NetVisor OS Command Reference Guide

Arista Networks

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Glossary

Glossary of NetVisor UNUM and NetVisor OS Terms

To review the Glossary, refer to the online *document*.

A Commands

aaa-tacacs-create

This command is used to configure TACACS+ services on a switch.

Syntax `aaa-tacacs-create`

`name` *`name-string`*	Specify the name for TACACS+ configuration. (up to 60 characters)
`scope fabric|local`	Specify the scope of TACACS+ configuration.
`server` *`server-string`*	Specify the TACACS+ server name. (up to 60 characters)
`port` *`port-number`*	Specify the TCACAS+ communication port. The default port is 49.
`secret` *`secret-string`*	Specify the shared secret (password) for TACACS+.
`timeout` *`timeout-number`*	Specify the number of seconds before communication times out. The default value is 10 seconds.
`priority` *`priority-number`*	Specify the priority for TACACS+.
`authen|no-authen`	Specify to enable or disable the authentication.
`authen-local|no-authen-local`	Specify if the authentication overrides local users. The `no-authen-local` parameter overrides local users, and gives them access while `authen-local` prevents local users from logging in.
`authen-method pap|chap|ms-chap`	Specify one among the authentication methods: PAP, CHAP and MS-CHAP.
`sess-acct|no-sess-acct`	Specify to enable or disable session accounting.
`cmd-acct|no-cmd-acct`	Specify to enable or disable command accounting.
`acct-local|no-acct-local`	Specify to enable or disable accounting for local users.
`sess-author|no-sess-author`	Specify to enable or disable session authorization.
`cmd-author|no-cmd-author`	Specify to enable or disable command authorization.
`author-local|no-author-local`	Specify to enable or disable authorization for local users.
`service` *`service-string`*	Specify the service name used for TACACS+ requests sent from NetVisor OS to the TACACS+ server for commands run at the NetVisor CLI, and

	REST APIs. The default service is `shell`.
`service-shell` *`service-shell-string`*	Specify the TACACS+ service name string for shell commands.
`service-vtysh` *`service-vtysh-string`*	Specify the TACACS+ service name string for vtysh commands.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.0	The parameters `acct-local`, `author-local`, `service`, `service-shell` and `service-vtysh` added.

Usage Use this command to allow a TACACS+ server authenticate, and authorize clients on the network. TACACS+ can also provide accounting for sessions, and commands.

Examples To create a TACACS+ account named `tac` having `local` scope with no local authentication privilege, use the command:

```
CLI (network-admin@switch) > aaa-tacacs-create name tac scope local server server1 authen-local
```

aaa-tacacs-delete

Use ts command to delete a TACACS+ configuration.

Syntax `aaa-tacacs-delete name` *`name-string`*

`name` *`name-string`*	Specify the name for TACACS+ configuration.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to delete a TACACS+ configuration.

Examples To delete a TACACS+ configuration, use the following command:

```
CLI (network-admin@switch) > aaa-tacacs-delete name TACserver1
```

aaa-tacacs-modify

This command is used to modify a TACACS+ server configuration on the network.

Syntax `aaa-tacacs-modify`

`name` *`name-string`*	Specify the name for TACACS+ configuration. (up to 60 characters)
Specify one or more of the following options to modify:	
`scope fabric|local`	Specify the scope of TACACS+ configuration.
`server` *`server-string`*	Specify the TACACS+ server name. (up to 60 characters)
`port` *`port-number`*	Specify the TCACAS+ communication port. The default port is 49.
`secret` *`secret-string`*	Specify the shared secret (password) for TACACS+.
`timeout` *`timeout-number`*	Specify the number of seconds before communication times out. The default value is 10 seconds.
`priority` *`priority-number`*	Specify the priority for TACACS+.
`authen|no-authen`	Specify to enable or disable the authentication.
`authen-local|no-authen-local`	Specify if the authentication overrides local users. The `no-authen-local` parameter overrides local users, and gives them access while `authen-local` prevents local users from logging in.
`authen-method pap|chap|ms-chap`	Specify one among the authentication methods: PAP, CHAP and MS-CHAP. **Note:** Pluribus does not support MS-CHAP authentication method.
`sess-acct|no-sess-acct`	Specify to enable or disable session accounting.
`cmd-acct|no-cmd-acct`	Specify to enable or disable command accounting.
`acct-local|no-acct-local`	Specify to enable or disable accounting for local users.
`sess-author|no-sess-author`	Specify to enable or disable session authorization.
`cmd-author|no-cmd-author`	Specify to enable or disable command authorization.
`author-local|no-author-local`	Specify to enable or disable authorization for local

	users.
`service` *`service-string`*	Specify the service name used for TACACS+ requests sent from NetVisor OS to the TACACS+ server for commands run at the NetVisor CLI, and REST APIs. The default service is `shell`.
`service-shell` *`service-shell-string`*	Specify the TACACS+ service name string for shell commands.
`service-vtysh` *`service-vtysh-string`*	Specify the TACACS+ service name string for vtysh commands.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.0	The parameters `acct-local`, `author-local`, `service`, `service-shell`, and `service-vtysh` added.

Usage Use this command to modify a TACACS+ server authenticate, and authorize clients on the network. The TACACS+ can also provide accounting for sessions, and commands.

Examples To modify the TACACS+ configuration, `TACserver1`, and change the secret password, to `m0nk3ys`, use the following command:

```
CLI (network-admin@switch) > aaa-tacacs-modify name TACserver1 secret @m0nk3ys
```

aaa-tacacs-show

Use this command to display the configuration parameters of the TACACS+ server.

Syntax `aaa-tacacs-show`

`name name-string`	Name of the TACACS+ service.
`scope local|fabric`	The scope to apply to the TACACS+ server.
`server` *`server-string`*	Name of the TACACS+ server.
`port` *`port-number`*	The port that connects to the server.
`timeout` *`timeout-number`*	The number of seconds for the server to time out a request. The default value is 10 seconds.
`priority` *`priority-number`*	The priority for the server.
`authen|no-authen`	Specifies if the server authenticates clients on the network.
`authen-local|no-authen-local`	Specifies if the server authentication overrides the local users.
`authen-method pap|chap|ms-chap`	The authentication method for clients. PAP, CHAP, and MS-CHAP are supported methods.
`sess-acct|no-sess-acct`	Specifies if the user uses session accounting. The TACACS+ server is notified when a user logs in or out of the network.
`cmd-acct|no-cmd-acct`	Specifies if the user uses command accounting. The TACACS+ server is notified when ever a user, including the network administrator, runs a non-show command.
`acct-local|no-acct-local`	Specify accounting for local users
`sess-author|no-sess-author`	Specifies if the user uses session authorization. The TACACS+ server configured for session authorization determines if a user can initiate a session on the network after logging in.
`cmd-author|no-cmd-author`	Specifies if the user uses command authorization. The TACACS+ server determines if a user can run certain commands on the network.
`author-local|no-author-local`	Specify authorization for local users.
`timed-out yes|no`	Specifies if the server has timed out.
`error-start date/time:yyyy-mm-`	The time of first error.

`ddTHH:mm:ss`	
`num-errors num-errors-number`	The number of errors.
`errors-logged yes|no`	Specifies if the errors are logged or not.
`service` *`service-string`*	Specify the service name used for TACACS+ requests sent from NetVisor OS to the TACACS+ server for commands run at the NetVisor CLI, and the Java, C, and REST APIs. The default value is `shell`.
`service-shell` *`service-shell-string`*	Specify the service name used for TACACS+ requests sent from NetVisor OS to the TACACS+ server for commands run from a UNIX shell.
`service-vtysh` *`service-vtysh-string`*	Specify the service name used for TACACS+ requests sent from NetVisor OS to the TACACS+ server for commands run from vtysh.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.0	The parameters `acct-local`, `author-local`, `service`, `service-shell` and `service-vtysh` added.

Usage Use this command to display information about a TACACS+ server

Examples To display the *information about a TACACS+ server, use the following command:*

```
CLI  (network-admin@switch)  >  aaa-tacacs-show
name  scope  server   port  timeout  priority  authen  authen-local  authen-method  sess-acct  cmd-acct
acct-local  sess-author  cmd-author  author-local  service  service-shell  service-vtysh
----  -----  -------  ----  -------  --------  ------  ------------  -------------  ---------  --------
----------  -----------  ----------  ------------  -------  -------------  -------------
tac  local server1 49   10      1        on     off          chap          on        off
off        on          off        on           shell   unix-shell    vtysh-shell
```

aaa-tacacs-status

Use this command to display the status of the TACACS+ service.

Syntax `aaa-tacacs-status`

`name` *`name-string`*	Specify the TACACS+ service name.

Defaults None.

Access CLI

Usage This command is used to display the TACACS+ status.

Examples To display the status of TACACS+ configuration, use the following command:

```
CLI (network-admin@switch) > aaa-tacacs-status name tac
name server  port priority status
---- ------- ---- -------- ------
tac  server1 49   1        up
```

access-list-create

This command creates an access list for the Router Advertisement (RA) Guard feature.

Syntax `access-list-create`

`name` *`name-string`*	Specify a name for the access list.
`scope local|fabric`	Specify the scope for the access list.

Defaults None

Access Network Administrator.

History

Version 3.0.0	Command introduced.

Usage This command is used to create an access list for RA Guard.

Examples To create an access list with the name, ra-guard-list, and the scope as fabric use the following syntax:

```
CLI (network-admin@switch) > access-list-create name ra-guard-list scope fabric
```

access-list-delete

This command is used to delete an access list for the Router Advertisement (RA) Guard feature.

Syntax `access-list-delete`

`name` *`name-string`*	Specify a name for the access list.

Defaults None

Access Network Administrator.

History

Version 3.0.0	Command introduced.

Usage Use the command to delete an access list for RA Guard.

Examples To delete an access list with the name, ra-guard-list , use the following syntax:

```
CLI (network-admin@switch) > access-list-delete  name  ra-guard-list
```

access-list-show

This command displays access lists for the Router Advertisement (RA) Guard feature.

Syntax `access-list-show`

`name` *`name-string`*	Name for the access list.
`scope local|fabric`	The scope for the access list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display an access list for RA Guard.

Examples To display an access list with the name, ra-guard-list , use the following syntax:

```
CLI (network-admin@switch) > access-list-show name ra-guard-list
  switch  name          scope
  ------- ------------- -----
  Spine-1 ra-guard-list local
```

access-list-ip-add

This command adds an IPv6 address to the access list for the Router Advertisement (RA) Guard feature.

Syntax `access-list-ip-add`

name *name-string*	Specify a name for the access list.
ip *ip-address*	Specify the IPv6 address associated with the access list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add an IPv6 IP address to an access list for RA Guard. .

Examples To add an IPv6 address to the access list, ra-guard-list, IPv6 address 2001:0db8:85a3:0000:0000:8a2e:0370:7334, use the following syntax:

```
CLI (network-admin@switch) > access-list-ip-add name ra-guard-list ip
2001:0db8:85a3:0000:0000:8a2e:0370:7334
```

access-list-ip-remove

This command is used to remove an IPv6 address from the access list for the Router Advertisement (RA) Guard feature.

Syntax `access-list-ip-remove`

`name` *`name-string`*	Specify the name of the access list.
`ip` *`ip-address`*	Specifies the IPv6 address to be removed from the access list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add an IPv6 IP address to an access list for RA Guard

Examples To remove an IPv6 address from an access list with the name, ra-guard-list, IPv6 address 2001:0db8:85a3:0000:0000:8a2e:0370:7334, use the following syntax:

```
CLI (network-admin@switch) > access-list-ip-remove name ra-guard-list ip
2001:0db8:85a3:0000:0000:8a2e:0370:7334
```

access-list-ip-show

This command displays access list IP addresses for the Router Advertisement (RA) Guard feature.

Syntax `access-list-ip-show`

name *name-string*	Name for the access list.
ip *ip-address*	IPv6 address specified for the access list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display IP addresses that are assigned to an access list for RA Guard.

Examples To display an access list with the name, ra-guard-list , use the following syntax:

```
CLI (network-admin@switch) > access-list-ip-show  ra-guard-list

  switch  name             ip
  ------   -------------   ----------------------------------------
  switch   ra-guard-list   2001:0db8:85a3:0000:0000:8a2e:0370:7334
```

acl-ip-create

Use this command to create an IP address for an Access Control List (ACL). ACLs are rules that you apply to allow or deny access to hosts or IP addresses.

Syntax `acl-ip-create`

`name` *`name-string`*	Specify the ACL name.
`action permit|deny`	Specify the permission of the ACL as either permit or deny.
`scope local|fabric`	Specify the scope of the ACL.
Specify at least one of the following options:	
`src-ip` *`ip-address`*	Specify the ACL source IP address.
`src-ip-mask` *`netmask`*	Specify the source IP mask of the ACL.
`dst-ip` *`ip-address`*	Specify the ACL destination IP address.
`dst-ip-mask` *`netmask`*	Specify the destination IP mask of the ACL.
Then any of the following options:	
`proto [tcp|udp|icmp|igmp|ip|icmpv6`	Specify the protocol flag filter of the ACL.
`src-port` *`src-port-number`*	Specify the source port number.
`dst-port` *`dst-port-number`*	Specify the destination port number
`vnet` *`vnet-name`*	Specify the vNET name.
`bd` *`bridge-domain name`*	Specify the domain name of the bridge.
`vlan` *`vlan-id`*	Specify the VLAN to apply the ACL. This is a numeric value between 0, and 4095.
`port` *`port-number`*	If the scope is local, Specify the switch port of the ACL.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.4	The option `igmp` added to the parameter, `protocol`.
Version 2.4.1	The parameter `vnet` is added.

Usage IP ACLs can be used to filter network traffic. Use this command to create a new IP ACL.

Informational Note: The source or destination IP address/mask of 0.0.0.0/255.255.255.255 means any address.
The source or destination IP address/mask of 208.74.182.229/0.0.0.0 is the same as “host 208.74.182.229”.

Examples This example shows how to create a fabric-wide ACL named MyWebACL allowing HTTP traffic (port 80) from any host to the web server with IP address 208.74.182.229.

```
CLI (network-admin@switch) > ip-acl-create name MyWebACL action permit scope fabric src-ip
0.0.0.0 src-msk 255.255.255.255 dst-ip 208.74.182.229 dst-msk 0.0.0.0 prot tcp src-port 80
dst-port 80
```

acl-ip-delete

Use this command to delete an ACL from the network configuration.

Syntax `acl-ip-delete name` *`name-string`* `id`

`name` *`name-string`*	Specify the ACL name.
`id`	Specify the identifier assigned to the ACL.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Deletes an ACL from the existing network configuration.

Examples To delete the ACL, `net-traffic`, use the following command:

```
CLI (network-admin@switch) > acl-ip-delete  net-traffic
```

acl-ip-modify

This command allows you to change an existing ACL rule on the switch.

Syntax `acl-ip-modify`

`name` *`name-string`*	Specifies the name of the ACL.
`id` *`id`*	Specifies the ID assigned by ONVL to the ACL.
The following parameter is optional:	
`action permit | deny`	Specifies the permission of the ACL to be either permit or deny.
`src-ip` *`ip-address`*	Specifies the source IP address of the ACL.
`src-ip-mask` *`netmask`*	Specifies the source IP mask of the ACL.
`dst-ip` *`ip-address`*	Enter the ACL destination IP address to be modified.
`dst-ip-mask` *`netmask`*	Specifies the destination IP mask of the ACL.
Then any of the following options:	
`proto [tcp|udp|icmp|igmp|ip|icmpv6]`	Specifies the protocol flag filter of the ACL.
`src-port` *`src-port-number`*	Specifies the source port number.
`dst-port` *`dst-port-number`*	Specifies the destination port number
`vnet` *`vnet-name`*	Specify the vNET name to be modified.
`bd` *`bridge-domain name`*	Specify the domain name of the bridge.
`vlan` *`vlan-id`*	Specifies the VLAN to apply the ACL. This is a numeric value between 0-4095.
`port` *`port-number`*	If the scope is local, specifies the switch port of the ACL.

Defaults None.

Access network-admin

History

Version 1.2	Command introduced.
Version 2.3.0	Added the parameters to modify the ACL.

Version 2.4	The option `igmp` added to the parameter, `protocol`.
Version 2.4.1	The parameter `vnet` added.

Usage

Use this command to modify an existing IP ACL.

Informational Note: The source or destination IP address/mask of 0.0.0.0/255.255.255.255 means any address.
The source or destination IP address/mask of 208.74.182.229/0.0.0.0 is the same as "host 208.74.182.229".

Examples

To modify the ACL, `net-traffic`, from `deny` to `permit`, use the following command:

```
CLI (network-admin@switch) > acl-ip-modify net-traffic action permit
```

acl-ip-show

Use this command to display information about ACLs configured on the switch.

Syntax `acl-ip-show`

`name` *`name-string`*	Name of the ACL.
`id`	The ID assigned to the ACL.
`action permit|deny`	The permission of the ACL to be either permit or deny.
`proto tcp|udp|icmp|igmp|ip|icmpv6`	The protocol assigned to the ACL.
`src-ip` *`ip-address`*	The ACL source IP address.
`src-ip-mask` *`netmask`*	The source IP mask of the ACL.
`src-port` *`src-port-number`*	The source port number.
`dst-ip` *`ip-address`*	The ACL destination IP address.
`dst-ip-mask` *`netmask`*	The destination IP mask of the ACL.
`dst-port` *`dst-port-number`*	The destination port number
`vnet` *`vnet-name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name assigned to the ACL.
`vlan` *`vlan-id`*	The VLAN (0-4095) to apply the ACL.
`scope local|fabric`	The scope of the ACL.
`port` *`port-number`*	If the scope is local, specifies the switch port of the ACL.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.3.0	Added the parameters to modify the ACL.
Version 2.4	The option `igmp` added to the parameter, `protocol`.
Version 2.4.1	The parameter `vnet` added.

Usage Displays the list of IP ACLS in the configuration. .

Informational Note: The source or destination IP address/mask of 0.0.0.0/255.255.255.255 means any address.
The source or destination IP address/mask of 208.74.182.229/0.0.0.0 is the same as “host 208.74.182.229”.

Examples Use this command to display information about IP ACLs:

```
CLI (network-admin@switch) > acl-ip-show deny-external layout vertical

  name:                deny-external
  id:                  b000022:20
  action:              deny
  proto:               tcp
  src-ip:              209.225.113.24/28
  src-port:            0
  dst-ip:              ::/0
  dst-port:            0
  vlan:                0
  scope:               fabric
  port:                0
```

acl-mac-create

This command is used to create Access Control Lists (ACLs) based on MAC addresses.

Syntax `acl-mac-create`

`name` *`name-string`*	Specifies the name of the ACL.
`action permit|deny`	Specifies the permission of the ACL to be either permit or deny.
`src-mac` *`mac-address`*	The source MAC address of the ACL. The value can be any to match all MAC addresses
`src-mac-mask` *`mac-address`*	Specifies the source MAC address mask.
`dst-mac` *`mac-address`*	Specifies the destination MAC address of the ACL. The value can be any to match all MAC addresses.
`dst-mac-mask` *`mac-address`*	Enter the destination MAC address mask.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi|jumbo|dot1X|aoe|lldp|qinq|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old`	Specifies the EtherType value.
`vnet` *`vnet-name`*	Specify the vNET name.
`bd bridge-domain name`	Specify the bridge domain name assigned to the ACL.
`vlan` *`vlan-id`*	Specifies the VLAN identifier, a value between 0-4095.
`scope local|fabric`	Specifies the scope of the ACL.
`port` *`port-number`*	Specifies the switch port number.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage MAC access control lists (ACLs) can be used to filter network traffic. This command creates a new ACL.

Examples This example shows how to create a fabric-wide ACL named `MyMacACL` allowing IPv4 traffic from the host with the MAC address `e0:f8:47:14:3c:2e` to any host.

```
CLI (network-admin@switch) > acl-mac-create name MyMacACL action permit scope fabric src
```

```
e0:f8:47:14:3c:2e dst any type ipv4
```

acl-mac-delete

This command is used to delete an existing MAC ACL from the switch.

Syntax `acl-mac-delete`

`name` *`string`*	Specify the ACL name to be deleted.
`id` *`acl-id`*	Specify the ACL identifier. This is automatically generated by ONVL.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage MAC access control lists (ACLs) can be used to filter network traffic. This command deletes an existing MAC ACL.

Examples To delete the MAC ACL named `MyMacACL`, use the following command:

```
CLI (network-admin@switch) > acl-mac-delete name MyMacACL
```

acl-mac-modify

This command is used to modify Access Control Lists (ACLs) based on MAC addresses.

Syntax `acl-mac-modify`

Defaults

`name name` *`string`*	Specifies the name of the ACL.
`id`	Specifies the ACL associated ID to be modified.
Specify one or more of the following options:	
`action permit|deny`	Specifies the permission of the ACL to be either permit or deny.
`src-mac` *`mac-address`*	The source MAC address of the ACL. The value can be any to match all MAC addresses
`src-mac-mask` *`mac-address`*	Specifies the source MAC address mask.
`dst-mac` *`mac-address`*	Specifies the destination MAC address of the ACL. The value can be any to match all MAC addresses.
`dst-mac-mask` *`mac-address`*	Specifies the destination MAC address mask.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|lacp|ecp|macsec|ptp|fcoe|fcoe-init|qinq-old`	Specifies the EtherType value.
`vnet` *`vnet-name`*	Specify the vNET name to be modified.
`bd bridge-domain name`	Specifies the bridge domain name assigned to the ACL
`vlan` *`vlan-id`*	Specifies the VLAN identifier.
`scope local|fabric|cluster`	Specifies the scope of the ACL.
`port` *`port-number`*	Specifies the switch port number.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Version 2.4.1	The parameter `vnet` added.
Version 2.5.2	The parameter `scope local|fabric|cluster` deprecated.

Usage MAC access control lists (ACLs) can be used to filter network traffic. This command modifies a new ACL.

Examples This example shows how to modify a fabric-wide ACL named `MyMacACL` allowing IPv4 traffic from the host with the MAC address `e0:f8:47:14:3c:2e` to any host.

```
CLI (network-admin@switch) > mac-acl-modify name MyMacACL action permit scope fabric src
e0:f8:47:14:3c:2e dst any type ipv4
```

acl-mac-show

Displays information about the ACLs using MAC addresses as a parameter.

Syntax `acl-mac-show`

`name` *`name-string`*	The name of the ACL.
`id`	The ID generated by ONVL.
`action permit|deny`	The permission of the ACL to be either permit or deny.
`src-mac` *`mac-address`*	The source MAC address of the ACL. The value can be any to match all MAC addresses
`src-mac-mask` *`mac-address`*	The source MAC address mask.
`dst-mac` *`mac-address`*	The destination MAC address of the ACL. The value can be any to match all MAC addresses.
`dst-mac-mask` *`mac-address`*	The destination MAC address mask.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|lacp|ecp|macsec|ptp|fcoe|fcoe-init||qinq-old`	The EtherType value.
`vnet` *`vnet-name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name assigned to the ACL.
`vlan` *`vlan-id`*	The VLAN identifier, a value between 0-4095.
`scope local|fabric`	The scope of the ACL.
`port` *`port-number`*	The switch port number.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 2.5.2	The parameter `cluster` deprecated.

Usage MAC access control lists (ACLs) filter network traffic. This command displays a list of MAC ACLs.

Examples Use this command to display information about ACLs using MAC addresses.

```
CLI  (network-admin@switch) > acl-mac-show

name      id               action  src                dst  type              vlan  scope  port
--------  ---------------  ------  -----------------  --------------------  ----- -----  ----
MyMacACl 54147812341841957 deny    e0:f8:47:14:3c:2e ff:ff:ff:ff:ff:ffipv4   0     local  0
```

admin-cc-mode-modify

This command is used to enable or disable the CC mode.

Syntax `admin-cc-mode-modify`

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage This command modifies the CC mode.

Examples Use this command to enable or disable the CC mode.

```
CLI  (network-admin@switch) > admin-cc-mode-modify
```

admin-cc-mode-show

This command is used to display the CC mode.

Syntax `admin-cc-mode-show`

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage This command displays the CC mode.

Examples Use this command to display the CC mode.

```
CLI  (network-admin@switch) > admin-cc-mode-show
```

admin-crl-config-modify

This command is used to modify the CRL configuration.

Syntax `admin-cc-mode-modify`

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage This command modifies the CRL configuration.

Examples Use this command to modify the CRL configuration.

```
CLI  (network-admin@switch) > admin-crl-config-modify
```

admin-crl-config-show

This command is used to display the CRL configuration.

Syntax `admin-cc-mode-modify`

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage This command displays the CRL configuration.

Examples Use this command to display the CRL configuration.

```
CLI  (network-admin@switch) > admin-crl-config-show
```

admin-service-modify

This command is used to modify the services on the switch.

Syntax `admin-service-modify`

`if` *`if-string`*	Specify the interface to modify.
Specify one or more of the following options:	
`ssh|no-ssh`	Specify if you want to connect to the switch using Secure Shell (SSH).
`nfs|no-nfs`	Specify if you want to use Network Files System (NFS) for the admin service.
`web|no-web`	Specify if you want to enable Web management.
`web-ssl|no-web-ssl`	Specify if you want to use SSL, and certificates for Web services.
`web-ssl-port` *`web-ssl-port-number`*	Specify the Web SSL port.
`web-port` *`web-port-number`*	Specify the port for Web management.
`web-log|no-web-log`	Specify if you want to turn on or off Web logging.
`vrrp|no-vrrp`	Specifies if VRRP is enabled or disabled.
`snmp|no-snmp`	Specify if SNMP is allowed as a service.
`netconf|no-netconf`	Specifies if NETCONF is enabled or disabled.
`icmp|no-icmp`	Specify if Internet Control Message Protocol (ICMP) is allowed as a service.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 3.0.0	The parameter `web-log|no-web-log` added.
Version 7.0.2	The parameter `netconf|no-netconf` added.

Usage Use this command to modify the administrative services on the switch.

Examples To modify the admin service to enable SNMP, use the following command:

```
CLI (network-admin@switch) > admin-service-modify if eth.0 scope fabric snmp
```

admin-service-show

This command is used to display information about admin services configuration.

Syntax `admin-service-show`

`if` *`if-string`*	The interface.
`ssh|no-ssh`	Specifies if the switch is running Secure Shell (SSH) as a service.
`nfs|no-nfs`	Specifies if the switch is running Network File System (NFS) as a service.
`web|no-web`	Specifies if Web is running as a service.
`web-ssl|no-web-ssl`	Specifies if SSL, and certificates are used for Web services.
`web-ssl-port` *`web-ssl-port-number`*	The Web SSL port.
`web-port` *`web-port-number`*	The port for Web management.
`web-log|no-web-log`	Specifies if the user wants to turn on or off Web logging.
`vrrp|no-vrrp`	Specifies if the user wants to enable or disable VRRP.
`snmp|no-snmp`	Specifies if SNMP is running as a service.
`netconf|no-netconf`	Specifies if NETCONF is enabled or disabled.
`icmp|no-icmp`	Specifies if Internet Control Message Protocol (ICMP) is running as a service.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 3.0.0	The parameter `web-log|no-web-log` added.
Version 7.0.2	The parameter `netconf|no-netconf` added.

Usage Use this command to display information about admin services on the switch.

Examples To display admin service information, use the following command:

```
CLI (network-admin@switch) > admin-service-show

switch if   ssh nfs web web-ssl web-ssl-port web-port vrrp snmp netconf icmp
------ ---- --- --- --- ------- ------------ -------- ---- ---- ------- ----
switch mgmt on  off on  off     443          80       off  off  on      on
```

```
switch data on  off on  off     443          80       off  off  off     on
```

admin-session-timeout-modify

Modify administrator timeouts for login sessions.

Syntax `admin-session-timeout-modify`

`timeout duration:#d#h#m#s`	Configure the maximum time to wait for user activity before terminating the login session.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to configure administrator session timeouts.

Examples To set the session timeout to five minutes, use the following syntax:

```
CLI (network-admin@switch) > admin-session-timout-modify  timeout  5m
```

admin-session-timeout-show

Display the session timeout for administrator sessions.

Syntax `admin-session-timeout-show`

Defaults None

Access Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display administrator sessions timeouts.

Examples To display the session timeout, use the following syntax:

```
CLI (network-admin@switch) > admin-session-timeout-show

   switch: switch1
   timeout: 1h
```

admin-sftp-modify

This command allows you to modify SFTP functionality for the network administrator.

Syntax `admin-sftp-modify`

`enable|disable`	Specify whether to enable or disable SFTP.
Between 0, and 1 of the following options:	
`minimum-pw-length` *`6..65`*	Specifies the minimum password length for SFTP account.

Defaults Disabled.

Access CLI

History

Version 1.2	Command introduced.
Version 7.0.0	The parameter `minimum-pw-length` added.

Usage Use this command to enable or disable secure file transport protocol (SFTP).

Examples To enable SFTP, use the following command:

```
CLI (network-admin@switch) > admin-sftp-modify  enable

  sftp  password:
  Enter  a  password  for  the  SFTP  server.
```

admin-sftp-show

This command allows you to display SFTP functionality for the administrator.

Syntax `admin-sftp-show`

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Use this command to display SFTP functionality on the switch.

Examples Use the following command to display SFTP,

```
CLI (network-admin@switch) > admin-sftp-show

  switch:             switch2
  sftp-user:          sftp
  enable:             yes
```

admin-syslog-create

This command is used to create the scope, and other parameters of syslog event collection.

Syntax `admin-syslog-create`

`name` *`name-string`*	The name of the syslog file for the syslog event collection.
`scope local|fabric`	The scope of the syslog for the syslog event collection.
`host` *`host-string`*	The host name for the syslog event collection..
`port` *`port-number`*	The port for the syslog event collection.
`transport tcp-tls|udp`	The type of transport for log events - `tcp/tls` or `udp`
`message-format structured|legacy`	The message format you want to use in the syslog event collection. The default format is legacy.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.5	The parameter `transport` added.

Usage Used to create a syslog file.

Examples To create the syslog file, `engoct12`, with the scope `local` on port `24` and message format `structured`, use the following command:

```
CLI (network-admin@switch) > admin-syslog-create name engoct12 scope local port 24
message-format structured
```

admin-syslog-delete

This command is used to delete a syslog from the configuration.

Syntax `admin-syslog-delete`

`name` *`name-string`*	Specify the name of the syslog file to delete.

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Used to delete a syslog file.

Examples To delete the syslog file, `eng-local`, use the following command:

```
CLI (network-admin@switch) > admin-syslog-delete  eng-local
```

admin-syslog-modify

This command is used to modify the scope, and other parameters of syslog event collection.

Syntax `admin-syslog-modify`

`name` *`name-string`*	Specify the name of the syslog file to modify.
Specify one or more of the following options:	
`scope local|fabric`	Specify the scope of the syslog to modify
`host` *`host-string`*	Specify the host to modify.
`port` *`port-number`*	Specify the port you want to modify.
`transport tcp-tls|udp`	The type of transport for log events - `tcp/tls` or `udp`
`message-format structured|legacy`	Specify the message format you want to modify.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.5	The parameter `transport` added.

Usage Used to modify an existing syslog file.

Examples To modify the port from port 24 to port 83 for syslog file, `engoct12`, use the following command:

```
CLI (network-admin@switch) > admin-syslog-modify name engoct12 port 83
```

admin-syslog-show

This command is used to display parameters about a syslog file.

Syntax `admin-syslog-show`

`name` *`name-string`*	Name of the syslog file.
`scope local|fabric`	Scope of the syslog file.
`host` *`host-string`*	Host for the syslog file.
`port` *`port-number`*	Port for the syslog file.
`transport tcp-tls|udp`	The type of transport for log events - `tcp/tls` or `udp`
`message-format structured|legacy`	The message format for the syslog file.
`status` *`status-string`*	The syslog export status.
`export-container-logs|no-export-container-logs`	Specifies to modify container log export functionality.
`export-os-logs|no-export-os-logs`	Specifies to modify operating system log export functionality.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.5	The parameter `transport` added.

Usage Use this command to display information about a syslog file.

Examples Use this command to display administrative log information.

```
CLI (network-admin@switch) > admin-syslog-show layout vertical

  switch:                 switch1
  name:                   audit-logs
  scope:                  local
  host:                   172.16.21.33
  port:                   10514
  transport:              tcp-tls
```

```
message-format:         legacy
export-container-logs:  off
export-os-logs:         off
```

admin-syslog-match-add

This command is used to add a syslog event match filter for sending selective logs to the syslog server.

Syntax `admin-syslog-match-add`

`syslog-name` *`name-string`*	Specify the name of the syslog file.
Specify the following match arguments:	
`name` *`name-string`*	Specify a name for the matching scheme.
Specify any of the following options:	
`msg-category event|audit|system|perror|container|os-logs|xact-truncate`	Specify one among the options as the category of the message to match.
`msg-program program-string`	Specify the name of the program used to generate the log messages.
`msg-name` *`name-string`*	Specify the name of the message to match.
`msg-code` *`code-number`*	Specify the message code to match.
`msg-level critical|error|warn|note|info`	Specify one among the options as the severity level to match. By default, all messages are forwarded to the syslog server.
`msg-event-type system|port|tcp|stp|igmp|lldp|lacp|vdp|ecp|evb|ptp|storage|tacacs|mld|mroute|vport|lacp-port-event`	Specify the type of event to match.
`msg-vnet` *`vnet-name`*	Specify the vNET name to match.
`msg-remote_switch` *`node-name`*	Specify the remote switch to match.
`msg-user` *`user-name`*	Specify user name to match.
`msg-client-addr ip-address`	Specify the client IP address.
`msg-port` *`port-number`*	Specify the port number to match.
`msg-vlan` *`0..4095`*	Specify the VLAN to match.
`msg-bd` *`bridge-domain-name`*	Specify the bridge domain to match.
`msg-vxlan` *`vxlan-ID`*	Specify the VXLAN to match.

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Version 2.3.3	The parameter `vport` added to message event type.
Version 6.0.0	The parameter `info` added to `msg-level`.

Usage Use this command to create a syslog event match filter.

Examples To create a filter to send the log messages of message-level critical to the syslog server, use the following command:

```
CLI (network-admin@switch) > admin-syslog-match-add syslog-name log1 msg-level critical
```

admin-syslog-match-modify

This command is used to modify a syslog event match filter for sending selective logs to the syslog server.

Syntax `admin-syslog-match-modify`

`syslog-name` *`name-string`*	Specify the name of the syslog file.
Specify the following match arguments:	
`name` *`name-string`*	Specify a name for the matching scheme.
Specify any of the following options:	
`msg-category event|audit|system|perror|container|os-logs|xact-truncate`	Specify one among the options as the category of the message to match.
`msg-program program-string`	Specify the name of the program used to generate the log messages.
`msg-name` *`name-string`*	Specify the name of the message to match.
`msg-code` *`code-number`*	Specify the message code to match.
`msg-level critical|error|warn|note|info`	Specify one among the options as the severity level to match. By default, all messages are forwarded to the syslog server.
`msg-event-type system|port|tcp|stp|igmp|lldp|lacp|vdp|ecp|evb|ptp|storage|tacacs|mld|mroute|vport|lacp-port-event`	Specify the type of event to match.
`msg-vnet` *`vnet-name`*	Specify the vNET name to match.
`msg-remote_switch` *`node-name`*	Specify the remote switch to match.
`msg-user` *`user-name`*	Specify user name to match.
`msg-client-addr ip-address`	Specify the client IP address.
`msg-port` *`port-number`*	Specify the port number to match.
`msg-vlan` *`0..4095`*	Specify the VLAN to match.
`msg-bd` *`bridge-domain-name`*	Specify the bridge domain to match.
`msg-vxlan` *`vxlan-ID`*	Specify the VXLAN to match.

Access CLI

History

Version 1.2	Command introduced.
Version 2.3.3	The parameter `vport` added to message event type.
Version 6.0.0	The parameter `info` added to `msg-level`.

Usage Use this command to modify a syslog match filter

Examples To modify the syslog match filter to capture messages with the level `critical`, use the following command:

```
CLI (network-admin@switch) > admin-syslog-match-modify syslog-name log1 msg-level critical
```

admin-syslog-match-remove

This command is used to remove a syslog match filter.

Syntax `admin-syslog-match-remove`

`syslog-name` *`name-string`*	The name of the syslog match filter.
Specify the following match arguments:	
`name` *`name-string`*	Specify the name of the match filter

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Use this command to remove a syslog match filter.

Examples To remove the syslog match filter, june2012, use the following command:

```
CLI (network-admin@switch) > admin-syslog-match-remove  june2012
```

admin-syslog-match-show

This command is used to display sylog match filters.

Syntax `admin-syslog-match-show`

`syslog-name` *`name-string`*	Name of the syslog file.
Specify the following match arguments:	
`msg-category event|audit|session|system|perror|container|os-logs|xact-truncate`	Category of the message.
`msg-program program-string`	Name of the program used to generate the log messages.
`msg-pid pid-number`	The product ID generating log messages.
`msg-name` *`name-string`*	Name of the message.
`msg-code` *`code-number`*	The message code.
`msg-level critical|error|warn|note|info`	The message severity level.
`msg-event-type systm|port|tcp|stp|igmp|lldp|lacp|vdp|ecp|evb|ptp|storage|tacacs|mld|mroute|vport|lacp-port-event`	The type of log event.
`msg-vnet` *`vnet-name`*	The name of the vNET.
`msg-remote_switch` *`node-name`*	The name of the remote switch.
`msg-user` *`user-name`*	Displays the user name.
`msg-client-pid client-pid-number`	The product ID to match.
`msg-client-addr ip-address`	The client IP address to match.
`msg-port` *`port-number`*	The port to match.
`msg-vlan 0..4095`	VLAN to match.
`msg-bd` *`bridge-domain name`*	Bridge Domain to match.
`msg-vxlan vxlan-string`	VXLAN to match.

`msg-start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time of the messages.
`msg-end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time of the messages.
`msg-duration duration: #d#h#m#s`	The duration of the messages.
`msg-count number`	The message count from 1 to 50000.
`msg-starting-point starting-point-number`	Message starting point to match
`msg-length length-number`	Message length to match
`msg-reverse|no-msg-reverse`	Reverse the order of the messages.
`msg-since-last-reset|no-msg-since-last-reset`	Messages since the log reset.
`name name-string`	Name of the matching scheme.
`set facility kern|user|mail|daemon|auth|syslog|lpr|news|uucp|clock|security|ftp|ntp|audit|alert|cron|local0|local1|local2|local3|local4|local5|local6|local7|0..23`	The facility type.
`set severity emerg|alert|crit|err|warning|notice|info|debug|0..7`	The severity of the event to match or add.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.3.3	The parameter `vport` added to message event type.
Version 6.0.0	The parameter `info` added to `msg-level`.

Usage Use this command to display syslog match filters.

Examples To display the syslog match configuration, use the following command:

```
CLI (network-admin@Leaf1) > admin-syslog-match-show
```

```
syslog-name    msg-category msg-level name
-------------- ------------ --------- -------
to-10.10.10.10 event                  match-1
```

api-install

This command is used to install NetVisor OS on a Linux platform, and use the API associated features.

Syntax `api-install linux-host`

`linux-host` *`linux-host-string`*	Specify the name of the Linux host.
`user` *`user-string`*	Specify the user login for the Linux host.

Defaults None

Access CLI

History

Version 2.2	Command introduced.

Usage Use this command to install the nvOS or ONVL API on a Linux platform.

Examples To install the nvOS or ONVL API on the Linux host, `centos-root`, and the user `root`, use the following syntax:

```
CLI (network-admin@switch) > api-install linux-host centos-server user root
```

alert-show

This command is used to display alerts for system issues.

Syntax `alert-show`

`level critical`	Specifies the alert level.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage The following are the possible outputs for the `alert-show` command:

- ```
  CLI (network-admin@switch) > alert-show
  STP bridge ID conflict on ports, change bridge ID to resolve
  ```
- ```
  CLI (network-admin@switch) > alert-show
  There are more vflows than HW resource available. Some vflows have
  been disabled. Remove vflows from config.
  ```
- ```
  CLI (network-admin@switch) > alert-show
  Inconsistent vlag config with peer for port, delete, and recreate
  vlag
  ```
- ```
  CLI (network-admin@switch) > alert-show
  TACACS+ authorization is disabled due to repeated TACACS+ server
  errors
  ```
- ```
  CLI (network-admin@switch) > alert-show
  Cluster ports are not part of a trunk, create one or disable extra
  port(s)
  ```
  ```

B Commands

bezel-portmap-show

This port is used to display physical to logical port mapping on the Dell platform. All ports are 40G ports that can be split into 4 logical 10G ports.

Syntax `bezel-portmap-show`

`port` *`port-number`*	The logical port number.
`bezel-intf` *`bezel-intf-string`*	Specify a bezel interface number.

Defaults None

Access Network-admin

Usage Use this command to display the physical to logical port mapping on a Dell platform.

Examples To display port mapping on the Dell platform, use the following syntax:

```
CLI (network-admin@switch) > bezel-portmap-show
switch   port  bezel-intf
-------  ----  ----------
s6000-2 1      1
s6000-2 2      1.2
s6000-2 3      1.3
s6000-2 4      1.4
s6000-2 5      2
s6000-2 6      3
s6000-2 7      3.2
s6000-2 8      3.3
s6000-2 9      3.4
s6000-2 10     4
s6000-2 11     5
s6000-2 12     5.2
s6000-2 13     5.3
s6000-2 14     5.4
s6000-2 15     6
s6000-2 16     7
s6000-2 17     7.2
s6000-2 18     7.3
s6000-2 19     7.4
```

From the output above, you can determine that port 1 has no cables connected to it. However port 2, has a 40G cable connected to another switch on the network. This is indicated by a single port number instead of 4 port numbers.

bootenv-activate-and-reboot

This command allows you to activate a boot environment, and reboot it.

Syntax `bootenv-activate-and-reboot name` *`name-string`* *g* `apply-current-config|no-apply-current-confi`

`name` *`name-string`*	The name of the boot environment to activate.
`apply-current-config|no-apply-current-config`	Specify if you want to apply the current configuration after rebooting the switch.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to activate a boot environment.

Examples To activate an environment called, `backup`, and reboot it, use the following command:

```
CLI (network-admin@switch) > bootenv-activate-and-reboot name backup
```

bootenv-delete

This command is used to delete a boot environment from the switch.

Syntax `bootenv-delete`

`name` *`name-string`*	The name of the boot environment to delete.

Defaults None

Access CLI.

History

Version 1.2.1	Command introduced.

Usage Use the command to remove stale boot environments from the platform.

Examples To delete the boot environment, **local-boot**, use the following command:

```
CLI (network-admin@switch) > bootenv-delete  local-boot
```

bootenv-show

Display information about the boot environment.

Syntax `bootenv-show`

`name` *`name-string`*	The name of the boot environment.
`version` *`version-string`*	The version of the boot environment.
`current yes|no`	Specifies if the named boot environment is the current boot environment.
`reboot yes|no`	Specifies if the boot environment is set to reboot.
`apply-current-config|no-apply-current-config`	Specify if the user wants to apply the current configuration after rebooting the switch.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Used to display configured information about the boot environment.

Examples To display the boot environment, use the following command:

```
CLI (network-admin@switch) > bootenv-show

  name          version      current reboot space created          apply-current-config
  -----------  -----------  -------  ------  -----  --------------  --------------------
  netvisor-1  6.0.0-16312 no      no     0     08-06,12:27:20 false
  netvisor-2  6.1.0-18189 no      no     0     08-18,21:19:41 false
  netvisor-3  7.0.0-18535 no      no     0     09-07,08:28:44 false
  netvisor-4  7.0.0-18536 no      no     0     09-08,01:16:40 false
  netvisor-5  7.0.0-18642 no      no     0     09-21,03:48:07 false
  test-be     7.0.0-18642 no      no     0     10-05,12:59:22 false
  amruth      7.0.0-18642 no      no     0     10-11,00:08:44 false
  amruth-1    7.0.0-18681 no      no     0     10-20,00:24:11 false
  amruth-2    7.0.0-18682 no      no     0     10-20,01:12:07 false
  amruth-3    7.0.0-18785 yes     yes    0     10-22,06:40:17 false
  netvisor-6  6.1.1-18525 no      no     0     11-15,06:59:46 false
  netvisor-7  6.1.1-18524 no      no     0     11-15,07:20:05 false
  netvisor-8  6.1.1-18525 no      no     0     11-15,07:26:40 false
  netvisor-9  6.1.1-18525 no      no     0     11-15,07:43:45 false
  netvisor-10 7.0.0-18752 no      no     0     11-16,22:27:53 false
  netvisor-11 7.0.0-18804 no       no      0      11-29,10:04:21 false
```

bridge-domain-create

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. Use this command to create a bridge domain.

Syntax `bridge-domain-create`

`name` *`name-string`*	Specify the name for the bridge domain.
`scope` *`local|cluster|fabric`*	Specify the bridge domain scope.
Specify any of the following options:	
`vnet` *`vnet name`*	vNET for this Bridge Domain.
`vxlan` *`0..16777215`*	Specify the VXLAN identifier for the tunnel.
`auto-vxlan|no-auto-vxlan`	Specify the options to automatically assign VXLAN, and/or assign to VTEPs.
`description` *`description-string`*	Add a bridge domain description.
`rsvd-vlan` *`1..4093`*	Specify the fabric reserved VLAN for cluster switches for bridge domain.
`local-rsvd-vlan` *`1..4093`*	Specify the local reserved VLAN for cluster switches for bridge domain.
`vxlan-inner-packet auto|remove-tags| transparent`	Preserve original Ethernet header inside the VXLAN tunnel.
`mac-learning|no-mac-learning`	Specify if you want to enable or disable MAC address learning.
`l2-tunneling` `none|lldp|stp|lacp|all`	Enable L2 tunneling on this bridge domain. You can tunnel LLDP, STP, and LACP packets by specifying the corresponding keywords.

Defaults None

History

Version 5.2.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.
Version 6.1.1	The parameter `l2-tunneling` added.

Usage Use this command to create a bridge domain.

Examples To create a bridge domain with the name bd100, and cluster scope, use the command:

```
CLI (network-admin@switch) > bridge-domain-create name bd100 scope
cluster
```

bridge-domain-modify

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command modifies a bridge domain.

Syntax `bridge-domain-modify`

`name` *`name-string`*	Specify the name for the bridge domain.
Specify any of the following options:	
`rsvd-vlan` *`1..4093`*	Specify the fabric reserved VLAN for cluster switches for bridge domain.
`local-rsvd-vlan` *`1..4093`*	Specify the local reserved VLAN for cluster switches for bridge domain.
`vnet` *`vnet-name`*	Specify the vNET name for the bridge domain to be modified.
`description` *`description-string`*	Modify the description for the bridge domain.
`mac-learning|no-mac-learning`	Enable or disable MAC address learning.
`vxlan-inner-packet auto|remove-tags| transparent`	Preserve original Ethernet header inside the VXLAN tunnel
`l2-tunneling` `none|lldp|stp|lacp|all`	Modify L2 tunneling on this bridge domain. You can tunnel LLDP, STP, and LACP packets by specifying the corresponding keywords.

Defaults None

History

Version 5.2.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.
Version 6.1.1	The parameter `l2-tunneling` added.

Usage Use this command to modify a bridge domain.

Examples To modify the reserved vlan to 25, and the description to main for the bridge domain bd200, use the command:

```
CLI (network-admin@switch) > bridge-domain-modify name bd200 rsvd-vlan 25 description main
```

bridge-domain-delete

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command deletes a bridge domain.

Syntax `bridge-domain-delete`

`name` *`name-string`*	Specify the bridge domain name.

Defaults None

History

Version 5.2.0	Command introduced.

Usage Use this command to delete a bridge domain.

Examples The command below deletes the bridge domain bd200

```
CLI (network-admin@switch) > bridge-domain-delete name bd200
```

bridge-domain-show

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command displays details of the bridge domain.

Syntax `bridge-domain-show`

`name` *`name-string`*	Name for the bridge domain.
`vnet` *`vnet-name`*	vNET name for the bridge domain.
`scope` *`local|cluster|fabric`*	The bridge domain scope.
`vxlan` *`0..16777215`*	The VXLAN identifier for the tunnel.
`auto-vxlan|no-auto-vxlan`	The options to automatically assign VXLAN, and/or assign to VTEPs.
`hw-vpn` *`hw-vpn-number`*	The hardware VPN number.
`hw-mcast-group` *`hw-mcast-group-number`*	The hardware multicast group.
`description` *`description-string`*	The bridge domain description.
`rsvd-vlan` *`2..4093`*	The fabric reserved VLAN for cluster switches for bridge domain.
`local-rsvd-vlan` *`2..4093`*	The local reserved VLAN for cluster switches for bridge domain.
`net-id` *`0..12287`*	The bridge domain ID.
`peer-net-id` *`0..12287`*	The peer network ID.
`active yes|no`	The bridge domain active status.
`ports` *`port-list`*	The ports assigned to the bridge domain.
`vxlan-inner-packet auto|remove-tags| transparent`	Preserve original Ethernet header inside the VXLAN tunnel.
`cluster-name` *`cluster-name-string`*	The cluster that needs to use the internal VLANs.
`qinq_rsvd_vlan` *`0..4095`*	The running reserved VLAN for cluster switches for bridge domain.
`mac-learning|no-mac-learning`	Specifies if the MAC address learning is enabled or disabled.
`l2-tunneling` `none|lldp|stp|lacp|all`	Specifies the status of L2 tunneling on the bridge domain.
`suppress-rsvd-vlan|no-suppress-rsvd-vlan`	Specifies to suppress fabric rsvd-vlan configuration requirement.

Defaults None

History

Version 5.2.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.
Version 6.1.1	The parameter `l2-tunneling` added.

Usage

Use this command to display the bridge domain details.

Examples

```
CLI (network-admin@switch) > bridge-domain-show
name  scope   ports  vxlan-inner-packet  mac-learning  l2-tunneling
----  ------  -----  ------------------  ------------  ------------
BD1   local         auto                on            none
BD2   local   20    remove-tags         on            none
```

bridge-domain-port-add

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command adds ports to a bridge domain.

Syntax `bridge-domain-port-add`

`name` *`name-string`*	Specify the name of the bridge domain to which the ports are to be added.
Specify any of the following options:	
`switch` *`switch-name`*	Specify the name of the switch.
`port` *`port-list`*	Specify the ports to be added to the bridge domain.
`outer-vlan` *`1..4093`*	Specify the outer VLANs for Q-in-Q.
`vlan-range` *`vlan-list`*	Specify the access VLANs for Q-in-Q as a range.
`vlans` *`vlan-list`*	Specify the access VLANs for Q-in-Q.
`qinq-untagged-port-vlan` *`1..4093`*	Specify the VLAN for untagged port for Q-in-Q network.
`inner-vlan` *`0..4095`*	Specify the inner VLAN for ports assigned to a network.
`l2-learning none|enable|disable`	Specify if you want to enable or disable MAC address learning. If you specify none, the port level the MAC address learning state is directly derived from the one of the encompassing bridge domain.
`outer-cos 0..7`	Specify the CoS value for outer VLAN.
`inner-cos 0..7`	Specify the CoS value for inner VLAN.
`CoS 0..7`	Specify the dot1q CoS priority.
`outer-tpid none|dot1q|q-in-q|q-in-q-old`	Specifies the outer TPID value.

Defaults None

History

Version 5.2.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.
Version 6.1.1	The parameters `inner-cos`, `outer-cos`, and `cos` added.

Version 7.0.0	The parameter `vlan-range` added.
Version 7.0.1	The parameter `outer-tpid` added.

Usage Use this command to add ports to a bridge domain.

Information Starting from NetVisor release 7.0.1, it is possible to configure BD ports in 802.1Q mode and in 802.1ad/QinQ mode on the same switch.

Examples To add the ports 17, and 18 to the bridge domain bd100, use the command:

```
CLI (network-admin@switch) > bridge-domain-port-add name bd100 port 17,1
```

bridge-domain-port-modify

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command modifies ports of a bridge domain.

Syntax `bridge-domain-port-modify`

`name` *`name-string`*	Specify the name of the bridge domain to which the ports are to be added.
Specify any of the following options:	
`port` *`port-list`*	Specify the ports to be added to the bridge domain.
`vlans` *`vlan-list`*	Specify the access VLANs for Q-in-Q.
`l2-learning none|enable|disable`	Specify if you want to enable or disable MAC address learning. If you specify none, the port level the MAC address learning state is directly derived from the one of the encompassing bridge domain.

Defaults None

History

Version 6.0.0	Command introduced.

Usage Use this command to add ports to a bridge domain.

Examples To add the ports 17, and 18 to the bridge domain bd100, use the command:

```
CLI (network-admin@switch) > bridge-domain-port-add name bd100 port 17,18
```

bridge-domain-port-remove

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command removes ports from a bridge domain.

Syntax `bridge-domain-port-remove`

`name` *`name-string`*	Specify the name of the bridge domain from which ports are to be removed.
Specify any of the following options:	
`switch` *`switch-name`*	Specify the name of the switch.
`port` *`port-list`*	Specify the ports to be removed from the bridge domain.

Defaults None

History

Version 5.2.0	Command introduced.

Usage Use this command to remove ports from a bridge domain.

Examples To remove the ports 22, and 25 from the bridge domain bd400, use the command:

```
CLI (network-admin@switch) > bridge-domain-port-remove name bd400 port 22,25
```

bridge-domain-port-show

A bridge domain is a set of logical ports that share the same flooding or broadcast characteristics. This command displays the port information of a bridge domain.

Syntax `bridge-domain-port-show`

`name` *`name-string`*	The bridge domain name.
`vnet` *`vnet name`*	The VNET for the bridge domain.
Specify any of the following port arguments:	
`port` *`port-list`*	The ports to be added to the bridge domain.
`active-ports` *`port-list`*	The active ports.
`outer-vlan` *`1..4093`*	The outer VLANs for Q-in-Q.
`vlan-range` *`vlan-list`*	The access VLANs for Q-in-Q as a range.
`single-bum-domain true|false`	The Q-in-Q VLANs in range for bum-limit.
`vlans` *`vlan-list`*	The access VLANs for Q-in-Q.
`untagged-port-vlan` *`2..4093`*	The VLAN for untagged port.
`inner-vlan` *`0..4095`*	The inner VLAN for ports assigned to a network.
`l2-learning none|enable|disable`	The status of MAC address learning.
`outer-cos 0..7`	The CoS value for outer VLAN.
`inner-cos 0..7`	The CoS value for inner VLAN.
`CoS 0..7`	The dot1q CoS priority.
`outer-tpid none|dot1q|q-in-q|q-in-q-old`	The outer TPID value.

Defaults None

History

Version 5.2.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.
Version 6.1.1	The parameters `inner-cos`, `outer-cos`, and `cos` added.
Version 7.0.0	The parameter `vlan-range` added.
Version 7.0.1	The parameter `outer-tpid` added.

Usage Use this command to display the port details of a bridge domain.

Information Starting from NetVisor release 7.0.1, it is possible to configure BD ports in 802.1Q mode and in 802.1ad/QinQ mode on the same switch.

Examples To display the details of the bridge domain BD1, use the command:

```
CLI (network-admin@switch) > bridge-domain-port-show name BD1
switch name port outer-vlan vlans untagged-port-vlan inner-vlan l2-learning
------ ---- ---- ---------- ----- ------------------ ---------- -----------
switch BD1  9    2000       1000  none
switch BD1  9    2001       1001  none
switch BD1  9    2002       1002  none
```

C Commands

cert-create

This command is used to create a self-signed server certificate

Syntax `cert-create`

`name` *`name-string`*	Specify the name of the certificate.
`country` *`country-string`*	Specify the country name (2 letter code).
`state` *`state-string`*	Specify the state or province name.
`city` *`city-string`*	Specify the city name.
`organization` *`organization-string`*	Specify the organization name.
`organizational-unit` *`organizational-unit-string`*	Specify the organizational unit name.
`common-name` *`common-name-string`*	Specify the common name.
`container` *`zone name`*	Specify the certificate zone or name.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage Use certificates to secure server connections.

Examples To create a self-signed server certificate named cert1, use the following command:

```
CLI (network-admin@switch) > CLI cert-create name cert1 country US state CA city PA
organization ovs organizational-unit ou common-name Pluribus
Successfully generated self-signed certificate.
```

cert-delete

This command is used to delete certificates container *zone|name*

Syntax `cert-delete`

`name` *`name-string`*	Specify the name of the certificate to delete.
`container` *`zone name`*	Specify the certificate zone or container name.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage Use this command to delete certificates.

Examples To successfully delete a certificate named cert1, use the following command:

```
CLI (network-admin@switch) > cert-delete name cert1

Successfully deleted all certificate files.
```

If you try to delete a certificate currently in use by a service, the following message displays:

```
CLI (network-admin@switch) > cert-delete name cert1
cert-delete: Certificate is being used by ovs service, cannot delete
```

cert-expiration-alert-modify

NetVisor OS allows you to configure a certificate expiry alarm where the certificate is checked every 24 hours, and an alarm is issued if the number of days of expiry is equal to or less than 30 days. Use this command to configure certificate expiry alerts.

Syntax `cert-expiration-alert-modify`

`netvisor|no-netvisor`	Specify whether to enable or disable NetVisor certificate expiry alerts.
`days-before-expiration 7..180`	Modify the number of days before expiration to send alerts (Default 30 days). The value ranges from 7 through 180 days.

Defaults None

Access CLI

History

Usage Use this command to configure certificate expiry alerts.

Examples To configure the certificate expiry alert for NetVisor certificates, use the command:

```
CLI (network-admin@switch) > cert-expiration-alert-modify  netvisor
```

cert-expiration-alert-show

NetVisor OS allows you to configure a certificate expiry alarm where the certificate is checked every 24 hours, and an alarm is issued if the number of days of expiry is equal to or less than 30 days. Use this command to view the alert configuration for certificate expiry.

Syntax `cert-expiration-alert-show`

Defaults None

Access CLI

History

Usage Use this command to display the certificate expiry alert configuration.

Examples To view the certificate expiry alert configuration for NetVisor certificates, use the command:

```
CLI (network-admin@switch) > cert-expiration-alert-show
switch: switch01
days-before-expiration(d): 30
```

cert-import

This command is used to import CA certificate files from a Simple File Transfer Protocol (SFTP) directory.

Syntax `cert-import`

`name` *`name-string`*	Specify a certificate name.
`file-ca` *`file-ca-string`*	Specify the name of CA certificate file.
`file-server` *`file-server-string`*	Specify the file server name.
`container` *`zone name`*	Specify a certificate zone name.
`file-inter` *`file-inter-string`*	Specify the name of intermediate CA certificate file.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage You can create one common certificate for all NetVisor OS services or create multiple named certificates. Each service can use a different certificate identified by name or container name or zone.The Certificate facility keeps track of certificate use by using various applications. It notifies the applications when a certificate is updated, and it also prevents a certificate from deletion if an application is using it.

Examples To import a CA certificate named cert3 from file server server.pem, use the following command:

```
CLI (network-admin@switch) > cert-import name cert3 file-ca ca.pem file-server
server.pem
Successfully imported certificates.
```

cert-request-create

Use this command to create a certificate signing request from an existing server certificate

Syntax `cert-request-create`

`name name-string`	Specify the certificate name.
`container` *`zone name`*	Specify the certificate zone or container name.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage

Examples To generate a certificate signing request where the certificate name is cert3, use the following command:

```
CLI (network-admin@switch) > cert-request-create name cert3
Certificate signing request successfully generated at /sftp/export/cert3-cert.csr.
```

cert-request-show

This command is used to display certificate signing request information.

Syntax `cert-request-show`

`name` *`name-string`*	The certificate name.
`container zone name`	The certificate zone/container name.
`cert-request cert-request-string`	The certificate signing request.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage You can display certificate signing request information.

Examples To display the certificate request for cert3, use the following command:

```
CLI (network-admin@switch) > cert-request-show name cert3

  ----------------------------------------------------------------
  -----BEGIN CERTIFICATE REQUEST-----
  MIICnDCCAYQCAQEwVzELMAkGA1UEBhMCdXMxCzAJBgNVBAgMAmNhMQswCQYDVQQH
  DAJtcDELMAkGA1UECgwCcGwxDTALBgNVBAsMBGVuZ2cxEjAQBgNVBAMMCXBsdXJp
  YnVzMTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAMrE6Jowg0VKUw2M
  NlL8vp1N8dYE/UL5pvu8FKYWgwG7tC2fjHunZCI0XmssFtZysQul/r9nk+edA5tt
  0zIWRmqTB60wnWmzl6uGymeAsC9OSm0ZHFc9zZfUxKjRM/n1dOri3Pw/rODbCjM9
  qwO5hsvZc/c1o3ajYFrj1yMlKDIiPW1td1VTpc5TL6wCwnDM697Yb9oQ0cbLKTDl
  w5AjQSgJK29rLUl8ptAZXIUkeendpE4MCYrl6Hd+ziOJHXncj65MJyfANTZMrtGD
  IJD3m+JsKZt882vMw3AZ3C9WEuE0OZrbabGBHqVKARik2qFhu2bGjlbuj/M6TOf5
  Jj1WROUCAwEAAaAAMA0GCSqGSIb3DQEBBQUAA4IBAQCh1YhXRNwkwmw3FVH4H0Xi
  rczy0FkyHkdSbIUIf+6n3qroRpBpcEdrx8fREyiw8hLUks9OcUlT+nSshsWIitI7
  R5dcFlyo5HUVjqQQVMlSq3j4fM9XE8y8KRMZ3mfLXRTmuFPxbBuE3ZGjlBSLnBgK
  ODqHF1gVa4u7l9mO3TRXczLQiAPaw38/kxEwkh4erJp4jjXf8K0h9JMGvYONYWeI
  1PbiZpjIWDLNbg6sKqqrPAxEAjzGNMgNPIMXRepmEmnC/BaLVA04noZran8LRLNp
  Id41o3TnlXiAodF/Mc7H5fI1hYf0YzWDSfz3PNufn6Dusu5M2ma7jtWlEdBW8huH
  -----END CERTIFICATE REQUEST----
```

cert-show

This command is used to display certificate information.

Syntax `cert-show`

`name` *`name-string`*	The certificate name.
`container zone name`	The certificate zone or container name.
`cert-type ca|intermediate|server`	The type of certificate: CA, intermediate or server.
`subject` *`subject-string`*	The certificate subject.
`issuer` *`issuer-string`*	The issuer of the certificate.
`serial-number` *`serial-number-number`*	The serial number of the certificate.
`valid-from` *`valid-from-string`*	The time from which the certificate is valid.
`valid-to` *`valid-to-string`*	The time at which the certificate expires, and is no longer valid.
`country` *`country-string`*	The country name (2 letter code).
`state` *`state-string`*	The state or province name.
`city city-string`	The city name.
`organization` *`organization-strings`*	The organization name.
`organizational-unit` *`organizational-unit-string`*	The organization name.
`common-name` *`common-name-string`*	The common name.
`name` *`name-string`*	The certificate name.

Defaults None

Access CLI

History

Version 2.5.4	Command introduced.

Usage You can display all or specific information for a particular certificate.

Examples To display certificate information, use the following command:

```
CLI (network-admin@switch) > cert-show

switch:               switch1
name:                 myswitch1
container:            vpod1-mgr
country:              US
state:                California
city:                 Palo Alto
organization:         Pluribus Networks Inc
organizational-unit: Engineering
common-name:          myswitch1
cert-type:            server
subject:              /C=US/ST=California/L=Palo Alto/O=Pluribus Networks
Inc/OU=Engineering/CN=myswitch1
issuer:               /C=US/ST=California/L=Palo Alto/O=Pluribus Networks
Inc/OU=Engineering/CN=Pluribus Networks Test CA 2k-sha-
256/emailAddress=example@pluribusnetworks.com
serial-number:        2
valid-from:           Apr 20 18:28:45 2017 GMT
valid-to:             Apr 20 18:28:45 2018 GMT
```

cert-switch-show

This command is used to display the validity of NetVisor certificates.

Syntax `cert-switch-show`

`name` *`name-string`*	The certificate name.
`container zone name`	The certificate zone or container name.
`cert-type ca|intermediate|server`	The type of certificate: CA, intermediate or server.
`subject` *`subject-string`*	The certificate subject.
`issuer` *`issuer-string`*	The issuer of the certificate.
`serial-number` *`serial-number-number`*	The serial number of the certificate.
`valid-from` *`valid-from-string`*	The time from which the certificate is valid.
`valid-to` *`valid-to-string`*	The time at which the certificate expires, and is no longer valid.
`country` *`country-string`*	The country name (2 letter code).
`state` *`state-string`*	The state or province name.
`city city-string`	The city name.
`organization` *`organization-strings`*	The organization name.
`organizational-unit` *`organizational-unit-string`*	The organization name.
`common-name` *`common-name-string`*	The common name.
`file-ca file-ca-string`	Name of CA certificate file.
`file-inter file-inter-string`	Name of intermediate CA certificate file.
`file-server file-server-string`	Name of server certificate file.
`cert-ca cert-ca-string`	CA certificate.
`cert-inter cert-inter-string`	Intermediate CA certificate.
`cert-server cert-server-string`	Server certificate.

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage You can display validity information for NetVisor certificates.

Examples To display certificate validity information, use the following command:

```
CLI (network-admin@switch) > cert-switch-show
switch:              switch1
name:                myswitch1
container:           vpod1-mgr
country:             US
state:               California
city:                Palo Alto
organization:        Pluribus Networks Inc
organizational-unit: Engineering
common-name:         myswitch1
cert-type:           server
subject:             /C=US/ST=California/L=Palo Alto/O=Pluribus Networks
Inc/OU=Engineering/CN=myswitch1
issuer:              /C=US/ST=California/L=Palo Alto/O=Pluribus Networks
Inc/OU=Engineering/CN=Pluribus Networks Test CA 2k-sha-
256/emailAddress=example@pluribusnetworks.com
serial-number:       2
valid-from:          Apr 20 18:28:45 2017 GMT
valid-to:            Apr 20 18:28:45 2018 GMT
CLI (network-admin@switch) > cert-switch-show
name: /usr/nvos/cert/core.pem
cert-type: server
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Core
Encryption/CN=Core Encryption
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 291
valid-from: Mar 9 10:19:06 2021 GMT
valid-to: Mar 4 10:19:06 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /usr/nvos/cert/cacert.pem
cert-type: ca
subject: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 17400531076958470354
valid-from: Apr 9 11:00:34 2021 GMT
valid-to: Apr 4 11:00:34 2041 GMT
status: Certificate valid for 7205 days
----------------------------------------
name: /usr/nvos/cert/pkg.pem
```

```
cert-type: server
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Package/CN=Package
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 31
valid-from: Oct 15 19:24:41 2012 GMT
valid-to: Oct 13 19:24:41 2022 GMT
status: Certificate valid for 458 days
----------------------------------------
name: /usr/nvos/cert/newswitch.pem
Page 86 / 950
cert-type: server
subject: /C=US/ST=California/O=Pluribus
Networks/OU=New
Switch/CN=New Pluribus Switch
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 290
valid-from: Mar 9 10:18:37 2021 GMT
valid-to: Mar 4 10:18:37 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/switch.pem
cert-type: server
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Switch/CN=hostid:184560120 serial:2126PN8500255
issuer: /C=US/ST=California/O=Pluribus
Networks/CN=Pluribus Update
Server CA
serial-number: 12343
valid-from: Jun 21 07:00:00 2021 GMT
valid-to: Jun 22 06:59:59 2041 GMT
status: Certificate valid for 7284 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 17400531076958470354
valid-from: Apr 9 11:00:34 2021 GMT
valid-to: Apr 4 11:00:34 2041 GMT
status: Certificate valid for 7205 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=Pluribus Update DNI CA
issuer: /O=Pluribus Networks/L=Palo
```

```
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 295
valid-from: Mar 9 14:34:32 2021 GMT
valid-to: Mar 4 14:34:32 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=Pluribus Update Celestica CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
Page 87 / 950
serial-number: 296
valid-from: Mar 9 14:40:07 2021 GMT
valid-to: Mar 4 14:40:07 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/CN=Pluribus Update
Leadman CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 298
valid-from: Mar 9 14:45:58 2021 GMT
valid-to: Mar 4 14:45:58 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=cb-update.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 297
valid-from: Mar 9 14:43:55 2021 GMT
valid-to: Mar 4 14:43:55 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=celestica-update2.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 299
valid-from: Mar 9 14:47:48 2021 GMT
```

```
valid-to: Mar 4 14:47:48 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=celestica-update.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 300
valid-from: Mar 9 14:48:29 2021 GMT
valid-to: Mar 4 14:48:29 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
Page 88 / 950
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=ct-update2.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 301
valid-from: Mar 9 14:49:17 2021 GMT
valid-to: Mar 4 14:49:17 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=ct-update.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 302
valid-from: Mar 9 14:49:56 2021 GMT
valid-to: Mar 4 14:49:56 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=staging-update.pluribusnetworks.com
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 303
valid-from: Mar 9 14:50:26 2021 GMT
valid-to: Mar 4 14:50:26 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
```

```
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=Pluribus Update Manufacturing CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 110
valid-from: Nov 4 01:08:14 2014 GMT
valid-to: Nov 1 01:08:14 2024 GMT
status: Certificate valid for 1207 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/CN=Pluribus Update
Server CA
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issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 304
valid-from: Mar 9 14:51:10 2021 GMT
valid-to: Mar 4 14:51:10 2041 GMT
status: Certificate valid for 7174 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=Pluribus Update Advantech CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 344
valid-from: Apr 21 12:02:10 2021 GMT
valid-to: Apr 16 12:02:10 2041 GMT
status: Certificate valid for 7217 days
----------------------------------------
name: /var/nvos/cert/cacerts.pem
cert-type: ca
subject: /C=US/ST=California/O=Pluribus
Networks/OU=Update
Servers/CN=Pluribus Update staging CA
issuer: /O=Pluribus Networks/L=Palo
Alto/ST=California/C=US/CN=Pluribus Update Root CA
serial-number: 101
valid-from: Jun 2 22:30:14 2014 GMT
valid-to: May 30 22:30:14 2024 GMT
status: Certificate valid for 1053 days
```

client-server-stats-clear

This command is used to clear statistics generated between a client, and server on the network.

Syntax `client-server-stats-clear`

Specify any of the following options:	
`time date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistics from a specific time period.
`start-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistics from a specific start time, and date.
`end-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistic from a specific end time, and date.
`duration:` *`#d#h#m#s`*	Clear statistics for a specific duration.
`interval duration:` *`#d#h#m#s`*	Clear statistics for a specific interval duration.
`since-start`	Clear statistics from the start of collection.
`older-than duration: #d#h#m#s`	Clear statistics older than a specified date, and time.
`within-last duration: #d#h#m#s`	Clear statistics within a specified duration time.
`count` *`count-number`*	Clear the number of counters.
`vlan` *`vlan-id`*	Clear statistics for a specific VLAN.
`vxlan` *`vxlan-id`*	Clear statistics for a specific VXLAN.
`client-switch-port` *`port-number`*	Clear statistics for a specific port number on the client switch.
`server-switch-port` *`port-number`*	Clear statistics for a specific port number on the server switch.
`client-mac` *`mac-address`*	Clear statistics for a specific client MAC address.
`server-mac` *`mac-address`*	Clear statistics for a specific server MAC address.
`client-ip` *`ip-address`*	Clear statistics for a specific client IP address.
`server-ip` *`ip-address`*	Clear statistics for a specific client IP address.
`server-port`	Specifies the type of statistic to clear from the server port. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`syn` *`syn-number`*	Clear the statistics for SYN packets.
`est` *`est-number`*	Clear the statistics for established connections.

`fin` *`fin-number`*	Clear the statistics for the total number of closed connections.
`obytes` *`obytes-number`*	Specifis the number of outgoing bytes to clear statistics.
`ibytes` *`ibytes-number`*	Specifies the number of incoming bytes to clear statistics.
`total-bytes` *`total-bytes-number`*	Specifies the total bytes to clear statistics.
`avg-dur high resolution time:` *`#ns`*	Clear the average duration of high resolution statistics.
`avg-lat high resolution time:` *`#ns`*	Clear the average latency statistics.
`first-seen date/time:` *`yyyy-mm-ddThh:mm:ss`*	Clear the first-seen statistics only.
`last-seen date/time:` *`yyyy-mm-ddThh:mm`*	Clear the last-seen statistics only.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameters `timestamp`, `start-time`, `end-time`, `duration`, `interval`, `since-start`, `older-than`, and `within-last` added to the command.
Version 2.2	The parameter `no-since-start` deprecated.
Version 2.2.5	The parameters `HDFS-` added.
Version 2.2.6	The parameters `MR`, `HBase`, `Ganglia`, `Cassandra`, and `Nutanix` added to `server-port`.

Usage You can clear all statistics for a client server connection or you can use a filter to clear specific statistics.

Examples To clear statistics for VLAN12, use the following command:

```
CLI (network-admin@switch) > client-server-stats-clear  vlan  12
```

client-server-stats-show

This command is used to show statistics generated between a client, and server on the network.

Syntax `client-server-stats-show`

`timestamp date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistics from a specific timestamp period.
`start-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistics from a specific start time, and date.
`end-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	Clear statistic from a specific end time, and date.
`duration:` *`#d#h#m#s`*	Clear statistics for a specific duration.
`interval duration:` *`#d#h#m#s`*	Clear statistics for a specific interval duration.
`since-start`	Clear statistics from the start of collection.
`older-than duration: #d#h#m#s`	Clear statistics older than a specified date, and time.
`within-last duration: #d#h#m#s`	Clear statistics within a specified duration time.
`count` *`count-number`*	The number of counters.
`vlan` *`vlan-id`*	The statistics for a specific VLAN.
`vxlan` *`vxlan-id`*	The statistics for a specific VXLAN.
`client-switch-port` *`port-number`*	The statistics for a specific port number on the client switch.
`server-switch-port` *`port-number`*	The statistics for a specific port number on the server switch.
`client-mac` *`mac-address`*	The statistics for a specific client MAC address.
`server-mac` *`mac-address`*	The statistics for a specific server MAC address.
`client-ip` *`ip-address`*	The statistics for a specific client IP address.
`server-ip` *`ip-address`*	The statistics for a specific client IP address.
`server-port`	The type of protocol on the server port. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`syn` *`syn-number`*	The number of SYN packets.

`est` *`est-number`*	The number established connections.
`fin` *`fin-number`*	The total number of closed connections statistics.
`syn-resends` *`syn-resends-number`*	The number of SYN packet resends.
`syn-ack-resends` *`syn-ack-resends-number`*	The number of SYN-ACK packet resends.
`obytes` *`obytes-number`*	The number of outgoing bytes to clear statistics.
`ibytes` *`ibytes-number`*	The number of incoming bytes to clear statistics.
`total-bytes` *`total-bytes-number`*	The total bytes to clear statistics.
`avg-dur high resolution time:` *`#ns`*	The average duration of high resolution statistics.
`avg-lat high resolution time:` *`#ns`*	The average latency statistics.
`first-seen date/time:` *`yyyy-mm-ddThh:mm:ss`*	The first-seen statistics only.
`last-seen date/time:` *`yyyy-mm-ddThh:mm`*	The last-seen statistics only.
`last-seen-ago duration: #d#h#m#s`	The duration to clear statistics.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameters `syn-resends`, and `syn-ack-resends` added.

Usage You can display all statistics for a client server connection or you can use a filter to display specific statistics.

Examples To display all statistics on switch pleiedes24, use the following command:

```
CLI (network-admin@switch) > client-server-stats-show  layout  vertical

  switch:              pleiades24
  vlan:                1
  vxlan:               0
  client-ip:            192.171.1.65
  server-ip:            192.171.2.60
  server-port:          ssh
  syn:                  4
  est:                  0
  fin:                  724
```

```
obytes:                1.29M
ibytes:                2.70M
total-bytes:           3.99M
avg-dur:               486ms
avg-lat:               97.1us
last-seen-ago:         51m4s
switch:               pleiedes24
vlan:                 1
vxlan:                0
client-ip:             192.171.1.31
server-ip:             192.171.2.60
server-port:           ssh
syn:                   10
est:                   0
fin:                   1.60K
obytes:                2.92M
ibytes:                6.09M
total-bytes:           9.01M
avg-dur:               490ms
avg-lat:               86.3us
last-seen-ago:         51m4s
```

client-server-stats-clear-history

This command is used to clear the history of client, and server statistics.

Syntax `client-server-stats-clear-history`

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Examples To clear the history of client and server statistics, use the following command:

```
CLI (network-admin@switch) > client-server-stats-clear-history
```

cluster-bringdown-modify

This command is used to modify cluster bring down settings.

Syntax `cluster-bringdown-modify`

Specify any of the following options:	
`vlag-port-staggered-interval` *`duration: #d#h#m#s`*	Specifies the interval between vLAG ports bringdown.
`defer-node-1-ports` *`port-list`*	Specify the ports to be brought down after vLAG & l3 for cluster-node-1.
`defer-node-2-ports` *`port-list`*	Specify the ports to be brought down after vLAG & l3 for cluster-node-2.
`fast_port_down|no-fast_port_down`	Specifies faster, simultaneous port down during switch reboot.

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use this command to modify cluster bring down settings.

Examples To modify cluster bring down settings, use the following command:

```
CLI (network-admin@switch) > cluster-bringdown-modify vlag-port-staggered-
interval 3s
```

cluster-bringdown-show

This command is used to display cluster bring down settings.

Syntax `cluster-bringdown-show`

Specify any of the following options:

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use this command to display cluster bring down settings.

Examples To display cluster bring down settings, use the following command:

```
CLI (network-admin@switch) > cluster-bringdown-show
vlag-port-staggered-interval: 0s
defer-node-1-ports:           73,77,105,109
defer-node-2-ports:           73,77,105,109
fast_port_down:               true
```

cluster-bringup-modify

This command is used to update cluster bring up settings.

Syntax `cluster-bringup-modify`

Specify any of the following options:	
`l3-port-bringup-mode staggered| simultaneous`	Specifies the L3 port bring up mode during start up.
`l3-port-staggered-interval` *`duration: #d#h#m#s`*	Specifies the interval between L3 ports in L3 staggered mode.
`vlag-port-bringup-mode staggered| simultaneous`	Specifies the vLAG port bring up mode during start up.
`vlag-port-staggered-interval` *`duration: #d#h#m#s`*	Specifies the interval between vLAG ports in vLAG staggered mode.
`cluster-trunk-port-staggered-interval` *`duration: #d#h#m#s`*	Specifies the interval between cluster trunk ports in staggered mode.
`maximum-sync-delay` *`duration: #d#h#m#s`*	Specifies the maximum delay to wait for cluster to sync before starting L3/vLAG port bring up.
`l3-to-vlag-delay` *`duration: #d#h#m#s`*	Specifies delay between last L3 port, and first vLAG port bring up.
`l3-to-vlan-interface-delay` *`duration: #d#h#m#s`*	Specifies delay between last L3 port, and vRouter VLAN interface bring up
`port-defer-bringup-delay` *`duration: #d#h#m#s`*	Specifies Global timer value used for port delay-bring up.
`port-defer-bringup-mode` *`staggered| simultaneous`*	Specifies the port defer-bring up mode during start up.
`port-defer-bringup-staggered-interval` *`duration: #d#h#m#s`*	Specifies the interval between ports in defer-bring up mode.
`vrouter-if-bringup-mode staggered| simultaneous`	Specifies the vRouter VLAN interface bring up mode.
`vrouter-if-staggered-interval` *`0..60000`*	Specifies the interval (ms) between vRouter VLAN interface bring ups in staggered mode.
`start-port-enable-delay` *`0..240`*	Specifies the time delay (sec) to start enabling ports (incl cluster ports) on slave switch.

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use this command to update cluster bring up settings.

Examples To update the settings of cluster bring up process, use the following command:

```
CLI (network-admin@switch) > cluster-bringup-modify maximum-sync-delay 1m port-
defer-bringup-delay 45s
```

cluster-bringup-show

This command is used to display cluster bring up settings.

Syntax `cluster-bringup-show`

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use this command to display cluster bring up settings.

Examples To display the status of the cluster bring up process, use the following command:

```
CLI (network-admin@switch) > cluster-bringup-show
switch:                                 switch
state:                                  ports-enabled
l3-port-bringup-mode:                   staggered
l3-port-staggered-interval:             3s
vlag-port-bringup-mode:                 staggered
vlag-port-staggered-interval:           3s
maximum-sync-delay:                     1m
l3-to-vlag-delay:                       15s
l3-to-vlan-interface-delay:             0s
port-defer-bringup-delay:               30s
port-defer-bringup-mode:                staggered
port-defer-bringup-staggered-interval:  0s
```

cluster-create

To create a new cluster for high availability (HA) in a fabric, use the `cluster-create` command.

Syntax `cluster-create`

`name` *`name-string`*	Specify the cluster name.
`cluster-node-1` *`fabric-node name`*	Specify the name of the first fabric node in the cluster.
`cluster-node-2` *`fabric-node name`*	Specify the name of the second fabric node in the cluster.
Any of the following options:	
`vxlan` *`0..16777215`*	Specify the VXLAN ID for cluster over L3.
`node1-ip` *`ip-address`*	Specify the IP address of cluster node 1.
`node2-ip` *`ip-address`*	Specifies the IP address of cluster node 2.
`validate|no-validate`	Validate the inter-switch links, and state of the switches in the cluster.
`cluster-sync-timeout` *`500..20000`*	Specify the amount of time before a cluster times out during synchronization. The allowed range is between 500ms, and 2000ms.
`cluster-sync-offline-count` *`1..30`*	Specify the number of missed synchronizations before the cluster goes offline.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `private-link` added.
Version 2.2	The parameter `private-link` deprecated.
Version 3.0.0	The parameters `cluster-sync-timeout` and `cluster-sync-offline-count` added.
Version 7.0.0	The parameters `vxlan`, `node1-ip`, `node2-ip` added.

Usage Clusters are typically used in conjunction with a virtual link aggregation group (VLAG) that allows links physically connected to two separate switches appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Clustering switch pairs over Layer 3 requires the creation of VXLAN tunnels between the cluster nodes through the intermediate switch(es). The VXLAN tunnels function as virtual cluster links, and carry both control traffic, and data traffic. For further clarification, refer to the Configuration Guide.

Examples To configure the cluster that includes Leaf1, and Leaf2, use the following command:

```
CLI (network-admin@switch) > cluster-create name name cluster1 cluster-node-1 Leaf1
cluster-node-2 Leaf2 vxlan 40940 node1-ip 192.168.1.1 node2-ip 192.168.1.2
```

cluster-modify

To modify a cluster for high availability (HA) in a fabric, use the `cluster-modify` command.

Syntax `cluster-modify`

`name` *`name-string`*	Specify the name of the cluster.
Any of the following options:	
`vxlan` *`0..16777215`*	Specify the VXLAN ID for cluster over L3.
`node1-ip` *`ip-address`*	Specify the IP address of cluster node 1.
`node2-ip` *`ip-address`*	Specifies the IP address of cluster node 2.
`cluster-sync-timeout` *`milliseconds`*	Specify the amount of time before a cluster times out during synchronization. Specify a time between 500, and 2000 ms.
`cluster-sync-offline-count` *`number`*	Specify the number of missed synchronizations before the cluster goes offline.
`enable|disable`	Enable or disable the cluster configuration.
`stp-mode rstp|mstp`	Specify the STP mode for the cluster.
`bpdus-bridge-ports|bpdus-all-ports`	Specify sending BPDU packets to a specific bridge port.
`bridge-id` *`mac-address`*	Specify the MAC address as the bridge ID.
`bridge-priority` *`number`*	Specify the bridge priority as a multiple of 4096 with a default value of 32768.
`hello-time` *`seconds`*	Specify the hello-time in seconds with a default time of 2 seconds.
`forwarding-delay` *`seconds`*	Specify the forwarding-delay between 4, and 30 seconds with a default time of 15 seconds.
`max-age` *`seconds`*	Specify the maximum age time between 6, and 40 seconds with a default time of 20 seconds.
`mst-max-hops` *`number`*	Specify the maximum hop count for MSTP BPDU packets. The default value is 20 hops.
`mst-config-name` *`mst-config-name-string`*	Specify the name of the MST configuration instance.
`mst-config-revision` *`mst-config-revision-number`*	Specify the MST configuration revision number. Allowed values are between 0, and 65535.
`root-guard-wait-time` *`seconds`*	Specify the root guard wait time between 0, and 300 seconds with a default value of 20 seconds. If

	you set the time to 0, you disable the parameter.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter private link was added.
Version 2.2	Command deprecated.
Version 3.0.0	Command reintroduced with new parameters.
Version 6.0.1	Introduced the `mst-config-revision` parameter.

Usage A cluster allows two switches to cooperate in high-availability (HA) deployments. The nodes that form the cluster must be members of the same fabric. Clusters are typically used in conjunction with a virtual link aggregation group (VLAG) that allows links physically connected to two separate switches appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Examples To modify a cluster named, `cluster_eng`, , use the following command:

```
CLI (network-admin@switch) > cluster-modify name cluster_eng cluster-syn-timeout 500ms
```

cluster-show

To display a cluster configuration in a fabric, use the `cluster-show` command.

Syntax `cluster-show`

`name` *`name-string`*	Name of the cluster.
`cluster-id`	The ID assigned to the cluster configuration.
`state`	• `offline` • `unavailable` • `online` • `coming-online` • `slave-ready` • `going offline`
`cluster-node-1`	The name of the first fabric node in the cluster.
`cluster-node-2`	The name of the first fabric node in the cluster.
`tid` *`tid-number`*	The transaction ID number.
`mode none|master|slave`	The mode assigned to the cluster.
`ports` *`port-list`*	The list of ports.
`remote-ports` *`port-list`*	The list of remote ports.
`validate|no-validate`	Validate the inter-switch links, and state of the switches in the cluster.
`cluster-sync-timeout` *`milliseconds`*	Specify the amount of time before a cluster times out during synchronization. Specify a time between 500, and 2000 ms.
`cluster-sync-offline-count` *`number`*	Specify the number of missed synchronizations before the cluster goes offline.
`enable|disable`	The if you enabled or disabled STP.
`stp-mode rstp|mstp`	The STP mode.
`bpdus-bridge-ports|bpdus-all-ports`	The if the cluster sends BPDU packets to bridge specific ports.
`bridge-id` *`mac-address`*	The bridge MAC address.
`bridge-priority` *`bridge-priority-number`*	The bridge priority with a default value of 32768.

`hello-time` *`seconds`*	The hello time in seconds
`forwarding-delay` *`seconds`*	The forwarding time delay in seconds.
`max-age` *`seconds`*	The maximum aging time in seconds.
`mst-max-hops` *`count`*	The number of maximum hops for MSTP BPDUs.
`mst-config-name` *`mst-config-name-string`*	The name of the MST configuration instance.
`mst-config-revision` *`mst-config-revision-number`*	The MST configuration revision number.
`mst-config-digest` *`mst-config-digest-string`*	The MST configuration digest.
`cluster-mode none|master|slave`	The STP cluster mode.
`mst-digest-mismatch-on-ports port-list`	The MST digest mismatch.
`mst-digest-mismatch-on-peer-ports port-list`	The MST digest mismatch for cluster peer.
`mst-config-id-mismatch-on-ports port-list`	The MST Config ID mismatch.
`mst-config-id-mismatch-on-peer-ports port-list`	The MST Config ID mismatch for cluster peer.
`mst-revision-mismatch-on-ports port-list`	The MST Revision mismatch.
`mst-revision-mismatch-on-peer-ports port-list`	The MST Revision mismatch for cluster peer.
`root-guard-wait-time` *`seconds`*	The root guard wait time.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `private-link`added.
Version 2.2	The parameter `private-link`, deprecated.
Version 2.4	The parameters `mode` and `remote-ports`

	added. The option `synching` deprecated. The option `slave-ready`, and `going-offline` added.
Version 2.4.1	The parameters `online`, and `unavailable` added.
Version 3.0.0	The parameters `cluster-sync-timeout` and `cluster-sync-offline-count` added.
Version 6.0.1	The parameters `mst-config-revision` added.

Usage The information about cluster configurations on the network.

Examples To show information about a cluster configuration, use the following command:

```
CLI (network-admin@switch) > cluster-show format all layout vertical

  name:            vlag
  id:              a000030:1
  state:           online
  cluster-node-1:  pubdev01
  cluster-node-2:  pubdev02
  tid:             0
  mode:            master
  remote-port:     33,34
  ports:           26,128
```

cluster-delete

To delete a cluster for high availability (HA) in a fabric, use the `cluster-delete` command.

Syntax `cluster-delete`

`name` *`name-string`*	Specify the name of the cluster.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `private-link` added.
Version 2.2	The parameter `private-link` deprecated.

Usage A cluster allows two switches to cooperate in high-availability (HA) deployments. The nodes that form the cluster must be members of the same fabric. Clusters are typically used in conjunction with a virtual link aggregation group (VLAG) that allows links physically connected to two separate switches appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Examples To delete a cluster named, `cluster_eng`, use the following command:

```
CLI (network-admin@switch) > cluster-delete name cluster_eng
```

cluster-info

To view information about clusters in a fabric, use the `cluster-info` command.

Informational Note: You may configure multiple clusters of switches within a single fabric. However, a switch can participate in only one cluster configuration. For example, switch-1, and switch-2 can participate in cluster-1, and switch-3, and switch-4 can participate in cluster-2, but switch-1, and switch-2 cannot participate in cluster-2 or any other cluster.

Syntax `cluster-info`

`cluster-name`	Displays the name of the cluster.
`cluster-node-1`	Displays the name of the first fabric node in the cluster.
`cluster-node-2`	Displays the name of the second fabric node in the cluster.
`tid`	Displays the transaction ID.
`ports`	Displays the port used to create the cluster configurarion.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `private-link` added.
Version 2.2	The parameter `private-link` deprecated.

Usage A cluster allows two switches to cooperate in high-availability (HA) deployments. The nodes that form the cluster must be members of the same fabric. Clusters are typically used in conjunction with a virtual link aggregation group (VLAG) that allows links physically connected to two separate switches appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Examples To display information a cluster named, `vlag`, use the `cluster-info` command:

```
CLI (network-admin@switch) > cluster-info

  name:            vlag
  state:           online
  cluster-node-1:  167772208
  cluster-node-2:  167772196
```

```
tid:              1
ports:            26
```

cluster-membership-modify

To modify a cluster membership for high availability (HA) in a fabric, use the `cluster-membership-modify` command.

Syntax `cluster-membership-modify`

`name` *`name-string`*	Specify the name of the cluster membership.
`cluster-node-1 fabric-node` *`name`*	Specify the name of the first fabric node in the cluster.
`cluster-node-2 fabric-node` *`name`*	Specify the name of the second fabric node in the cluster.

Defaults None

Access CLI

History

Version 2.5.0	Command introduced.
Version 3.0.0	The parameter `validate|no-validate` deprecated.

Usage A cluster allows two switches to cooperate in high-availability (HA) deployments. Clusters are typically used in conjunction with a virtual link aggregation group (VLAG) that allows links physically connected to two separate switches appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Examples To modify a cluster membership, `cluster_eng`, using an interswitch link or trunk between two cluster nodes, `fabric_a` and `fabric_b`, and is available to other network traffic, use the following command:

```
CLI (network-admin@switch) > cluster-create name cluster_eng cluster-node-1 fabric_a
cluster-node-2 fabric_b
```

cluster-membership-show

To display a cluster membership for high availability (HA) in a fabric, use the `cluster-membership-show` command.

Syntax `cluster-membership-show`

switch *fabric-node name*	The switch name.
name *name-string*	Name of the cluster membership.
id	The ID assigned to the cluster.
state offline|online|unavailable|coming-online|slave-ready|going-offline	The state of the cluster.
cluster-node-1 *fabric-node name*	Specify the name of the first fabric node in the cluster.
cluster-node-2 *fabric-node name*	Specify the name of the second fabric node in the cluster.
vxlan 0..16777215	VXLAN ID for Cluster over tunnel.
node1-ip *ip-address*	Specify the IP address of cluster node 1.
node2-ip *ip-address*	Specify the IP address of cluster node 2.
tid *tid-number*	The transaction ID assigned to the cluster.
mode none|master|slave	The cluster mode.
ports *port-list*	The list of ports.
remote-ports *port-list*	The list of remote ports.
validate|no-validate	The if the cluster link validated.
cluster-sync-timeout *mseconds*	The cluster synchronization timeout in ms.
cluster-sync-offline-count *number*	The number of missed timeouts before the cluster goes offline.
enable|disable	The if you enabled or disabled STP.
stp-mode rstp|mstp	The STP mode.
bpdus-bridge-ports|bpdus-all-ports	The if the cluster sends BPDU packets to bridge specific ports.
bridge-id *mac-address*	The MAC address of the bridge.
bridge-priority *bridge-priority-number*	The bridge priority with a default value of 32768.

`hello-time` *`seconds`*	The hello time in seconds
`forwarding-delay` *`seconds`*	The forwarding time delay in seconds.
`max-age` *`seconds`*	The maximum aging time in seconds.
`mst-max-hops` *`count`*	The number of maximum hops for MSTP BPDUs.
`mst-config-name` *`mst-config-name-string`*	Name of the MST configuration instance.
`mst-config-revision` *`mst-config-revision-number`*	The MST Revision number from 0 to 65535.
`mst-config-digest` *`mst-config-digest-string`*	The MST configuration digest.
`cluster-mode none|master|slave`	The STP cluster mode.
`mst-digest-mismatch-on-ports` *`port-list`*	The MST digest mismatch.
`mst-digest-mismatch-on-peer-ports` *`port-list`*	The MST digest mismatch for cluster peer.
`mst-config-id-mismatch-on-ports` *`port-list`*	Displays MST Config ID mismatch.
`mst-config-id-mismatch-on-peer-ports` *`port-list`*	The MST Config ID mismatch for cluster peer.
`mst-revision-mismatch-on-ports` *`port-list`*	The MST Revision mismatch.
`mst-revision-mismatch-on-peer-ports` *`port-list`*	The MST Revision mismatch for cluster peer.
`root-guard-wait-time` *`seconds`*	The root guard wait time.

Defaults None

Access CLI

History

Version 2.5.0	Command introduced.
Version 3.0.0	The parameter `validate|no-validate` deprecated.
Version 6.0.1	The parameter `mst-config-revision` added.

Usage A cluster allows two switches to cooperate in high-availability (HA) deployments. The nodes forming the cluster must be members of the same fabric. Clusters are typically used in conjunction

with a virtual link aggregation group (VLAG) allowing links physically connected to two separate switches to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device.

Examples To display a cluster membership, use the following command:

```
CLI (network-admin@switch) > cluster-membership-show
```

connection-clear

To clear connection statistics for a switch, use the `connection-clear` command.

Syntax `connection-clear`

Specify any of the following options:	
`time date/time: yyyy-mm-ddThh:mm:ss`	Clear statistics from a specific timestamp period.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	Clear statistics from a specific start time, and date.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	Clear statistic from a specific end time, and date.
`duration: #d#h#m#s`	Clear statistics for a specific duration.
`interval duration: #d#h#m#s`	Clear statistics for a specific interval duration.
`since-start`	Clear statistics from the start of collection.
`older-than duration: #d#h#m#s`	Clear statistics older than a specified date, and time.
`within-last duration: #d#h#m#s`	Clear statistics within a specified duration time.
`count count-number`	Clear the count number.
`vlan vlan_id`	Specifies the VLAN identifier.
`egress-vnet vnet-name`	Specifies the egress vNET.
`egress-bd bridge-domain name`	Specifies the bridge domain of the connection information.
`egress-vlan vlan_id`	Specifies the egress VLAN of the connection.
`vxlan vxlan-id`	Specifies the VXLAN identifier.
`vnet vnet-string`	Specifies the name of the virtual network (vNET).
`src-switch-port`	Specifies the physical port number on the switch where a client requested a connection.
`dst-switch-port`	Specifies the physical port number on the switch where a server responded to a connection.
`ether_type`	Specifies the EtherType value or keyword of the connection. The keywords can be `arp`, `dot1X`, `fcoe`, `fcoe-init`, `ipv4`, `ipv6`, `jumbo`, `lldp`, `macsec`, `mpls-multi`, `mpls-uni`, `ptp`, `qing`,

	`rarp, vlan, and wake`.
`src-mac-addr`	Specifies the MAC address of the client requesting a connection.
`dst-mac-addr`	Specifies the MAC address of the server responding to a connection.
`src-ip`	Specifies the IP address of the client requesting a connection.
`dst-ip`	Specifies the IP address of the server responding to a connection.
`src-port`	Specifies the type of port used by the client requesting a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`dst-port`	Specifies the type of port used by the server responding to a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`dscp`	Specifies the 6-bit Differentiated Services Code Point (DSCP).
`protocol tcp|udp|icmp|igmp|ip`	Specifies the protocol.
`tunnel-vnet` *`vnet-name`*	Specifies the tunnel vNET name.
`tunnel-bd` *`bridge-domain name`*	Specifies the tunnel bridge domain.
`tunnel-vlan` *`vlan-id`*	Specifies the VLAN ID.
`tunnel-src-mac` *`mac-address`*	Specifies the tunnel source MAC address.
`tunnel-dst-mac` *`mac-address`*	Specifies the tunnel destination MAC address.
`tunnel-src-ip` *`ip-address`*	Specifies the tunnel source IP address
`tunnel-dst-ip` *`ip-address`*	Specifies the tunnel destination IP address.
`tunnel-src-port`	Specifies the type of port used by the client requesting a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`tunnel-dst-port`	Specifies the type of port used by the client requesting a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`tunnel-proto tcp|udp|icmp|igmp|ip|`	Specifies the protocol assigned to the tunnel.

icmpv6	
cur-state syn|est|fin|rst	Specifies the current state of the connection.
dur high resolution time:*#ns*	Specifies the duration for high resolution time in nano seconds.
latency high resolution time:*#ns*	Specifies the latency for high resolution time in nano seconds
latency(us)	Specifies the network transmit time (latency) experienced by the connection in microseconds.
obytes	Specifies the number of bytes sent from the client side of the connection.
ibytes	Specifies the number of bytes received by the client side of the connection.
total-bytes	Specifies the total number of bytes for the connection.
update-id high resolution time: #ns	Specifies the last update to the connection in elapse time (nanoseconds).
started-time-ns high resolution time: #ns	Specifies the started time of the connection in nanoseconds.
started-time date/time: yyyy-mm-ddThh:mm:ss	Specifies the time, and date of the initial connection.
ended-time date/time: yyyy-mm-ddThh:mm:ss	Specifies the time, and date when the connection ended.
transition-state any|started-and-ended |started|ended| ongoing	Specifies the transition state of the connection.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.2	Command changed to `connection-clear`. bytes-sent, and bytes-recvd changed to obytes, and ibytes. older-than, and within-last parameters added.
Version 2.1	The parameters `client`, and `server` changed to `src` and `dst`. The parameter `service`, is

	deprecated. The parameters `started-time`, `ended-time`, and `transition-state` added.
Version 2.2	The parameter `no-since-start` deprecated.
Version 2.2.5	The parameters `HDFS-` added.
Version 2.4	The parameter `egress-vlan` added.
Version 2.4.1	The parameter `egress-vnet` added.
Version 2.6.2	The parameters `tunnel-*` added.
Version 5.1.1	The parameters `egress-bd`, `tunnel-bd`, `update-id high resolution time`, and `started-time-ns high resolution time` added.

Usage Clears statistical information about the current connections on the switch.

Examples To clear the history of connection statistics on switch1, use the following command:

```
CLI (network-admin@switch) > connection-clear
```

connection-clear-history

This command is used to clear the history of connection statistics.

Syntax `connection-clear-history`

Defaults None

Access CLI

History

Usage You can clear the history of connection statistics by using this command

Examples To clear the history of connection statistics on switch1, use the following command:

```
CLI (network-admin@switch) > connection-clear-history
```

connection-latency-show

This command is used to display latency information for connections on the switch. Comparing latency information for connections at various times can show whether the network performance has changed or stayed the same, and potentially eliminate the network as the cause of the problem.

Syntax `connection-latency-show`

`min high resolution time: #ns`	The minimum latency in nanoseconds.
`max high resolution time: #ns`	The maximum latency in nanoseconds.
`num-bins num-bins-number`	Specify the number of bins to divide the latency range. Bins display the number of connections at each latency interval.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage You can display all of the latency information about a connection or you can filter by the number of bins to display. Comparing latency information for connections at various times can show whether the network performance has changed or stayed the same, and potentially eliminate the network as the cause of the problem

Examples To display all latency information on pleiades24, use the following command:

```
CLI (network-admin@switch) > connection-latency-show
switch     min    max    num-conns percent avg-dur obytes ibytes total-bytes
---------- ------ ------ --------- ------- ------- ------ ------ -----------
pleiades2  40.00ns 20.0us 13        0%              0      0      0
pleiades24 20.0us 40.0us 80        3%      1.28us  146K   305K   451K
pleiades24 40.0us 60.0us 671       28%     14.9us  1.19M  2.50M  3.69M
pleiades24 60.0us 80.0us 649       27%     19.2us  1.16M  2.42M  3.57M
pleiades24 80.0us 100us  337       14%     12.9us  615K   1.25M  1.86M
pleiades24 100us  120us  219       9%      10.2us  400K   835K   1.21M
pleiades24 120us  140us  114       4%      6.33us  208K   434K   642K
pleiades24 140us  160us  63        2%      4.01us  115K   241K   356K
pleiades24 160us  180us  58        2%      4.19us  106K   222K   327K
pleiades24 180us  200us  35        1%      2.85us  63.9K  134K   198K
pleiades24 200us         94        4%      13.2us  172K   359K   530K
```

connection-stats-clear

This command clears statistics collected while connected to the host.

Syntax `connection-stats-clear`

`time date/time: yyyy-mm-ddThh:mm:ss`	Specify a time to clear statistics collection.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	Specify the start-time for statistics collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	Specify the end-time for statistics collection.
`duration: #d#h#m#s`	Specify the duration of statistics collection.
`interval duration: #d#h#m#s`	Specify the interval between statistics collection.
`since-start`	Clears statistics from the start of collection.
`older-than duration: #d#h#m#s`	Clears statistics older than a specified duration.
`within-last duration: #d#h#m#s`	Clears statistics within the last specified duration.
`count count-number`	Specify a count for connection statistics
`mac mac-address`	Specify the MAC address of connections
`vnet vnet-name`	Specify the vNET name of connections
`vlan vlan_id`	Specify the VLAN of connections.
`ip ip-address`	Specify the IP address of connections
`port port-number`	Specify the port number of connections.
`iconns iconns-number`	Specify the number of incoming connections.
`oconns oconns-number`	Specify the number outgoing connections.
`obytes`	Specify the number of bytes sent from the client side of the connection.
`ibytes`	Specify the number of bytes received by the client side of the connection.
`total-bytes total-bytes-number`	Specify the total number of bytes for the connection.
`first-seen date/time: yyyy-mm-ddThh:mm:ss`	Specify the time at which an entry was first seen.

`last-seen date/time: yyyy-mm-ddThh:mm:ss`	Specify the time at which an entry was last seen.
`last-seen-ago duration: #d#h#m#s`	Specify the duration since the statistics was last seen.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.2	Command changed to `connection-stats-show`.
Version 2.2	The parameter `no-since-start` deprecated.
Version 2.4.1	The parameters `vnet`, and `total-bytes` added.

Usage Used to clear statistics for a connection to a host.

Examples To clear the statistics from port 23, use the following command:

```
CLI (network-admin@switch) > connection-stats-clear port 23
```

connection-stats-show

This command displays statistics collected when connected to a host.

Syntax `connection-stats-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	Specify a time to display connection statistics.
`start-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	The statistics from a specific start time, and date.
`end-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	The statistic from a specific end time, and date.
`duration:` *`#d#h#m#s`*	The statistics for a specific duration.
`interval duration:` *`#d#h#m#s`*	The statistics for a specific interval duration.
`since-start|no-since-start`	The statistics from the start of collection.
`older-than duration: #d#h#m#s`	The statistics older than a specified date, and time.
`within-last duration: #d#h#m#s`	The statistics within a specified duration time.
`count` *`count-number`*	Clear a specific number of statistics.
`mac` *`mac-address`*	Clear statistics for a MAC address.
`vnet` *`vnet-name`*	The vNET name of the connection.
`vlan` *`vlan_id`*	The VLAN identifier.
`ip` *`ip-address`*	The IP address of the connection.
`port` *`port-number`*	The port number of the connection.
`iconns` *`iconns-number`*	The number of incoming connections.
`oconns` *`oconns-number`*	The number outgoing connections.
`obytes`	The number of bytes sent from the client side of the connection.
`ibytes`	The number of bytes received by the client side of the connection.
`total-bytes` `total-bytes-number`	The total number of bytes for the connection.
`first-seen date/time: yyyy-mm-ddThh:mm:ss`	Clear statistics from the time a connection is first seen.
`last-seen date/time: yyyy-mm-`	Clear statistics from the time a connection was

ddThh:mm:ss	last seen.

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.2	Command changed to `connection-stats-show`.
Version 2.2	The parameter `total-bytes` added.
Version 2.4	The parameter `age` deprecated.
Version 2.4.1	The parameter `vnet` added.

Usage Used to clear statistics about a connection to a host.

Examples To display the statistics from port 23, use the following command:

```
CLI (network-admin@switch)1 > connection-stats-show format all layout vertical

  switch:        switch1
  mac:           64:0e:94:28:03:56
  vnet:          vnet-global
  vlan:          1
  ip:            192.168.42.30
  port:          41
  iconns:        184
  oconns:        0
  ibytes:        0
  obytes:        0
  total-bytes:   0
  first-seen:    01-14,10:33:44
  last-seen:     01-14,10:35:22
  last-seen-ago: 5d23h29m53s
  switch:        switch1
  mac:           64:0e:94:28:00:5e
  vlan:          1
  ip:            192.168.42.20
  port:          47
  iconns:        3
  oconns:        0
  ibytes:        1.47K
  obytes:        14.8K
  total-bytes:   16.3K
  first-seen:    01-13,13:59:35
  last-seen:     01-19,22:45:21
  last-seen-ago: 11h19m54s
```

connection-stats-clear-history

This command is used to clear the history of connection statistics.

Syntax `connection-stats-clear-history`

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Examples To clear the history of connection statistics on switch1, use the following command:

```
CLI (network-admin@switch) > connection-stats-clear-history
```

connection-stats-settings-modify

This command allows you to modify the settings for collecting statistical data about connections.

Syntax `connection-stats-settings-modify`

Specify one or more of the following options:	
`enable|disable`	Enable or disable collecting connection statistics.
`connection-max-memory` *`connection-max-memory-number`*	Specify the maximum memory allowed for connection statistics.
`connection-backup-enable|connection-backup-disable`	Enable or disable backup for connection statistics collection. This option is disabled by default.
`connection-backup-interval duration:` *`#d#h#m#s`*	Specify backup interval for connection statistics collection.
`client-server-stats-max-memory` *`client-server-stats-max-memory-number`*	Specify maximum memory for client server statistics.
`client-server-stats-log-enable|client-server-stats-log-disable`	Enable or disable client server statistics logging. This option is disabled by default.
`client-server-stats-log-interval duration:` *`#d#h#m#s`*	Specify the client server statistics logging interval.
`client-server-stats-log-disk-space` *`disk-space-number`*	Specify the disk-space allocated for client server statistics logging.
`connection-stats-max-memory` *`connection-stats-max-memory-number`*	Specify the maximum memory allowed for connection statistics.
`connection-stats-log-enable|connection-stats-log-disable`	Enable or disable connection statistics logging. This option is disabled by default.
`connection-stats-log-interval duration: #d#h#m#s`	Specify the connection statistics logging interval.
`connection-stats-log-disk-space` *`disk-space-number`*	Specify the disk-space allocated for connection statistics logging.
`service-stat-max-memory` *`service-stat-max-memory-number`*	Specify the maximum memory allowed for service statistics.
`fabric-connection-max-memory` *`fabric-connection-max-memory-number`*	Specify the maximum memory allowed for fabric connection statistics.
`fabric-connection-backup-enable|fabric-connection-backup-disable`	Enable or disable backup for fabric connection statistics collection. This option is disabled by default.

`fabric-connection-backup-interval duration: #d#h#m#s`	Specify the backup interval for fabric connection statistics collection.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify connection statistics collection.

Examples To disable statistics collection, use the following syntax:

```
CLI (network-admin@switch)1 > collection-stats-settings-modify
disable
```

connection-stats-settings-show

This command allows you to display the settings for collecting statistical data about connections.

Syntax `connection-stats-settings-show`

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display connection statistics settings.

Examples To display connection statistics settings, use the following syntax:

```
CLI (network-admin@switch)1 > connection-stats-settings-show
switch:                                   switch1
enable:                                   yes
connection-max-memory:                    50M
connection-max-count:                     52012
connection-current-count:                 28482
connection-backup-enable:                 no
connection-backup-interval:               1m
connection-backup-used-disk-space:        5.54M
client-server-stats-max-memory:           50M
client-server-stats-max-cnt:              71234
client-server-stats-cur-cnt:              132
client-server-stats-log-enable:           no
client-server-stats-log-interval:         1m
client-server-stats-log-disk-space:       50M
connection-stats-max-memory:              50M
connection-stats-max-cnt:                 82956
connection-stats-cur-cnt:                 108
connection-stats-log-enable:              no
connection-stats-log-interval:            1m
connection-stats-log-disk-space:          50M
service-stat-max-memory:                  1M
service-stat-max-cnt:                     4681
service-stat-cur-cnt:                     0
fabric-connection-max-memory:             10M
fabric-connection-max-count:              8090
fabric-connection-current-count:          7234
fabric-connection-backup-enable:          no
fabric-connection-backup-interval:        1m
fabric-connection-backup-used-disk-space: 1.46
```

connection-show

To display connection statistics for a switch, use the `connection-show` command.

Syntax `connection-show`

`start-time date/time: yyyy-mm-ddThh:mm:ss`	Specifies statistics from a specific start time, and date.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	Specifies statistic from a specific end time, and date.
`duration: #d#h#m#s`	Specifies statistics for a specific duration.
`interval duration: #d#h#m#s`	Specifies statistics for a specific interval duration.
`since-start`	Specifies statistics from the start of collection. This is another way to specify the start time for the connection output.
`older-than duration: #d#h#m#s`	Specifies statistics older than a specified date, and time. This is another way to specify the end time for the connection output.
`within-last duration: #d#h#m#s`	Specifies statistics within a specified duration time. This is another way to specify the start time for the connection output. Also, only the closed connections are displayed.
`vlan vlan-id`	The VLAN identifier.
`egress-vnet vnet-name`	The egress vNET.
`egress-vlan vlan_id`	The egress VLAN of the connection.
`vnet vnet-name`	The vNET name.
`src-switch-port`	The physical port number on the switch where a client requested a connection.
`dst-switch-port`	The physical port number on the switch where a server responded to a connection.
`ether_type`	The EtherType value or keyword of the connection. The keywords can be `arp`, `dot1X`, `fcoe`, `fcoe-init`, `ipv4`, `ipv6`, `jumbo`, `lldp`, `macsec`, `mpls-multi`, `mpls-uni`, `ptp`, `qing`, `rarp`, `vlan`, and `wake`.
`src-mac-addr`	The MAC address of the client requesting a connection.
`dst-mac-addr`	The MAC address of the server responding to a connection.

`src-ip`	The IP address of the client requesting a connection.
`dst-ip`	The IP address of the server responding to a connection.
`src-port`	The type of data on the source port. HDFS indicates ports connected to Hadoop systems. Also includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`dst-port`	The type of data on the destination port. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`dscp`	The 6-bit Differentiated Services Code Point (DSCP).
`tunnel-vnet` *`vnet-name`*	The tunnel vNET name.
`tunnel-vlan` *`vlan-id`*	The VLAN ID.
`tunnel-src-mac` *`mac-address`*	The tunnel source MAC address.
`tunnel-dst-mac` *`mac-address`*	The tunnel destination MAC address.
`tunnel-src-ip` *`ip-address`*	The tunnel source IP address
`tunnel-dst-ip` *`ip-address`*	The tunnel destination IP address.
`tunnel-src-port`	The type of port used by the client requesting a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`tunnel-dst-port`	The type of port used by the client requesting a connection. This includes HDFS, Hive, Ganglia, Cassandra, Nutanix, and other server types.
`tunnel-proto tcp|udp|icmp|igmp|ip|icmpv6`	The protocol assigned to the tunnel.
`proto[tcp|udp|icmp|igmp|ip`	The protocol.
`cur-state syn|est|fin|rst`	The current state of the connection. syn — synchronized est — established fin — finished rst — reset
`dur high resolution time: #ns`	The duration of the connection.
`latency(us)high resolution time: #ns`	The network transmit time (latency) experienced by the connection in microseconds.

`obytes`	The number of bytes sent from the client side of the connection.
`ibytes`	The number of bytes received by the client side of the connection.
`active`	Specifies whether the connection is currently active or inactive.
`age duration:#d#h#m#s`	The duration of the connection in days, hours, minutes, and seconds.
`transition-state any|started-and-ended |started| ended|ongoing`	The transition state of the connection.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.2	Command changed to `connection-clear`. bytes-sent, and bytes-recvd changed to obytes, and ibytes. older-than, and within-last parameters added.
Version 2.1	The parameters `client`, and `server` changed to `src` and `dst`. The parameter `service`, is deprecated. The parameters `started-time`, `ended-time`, and `transition-state` added.
Version 2.2	The parameter no-since-start deprecated.
Version 2.2.5	The parameters `HDFS-` added.
Version 2.4	The parameter `egress-vlan` added.
Version 2.4.1	The parameter `egress-vnet` added.
Version 2.6.2	The parameters `tunnel-*` added.
Version 5.1.1	The parameters `egress-bd`, `tunnel-bd`, `update-id high resolution time`, and `started-time-ns high resolution time` added.

Usage Each switch maintains a set of standard flow-based statistics that are “always-on”, meaning that they are continuously tracked, and updated by the switch. This command displays the TCP connections transiting the local switch as identified through the SYN/FIN protocol handshake between the client, and the server of the application.

Examples To show the connection statistics for vnet MyVNET, use the following command:

```
CLI (network-admin@switch) > connection-show vnet MyVNET layout vertical

  switch:                              pleiades24
  vlan:                                51
  vxlan:                               0
  vnet:
  src-ip:                              10.222.1.1
  dst-ip:                              10.222.1.2
  client-switch-port:                  8000
  server-switch-port:
  client-port:
  server-port:
  dscp:
  proto:
  service dur(s:
  latency(us):
  bytes-sent:
  bytes-recv:
  active:
```

control-stats-settings-modify

This command is used to modify the settings for collecting statistics about packets sent from the CPU.

Syntax `control-stats-settings-modify`

`enable|disable`	Enable or disable collecting control statistics.
`interval duration: #d#h#m#s`	Specify the interval to collect statistics
`disk-space` *`disk-space-number`*	`disk-space` allocated for statistics (including rotated log files)

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage You can use this command to modify the settings for control statistics collection.

Examples To disable statistics collection, use the following command:

```
CLI (network-admin@switch) > control-stats-settings-modify disable
```

control-stats-settings-show

This command is used to display the settings for collecting statistics about packets sent from the CPU.

Syntax `control-stats-settings-show`

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage You can use this command to display how packets statistics are collected.

Examples To disable statistic collection, use the following command:

```
CLI (network-admin@switch) > control-stats-settings-show
switch:       pubdev01
enable:       yes
interval:    1m
disk-space:  50M
switch:       pubdev03
enable:       yes
interval:    1m
disk-space:  50M
switch:       pubdev02
enable:       yes
interval:    1m
disk-space:  50M
```

control-stats-show

This command is used to display the packet counts sent from the CPU.

Syntax `control-stats-show`

`time` *`date/time: yyyy-mm-ddThh:mm:ss`*	The timestamp of the statistics that you want to display.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the statistics that you want to display.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the statistics that you want to display.
`duration duration: #d#h#m#s`	The duration of the statistics that you want to display.
`interval duration: #d#h#m#s`	The interval between the statistics that you want to display.
`since-start`	Specify a start time for the statistics.
`older-than duration: #d#h#m#s`	Specify a duration that is older than a specified time.
`within-last duration: #d#h#m#s`	Specify a duration window for a specified time.
`caller Unknown|Total|Vxlan|Vle`	The caller for the specific statistics. Total is displayed by default.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The options CPU-RX-TX|VLAG|BCAST|Flood added to the parameter caller.
Version 2.2	The parameters older-than, and within-last added. The parameters `|ARP|Vxlan-ARP|Vxlan-multicast|Vxlan-TCP|Vxlan-encap|Vxlan|Discovery|Keep-Alive|ECP| ICMP|IGMP|LLDP|LACP|Logical-switch|PTP|STP|PVST|nvOS-control|Local-subnet|Ipv6-mc|TCP-conn|RX-queue|NAT-Dynamic|CPU-RX-TX|VLAG|BCAST|Flood]` deprecated.
Version 2.4.0	The option `Vxlan` added to the parameter

	`caller`.
Version 2.6.2	The option `Vle` added to the parameter `caller`.

Usage You can use this command to display how many packets the operating system is sending out, and how many packets were dropped. This can be helpful when debugging or troubleshooting problems on the network.

Examples To display control stats for a duration of three days, and an interval of one day, use the following command:

```
CLI (network-admin@switch) > control-stats-show duration 03:00:00
interval 01:00:00 format all layout vertical
switch: pubdev03
caller: Total
ipkts: 1.80M
ibytes: 458M
idrops: 5
idrop-bytes: 300
idrops-err: 0
opkts: 1.87M
obytes: 395M
odrops: 29.7K
odrop-bytes: 1.51M
switch: pubdev02
caller: Total
ipkts: 978K
ibytes: 434M
idrops: 8
idrop-bytes: 490
idrops-err: 0
opkts: 1.53M
obytes: 399M
odrops: 53.4K
odrop-bytes: 15.2M
switch: pubdev01
caller: Total
ipkts: 1.86M
ibytes: 499M
idrops: 13
idrop-bytes: 780
idrops-err: 0
opkts: 2.33M
obytes: 454M
odrops: 89.0K
odrop-bytes: 15.0M
```

control-traffic-modify

This command is used to modify the control traffic on the switch.

Syntax control-traffic-modify

`type smac-miss|dmac-miss|l3-miss|l3-ttl`	Specify the type of control traffic.
`class` *`vflow-class-name`*	Specify the vFlow class name.
`cpu_class` *`cpu-class name`*	Specify the CPU class name.

Defaults None

Access CLI

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameter `smac-miss` added.
Version 2.6.2	The parameter `cpu_class` added.

Usage You can use this command to update the control traffic configuration.

Examples To modify control traffic, use the following command:

```
CLI (network-admin@switch) > control-traffic-modify  type
```

control-traffic-show

This command is used to display the control traffic configuration on the switch.

Syntax `control-traffic-show`

`type smac-miss|dmac-miss|l3-miss|l3-ttl`	The type of control traffic.
`class` *`vflow-class-name`*	The start time for the statistics that you want to display.
`cpu_class` *`cpu-class name`*	The CPU class name.

Defaults None

Access CLI

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameter `smac-miss` added.
Version 2.6.2	The parameter `cpu_class` added.

Usage You can use this command to display the control traffic configuration.

Examples To display control traffic, use the following command:

```
CLI (network-admin@switch) > control-traffic-show
switch type      class
------ --------- ------
switch smac-miss class1
switch dmac-miss class0
switch l3-miss   class0
switch l3-ttl    class0
```

cpu-class-create

NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-create`

`name` *`name-string`*	Specify a name for the CPU class.
`scope local|fabric`	Specify the scope as local or fabric.
`rate-limit` *`rate-limit-number`*	Specify the cap for the rate limit.
`hog-protect disable|enable|enable-and-drop`	Specify if you want to enable, enable, and drop packets, or disable hog protection.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create CPU protection.

Examples To create a CPU protection class for the local subnet, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-create name local-subnet
scope local rate-limit 100 hog-protect enable-and-drop
```

cpu-class-delete

NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-delete`

`name` *`name-string`*	Specify a name for the CPU class.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to delete CPU protection.

Examples To delete a CPU protection class for the local subnet, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-delete name local-subnet
```

cpu-class-modify

NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-modify`

`name` *`name-string`*	Specify a name for the CPU class.
`scope local|fabric`	Specify the scope as local or fabric.
`rate-limit` *`rate-limit-number`*	Specify the cap for the rate limit.
`hog-protect disable|enable|enable-and-drop`	Specify if you want to enable, enable, and drop packets, or disable hog protection.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify CPU protection.

Examples To modify a CPU protection class for the local subnet to rate limit 1000, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-modify name local-subnet
rate-limit 1000
```

cpu-class-show

NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-show`

`name` *`name-string`*	Name for the CPU class.
`scope local|fabric`	The scope as local or fabric.
`rate-limit` *`rate-limit-number`*	The cap for the rate limit.
`hog-protect disable|enable| enable-and-drop`	Specifies if you want to enable, enable, and drop packets, or disable hog protection.
`hog-protect-support| no-hog-protect-support`	Specifies if hog protection is supported or not.
`queue` *`queue-number`*	The queue number.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about CPU class configurations.

Examples To display CPU class configurations, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-show
switch name             scope rate-limit hog-protect hog-protect-support queue
------ ---------------- ----- ---------- ----------- ------------------- -----
switch dmac-miss        local 1000       disable     none                1
switch smac-miss        local 1000       disable     none                2
switch l3-miss          local 1000       disable     none                3
switch ttl1             local 1000       disable     none                4
switch stp              local 1000       disable     supported           5
switch lacp             local 1000       disable     supported           6
switch system-d         local 1000       disable     none                7
switch dmac-miss        local 1000       disable     none                8
switch smac-miss        local 1000       disable     none                9
switch l3-miss          local 1000       disable     none                10
switch ttl1             local 1000       disable     none                11
switch stp              local 1000       disable     supported           12
switch lacp             local 1000       disable     supported           13
switch system-d         local 1000       disable     none                14
```

```
switch igmp             local 1000       disable     none                15
switch bcast            local 1000       disable     none                16
switch icmpv6           local 1000       disable     none                17
switch tcp-analytics    local 1000       disable     none                18
switch kpalv            local 1000       disable     none                19
switch ecp              local 1000       disable     none                20
switch arp              local 1000       disable     supported           21
switch lldp             local 1000       disable     supported           22
switch vport-stats      local 1000       disable     none                23
switch dhcp             local 1000       disable     none                24
switch pim              local 1000       disable     none                25
switch local-subnet     local 1000       disable     supported           26
switch bgp              local 1000       disable     supported           27
switch ospf             local 1000       disable     supported           28
switch bfd              local 1000       disable     supported           29
switch vrrp             local 1000       disable     supported           30
switch cluster-control  local 5000       disable     none                31
switch control          local 5000       disable     none                32
switch hog-arp          local 100        disable     none                33
switch hog-ospf         local 100        disable     none                34
switch hog-bgp          local 100        disable     none                35
switch hog-bfd          local 100        disable     none                36
switch hog-lacp         local 100        disable     none                37
switch hog-stp          local 100        disable     none                38
switch hog-vrrp         local 100        disable     none                39
switch hog-lldp         local 100        disable     none                40
switch hog-local-subnet local 100        disable     none                41
switch dhcp-log-drop    local 1000       disable     none                42
```

cpu-class-settings-modify

NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-settings-modify`

`hog-checker-interval` *`hog-checker-interval-number (ms)`*	Specify the hog checking interval in milliseconds.
`hog-max-hosts-per-class` *`hog-max-hosts-per-class-number`*	Specify the maximum number of active hosts tracked per CPU class.
`hog-max-violators-per-port` *`hog-max-violators-per-port-number`*	Specify the maximum number of hog violators per port.
`hog-max-violators-per-port` *`hog-max-violators-per-port-number`*	Specify the hog warning threshold.
`hog-violator-timeout` *`hog-violator-timeout-number (s)`*	Specify the timeout before restoring the hog violator to normal queue after an idle state.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify statistics settings for CPU class.

Examples To modify CPU class settings for hog-checker-interval from 100 to 150, use the following syntax:

```
CLI (network-admin@switch) > cpu-clss-settings-modify hog-checker-interval 150
```

cpu-class-settings-show

The NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called “CPU hog protection”.

If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-settings-show`

`hog-checker-interval` *`hog-checker-interval-number (ms)`*	The hog checking interval in milliseconds.
`hog-max-hosts-per-class` *`hog-max-hosts-per-class-number`*	The maximum number of active hosts tracked per CPU class.
`hog-max-violators-per-port` *`hog-max-violators-per-port-number`*	The maximum number of hog violators per port.
`hog-max-violators-per-port` *`hog-max-violators-per-port-number`*	The hog warning threshold.
`hog-violator-timeout` *`hog-violator-timeout-number (s)`*	The timeout before restoring the hog violator to normal queue after an idle state.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display statistic settings for CPU hog protection.

Examples To display statistic settings for CPU hog protection, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-settings-show
switch:                                                Spine01
hog-checker-interval(ms):       100
hog-max-hosts-per-class:         500
hog-max-violators-per-port:  50
hog-warning-threshold:              5
hog-violator-timeout(s):         20
```

cpu-class-stats-clear

The NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called “CPU hog protection”. If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-stats-clear`

`name` *`name-string`*	Specify the name of the CPU class to clear statistics.
`cos` *`cos-number`*	Clear the CoS value for the CPU class.
`hw-out-pkts` *`hw-out-pkts-number`*	Clear the hardware transmitted packet count.
`hw-drop-pkts` *`hw-drop-pkts-number`*	Clear the number of hardware dropped packets.
`sw-pkts` *`sw-pkts-number`*	Clear the number of packets processed in software.
`sw-drops-pkts` *`sw-drops-pkts-number`*	Clear the number of packets dropped in software because the queue is full.
`hog-violations` *`hog-violations-number`*	Clear the number of hog protection host violations, and moved to separate queue.
`hog-warnings` *`hog-warnings-number`*	Clear the number of hog protection delegated bandwidth warnings.
`hog-hosts-in` *`hog-hosts-in-number`*	Clear the number of added hosts for hog protection.
`hog-hosts-out` *`hog-hosts-out-number`*	Clear the number of hosts removed from hog protection.
`hog-max-hosts-drops` *`hog-max-hosts-drops-number`*	Clear the number of dropped hosts with hog protection because the maximum number of hosts is reached.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to clear statistics for CPU hog protection.

Examples To clear statistics for CPU hog protection, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-stats-clear
```

cpu-class-stats-show

The NetVisor OS's CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called “CPU hog protection”.
If a host floods a control protocol packet, it floods the to-cpu queue. This prevents lower-rate packets from valid senders from reaching NetVisor, resulting in traffic loss for those hosts. Typically a traffic loss occurs for other hosts on the network. NetVisor OS can process large streams of both valid, and malformed protocol packets for various protocols.

Syntax `cpu-class-stats-show`

`name` *`name-string`*	Specify the name of the CPU class to clear statistics.
`cos` *`cos-number`*	Displays the CoS value for the CPU class.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display statistics for CPU hog protection.

Examples To display statistics for CPU hog protection, use the following syntax:

```
CLI (network-admin@switch) > cpu-class-stats-show
switch:  Spine01
hog-checker-interval(ms):  100
hog-max-hosts-per-class:  500
hog-max-violators-per-port:  50
hog-warning-threshold:  5
hog-violator-timeout(s):  20
```

D Commands

dhcp-filter-create

DHCP snooping is a security feature which allows the network to avoid denial-of-service attacks from rogue DHCP servers. Trusted ports are defined to connect to the known DHCP servers. DHCP snooping also maintains a mapping table for current assignments.
In a DHCP packet flow, there are the following packet types:

- DHCPDISCOVER/DHCPREQUEST — Packets from the DHCP client to server (UDP dest-port = 67)
- DHCPOFFER/DHCPACK — Packets from the DHCP Server to client (UDP dest-port = 68)

NetVisor must snoop the DHCP packets in order to implement this feature, and achieves this by installing a copy-to-cpu vFlow with the parameter, `bw-max`, to set packet rate limits.

- DHCP-client-vflow — Packets with UDP dest-port=67, copy-to-cpu
- DHCP-server-vflow — Packets with UDP dest-port=68, copy-to-cpu

A trusted port is a port receiving the DHCP server messages from a trusted DHCP server. Any DHCP server message, such as OFFER/ACKNOWLEDGE, received from trusted ports are valid. Ports not configured as trusted are untrusted ports. NetVisor drops any DHCP server message received from untrusted ports, and ensures that a rogue DHCP server cannot assign IP addresses to devices on your network.
This command is used to create a DHCP filter.

Syntax `dhcp—filter-create`

`name` *`name-string`*	Specify a name for the filter.
`trusted-ports` *`port-list`*	Specify a list of trusted ports.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a DHCP filter for trusted ports.

Examples To create a DHCP filter, trust-server-1, and port 13-17 , use the following syntax:

```
CLI (network-admin@switch) > dhcp-filter-create name trust-server-1
ports 13-17
```

dhcp-filter-delete

DHCP snooping is a security feature which allows the network to avoid denial-of-service attacks from rogue DHCP servers. Trusted ports are defined to connect to the known DHCP servers. DHCP snooping also maintains a mapping table for current assignments.
In a DHCP packet flow, there are the following packet types:

- DHCPDISCOVER/DHCPREQUEST — Packets from the DHCP client to server (UDP dest-port = 67)
- DHCPOFFER/DHCPACK — Packets from the DHCP Server to client (UDP dest-port = 68)

This command is used to delete a DHCP filter.

Syntax `dhcp—filter-add name name-string`

`name` *`name-string`*	Specify a name for the filter.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a DHCP filter for trusted ports.

Examples To delete a DHCP filter, trust-server-1, use the following syntax:

```
CLI (network-admin@switch) > dhcp-filter-delete name trust-server-1
```

dhcp-filter-modify

DHCP snooping is a security feature which allows the network to avoid denial-of-service attacks from rogue DHCP servers. Trusted ports are defined to connect to the known DHCP servers. DHCP snooping also maintains a mapping table for current assignments.
In a DHCP packet flow, there are the following packet types:

- DHCPDISCOVER/DHCPREQUEST — Packets from the DHCP client to server (UDP dest-port = 67)
- DHCPOFFER/DHCPACK — Packets from the DHCP Server to client (UDP dest-port = 68)

This command is used to modify a DHCP filter.

Syntax `dhcp—filter-modify name name-string trusted-ports port-list`

`name` *`name-string`*	Specify a name for the filter.
`trusted-ports` *`port-list`*	Specify a list of trusted ports.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a DHCP filter for trusted ports.

Examples To modify a DHCP filter, trust-server-1 and change the ports to 33-35, use the following syntax:

```
CLI (network-admin@switch) > dhcp-filter-modify name trust-server-1
ports 33-35
```

dhcp-filter-show

DHCP snooping is a security feature which allows the network to avoid denial-of-service attacks from rogue DHCP servers. Trusted ports are defined to connect to the known DHCP servers. DHCP snooping also maintains a mapping table for current assignments.
In a DHCP packet flow, there are the following packet types:

- DHCPDISCOVER/DHCPREQUEST — Packets from the DHCP client to server (UDP dest-port = 67)
- DHCPOFFER/DHCPACK — Packets from the DHCP Server to client (UDP dest-port = 68)

This command is used to display DHCP filter information.

Syntax `dhcp-filter-show`

`name` *`name-string`*	Name of the filter.
`trusted-ports` *`port-list`*	A list of trusted ports.
`vlan` *`vlan-list`*	A list of VLANs.

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about a DHCP filter configuration.

Examples To display DHCP filter information, use the following syntax:

```
CLI (network-admin@switch) > dhcp-filter-show trusted-ports 1

name        trusted-ports
----------- -------------
dhcp-filter 0-2,5,12
```

dhcp-lease-show

This command is used to display information about DHCP leases on the switch.

Syntax `dhcp-lease-show`

`ip` *`ip-address`*	The IP address of a DHCP client.
`mac` *`mac-address`*	The MAC address of a DHCP client.
`port` *`port-list`*	The port of a DHCP client.
`vlan` *`vlan-id`*	The VLAN for the DHCP client.
`vnet` *`vnet name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name.
`db-state unknown|free|active|backup|abandoned|expired`	The state of a DHCP client's lease.
`start-time` *`yyyy-mm-ddThh:mm:ss`*	The beginning of the DHCP lease.
`end-time` *`yyyy-mm-ddThh:mm:ss`*	The end of the DHCP lease.
`server dhcp` *`name`*	The DHCP server name.
`server-ip` *`ip-address`*	The IP address of the DHCP server.
`server-port` *`server-port-number`*	The port number of the DHCP server.
`last-msg |discover|offer|request|decline|ack|nack|release|inform`	The last message received from the DHCP client.
`last-msg-time date/time:`*`yyyy-mm-ddThh:mm:ss`*	The time of the last message received from the DHCP client.
`trusted-server|no-trusted-server`	The trusted DHCP server.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6	The parameter `trusted-server` added.
Version 5.1.1	The parameters `vnet` and `bd` added.

Usage Used to display information about DHCP leases on the switch.

Examples To display information about the DHCP leases on the switch, use the following command:

```
CLI (network-admin@switch) > dhcp-lease-show
ip                  mac               port vnet vlan db-state  server server-ip
serverport  trusted-server  last-msg
------------------- ----------------- ---- ---- ---- --------- ------
---------------------  --------------  -------
6053:23a7:0:0:200:: 00:12:c0:80:1f:b8  9          1   unknown         10.1.1.100 65
        no             offer
```

dscp-map-create

NetVisor OS supports creating Quality of Service (QoS) maps to configure hardware based mapping of Differentiated Services Code Point (DSCP) value in a received IP header to a Cost of Service (CoS) priority. This helps with prioritizing traffic based on DSCP markings by using the appropriate egress CoS queues to send packets out.

Syntax `dscp-map-create`

`name` *`name-string`*	Create a name for the DSCP map.
`scope local|fabric`	Specifies the scope for DSCP map.

Defaults

CoS Priority Value	Default DSCP Values
0	None
1	8,10,12,14
2	16,18,20,22
3	24,26,28,30
4	32,34,36,38
5	40
6	48
7	56

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to create a DSCP map with default DSCP to priority mappings.

Examples To create a DSCP map with the name DSCP-1, use the following syntax:

```
CLI (network-admin@switch) > dscp-map-create name DSCP-1
```

dscp-map-delete

NetVisor OS supports creating Quality of Service (QoS) maps that configure hardware based mapping of Differentiated Services Code Point (DSCP) value in a received IP header to a Cost of Service (CoS) priority. This helps in prioritizing traffic based on DSCP markings by using the appropriate egress CoS queues to send packets out.

Syntax `dscp-map-delete`

`name` *`name-string`*	Specify the name of the DSCP map.

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to delete a DSCP map.

Examples To delete a DSCP map with the name DSCP-1, use the following syntax:

```
CLI (network-admin@switch) > dscp-map-delete name DSCP-1
```

dscp-map-show

NetVisor OS supports creating Quality of Service (QoS) maps that configure hardware based mapping of Differentiated Services Code Point (DSCP) value in a received IP header to a Cost of Service (CoS) priority. This helps in prioritizing traffic based on DSCP markings by using the appropriate egress CoS queues to send packets out.

Syntax `dscp-map-show`

`name` *`name-string`*	Name of the DSCP map.
`scope local|fabric`	The scope for DSCP map.

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to display DSCP maps.

Examples To display a DSCP map with the name DSCP-1, use the following syntax:

```
CLI (network-admin@switch) > dscp-map-show
name   scope
-----  ------
dscp   fabric
```

dscp-map-pri-map-modify

NetVisor OS supports creating Quality of Service (QoS) maps that configure hardware based mapping of Differentiated Services Code Point (DSCP) value in a received IP header to a Cost of Service (CoS) priority. This helps in prioritizing traffic based on DSCP markings by using the appropriate egress CoS queues to send packets out.

Syntax `dscp-map-pri-map-modify`

`name` *`name-string`*	Specify the name of the DSCP map.
Specify the following `pri-map` arguments:	
`pri` *`number`*	Specify a CoS priority from 0 to 7.
`dsmap` *`number-list`*	Specify a DSCP value(s)as a single value, comma separated list, or a number range.

Defaults

CoS Priority Value	Default DSCP Values
0	None
1	8,10,12,14
2	16,18,20,22
3	24,26,28,30
4	32,34,36,38
5	40
6	48
7	56

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to modify a DSCP map.

Examples To modify a DSCP map with the name DSCP-1, use the following syntax:

```
CLI (network-admin@switch) > dscp-map-pri-map-modify name DSCP-1
pri 5 dsmap 44
```

dscp-map-pri-map-show

NetVisor OS supports creating Quality of Service (QoS) maps that configure hardware based mapping of Differentiated Services Code Point (DSCP) value in a received IP header to a Cost of Service (CoS) priority. This helps in prioritizing traffic based on DSCP markings by using the appropriate egress CoS queues to send packets out.

Syntax `dscp-map-pri-map-show`

`name` *`name-string`*	Specify the name of the DSCP map.
Specify the following `pri-map` arguments:	
`pri` *`number`*	Specify a CoS priority from 0 to 7.
`dsmap` *`number-list`*	Specify a DSCP value(s)as a single value, comma separated list, or a number range.

Defaults

CoS Priority Value	Default DSCP Values
0	None
1	8,10,12,14
2	16,18,20,22
3	24,26,28,30
4	32,34,36,38
5	40
6	48
7	56

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to display a DSCP map, and values.

Examples To display a DSCP map with the name default, use the following syntax:

Informational Note: The `dscp-map-pri-map-show` displays output only if there are maps configured .

```
CLI (network-admin@switch) > dscp-map-pri-map-show
```

```
name     pri dsmap
-------  --- -----------
default 0   none
default 1   8,10,12,14
default 2   16,18,20,22
default 3   24,26,28,30
default 4   32,34,36,38
default 5   40
default 6   48
default 7   56
```

E Commands

eap-host-profile-create

This command is used to create an EAP host profile.

Syntax `eap-host-profile-create`

`name` *`name-string`*	Specifies the name of the profile.
`mode` *`md5`*	Specifies the EAP auth mode.
`identity identity-string`	Specifies the User Identity.
`password` *`password-string`*	Specifies the password for the User Identity.
`scope local|cluster`	Specifies the scope of host profile.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to create EAP host profiles.

Examples To create EAP host port profiles, use the following syntax:

```
CLI (network-admin@switch) > eap-host-profile-create
```

eap-host-profile-delete

This command is used to delete an EAP host profile.

Syntax `eap-host-profile-delete`

`name name-string`	Specifies the name of the profile.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete EAP host profiles.

Examples To remove host port profiles, use the following syntax:

```
CLI (network-admin@switch) > eap-host-profile-delete
```

eap-host-profile-modify

This command is used to modify an EAP host profile.

Syntax `eap-host-profile-modify`

`name` *`name-string`*	Specifies the name of the profile.
`mode` *`md5`*	Specifies the EAP auth mode.
`identity identity-string`	Specifies the User Identity.
`password` *`password-string`*	Specifies the password for the User Identity.
`scope local|cluster`	Specifies the scope of host profile.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify EAP host profiles.

Examples To modify EAP host port profiles, use the following syntax:

```
CLI (network-admin@switch) > eap-host-profile-modify
```

eap-host-profile-show

This command is used to display an EAP host profile.

Syntax `eap-host-profile-show`

`name` *`name-string`*	Name of the profile.
`mode` *`md5`*	The EAP auth mode.
`identity identity-string`	The User Identity.
`scope local|cluster`	The scope of host profile.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display EAP host profiles.

Examples To display EAP host port profiles, use the following syntax:

```
CLI (network-admin@switch) > eap-host-profile-show
switch name          mode identity    scope
------ ------------- ---- ----------- -----
switch profile1      md5  user1       local
```

err-disable-clear-counters

Physical ports are automatically disabled by NetVisor due to certain violations. For example, if a port receives BPDU messages from an edge port, NetVisor disables the port because receiving BPDUs on a edge port is a security violation. However, there is no way to indicate that the port is shut down because of a violation, and not because of physical link issues.

Syntax `err-disable-clear-counters`

`bpduguard|no-bpduguard`	Specify if you want BPDU guard enabled.
`macsecurity|no-macsecurity`	Specify if you want MAC recovery enabled.
`recovery-timer duration: #d#h#m#s`	Specify the recovery time value.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to reset port error counters.

Examples To clear port error counters, use the following syntax:

```
CLI (network-admin@switch) > err-disable-clear-counters
```

err-disable-modify

Physical ports are automatically disabled by NetVisor due to certain violations. For example, if a port receives BPDU messages from an edge port, NetVisor disables the port because receiving BPDUs on a edge port is a security violation. However, there is no way to indicate that the port is shut down because of a violation, and not because of physical link issues.

Syntax `err-disable-modify`

`bpduguard|no-bpduguard`	Specify if you want BPDU guard enabled.
`macsecurity|no-macsecurity`	Specify if you want MAC recovery enabled.
`recovery-timer duration:` *#d#h#m#s*	Specify the recovery time value.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify port error counters.

Examples To clear port error counters, use the following syntax:

```
CLI (network-admin@switch) > err-disable-modify
```

err-disable-show

This command is used to display port recovery settings.

Syntax `err-disable-show`

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display port recovery settings.

Examples To display port recovery settings, use the following syntax:

```
CLI (network-admin@switch) > err-disable-show
switch:         Leaf1
bpduguard:      off
macsecurity:    off
recovery-timer: 5m
```

eula-show

This command is used to display the End User License Agreement (EULA).

Syntax `eula-show`

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display the End User License Agreement (EULA).

Examples To display End User License Agreement (EULA), use the following syntax:

```
CLI (network-admin@switch) > eula-show
End User License Agreement Pluribus Networks, Inc.'s ("Pluribus", "we", or "us") software
products are designed to provide fabric networking, and analytics solutions that simplify
operations, reduce operating expenses, and introduce applications online more rapidly. Before
you download, and/or use any  of our software, whether alone or as loaded on a piece of
equipment, you will need to agree to the terms of this End User License Agreement (this
"Agreement"). ... PN EULA v. 2.1
```

evpn-check-show

This command is used to display inconsistent EVPN configuration.

Syntax `evpn-check-show`

data1 data1-string	The EVPN configuration check data.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display inconsistent EVPN configuration.

Examples To display inconsistent EVPN configuration, use the following syntax:

```
CLI (network-admin@switch) > evpn-check-show
switch data1
------  -----------------------------------------------------
switch Could not parse all states(non EVPN vrouter), exiting
```

exit

This command allows you to exit the CLI.

Defaults None

Access CLI.

Usage Use this command to exit the CLI.

F Commands

fabric-anycast-mac-modify

This command is used to modify the fabric anycast MAC address for the fabric.

Syntax `fabric-anycast-mac-modify`

`mac` *`mac-address`*	Modify the anycast MAC address for the fabric.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to modify the fabric anycast MAC address for the fabric.

Examples To modify the fabric anycast MAC address for the fabric, use the following syntax:

```
CLI (network-admin@switch) > fabric-anycast-mac-modify  mac
72:0e:94:40:00:02
```

fabric-anycast-mac-show

This command is used to display the anycast MAC address for the fabric.

Syntax `fabric-anycast-mac-show`

`mac` *`mac-address`*	The anycast MAC address for the fabric. The default value is `64:0e:94:40:00:02`,

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display the anycast MAC address for Virtual Routing, and Forwarding (VRF).

Examples To display the anycast MAC address, use the following syntax:

```
CLI (network-admin@switch) > fabric-anycast-mac-show
mac:        64:0e:94:40:00:02
```

fabric-comm-vrouter-bgp-create

This command is used to create a fabric over a Layer 3 network using a BGP vRouter.

Syntax `fabric-comm-vrouter-bgp-create`

`name` *`name-string`*	Specify the name of the fabric communication vRouter.
`bgp-as` *`number`*	Specify the BGP Autonomous System number from 1 to 4294967295.
`bgp-redistribute static|connected|rip|ospf`	Specify the BGP route redistribution type.
`bgp-max-paths` *`integer`*	Specify the maximum BGP paths from 1 to 255.
`bgp-ibgp-multipath` *`integer`*	Specify the number of IBGP multipath connections from 1 to 255.
`router-id` *`ip-address`*	Specify the vRouter ID.
`hw-vrrp-id` *`hw-vrrp-id-number`*	Specify the VRRP ID assigned to the hardware router.
`bgp-nic-ip` *`ip-address`*	Specify the IP address.
`bgp-nic-netmask netmask`	Specify the netmask.
`bgp-nic-linklocal` *`ip-address`*	Specify the IPv6 link local address.
`bgp-nic-vnet` *`vnet name`*	Specify the VLAN interface.
`bgp-nic-bd` *`bridge-domain name`*	Specify the bridge domain interface.
`bgp-nic-vlan` *`vlan-id`*	Specify the VLAN ID.
`bgp-nic-vlan-type public|private`	Specify the VLAN type as public or private.
`bgp-nic-l3-port` *`l3port-usable-port name`*	Specify the Layer 3 port.
`in-band-nic-ip` *`ip-address`*	Specify the IP address of the in-band management interface.
`in-band-nic-netmask` *`netmask`*	Specify the netmask of the in-band management interface.
`in-band-nic-linklocal` *`ip-address`*	Specify the IPv6 link local address.
`in-band-nic-vnet` *`vnet name`*	Specify the VLAN interface.

in-band-nic-bd *bridge-domain name*	Specify the bridge domain interface.
in-band-nic-vlan *vlan-id*	Specify the VLAN interface.
in-band-nic-if-nat-realm internal| external	Specify the NAT interface realm.
neighbor *ip-address*	Specify the IP address of the BGP neighbor.
remote-as *integer*	Specify the BGP remote AS from 1 to 4294967295.
next-hop-self|no-next-hop-self	Specify the next hop as self or not.
password *password-string*	Specify the MD5 password for BGP.
ebgp-multihop *integer*	Specify the value for external BGP from 1 to 255.
update-source-interface *update-source-interface-string*	Specify the interface name of BGP packets. This parameter is required for peering over any interface.
override-capability|no-override-capability	Specify if you want override capability.
soft-reconfig-inbound|no-soft-reconfig-inbound	Specify if you want a soft reset to reconfigure inbound traffic.
max-prefix *max-prefix-number*	Specify the maximum number of prefixes.
max-prefix-warn-only|no-max-prefix-warn-only	Specify you want to receive a warning if the maximum number of prefixes is exceeded.
bfd|no-bfd	Specify if you want BFD protocol support for fault detection.
weight none	Specify the weight value between 0, and 65535 for the neighbor's routes. The default is none.
default-originate|no-default-originate	Specify to announce default routes to the neighbor or not.
neighbor-keepalive-interval *seconds*	Specify the keepalive interval in seconds. This is a value between 0, and 65535 seconds.
neighbor-holdtime *seconds*	Specify the neighbor hold time in seconds. This is a value between 0, and 65535 seconds
allowas-in|no-allowas-in	Specify if you want to reject routes with local AS in AS_PATH. Normally, when you do not set this option, nodes reject routes containing their own AS which helps prevent routing loops. However, in some cases nodes that belong to the same AS have no direct connectivity; for example when you

	form clusters, and choose not to use the cluster link for iBGP communication. In this case the only way to direct routes through connected eBGP neighbors is to set this option so routes are not rejected routes from the cluster peer.
`interface vrouter interface` *`nic`*	Specify the interface to reach the neighbor.
`advertisement-interval 0..600`	Specify the minimum interval between sending BGP routing updates.
`no-route-map-in`	Specify if you want to remove an ingress route map.
`no-route-map-out`	Specify if you want to remove an egress route map.
`fabric-network` *`ip-address`*	Specify the in-band network IP address.
`fabric-netmask` *`netmask`*	Specify the in-band network mask.

Defaults None

Access Network administrator

History

Version 2.4.1	Command introduced.
Version 2.5.2	The parameter `allowas-in|no-allowas-in` added.
Version 3.0.0	The parameter `interface` added.
Version 3.1.0	The parameters `advertisement-interval`, `no-route-map-in`, and `no-route-map-out` added.
Version 6.0.1	The parameter `update-source-interface` added.

Usage This command is used to allow fabric communication over a Layer 3 network.

Examples To modify fabric communication ports, use the following syntax:

```
CLI (network-admin@switch) > fabric-comm-vrouter-bgp-create
```

fabric-comm-ports-modify

This command is used to modify communication ports on a fabric.

Syntax `fabric-comm-ports-modify`

`range-start` *`port-number`*	Modify the communications port range. This is a value between 1024, and 65435 .

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to modify fabric communication ports.

Examples To modify fabric communication ports, use the following syntax:

```
CLI (network-admin@switch) > fabric-comm-ports-modify  range-start
1050-1060
```

fabric-comm-ports-show

This command is used to display communication ports on a fabric.

Syntax `fabric-comm-ports-show`

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display fabric communication ports.

Examples To display fabric communication ports, use the following syntax:

```
CLI (network-admin@switch) > fabric-comm-ports-show
switch:                         switch
range-start:                    23300
fabric-port:                    23399
notify-port:                    23398
proxy-port:                     23397
fabric-keepalive-port:          23394
filesystem-replication-port:    23392
cluster-traffic-forwarding-port: 23391
vport-statistics-port:          23390
l2-encap-port:                  23389
igmp-encap-port:                23388
icmpv6-encap-port:              23387
arp-encap-port:                 23386
cluster-analytics-port:         23385
igmp-port:                      23384
```

fabric-create

This command is used to create a fabric on the network.

Syntax `fabric-create`

name *name-string*	Specify the name of the fabric.
Specify any of the following options:	
repeer-to-cluster-node *cluster-repeer-node name*	Specify if you want to replace a dead cluster node by restoring the switch against the existing cluster node.
vlan *vlan-id*	Specify VLAN for the fabric.
password *password-string*	Specify the fabric password.
fabric-network in-band|mgmt	Specify the in-band interface or the management interface to send fabric communications over the fabric.
control-network in-band|mgmt	Specify the in-band interface or the management interface to send fabric communications over the control plane.
delete-conflicts|abort-on-conflict	Specify the action to take when there is a conflict with another fabric.
fabric-advertisement-network inband-mgmt|inband-vmgmt|inband-only|mgmtonly	Specify the network for fabric advertisement.

Defaults If the multicast address is not specified, a random IPv6 address in the range from ff95::239:4:10:1 to ff95::239:4:10:ff is used as the default fabric multicast address. Unless you specify a password, the default password for the fabric is blank.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `mcast-ip` deprecated. The parameter `vlan` added.
Version 2.2.4	The parameter `network-type` added.
Version 2.4	The parameter `network-type` removed. Two parameters `fabric-network`, and `control-network` added. The parameter `repeer-to-cluster-node` added.
Version 2.4.1	The parameters `fabric-advertisement-`

	`network inband-mgmt|inband-only` added.

Usage The fabric consists of one or more switches that share a fabric administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. This command creates the fabric abstraction, but not the switch membership.

Examples To create a fabric named `MyFabric` with the password `b0n3s123`

```
CLI (network-admin@switch) > fabric-create name MyFabric password
b0n3s123
```

fabric-evpn-node-show

This command is used to display EVPN node information for the fabric.

Syntax `fabric-evpn-node-show`

`fabric-pod` *`fabric-pod-string`*	The Fabric-Pod Name.
`evpn-node` *`evpn-node-string`*	The EVPN Node Name.
`version` *`version-string`*	The nvOS version.
`vtep-ip` *`ip-address`*	The VTEP IP address.
`evpn-role primary|secondary|stand-alone|none|unknown`	The EVPN role for the node.

Defaults

Access CLI

History

Version 7.0.0	Command introduced.

Usage This command displays EVPN node information for the fabric.

Examples To display information about EVPN nodes in the fabric, use this command:

```
CLI (network-admin@switch) > fabric-evpn-node-show
fabric-pod evpn-node version        vtep-ip     evpn-role
---------- --------- -------------- ----------- ---------
evpn-fab1  bgw       6.2.6020018465 93.93.93.93 primary
```

fabric-info

Use this command to display the fabric information on the switch.

Syntax `fabric-info`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to display information about the fabric on a local switch.

Examples To display information about a fabric, use the following command:

```
CLI (network-admin@switch) > fabric-info
name:     pn-fab
ident:    a1634:b
mcastaddr:ff95::239:4:10:2c
tid:      0
```

fabric-join

This command is used to join an existing fabric on the switch.

Syntax `fabric-join`

Specify one of the following options:	
`name` *`name-string`*	Specify the name of the fabric.
`password` *`password-string`*	Specify the fabric password if configured.
`switch-ip` *`ip-address`*	Specify the IP address of the switch joining the fabric.
Specify any of the following options:	
`vlan` *`vlan-id`*	Specify VLAN for the fabric.
`delete-conflicts|` `abort-on-conflict`	Specify the action to take when there is a conflict with another fabric.
`location-id` *`location-id-number`*	Specify the location ID to use for joining the fabric.
`repeer-to-cluster-node` *`cluster-repeer-node name`*	Replace a dead cluster node by restoring against the existing cluster node.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `vlan` added.
Version 2.3	The parameter `repeer-to-cluster-node` added.
Version 3.0.0	The parameter `repeer-to-cluster-node`, deprecated. The parameter `location-id` added.
Version 5.1.1	The parameter `repeer-to-cluster-node`, re-added.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to join a fabric.

Examples To join the fabric, network-1, with the id, admin, and the password, **`pizzatime`**, use the following command:

```
CLI (network-admin@switch) > fabric-join name network-1 id admin password
pizzatime
```

fabric-local-modify

This command is used to modify a local fabric on the network.

Syntax `fabric-local-modify`

`vlan` *`vlan-id`*	Specify the VLAN to modify on the local fabric.
`change-password` *`change-passwor-string`*	Use this option to change the fabric password after confirming the current password.
`reset-password` *`reset-password-string`*	Use this option to reset the fabric password forcefully. **Note:** Resetting the password requires assistance from Pluribus support.
`control-network in-band|mgmt`	Specify the in-band interface or the management interface to send fabric communications over the control plane.
`fabric-network in-band|mgmt`	Specify the in-band interface or the management interface for fabric administrative network.
`fabric-advertisement-network inband-mgmt|inband-vmgmt|inband-only|mgmt-only`	Specify if you want to send fabric advertisement packets over the inband management interface or inband only.

Defaults The default VLAN for a fabric is VLAN 0.

Access CLI

History

Version 2.2	Command introduced.
Version 2.2.4	The parameter `network-type` introduced.
Version 2.4	The parameter `network-type` removed. Two parameters `fabric-network`, and `control-network` added. The parameter `repeer-to-cluster-node` added.
Version 2.4.1	The parameter `fabric-advertisement-network` added.
Version 6.0.0	The parameters `change-password`, and `reset-password` introduced.

Usage In some network configurations, you may want to assign a different VLAN to a local fabric.

Examples To modify a local fabric, and assign it to VLAN 2, use the following syntax:

```
CLI (network-admin@switch) > fabric-local-modify vlan 2
```

fabric-stats-show

This command is used to display statistical information about the fabric configured on the network.

Syntax `fabric-stats-show`

`id` *`id-number`*	The ID number automatically assigned to the fabric.
`servers` *`servers-number`*	The number of servers in the fabric.
`storage` *`storage-number`*	The storage occupying the fabric.
`VM` *`VM-number`*	The number of VMs in the fabric.
`vlan` *`vlan-number`*	The number of VLANs in the fabric.
`vxlan` *`vxlan-number`*	The number of VXLANs in the fabric.
`tcp-syn` *`tcp-syn-number`*	The number of TCP packets synchronized by the fabric.
`tcp-est` *`tcp-est-number`*	The number of TCP packets estimated on the network.
`tcp-completed` *`tcp-completed-number`*	The number of completed TCP packets.
`tcp-bytes` *`tcp-bytes-number`*	The number of TCP bytes sent through the fabric.
`udp-bytes` *`udp-bytes-number`*	The number of UDP bytes sent through the fabric.
`arp` *`arp-number`*	The number of ARPs on the fabric.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.4	The parameter `VLAN` deprecated.
Version 2.4.1	The parameter `vlan` added.

Usage Use this command to display statistical information about the fabric configured on the network.

Examples To display the statistics about the fabric, use this command:

```
CLI (network-admin@switch) > fabric-stats-show
switch id servers storage VM vlan vxlan tcp-syn tcp-est tcp-completed tcp-bytes udp-
bytes arp
------ -- ------- ------- -- ---- ----- ------- ------- ------------- ---------
--------- ---
switch 0  0       0       0  0    0     0       0       0             0         0
      0
```

fabric-show

This command is used to display information about a fabric on the switch.

Syntax `fabric-show`

`name` *`name-string`*	Name of the fabric.
`switch-ip` *`ip-address`*	Specify the IP address of the switch joining the fabric.
`id`	The identifier for the fabric.
`repeer-to-cluster-node` *`cluster-repeer-node name`*	Specifies if the action is to replace a dead cluster node by restoring against the existing cluster node.
`vlan` *`vlan-id`*	The VLAN ID for the fabric.
`fabric-network in-band|mgmt`	The fabric network as in-band or management network.
`control-network in-band|mgmt`	The control network type as in-band or through the management interface.
`tid` *`tid-number`*	The transaction identifier.
`fabric-advertisement-network inband-mgmt|inband-vmgmt|inband-only|mgmt-only`	Specify if you want to send fabric advertisement packets over the inband management interface or inband only.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameters `multicast-ip`, and `cid` deprecated.
Version 2.2.8	The parameter `network-type` added.
Version 2.3	The parameter `repeer-to-cluster-node` added.
Version 2.4	The parameter `network-type`, changed to `fabric-network` and `control-network`.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the

complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to display information about the fabric.

Examples To display the fabric information, use the following command:

```
CLI (network-admin@switch) > fabric-show
name    id               vlan fabric-network control-network tid fabric-advertisement-network
------- ---------------- ---- -------------- --------------- --- ----------------------------
switch1 c00019c:5f1c5d1a 1    in-band        in-band         5   inband-mgmt
sample  c00019c:61c19edb 1    in-band        in-band         0   inband-mgmt
switch2 9000d0d:61c2ea7c 1    mgmt           mgmt            90  inband-mgmt
pod1    9000fc5:61c2eb63 1    in-band        in-band         58  inband-mgmt
pod2    9000fc6:61c2ec4a 1    in-band        in-band         2   inband-mgmt
pod3    b002cde:61c2ecae 1    in-band        in-band         0   inband-mgmt
```

fabric-unjoin

This command is used to unjoin an existing fabric on the switch.

Syntax `fabric-unjoin`

`delete-conflicts|abort-on-conflict`	Specify the action to take when there is a conflict with another fabric.

Defaults None.

Access CLI

License SDF

History

Version 1.2.1	Command introduced.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to join a fabric.

Examples To join the fabric, `network-1`, with the id, `admin`, and the password, `pizzatime`, use the following command:

```
CLI (network-admin@switch) > fabric-unjoin name network-1 id admin
password pizzatime
```

fabric-in-band-network-create

This command is used to create an in-band fabric network.

Syntax `fabric-in-band-network-create`

`network` *`ip-address`*	Specify an in-band network IP address.
`netmask` *`netmask`*	Specify the netmask.

Defaults None

Access Network Admin

History

Version 2.4.1	Command introduced.

Usage Use this command to create an in-band network for a fabric.

Examples To create an in-band network using the IP address 172.16.21.135, and netmask 255.255.255.0, use the following syntax:

```
CLI (network-admin@switch) > fabric-in-band-network-create  network
172.16.21.135  netmask  255.255.255.0
```

fabric-in-band-network-delete

This command is used to delete an in-band fabric network.

Syntax `fabric-in-band-network-delete`

`network` *`ip-address`*	Specify an in-band network IP address.
`netmask` *`netmask`*	Specify the netmask.

Defaults None

Access Network Admin

History

Version 2.4.1	Command introduced.

Usage Use this command to delete an in-band network for a fabric.

Examples To delete an in-band network using the IP address 172.16.21.135, and netmask 255.255.255.0, use the following syntax:

```
CLI (network-admin@switch) > fabric-in-band-network-delete network
172.16.21.135 netmask 255.255.255.0
```

fabric-in-band-network-show

This command is used to display an in-band fabric network network.

Syntax `fabric-in-band-network-show`

`network` *`ip-address`*	An in-band network IP address.
`netmask` *`netmask`*	The netmask.

Defaults None

Access Network Admin

History

Version 2.4.1	Command introduced.

Usage Use this command to display an in-band network for a fabric.

Examples To display an in-band network, use the following syntax:

```
CLI (network-admin@switch) > fabric-in-band-network-show
network
------------
10.14.0.0/16
```

fabric-node-evict

This command is used to remove a node from a fabric.

Syntax `fabric-node-evict`

> **Note**: The fabric-node-evict will only remove the node from the fabric list whereas the node specific configuration will still be present in the running configuration.

`name` *`fabric-node-name`*	Specify the name of the fabric node to remove from the configuration.
`id` *`id-number`*	Specify the identifier of the fabric node.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage The fabric consists of one or more switches sharing an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to remove a node.

Examples To remove the node, `switch123`, use the following command:

```
CLI (network-admin@switch) > fabric-node-evict name switch123
```

fabric-node-location-mappings

NetVisor OS uses this command to generate location mappings for importing switch configurations.

Syntax `fabric-node-location-mappings`

`id` *`id-number`*	Displays the ID assigned to the node.
`location-id` *`location-id-number`*	Displays the location ID assigned to the fabric.
`serial` *`serial-string`*	Displays the serial number.
`name fabric-node` *`name`*	Displays the node name.
`fab-name` *`fab-name-string`*	Displays the fabric name.
`fab-id`	Displays the ID assigned to the fabric.
`cluster-id`	Displays the ID assigned to the cluster.
`local-mac` *`mac-address`*	Displays the local MAC address.
`fabric-network` *`in-band`*`|`*`mgmt`*	Displays the network fabric.
`control-network` *`in-band`*`|`*`mgmt`*	Displays the control plane network.
`mgmt-ip` *`ip-address`*	Displays the management IP address.
`mgmt-netmask` *`netmask`*	Displays the management netmask.
`mgmt-ip2` *`ip-address`*	Displays the second management IP address.
`mgmt-netmask2` *`netmask`*	Displays the second management netmask
`mgmt-assignment2 none|dhcp|dhcpv6`	Displays the type of IP address assignment.
`mgmt-linklocal` *`ip-address`*	Displays the IPv6 address of the link local.
`mgmt-assignment-linklocal none|dhcp|dhcpv6`	Displays the type of IP address assignment.
`mgmt-mac` *`mac-address`*	Displays the interface MAC address.
`mgmt-vnet vnet` *`name`*	Displays the interface VLAN vNET.
`mgmt-public-vlan` *`vlan-id`*	Displays the public VLAN ID.
`mgmt-secondary-macs` *`secondary-macs-string`*	Displays the secondary MAC addresses.
`mgmt-if-nat-realm internal|external`	Displays the NAT interface realm.

vmgmt-ip *ip-address*	Displays the IP address.
vmgmt-netmask *netmask*	Displays the netmask.
vmgmt-ip2 *ip-address*	Displays the second IP address.
vmgmt-netmask2 *netmask*	Displays the netmask.
vmgmt-assignment2 none|dhcp|dhcpv6	Displays the type of lPv6 address assignment.
vmgmt-linklocal *ip-address*	Displays the IPv6 linklocal address.
vmgmt-assignment-linklocal none|dhcp|dhcpv6	Displays the type of IPv6 address assignment.
vmgmt-mac *mac-address*	Displays the MAC address.
vmgmt-vnet vnet *name*	Displays the vNET name.
vmgmt-vlan *vlan-id*	Displays the VLAN ID.
vmgmt-public-vlan *vlan-id*	Displays the public VLAN ID.
vmgmt-secondary-macs *secondary-macs-string*	Displays the secondary MAC addresses.
in-band-ip *ip-address*	Displays the IP address.
in-band-netmask *netmask*	Displays the netmask.
in-band-ip2 *ip-address*	Displays the second IP address.
in-band-netmask2 *netmask*	Displays the netmask.
in-band-assignment2 none|dhcp|dhcpv6	Displays the type of lPv6 address assignment.
in-band-linklocal *ip-address*	Displays the IPv6 linklocal address.
in-band-assignment-linklocal none|dhcp|dhcpv6	Displays the type of IPv6 address assignment.
in-band-mac *mac-address*	Displays the MAC address.
in-band-vnet vnet name	Displays the vNET name.
in-band-bd *bridge-domain name*	Displays the interface bridge domain.
in-band-vlan *vlan-id*	Displays the VLAN ID.
in-band-vlan-type public|private	Displays the type of VLAN.
in-band-public-vlan *vlan-id*	Displays the public VLAN ID.

`in-band-secondary-macs` *`secondary-macs-string`*	Displays the secondary MAC addresses.
`in-band-if-nat-realm internal|external`	Displays the interface NAT realm.
`fab-tid` *`fab-tid-number`*	Displays the fabric transaction ID.
`cluster-tid` *`cluster-tid-number`*	Displays the cluster transaction ID.
`out-port` *`out-port-number`*	Displays the fabric outgoing port.
`version` *`version-string`*	Displays the NetVisor version.
`state offline|online|in-band-only-online|vmgmt-only-online|mgmt-only-online|fabric-joined|eula-required|setup-required|fabric-required|fresh-install`	Displays the fabric state.
`firmware-upgrade`	Displays the firmware upgrade status.
`device-state`	Displays the device state.
`ports` *`ports-number`*	Displays the ports.
`keepalive-timeout high resolution time:` *`#ns`*	Displays the keepalive timeout in nanoseconds.

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to generate location mappings for a node.

Examples To generate location mappings for a node, use the following syntax:

```
CLI (network-admin@switch) > fabric-node-locations-mapping
```

fabric-node-show

This command is used to display node information in a fabric.

Syntax `fabric-node-show`

`id id-number`	The identifier assigned to the node.
`location-id` *`location-id-number`*	The location ID assigned to the fabric node.
`serial` *`serial-string`*	The serial string for the fabric node
`name` *`fabric-node-name`*	The name of the fabric node to display information.
`fab-name` *`fab-name`*	The name of the fabric node.
`fab-id`	The fabric identifier.
`cluster-id`	The cluster identifier.
`local-mac` *`mac-address`*	The local MAC address of the fabric.
`fabric-network in-band|mgmt|vmgmt`	The fabric network type.
`control-network in-band|mgmt||vmgmt`	The interface to send control plane communications.
`mgmt-ip` *`ip-address`*	The IP address for the management NIC.
`mgmt-netmask` *`netmask`*	The netmask for the IP address.
`mgmt-ip2` *`ip-address`*	The second IP address for the management NIC.
`mgmt-netmask2` *`netmask`*	The netmask for the second IP address.
`mgmt-assignment2 none|static|dhcp| dhcpv6|autov6`	The type of IP address assignment.
`mgmt-linklocal` *`ip-address`*	The IPv6 address for the link local address.
`mgmt-ipv6-unnumbered|mgmt-no-ipv6-unnumbered`	The IPv6 address is LinkLocal only.
`mgmt-assignment-linklocal none| static|dhcp|dhcpv6|autov6`	The type of link local IP address assignment.
`mgmt-mac` *`mac-address`*	The MAC address for the management interface.
`mgmt-vnet` *`vnet-name`*	The management vNET.
`mgmt-public-vlan 0..4095`	The public VLAN ID.
`mgmt-secondary-macs secondary-macs-string`	The secondary MAC address of the management interface.
`mgmt-if-nat-realm internal|external`	The NAT interface realm.

`mgmt-vrf vrf name|default`	Name of the VRF.
`mgmt-sec-addresses sec-addresses-number`	Number of IP, and IPv6 addresses configured on this interface.
`mgmt-wake-on-lan|mgmt-no-wake-on-lan`	The wake on LAN.
`vmgmt-ip` *`ip-address`*	The IP address for the in-band interface to the switch control plane.
`vmgmt-netmask` *`netmask`*	The netmask for the in-band interface to the switch control plane.
`vmgmt-ip2` *`ip-address`*	The second IP address for the in-band interface to the switch control plane.
`vmgmt-netmask2` *`netmask`*	The second netmask for the in-band interface to the switch control plane.
`vmgmt-assignment2 none|static|dhcp|dhcpv6|autov6`	The type of IP address assignment.
`vmgmt-linklocal ip-address`	IPv6 Link Local address.
`vmgmt-ipv6-unnumbered|vmgmt-no-ipv6-unnumbered`	The IPv6 address is LinkLocal only.
`vmgmt-assignment-linklocal none|static|dhcp|dhcpv6|autov6`	The type of IPv6 LinkLocal address assignment.
`vmgmt-mac` *`mac-address`*	The MAC address for the in-band interface to the switch control plane.
`vmgmt-vnet` *`vnet-name`*	The inband vNET name.
`vmgmt-vlan 0..4095`	The inband VLAN ID.
`vmgmt-secondary-macs secondary-macs-string`	The secondary MAC addresses.
`vmgmt-vrf vrf name|default`	Name of the VRF.
`vmgmt-sec-addresses sec-addresses-number`	Number of IP, and IPv6 addresses configured on this interface.
`vmgmt-wake-on-lan|vmgmt-no-wake-on-lan`	The wake on LAN.
`in-band-ip` *`ip-address`*	The IP address for the in-band interface to the switch control plane.
`in-band-netmask` *`netmask`*	The netmask for the in-band interface to the switch control plane.
`in-band-ip2` *`ip-address`*	The second IP address for the in-band interface to the switch control plane.
`in-band-netmask2` *`netmask`*	The second netmask for the in-band interface to

	the switch control plane.
`in-band-assignment2 none|static|dhcp|dhcpv6|autov6`	The type of IP address assignment.
`in-band-linklocal ip-address`	The IPv6 LinkLocal address.
`in-band-assignment-linklocal none|static|dhcp|dhcpv6|autov6`	The type of IPv6 LinkLocal address assignment.
`in-band-mac` *`mac-address`*	The MAC address for the in-band interface to the switch control plane.
`in-band-vnet` *`vnet-name`*	The inband vNET name.
`in-band-bd bridge-domain` *`name`*	The interface Bridge Domain.
`in-band-vlan` *`0..4095`*	The inband VLAN ID.
`in-band-vlan-type public|private`	The type of inband VLAN as public or private.
`in-band-public-vlan` *`0..4095`*	The inband public VLAN ID.
`in-band-secondary-macs` *`secondary-macs-string`*	The secondary MAC address of the in-band interface
`in-band-if-nat-realm internal|external`	The NAT interface realm.
`in-band-vrf vrf name|default`	Name of the inband VRF.
`in-band-sec-addresses sec-addresses-number`	Number of IP, and IPv6 addresses configured on this interface.
`in-band-wake-on-lan|in-band-no-wake-on-lan`	The inband wake on LAN.
`fab-tid` *`fab-tid-number`*	The fabric identifier.
`cluster-tid` *`cluster-tid-number`*	The cluster identifier.
`out-port` *`out-port-number`*	The port number where the switch multicasts the fabric discovery messages to other Pluribus Networks switch.
`version` *`version-string`*	The current ONVL version.
`state offline|online|in-band-only-online|mgmt-only-online|vmgmt-only-online|offline(evicted)|online(joined)|eula-required|setup-required|fabric-required|fresh-install`	The state of the fabric.
`firmware_upgrade not-required|required|reboot-required`	Specifies if a firmware upgrade is required.

`device-state ok|error|simulator`	The state of the switch.
`ports` *`ports-number`*	The port list used by the fabric.
`keepalive-timeout` *`high resolution time: #ns`*	The keepalive timeout in nanoseconds.
`rollforward-failed true|false`	The roll-forward status of the node.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.3.2	The parameters cluster-id, cluster-tid, `mgmt-assignment`, `mgmt-vm-nic-type`, `mgmt-nic`, `mgmt-vxlan`, `mgmt-if`, `mgmt-alias-on`, `mgmt-vm-nic-type`, `mgmt-exclusive`, `mgmt-nic-enable`, `mgmt-nic-state`, and corresponding `in-band` parameters deprecated.
Version 2.4.1	The parameters `mgmt-vnet`, `mgmt-public-vlan`, `in-band-vnet`, `in-band-vlan-type`, and `in-band-public-vlan` added.
Version 5.1.1	The parameter `keepalive-timeout` added.
Version 7.0.0	The parameter `rollforward-failed` added.

Usage The fabric consists of one or more switches sharing an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to display node information.

Examples To display a list of fabrics visible from the local switch, use the following command:

```
CLI (network-admin@switch) > fabric-node-show
name   fab-name mgmt-ip        in-band-ip       in-band-vlan-type fab-tid version
       state  firmware-upgrade device-state
------ -------- -------------- ---------------- ----------------- -------
---------------- ------ ---------------- ------------
switch fabric   10.13.44.53/23 192.168.25.33/24 public            5       6.0.0-
6000016312 online not-required     ok
```

fabric-upgrade-abort

This command is used to end a fabric-wide upgrade on the fabric.

Syntax `fabric-upgrade-abort`

`force|no-force`	Specify if you want the upgrade to stop immediately or wait for a logical step in the upgrade process.

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to stop a fabric-wide upgrade.

Examples To stop the fabric upgrade, and end the process immediately, use the following command:

```
CLI (network-admin@switch) > fabric-upgrade-abort  force
```

fabric-upgrade-start

This command is used to start a fabric-wide upgrade.

Syntax `fabric-upgrade-start`

`packages sftp-files` *`name`*	Specify a comma delimited list of the offline packages to use for the upgrade process.
`auto-finish|no-auto-finish`	Specify if you want to automatically reboot the fabric after the upgrade.
`abort-on-failure| no-abort-on-failure`	Specify if you want to stop the upgrade process if the upgrade fails on a node.
`manual-reboot| no-manual-reboot`	Specify if you want to manually reboot the switches so that all switches do not reboot at the same time.
`download-count 1..5`	Specify the number of concurrent downloads, the default count is 5.
`prepare|no-prepare`	Specify if you want to perform setup steps for the actual upgrade.
`upload-server` *`upload-server-strin`*g	Specify the upload server string.
`server-password` *`server-password-string`*	Specify the server password.

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.
Version 2.3	The parameters `prepare` `reboot-parallel` and `reboot-group` added.
Version 3.1.0	The parameters `upload-server`, and `server-password` added.
Version 5.1.1	The parameters `rolling|no-rolling`, `reboot-parallel|reboot-single`, `reboot-count` got deprecated.
Version 6.1.0	The parameter `download-count` is added.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to begin a fabric-wide upgrade.

Examples To force the upgrade to end immediately, use the following syntax:

```
CLI (network-admin@switch) > fabric-upgrade-start
```

fabric-upgrade-status-show

This command is used to display the status of a fabric-wide upgrade.

Syntax `fabric-upgrade-status-show`

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to display the status of a fabric-wide upgrade.

Examples To force the upgrade to end immediately, use the following snyntax:

```
CLI (network-admin@switch) > fabric-upgrade-status-show
log                              switch state cluster
-------------------------------- ------ ----- -------
Fabric upgrade not running/ended N/A    N/A   N/A
```

fabric-upgrade-prepare-cancel

Use this command to cancel a fabric upgrade prepared earlier.

Syntax

`fabric-upgrade-prepare-cancel`

Defaults

None

Access

Network Administrator

History

Version 5.1.1	Command introduced.

Usage

If you prepared a switch for an upgrade, and want to cancel it, use this command.

Examples

To cancel a fabric upgrade, use the following syntax:

```
CLI (network-admin@switch) > fabric-upgrade-prepare-cancel
```

fabric-upgrade-prepare-resume

Use this command to resume a fabric upgrade prepared earlier.

Syntax `fabric-upgrade-prepare-resume`

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage If you prepared a switch for an upgrade, and want to resume it, use this command.

Examples To resume a fabric upgrade, use the following syntax:

```
CLI (network-admin@switch) > fabric-upgrade-prepare-resume
```

fabric-upgrade-prepare-show

Use this command to display prepared fabric upgrades.

Syntax `fabric-upgrade-prepare-show`

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage If you prepared a switches for an upgrade, and want to display them, use this command.

Examples To display prepared fabric upgrades, use the following syntax:

```
CLI (network-admin@switch) > fabric-upgrade-prepare-show
switch log
------ ------------------------------
switch No prepared upgrade available
```

fabric-upgrade-finish

This command is used to reboot the fabric after a fabric-wide upgrade.

Syntax `fabric-upgrade-finish`

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.

Usage The fabric consists of one or more switches that share an administrative domain. The fabric presents the abstraction of a big logical switch with a single point of management, hiding the complexity of the underlying collection of switch hardware, and inter-switch links. Use this command to reboot the nodes after a fabric-wide upgrade.

Examples To finish the upgrade, use the following syntax:

```
CLI (network-admin@switch) > fabric-upgrade-finish
```

fabric-vnic-create

NetVisor OS allows the creation of a management interface on a Virtual Network Interface Card (vNIC) for fabric communication. In the current fabric, NetVisor allows two subnets: one for out-of-band provisioning, and fabric, and one for in-band fabric. This feature allows three subnets per fabric:

- An out-of-band provisioning subnet
- An out-of-band fabric subnet
- An in-band fabric subnet

Each subnets uses a separate VLAN for traffic isolation purposes. When a vNIC is created for the management interface, fabric communication automatically switches to this vNIC, without additional configuration.

Syntax `fabric-vnic-create`

`ip` *`ip-address`*	Specify the IP address of the vNIC.
`netmask` *`netmask`*	Specify the netmask for the IP address.
`vlan` *`vlan-id`*	Specify the VLAN ID for the vNIC. This must be unique to the vNIC.

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage Use this command to create a vNIC for fabric management.

Examples To create a vNIC with IP address, 20.1.1.1/24 on VLAN 22, use the following syntax:

```
CLI (network-admin@switch) > fabric-vnic-create ip 20.1.1.1 netmask
255.255.255.0 vlan 22
```

fabric-vnic-delete

NetVisor OS allows the creation of a management interface on a Virtual Network Interface Card (vNIC) for fabric communication. In the current fabric, NetVisor allows two subnets: one for out-of-band provisioning, and fabric, and one for in-band fabric. This feature allows three subnets per fabric:

- An out-of-band provisioning subnet
- An out-of-band fabric subnet
- An in-band fabric subnet

Each subnets uses a separate VLAN for traffic isolation purposes. When a vNIC is created for the management interface, fabric communication automatically switches to this vNIC, without additional configuration.

Syntax `fabric-vnic-delete`

Defaults None

Access Network Administrator

History

Version 5.1.0	Command introduced.

Usage Use this command to delete a vNIC for fabric management.

Examples To modify a vNIC with IP address, 20.1.1.1/24 on VLAN 32, use the following syntax:

```
CLI (network-admin@switch) > fabric-vnic-delete
```

fabric-vnic-modify

NetVisor OS allows the creation of a management interface on a Virtual Network Interface Card (vNIC) for fabric communication. In the current fabric, NetVisor allows two subnets: one for out-of-band provisioning, and fabric, and one for in-band fabric. This feature allows three subnets per fabric:

- An out-of-band provisioning subnet
- An out-of-band fabric subnet
- An in-band fabric subnet

Each subnets uses a separate VLAN for traffic isolation purposes. When a vNIC is created for the management interface, fabric communication automatically switches to this vNIC, without additional configuration.

Syntax `fabric-vnic-modify`

`ip` *`ip-address`*	Specify the IP address of the vNIC.
`netmask` *`netmask`*	Specify the netmask for the IP address.
`vlan` *`vlan-id`*	Specify the VLAN ID for the vNIC. This must be unique to the vNIC.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify a vNIC for fabric management.

Examples To modify a vNIC with IP address, 20.1.1.1/24 on VLAN 32, use the following syntax:

```
CLI (network-admin@switch) > fabric-vnic-modify ip 20.1.1.1 netmask
255.255.255.0 vlan 32
```

fabric-vnic-show

NetVisor OS allows the creation of a management interface on a Virtual Network Interface Card (vNIC) for fabric communication. In the current fabric, NetVisor allows two subnets: one for out-of-band provisioning, and fabric, and one for in-band fabric. This feature allows three subnets per fabric:

- An out-of-band provisioning subnet
- An out-of-band fabric subnet
- An in-band fabric subnet

Each subnets uses a separate VLAN for traffic isolation purposes. When a vNIC is created for the management interface, fabric communication automatically switches to this vNIC, without additional configuration.

Syntax `fabric-vnic-show`

`ip` *`ip-address`*	The IP address of the vNIC.
`netmask` *`netmask`*	The netmask for the IP address.
`vlan` *`vlan-id`*	The VLAN ID for the vNIC. This must be unique to the vNIC.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about a fabric management vNIC.

Examples To display information about a fabric management vNI, use the following syntax:

```
CLI (network-admin@switch) > fabric-vnic-show
nic:        vmgmt0
ip:         20.1.1.1/24
mac:        66:0e:94:6a:2a:ad
vlan:       20
nic-config: enable
nic-state:  up
```

From the output, you can see the status of the interface as enabled, and up as well as the vNIC name, IP address, MAC address, and VLAN.

factory-reset

Use this command to reset the switch to factory default settings.

Syntax `factory-reset`

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	Deprecated.
Version 2.6.2	Command re-introduced.

Usage This command restores all configuration, and persistent state, including data on built-in storage devices, to factory default settings.

Examples To reset the switch use the following command:

```
factory-reset
```

flow-table-show

This command is used to display information about traffic flows on the switch.

Syntax `flow-table-show`

`name` *`name-string`*	Name of the traffic flow
`id` *`id-number`*	The identifier of the traffic flow
`hw-id` *`hw-id-number`*	The identifier of the hardware source
`flow-name` *`flow-name-string`*	Name of the traffic flow type
`flow-hw-id` *`flow-hw-id-number`*	The identifier of the hardware flow source

Defaults None

History

Version 1.2	Command introduced.
Version 2.0	The parameter `flow-id` *`flow-id`* deprecated.
Version 5.1.1	The parameter `tbl-id` deprecated.

Usage Each switch is built with a datapath ASIC inside, and contains a set of hardware flow tables for traffic forwarding. Use this command to display flows as they are currently programmed in each of the hardware flow tables.

Examples To display the flows, use the following command:

```
CLI (network-admin@switch) > flow-table-show
switch:     pleaides24
name:       Switch System Table - L2 to L4
id:         2
hw-id:      33
flow-name:   Martian-L2-Check
flow-id:    2
flow-hw-id: 1048578
```

flow-tracker-add-protocol

This command is used to add a non-TCP protocol for analysis.

Syntax `flow-tracker-add-protocol`

`protocol dns|ntp|dhcp|ping4|udp|ping6|dhcpv6`	Specifies to add a protocol for analysis.
Specify any of the following options:	
`server-port` *`server-port-number`*	Specifies the server port for UDP.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to add a non-TCP protocol for analysis.

Informational Note: The FlowTracker feature and commands for non-TCP analytics are available on the following platforms in NetVisor version 7.0.1:

- Dell: S5232F-ON, S5248F-ON
- Edgecore: AS7726-32X, AS7326-56X, AS5835-54X, AS5835-54T
- Freedom: F9432-C, F9480-V, F9460-X, F9460-T

Examples To add a non-TCP protocol for analysis, use the following command:

```
CLI (network-admin@switch) > flow-tracker-add-protocol
```

flow-tracker-remove-protocol

This command is used to remove a non-TCP protocol.

Syntax `flow-tracker-remove-protocol`

`protocol dns|ntp|dhcp|ping4|udp|ping6|dhcpv6`	Specifies to remove a protocol for analysis
Specify any of the following options:	
`server-port server-port-number`	Specifies the server port for UDP.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to remove a non-TCP protocol.

Informational Note: The FlowTracker feature and commands for non-TCP analytics are available on the following platforms in NetVisor version 7.0.1:

- Dell: S5232F-ON, S5248F-ON
- Edgecore: AS7726-32X, AS7326-56X, AS5835-54X, AS5835-54T
- Freedom: F9432-C, F9480-V, F9460-X, F9460-T

Examples To remove a non-TCP protocol, use the following command:

```
CLI (network-admin@switch) > flow-tracker-remove-protocol
```

flow-tracker-show

This command is used to display the enabled protocols.

Syntax `flow-tracker-show`

`protocol dns|ntp|dhcp|ping4|udp|ping6|dhcpv6`	Specifies to add a protocol for analysis
Specify any of the following options:	
`server-port server-port-number`	The server port for UDP.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the enabled protocols.

Informational Note: The FlowTracker feature and commands for non-TCP analytics are available on the following platforms in NetVisor version 7.0.1:

- Dell: S5232F-ON, S5248F-ON
- Edgecore: AS7726-32X, AS7326-56X, AS5835-54X, AS5835-54T
- Freedom: F9432-C, F9480-V, F9460-X, F9460-T

Examples To display the enabled protocols, use the following command:

```
CLI (network-admin@switch) > flow-tracker-show
protocol server-port
-------- -----------
dhcp
dns
udp      52001
ntp
udp      52000
```

H Commands

help

Displays usage information about commands.

Syntax `help`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display usage information for all ONVL commands.

Examples To display usage information for fabric-create, use the following command:

```
CLI (network-admin@switch) > help fabric-create
name    name-string
any of the following options:
mcast-ip ip-address
password
delete-conflicts|abort-on-conflict
```

hog-violator-show

The CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
NetVisor OS provides three types of Control Plane Protection:

- Overall CPU Bandwidth
- Dedicated Queues for Critical Flows
- Protection from offending flows in Critical Queues (DDOS Protection) by using special CPU hog queues

Syntax `hog-violator-show`

`mac` *`mac-address`*	The hog violator MAC address.
`vnet` *`vnet name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The hog violator VLAN ID.
`vxlan` *`vxlan-id`*	The hog violator VXLAN ID.
`port` *`port-number`*	The hog violator ingress port.
`cpu-class` *`cpu-class-string`*	The hog violator original class.
`hog-cpu-class` *`hog-cpu-class-string`*	The hog violator hog queue CPU class.
`created date/time:` *`yyyy-mm-ddTHH:mm:ss`*	The time, and date when hog violator is created.
`vflow` *`vflow-string`*	The redirect vFlow.
`vflow2` *`vflow-string`*	The redirect vFlow 2.
`vflow3` *`vflow-string`*	The redirect vFlow 3.
`vflow4` *`vflow-string`*	The redirect vFlow 4.

`vflow5` *`vflow-string`*	The redirect vFlow 5.
`vflow6` *`vflow-string`*	The redirect vFlow 6.
`idle-count` *`idle-count-number`*	The current idle count.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameter `idle-count` added.

Usage Use this command to display information about CPU hog violators.

Examples To display information about CPU hog violators, use the following syntax:

`CLI (network-admin@switch) >` `hog-violator-show`

```
mac               vlan vxlan  port cpu-class hog-cpu-class created
----------------- ---- ------ ---- --------- ------------- --------
66:0e:94:10:d8:4a 704         15   ospf      hog-ospf      13:13:58
66:0e:94:10:d8:4a 704         15   bfd       hog-bfd       13:14:02
06:c0:00:17:30:0f 16          15   lldp      hog-lldp      13:14:07
06:c0:00:17:30:0f 16          15   lacp      hog-lacp      13:14:10
66:0e:94:1d:09:58      101001 25   arp       hog-arp       13:14:19
00:00:5e:00:01:0b 2001        128  vrrp      hog-vrrp      13:14:22
06:c0:00:17:30:0e 16          15   stp       hog-stp       13:14:31
80:ac:ac:f0:aa:34 16          15   bgp       hog-bgp       13:14:35
00:00:33:33:33:33 2003        15   arp       hog-arp       13:14:46
```

hog-violator-stats-show

The CPU Control Packet Processing Protection feature allows the CPU control packet processing path be protected against misbehaving, and malicious hosts or end-points that may flood control protocol packets. This is also called "CPU hog protection".
NetVisor OS provides three types of Control Plane Protection:

- Overall CPU Bandwidth
- Dedicated Queues for Critical Flows
- Protection from offending flows in Critical Queues (DDOS Protection) by using special CPU hog queues

Syntax `hog-violator-stats-show`

`time date/time: yyyy-mm-ddTHH:mm:ss`	The time, and date to start statistics collection.
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	The start time of the statistics collection.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	The end time of the statistics collection.
`duration duration: #d#h#m#s`	The duration of statistics collection.
`interval duration: #d#h#m#s`	The interval between statistics collection.
`since-start`	The statistics collection since the start time.
`older-than duration: #d#h#m#s`	The statistics collection older than the time.
`within-last duration: #d#h#m#s`	The statistics collection within a specified time period.
`name vflow-name`	The name of the vFlow.
`vnet #d#h#m#s`	The vNET name.
`id`	The ID assigned by NetVisor.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage

Use this command to display settings for CPU hog violator statistics.

Examples

To display settings for CPU hog violator statistics, use the following syntax:

```
CLI (network-admin@switch) > hog-violator-stats-show
```

I Commands

id-led-modify

This command is used to locate the switch by blinking the LED on the front panel.

Syntax `id-led-modify`

`enable|disable`	You can enable or disable this feature.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage When you enable this feature, the LED on the switch blinks allowing you to physically locate it.

Examples To enable this feature, use the following command:

```
CLI (network-admin@switch) > id-led-modify enable
```

id-led-show

This command is used to display LED parameters on the switch.

Syntax `id-led-show`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display LED parameters on the switch.

Examples To display LED parameters, use the following command:

```
 CLI (network-admin@switch) > id-led-show layout vertical
switch:    pleiades24
enable:    no
```

igmp-show

To show the Internet Group Management Protocol (IGMP) group membership information for a switch, use this command.

Syntax `igmp-show`

`group-ip` *`ip-address`*	The multicast group IP address.
`node-ip` *`ip-address`*	The node IP address
`vnet vnet-nam`	Name of the vNET.
`vlan` *`vlan-id`*	The VLAN identifier.
`port` *`port-number`*	The port number.
`source` *`ip-address`*	The multicast source traffic.
`node-type host|router|switch`	Specifies if the router is a host, router, or switch.
`expires` *`expires-number(s)`*	The age out time on the IGMP router.

Defaults All IGMP group membership information for the local switch is displayed unless a single switch is specified.

Access CLI

History

Version 1.2	Commmand introduced.
Version 2.4	The parameters `node-type`, and `expires` added.
Version 2.4.1	The parameter `host-ip` changed to `node-ip`. The parameter `vnet` added.

Usage Use this command to display information about IGMP on the network.

Examples To display all IGMP group membership information for the local switch, use the following command:

```
CLI (network-admin@switch) > igmp-show
switch group-ip  node-ip      vnet bd vlan port source  node-type expires(s)
```

```
------ --------- ------------- ---- -- ---- ---- ------- --------- ----------
switch 239.4.9.3 192.168.25.31         1    272  0.0.0.0 host      272
switch 239.4.9.3 100.3.0.1             1    16   0.0.0.0 host      300
switch 239.4.9.3 100.2.0.1             1    16   0.0.0.0 host      277
switch 239.4.9.3 192.168.25.32         1    0    0.0.0.0 host      300
switch 239.4.9.7 100.3.0.1             1    16   0.0.0.0 host      277
switch 239.4.9.7 192.168.25.31         1    272  0.0.0.0 host      277
switch 239.4.9.7 100.2.0.1             1    16   0.0.0.0 host      241
switch 239.4.9.7 192.168.25.32         1    69   0.0.0.0 host      243
switch 239.4.9.4 100.3.0.1             1    16   0.0.0.0 host      277
switch 239.4.9.4 192.168.25.31         1    272  0.0.0.0 host      277
switch 239.4.9.4 100.2.0.1             1    16   0.0.0.0 host      241
switch 239.4.9.4 192.168.25.32         1    69   0.0.0.0 host      243
```

igmp-querier-ip-modify

You can configure an IGMP querier IP address for a VLAN or as a global IGMP querier. The IGMP querier sends IGMP General Query messages. on the network.

If you do not specify a querier IP address, then NetVisor uses 0.0.0.0 as the default value. There can be an unique querier IP for each VLAN, or you can configure the same Querier IP address for all the VLANs participating in IGMP snooping. The Querier IP address should have a local scope, and every switch should have a unique Querier IP address.

With a valid source IP address on IGMP Query packets, the VLAN, where Query is received, is added to an IGMP Snoop switch list, and is now reflected in the `igmp-switches-show` output, and the IGMP queries are sent to the peer Switch as well. This is to solicit a report from the hosts listening on the peer switch.

Syntax `igmp-querier-ip-modify`

`querier-ip` *`ip-address`*	Specify the Snooping Querier IP address.
`vlans-on-querier-ip` *`vlan-list`*	Specify the VLAN map for the querier IP address.

Defaults None

Access network-admin

History

Version 2.5	Command introduced.

Usage Configure an IGMP querier IP address for a VLAN or as a global IGMP querier.

Examples To configure an IGMP querier IP address with a VLAN list of 12-15, use the following syntax:

```
CLI (network-admin@switch) > igmp-querier-ip-modify  querier-ip
1.1.1.1  vlans-on-querier-ip  12-15
```

igmp-querier-ip-show

You can configure an IGMP querier IP address for a VLAN or as a global IGMP querier. The IGMP querier sends IGMP General Query messages. on the network.

If you do not specify a querier IP address, then NetVisor uses 0.0.0.0 as the default value. There can be an unique querier IP for each VLAN, or you can configure the same Querier IP address for all the VLANs participating in IGMP snooping. The Querier IP address should have a local scope, and every switch should have a unique Querier IP address.

With a valid source IP address on IGMP Query packets, the VLAN, where Query is received, is added to an IGMP Snoop switch list, and is now reflected in the igmp-switches-show output, and the IGMP queries are sent to the peer Switch as well. This is to solicit a report from the hosts listening on the peer switch.

Syntax `igmp-querier-ip-show`

`querier-ip` *`ip-address`*	The Snooping Querier IP address.
`vlans-on-querier-ip` *`vlan-list`*	The VLAN map for the querier IP address.

Defaults None

Access network-admin

History

Version 2.5	Command introduced.

Usage Display an IGMP querier IP address for a VLAN or as a global IGMP querier.

Examples To display an IGMP querier IP address with a VLAN list of 12-15, use the following syntax:

```
CLI (network-admin@switch) > igmp-querier-ip-show
switch  vlans-on-querier-ip  querier-ip
------  -------------------  ----------
switch 1-4092                0.0.0.0
```

igmp-router-show

This command is used to display IGMP routers on the network.

Syntax `igmp-router-show`

`node-ip` *`ip-address`*	The host IP address.
`vnet` *`vnet name`*	The host vNET.
`bd` *`bridge-domain name`*	The host bridge domain.
`vlan` *`vlan-id`*	The ID of the VLAN.
`port` *`port-number`*	The number of the port.

Defaults None

Access CLI

History

Version 2.2.2	Command introduced.
Version 5.1.1	The parameters `group-ip`, `source`, `node-type`, and `expires` deprecated. The parameters `vnet`, and `bd` added.

Usage Use this command to display information about IGMP routers on the network.

Examples To display information about IGMP routers on the network, use the following command:

```
CLI (network-admin@switch) > igmp-router-show
node-ip       vlan port
------------- ---- ----
10.56.57.1    57   0
192.168.126.1 111  0
55.56.1.2     2001 0
55.56.1.3     2001 272
10.55.56.1    4000 0
10.55.56.2    4000 272
10.59.55.1    4092 10
10.59.55.2    4092 0
```

igmp-snooping-modify

Use this command to modify the Internet Group Management Protocol (IGMP) snooping on the network.

Informational Note: NetVisor OS does not support IGMPv1. If you use IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-snooping-modify`

Specify one or more of the following options:	
`scope local|fabric`	Specify if the scope is local or fabric.
`enable|disable`	Specify if IGMP snooping is enabled or disabled.
`vxlan|no-vxlan`	Specify to enable or disable IGMP snooping on VXLANs.
`enable-vlans` *`vlan-list`*	Specify a list of VLANs to enable for IGMP.
`snoop-linklocal-vlans` *`vlan-list`*	Specify if you allow snooping of link-local groups(224.0.0.0/24) on these VLANs.
`no-snoop-linklocal-vlans` *`vlan-list`*	Specify if you do not allow snooping of link-local groups(224.0.0.0/24) on these VLANs.
`igmpv3-vlans` *`vlan-list`*	Specify IGMP Version 3 VLAN list for sending queries.
`igmpv2-vlans` *`vlan-list`*	Specify IGMP Version 2 VLAN list for sending queries.
`query-interval` *`seconds`*	Specify the interval between queries in seconds.
`query-max-response-time` *`seconds`*	Specify the maximum response time for a query.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `scope` added.
Version 2.4	The parameter `version` added.
Version 2.4.1	The parameter `version` changed to `igmpv2-`

	`vlans`, and `igmpv3-vlans`. The parameter `enable-vlans` added.
Version 3.1.0	The parameters `query-interval` and `query-max-response-time` added.
Version 5.1.1	The parameters `vxlan` and `snoop-linklocal` added.

Usage IGMP snooping allows the switch to listen in on IGMP traffic between hosts, and routers, thus maintaining a map of the links that need IP multicast streams. This command is used to modify IGMP snooping on the switch.

Examples To enable IGMP snooping, use the following command:

```
CLI (network-admin@switch) > igmp-snooping-modify  enable
```

igmp-snooping-show

This command displays information about Internet Group Management Protocol (IGMP) snooping on the network.

Informational Note: NetVisor OS does not support IGMPv1. If you use IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch

Syntax `igmp-snooping-show`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage IGMP snooping allows the switch to listen in on IGMP traffic between hosts, and routers, thus maintaining a map of the links that need IP multicast streams. Use this command to display IGMP snooping information on the switch.

Examples To display information about Internet Group Management Protocol (IGMP) snooping, use the following command:

```
CLI (network-admin@switch) > igmp-snooping-show
switch:                     switch
enable:                     yes
vxlan:                      no
enable-vlans:               1-4092
snoop-linklocal-vlans:      none
query-interval(s):          60
query-max-response-time(s): 1
```

igmp-switches-show

This command is used to display switches with IGMP protocol enabled.

Syntax `igmp-switches-show`

`node-ip` *`ip-address`*	The node IP address.
`vnet` *`vnet-name`*	Name of the vNET assigned to the IGMP static source.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The VLAN identifier.
`port` *`port-number`*	The port number.

Defaults None

Access CLI

History

Version 2.3.3	Command introduced.
Version 2.4.1	The parameters `group-ip`, `node-type`, `expires`, and `source` deprecated. The parameters `vnet` and `vlan` added.
Version 5.1.1	The parameter `bd` added.

Usage Displays information about IGMP switches.

Examples To display IGMP switches, use the following syntax:

```
CLI (network-admin@switch) > igmp-switches-show
switch  node-ip vlan port
------- ------- ---- ----
spine-1 0.0.0.0 1    3
spine-1 0.0.0.0 1    57
spine-1 0.0.0.0 2    3
spine-1 0.0.0.0 3    3
```

igmp-static-group-create

This command creates a static IGMP group on the network.

Informational Note: IGMPv1 is not supported in nvOS. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-static-group-create`

`group-ip` *`ip-address`*	Speicifies the group multicast IP address for IGMP.
`vlan` *`vlan-id`*	Specifies the VLAN identifier.
`ports` *`port-list`*	Specifies the list of ports.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage NetVisor OS uses IGMP groups to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to create an IGMP static group.

Examples To configure a static group for 239.4.9.3 on VLAN 202, and ports 55-57, use the following command:

```
CLI (network-admin@switch) > igmp-static-group-create  group-ip
239.4.9.3 vlan 202 ports 55-57
```

igmp-static-group-delete

This command deletes information about IGMP snooping on the network.

Syntax `igmp-static-group-delete`

`group-ip` *`ip-address`*	Specify the group IP address for IGMP.
`vnet` *`vnet name`*	Specify the vNET to delete.
`l2-net` *`l2-net name`*	Specify the group Layer 2 network.
`vlan` *`vlan-id`*	Specify the VLAN identifier.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `ports` is deprecated.
Version 3.0.0	The parameters `vnet`, and `l2-net` added.

Usage IGMP groups are used to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to remove an IGMP static group.

Examples To delete a static group for 239.4.9.3 on VLAN 202, and ports 55-57, use the following command:

```
CLI (network-admin@switch) > igmp-static-group-delete  group-ip
239.4.9.3 vlan 202 ports 55-57
```

igmp-static-group-show

This command is used to display information about IGMP static groups configured on the switch.

> **Informational Note**: IGMPv1 is not supported in nvOS. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-static-group-show`

`group-ip` *`ip-address`*	The IP address of the IGMP static group.
`vnet` *`vnet-name`*	The vNET assigned to the IGMP static group.
`l2-net` *`l2-net name`*	Specify the group Layer 2 network.
`vlan` *`vlan-id`*	The VLAN assigned to the IGMP static group.
`ports` *`port-list`*	The ports assigned to the IGMP group.

Access CLI

History

Version 2.0	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.

Usage IGMP groups are used to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to display an IGMP static group.

Examples To display a static group for 239.4.9.3 on VLAN 202, and ports 55-57, use the following command:

```
CLI (network-admin@switch) > igmp-static-group-show
group-ip   bd vlan ports
--------- -- ---- ----
239.1.1.1    10   14
```

igmp-static-source-create

This command creates a static IP address as the IGMP source on the network.

Informational Note: IGMPv1 is not supported in nvOS. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-static-source-create`

`source-ip` *`ip-address`*	Specify the IP address of the source. This is a unicast IP address.
`group-ip` *`ip-address`*	Specify the group IP address for IGMP.
`vlan` *`vlan-id`*	Specify the VLAN identifier.
Specify the following option:	
`vnet` *`vnet-name`*	Specify the vNET name assigned to the IGMP static source.
`bd` *`bridge-domain name`*	Specify the bridge domain name.
`ports` *`port-list`*	Specify the list of ports.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The parameter `l2-net` deprecated.

Usage IGMP groups are used to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to create an IGMP static IP address as the source.

Examples To add the static source 12.0.0.1 as the static source, use the following command:

```
CLI (network-admin@switch) > igmp-static-source-create  source-ip
12.0.0.1 group-ip vlan 202 ports 55-57
```

igmp-static-source-delete

This command deletes a static IGMP source on the network.

> **Informational Note:** IGMPv1 is not supported in nvOS. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-static-source-delete`

`group-ip` *`ip-address`*	Specifies the group IP address for IGMP.
`source-ip` *`ip-address`*	Specifies the IP address of the source.
`bd` *`bridge-domain name`*	Specify the bridge domain name.
`vlan` *`vlan-id`*	Specifies the VLAN identifier.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The parameter `l2-net` deprecated.

Usage IGMP groups are used to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to remove an IP address as the static source.

Examples To remove the static source 12.0.0.1 as the static source, use the following command:

```
CLI (network-admin@switch) > igmp-static-source-delete  source-ip
12.0.0.1 group-ip vlan 202 ports 55-57
```

igmp-static-source-show

This command displays a static IGMP source on the network.

> **Informational Note:** IGMPv1 is not supported in nvOS. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax `igmp-static-source-show`

`group-ip` *`ip-address`*	Specifies the group IP address for IGMP.
`vnet` *`vnet-name`*	Specify the vNET name assigned to the IGMP static source.
`source-ip` *`ip-address`*	Specifies the source IP address.
`bd` *`bridge-domain name`*	Specifies the bridge domain name.
`vlan` *`vlan-id`*	Specifies the VLAN identifier.
`ports` *`port-list`*	Specifies the list of ports.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 5.1.1	The parameter `host` deprecated, and the parameter `bd` added.

Usage IGMP groups are used to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to remove an IGMP static source.

Examples To display information about all IGMP static source IP addresses, use the following command:

```
CLI (network-admin@switch) > igmp-static-source-show
switch  group-ip  vnet bd vlan source-ip    ports
------- --------- ---- -- ---- ------------ -----
switch1 224.1.1.1         100  10.16.100.10 123
```

igmp-stats-show

This command displays IGMP statistics for a network on a per-VLAN basis.

Syntax `igmp-stats-show`

`vlan` *`vlan-id`*	Specify the VLAN ID for which IGMP statistics are to be displayed. For multiple VLANs, specify VLAN IDs as a list separated by commas.

Defaults None

Access CLI

History

Usage This command displays IGMP statistics for the network. The displayed information includes VLANs as well as the number of queries, and number of member reports for IGMPv2, and IGMPv3, among other details.

Examples To display IGMP statistics for VLAN 1 in a vertical layout, use the command:

```
CLI (network-admin@switch1) > igmp-stats-show
switch vlan v2-queries v3-queries v1-member-reports v2-member-reports v2-leave-group v3-member-
reports queries-sent drops ignored
------ ---- ---------- ---------- ---------------- ---------------- --------------
---------------- ------------ ----- -------
switch 1    0          1091       0                0                0              6545
  574          0     0
switch 4093 0          0          0                0                0              0
  0            0     0
```

igmp-stats-clear

NetVisor OS uses IGMP groups to determine the reception state for a specific multicast address. This allows the switch to determine if any switches need messages sent from a multicast group. Use this command to clear IGMP statistics:

Syntax `igmp-stats-clear`

`vlan` *`vlan-id`*	Specify the VLAN ID for which IGMP statistics are to be cleared. For multiple VLANs, specify VLAN IDs as a list separated by commas.

Defaults None

Access CLI

History

Usage This command clears IGMP statistics for the network. The command can be made specific to VLANs.

Examples To clear IGMP statistics for VLAN 1, use the command:

```
CLI (network-admin@Switch1) > igmp-stats-clear vlan 1
```

inline-service-create

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command creates an Inline Service configuration.

Syntax `inline-service-create`

`name` *`name-string`*	Specify a name for the Inline Service.
`tx-port` *`port-list`*	Specify the ports to send the Inline Service.
`rx-port` *`port-list`*	Specify the ports to receive the Inline Service.
`heartbeat service-heartbeat` *`name`* `| none`	Specify the service heartbeat.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameter `heartbeat service-heartbeat` added.

Usage Use this command to create an Inline Service configuration.

Examples To create an Inline Service configuration for IDS on transmit port 1, and receive port 2, use the following syntax:

```
CLI (network-admin@switch) > inline-service-create name IDS tx-port
1 rx-port 2
```

inline-service-delete

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command delete an Inline Service configuration.

Syntax `inline-service-delete`

`name` *`name-string`*	Specify a name for the Inline Service.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to delete an Inline Service configuration.

Examples To remove an Inline Service configuration named IDS, use the following syntax:

```
CLI (network-admin@switch) > inline-service-delete name IDS
```

inline-service-modify

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command delete an Inline Service configuration.

Syntax `inline-service-modify`

`name` *`name-string`*	Specify a name for the Inline Service.
`heartbeat service-heartbeat` *`name`* `| none`	Specify the service heartbeat.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to modify an Inline Service configuration.

Examples To remove an Inline Service configuration named IDS, use the following syntax:

```
CLI (network-admin@switch) > inline-service-modify name IDS
```

inline-service-show

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command displays information about an inline service configuration.

Syntax `inline-service-show`

`name` *`name-string`*	Name for the Inline Service.
`tx-port` *`port-list`*	The ports to send the Inline Service.
`rx-port` *`port-list`*	The ports to receive the Inline Service.
`status down|up`	The status of the inline service.
`heartbeat service-heartbeat` *`name`* `| none`	The service heartbeat.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameter `heartbeat service-heartbeat` added.

Usage Use this command to display information about an Inline Service configuration.

Examples To display an Inline Service configuration, use the following syntax:

```
CLI (network-admin@switch) > inline-service-show
switch name tx-port rx-port
------ ---- ------- -------
Leaf1  IDS   1      2
Leaf1  FW    10     20
Leaf1  FW    40     40
```

ip-pool-create

This command creates a new IP address pool with a specific IP address range.

Syntax `ip-pool-create`

`name` *`ip-pool-name`*	Specify the name for the IP pool.
`vnet` *`vnet-name`*	Specify the vNET name for the IP pool.
`start-ip` *`ip-address`*	Specify the first IP address in the pool. This address is included in the pool.
`end-ip` *`ip-address`*	Specify the end IP address of the pool, and is included in the pool.
`netmask` *`netmask`*	Specify the subnet for the IP address pool.
Specify the following option:	
`bd` *`bridge-domain name`*	Specify the bridge domain name.
`vlan` *`vlan-id`*	Specify the VLAN identifier for an IP address pool that applies to a specific Layer 2 network segment.

Defaults Unless the netmask parameter is specified, the subnet for the IP address pool is assumed to be the standard IP block for a given IP prefix. For example, if no netmask is specified, and the IP address has a prefix of 192.168.0.x, the subnet is assumed as /24, 255.255.255.0.

Access CLI

History

Version 1.2.1	Command introduced.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The parameter `l2-net` deprecated, and the parameter `bd` added.

Usage IP address pools help automate the management of IP addresses for hosts, and virtual machines, including the management IP addresses of the switches in a fabric. Use this command to create a new IP pool.

Examples To create a fabric-wide IP address pool named `MyPublicIPv4Pool` to automate the allocation of IP addresses within a fabric for the IP address block `208.74.182.0 to 208.74.182.100/32`, use the following command:

```
CLI (network-admin@switch) > ip-pool-create name MyPublicIPv4Pool
start-ip 208.74.182.0 end-ip 208.74.182.100 netmask 255.255.255.0
```

ip-pool-delete

This command deletes an IP address pool with a specific IP address range.

Syntax `ip-pool-delete`

`name` *`ip-pool-name`*	Specify the name of the IP pool to delete.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage IP address pools help automate the management of IP addresses for hosts, and virtual machines, including the management IP addresses of the switches in a fabric. This command deletes an existing IP address pool.

Examples To delete the IP address pool name MyPublicIPv4Pool, use the following command:

```
CLI (network-admin@switch) > ip-pool-delete MyPublicIPv4Pool
```

ip-pool-modify

This command modifies an IP address pool with a specific IP address range.

Syntax `ip-pool-modify`

`name` *`ip-pool-name`*	Specify the name of the IP pool.
Specify one or more of the following options:	
`start-ip` *`ip-address`*	Specify the first IP address in the pool. This address is included in the pool.
`end-ip` *`ip-address`*	Specify the end IP address of the pool, and is included in the pool.
`network` `ip-address`	Specify the network for the IP address pool, for example, 192.168.1.0.
`netmask` *`netmask`*	Specify the subnet for the IP address pool.
`vlan` *`vlan-id`*	Specify the VLAN identifier for an IP address pool that applies to a specific Layer 2 network segment.
`bd` *`bridge-domain name`*	Specify the Bridge Domain assigned to IP pool.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `vnet` deprecated.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The parameter `l2-net` deprecated, and the parameter `bd` added.

Usage IP address pools help automate the management of IP addresses for hosts, and virtual machines, including the management IP addresses of the switches in a fabric. Use this command to modify an existing IP pool.

Examples To modify a fabric-wide IP address pool named MyPublicIPv4Pool to automate the allocation of IP addresses within a fabric for the IP address block 208.74.182.0/24 to 208.74.182.201/24, use the following command:

```
CLI (network-admin@switch) > ip-pool-modify name MyPublicIPv4Pool start-ip 208.74.182.0
end-ip 208.74.182.200 netmask 255.255.255.0
```

ip-pool-show

This command displays information about an IP address pool with a specific IP address range.

Syntax `ip-pool-show`

`name` *`ip-pool-name`*	Specifies the name of the IP pool.
`vnet` *`vnet-name`*	Specifies the vNET name for the IP pool.
`scope local|fabric`	Specifies the scope of the vNET.
`start-ip` *`ip-address`*	Specifies the first IP address in the pool. This address is included in the pool.
`end-ip` *`ip-address`*	Specifies the end IP address of the pool, and is included in the pool.
`network` *`ip-address`*	Specify an IP address group such as 192.168.11.0.
`netmask` *`netmask`*	Specifies the subnet for the IP address pool.
`l2-net` *`l2-net-name`*	Specify the name of the Layer 2 network.
`vlan` *`vlan-id`*	Specifies the VLAN identifier for an IP address pool that applies to a specific Layer 2 network segment.
`bd` *`bridge-domain name`*	Specify the Bridge Domain assigned to IP pool.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `vnet` deprecated.

Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The parameter `l2-net` deprecated, and the parameter `bd` added.

Usage IP address pools help automate the management of IP addresses for hosts, and virtual machines, including the management IP addresses of the switches in a fabric.

Examples To display information about a fabric-wide IP address pool named vPool, use the following command:

```
 CLI (network-admin@switch) > ip-pool-show name vPool
Name  Owner Scope Range Start   Range End       Nemask Gateway   DNS
----- ----- ----- ------------- --------------- ------ --------- ---
vPool  None local 192.168.240.1 192.168.240.254 24     10.9.40.1  0
```

ipv6security-raguard-create

Create a Router Advertisement (RA) IPv6 security policy for IPv6 addresses.

Syntax `ipv6security-raguard-create`

`name` *`name-string`*	Specify the RA policy name.
`device host|router`	Specify the type of device as host or router.
`router-priority low|medium|high`	Specify the router priority as low, medium, or high.
`access-list` *`name-string`*	Specify the access list name.
`prefix-list` *`name-string`*	Specify the prefix list name.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to create a RA Guard policy for IPv6 addresses.

Examples To create a RA Guard policy with the name ra-guard-policy, device router, router-priority low, access-list ra-access-1, and prefix-list ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-create name ra-
guard-policy device router router-priority low access-list ra-
access-1 prefix-list ra-prefix-1
```

ipv6security-raguard-delete

Delete a Router Advertisement (RA) IPv6 security policy for IPv6 addresses.

Syntax `ipv6security-raguard-delete`

`name` *`name-string`*	Specify the RA policy name.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to delete a RA Guard policy for IPv6 addresses.

Examples To delete a RA Guard policy with the name ra-guard-policy, device router, router-priority low, access-list ra-access-1, and prefix-list ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-delete name ra-guard-policy
```

ipv6security-raguard-modify

Modify a Router Advertisement (RA) IPv6 security policy for IPv6 addresses.

Syntax `ipv6security-raguard-modify`

`name` *`name-string`*	Specify the RA policy name.
one or more of the following options:	
`device host|router`	Specify the type of device as host or router.
`router-priority low|medium|high`	Specify the router priority as low, medium, or high.
`access-list` *`name-string`*	Specify the access list name.
`prefix-list` *`name-string`*	Specify the prefix list name.
`attached-ports` *`port-list`*	Specify the ports attached to the RA Guard policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to modify a RA Guard policy for IPv6 addresses.

Examples To modify a RA Guard policy with the name ra-guard-policy, device router, router-priority low, access-list ra-access-1, and prefix-list ra-prefix-1, and add ports 11-13, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-modify name ra-
guard-policy device router router-priority low access-list ra-
access-1 prefix-list ra-prefix-1 attached-ports 11-13
```

ipv6security-raguard-show

Display information about a Router Advertisement (RA) IPv6 security policy configuration.

Syntax `ipv6security-raguard-show`

`name` *`name-string`*	The RA policy name.
`device host|router`	The type of device as host or router.
`router-priority low|medium|high`	The router priority as low, medium, or high.
`access-list` *`name-string`*	The access list name.
`prefix-list` *`name-string`*	The prefix list name.
`attached-ports` *`port-list`*	The ports attached to the policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about a RA Guard policy configuration.

Examples To display information about a RA Guard policy configuration, NAT-1, use the following syntax:

CLI (network-admin@switch) > ipv6security-raguard-show

```
switch name    device attached-ports attached-vlans
------ ------- ------ -------------- --------------
switch policy1 host   69-71          none
```

ipv6security-raguard-port-add

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages arriving at the network device platform. Use this command to add a port to an RA guard policy.

Syntax `ipv6security-raguard-port-add`

`name` *`name-string`*	Specify the name of the RA Guard policy to add ports.
`ports` *`port-list`*	Specify the list of ports to add to the policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add a port to an RA guard policy.

Examples To add a port to an IPv6 RA guard policy, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-port-add name RA1
ports 12,13
```

ipv6security-raguard-port-remove

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages arriving at the network device platform. Use this command to remove a port from an RA guard policy.

Syntax `ipv6security-raguard-port-remove`

`name` *`name-string`*	Specify the name of the RA Guard policy to remove ports from.
`ports` *`port-list`*	Specify the list of ports to remove.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove a port from an RA guard policy.

Examples To remove a port from an IPv6 RA guard policy, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-port-remove name
RA1 ports 12,13
```

ipv6security-raguard-port-show

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages arriving at the network device platform. Display information about a Router Advertisement (RA) IPv6 security policy port configuration.

Syntax `ipv6security-raguard-port-show`

`name` *`name-string`*	The RA guard policy name.
`ports` *`port-list`*	The type of device as host or router.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about an RA Guard policy port configuration.

Examples To display information about a RA Guard policy port configuration, NAT-1, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-port-show  name
NAT-1
```

ipv6security-raguard-vlan-add

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages arriving at the network device platform.

Syntax `ipv6security-raguard-vlan-add`

`name` *`name-string`*	Specify the name of the RA Guard policy to add VLANs.
`vlans` *`vlan-id`*	Specify the VLANs to add to the policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add a VLAN to an RA Guard policy.

Examples To add VLAN 33 to RA Policy, RA-Guard, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-vlan-add name RA-Guard vlans 33
```

ipv6security-raguard-vlan-remove

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages that arrive at the network device platform.

Syntax `ipv6security-raguard-vlan-remove`

`name` *`name-string`*	Specify the name of the RA Guard policy to add VLANs.
`vlans` *`vlan-id`*	Specify the VLANs to add to the policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove a VLAN from an RA Guard policy.

Examples To remove VLAN 33 to RA Policy, RA-Guard, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-vlan-remove  name
RA-Guard vlans 33
```

ipv6security-raguard-vlan-show

The IPv6 RA Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue RA guard messages that arrive at the network device platform.

Syntax `ipv6security-raguard-vlan-show`

`name` *`name-string`*	Name of the RA Guard policy to add VLANs.
`vlans` *`vlan-id`*	The VLANs to add to the policy.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display a VLAN assigned to an RA Guard policy.

Examples To display for the RA Policy, RA-Guard, use the following syntax:

```
CLI (network-admin@switch) > ipv6security-raguard-vlan-show  name
RA-Guard vlans 33
```

K Commands

k8s-cluster-show

A Kubernetes cluster consists of a control plane node, and a set of worker nodes that run containerized applications. Every cluster runs at least one worker node. This command is used to display Kubernetes cluster information.

Syntax `k8s-cluster-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistic collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistic collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`control-plane-node control-plane-node-string`	The control plane node name.
`control-plane-node-ip control-plane-node-ip-string`	The control plane node name.
`controller-status` *`controller-status-string`*	The status of the Kubernetes controller.
`scheduler-status`	The status of the Kubernetes scheduler.
`action none|add|remove|update`	The last action.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the Kubernetes cluster information.

Examples To display the Kubernetes cluster information, use this command:

```
CLI (network-admin@switch) > k8s-cluster-show
cluster-name  control-plane-node  control-plane-node-ip  controller-stauts  scheduler-status
lastchanged
------------  ------------------  ---------------------  -----------------  ----------------
-------------
k8s01        server-test-93     192.168.10.10         healthy           healthy
0712,23:25:21
```

k8s-cni-show

The Container Network Interface (CNI) is a proposed standard for configuring network interfaces for Linux application containers. This command is used to display CNI information.

Syntax `k8s-cni-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistic collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`cni-plugin` *`cni-plugin-string`*	The CNI plugin.
`backend` *`backend-string`*	The backend used by the CNI plugin.
`udp-port` *`udp-port-number`*	The VXLAN destination port.
`vxlan 0..16777215`	VXLAN ID for the vFlow.
`network-type` *`network-type-string`*	The network type implemented by the CNI plugin.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the CNI information.

Examples To display the CNI information, use this command:

```
CLI (network-admin@switch) > k8s-cni-show
cluster-name  cni-plugin  backend  network-type
------------  ----------  -------  -----------
arista        flannel     host-gw  underlay
```

k8s-connection-create

This command is used to create a new connection to the Kubernetes API server.

Syntax `k8s-connection-create`

`cluster-name` *`cluster-name-string`*	Specify a name for the Kubernetes cluster.
`rest-user` *`user name`*	Specify the username for vREST access.
Specify one or more of the following options:	
`kube-config` *`kube-config-string`*	Specify the absolute path to the kubeconfig file. The Default file location is `/root/.kube/config` in case `kube-config` option is not specified.
`password` *`password-string`*	Specify the vREST password.
`enable|disable`	Specifies whether to enable or disable the connection to Kubernetes API server.
`track-history|no-track-history`	Specifies whether enable or disable Kubernetes cluster history tracking.
`disk-space` *`disk-space-number`*	Specify the disk-space allocated for history (including rotated log files).

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to create a new connection to the Kubernetes API server.

Examples Use the following syntax to create a new connection to the Kubernetes API server.

```
CLI (network-admin@switch) > k8s-connection-create  cluster-name
k8s01  kube-config  /root/.kube/config
rest-user  network-admin  enable
rest-user  password  :
confirm  rest-user  password:
```

k8s-connection-delete

This command is used to delete the connection to the Kubernetes API server.

Syntax `k8s-connection-delete`

`cluster-name` *`cluster-name-string`*	Specify a name for the Kubernetes cluster.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete the connection to the Kubernetes API server.

Examples Use the following syntax to delete the connection to the Kubernetes API server.

```
CLI (network-admin@switch) > k8s-connection-delete
```

k8s-connection-modify

This command is used to modify the connection to the Kubernetes API server.

Syntax `k8s-connection-modify`

`cluster-name` *`cluster-name-string`*	Specify a name for the Kubernetes cluster to be modified.
one or more of the following options:	
`rest-user` *`user name`*	Specify the username for vREST access.
`password` *`password-string`*	Specify the vREST password.
`enable|disable`	Specifies whether to enable or disable the connection to Kubernetes API server.
`track-history|no-track-history`	Specifies whether enable or disable Kubernetes cluster history tracking.
`disk-space` *`disk-space-number`*	Specify the disk-space allocated for history (including rotated log files).
`create-vport|no-create-vport`	Specifies whether to enable or disable vPort creation for Pod traffic.
`overlay-vxlan-analytics|no-overlay-vxlan-analytics`	Specify whether to enable or disable pod traffic analytics.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify the connection to the Kubernetes API server.

Examples Use the following syntax to modify the connection to the Kubernetes API server.

```
CLI (network-admin@switch) > k8s-connection-modify
```

k8s-connection-show

This command is used to display the connection to the Kubernetes API server.

Syntax `k8s-connection-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
`kube-config` *`kube-config-string`*	The absolute path to the kube config file.
`rest-user` *`user name`*	The username for vRest access on switch.
`enable|disable`	Status of the connection to Kubernetes API server.
`track-history|no-track-history`	Enable or disable Kubernetes cluster history tracking.
`disk-space` *`disk-space-number`*	The disk-space allocated for history (including rotated log files).
`create-vport|no-create-vport`	Enable or disable vPort creation for Pod traffic.
`overlay-vxlan-analytics|no-overlay-vxlan-analytics`	Enable or disable pod traffic analytics.
`location` *`location-number`*	Location where the connection is running.
`connection-error` *`connection-error-string`*	Kubernetes connection error.
`k8s-vlan 0..4095`	VLAN used by k8s for pod vport creation.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the connection to the Kubernetes API server.

Examples Use the following syntax to display the connection to the Kubernetes API server.

```
CLI (network-admin@switch) > k8s-connection-show format all layout vertical
cluster-name:           k8s01
kube-config:            /root/.kube/config
rest-user:              network-admin
enable:                 yes
track-history:          yes
disk-space:             50M
create-vport:           yes
```

```
overlay-vxlan-analytics: no
location:                1262261009
```

k8s-connectivity-show

The Kubernetes visibility feature enables you to locate where Kubernetes Pods for specific applications are connected to the fabric to resolve any connectivity or performance issues. This command is used to display Kubernetes connectivity information.

Syntax `k8s-connectivity-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`namespace` *`namespace-string`*	The namespace.
`deployment` *`deployment-string`*	The Kubernetes deployment.
`daemonset` *`daemonset-string`*	The Kubernetes daemonset name.
`service` *`service-string`*	The Kubernetes service name.
`pod` *`pod-string`*	Name of the pod.
`node` *`node-string`*	The Kubernetes cluster node name.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes connectivity information.

Examples Use the following syntax to display the Kubernetes connectivity information

```
CLI (network-admin@switch) > k8s-connectivity-show
cluster-name namespace deployment pod                     connections
------------ --------- ---------- ------------------------ -----------------------------------------
arista       default   petstore   petstore-9d499b76f-hhmg4 server-test-94:enp1s0f0  -- 43:aurigacolo-1
arista       default   petstore   petstore-9d499b76f-psv8w server-test-103:enp1s0f0 -- 16:aurigacolo-1

                                                                                 server-test-94:enp1s0f1  -- 44:aurigacolo-1
arista       default   petstore   petstore-9d499b76f-qj58s server-test-94:enp1s0f0  -- 43:aurigacolo-1

                                                                                 server-test-94:enp1s0f1  -- 44:aurigacolo-1
arista       default   petstore   petstore-9d499b76f-649g6 server-test-103:enp1s0f0 -- 16:aurigacolo-1
```

k8s-daemonset-show

A DaemonSet manages groups of replicated Pods, and ensures that all (or some) nodes run a copy of a Pod. DaemonSets adds Pods to nodes that are added to a cluster, and removes the Pods from nodes which are removed from the cluster. Deleting a DaemonSet also deletes the Pods that it created. This command is used to display Kubernetes daemonset information.

Syntax `k8s-daemonset-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval duration: #d#h#m#s`	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the daemonset.
`namespace` *`namespace-string`*	Name of the namespace.
`desired-cnt` *`desired-cnt-number`*	The desired number of Pods.
`ready-cnt` *`ready-cnt-number`*	The number of Pods which are ready.
`selector` *`selector-string`*	The label selector for the Pods.
`action none|add|remove|update`	The last action performed.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes daemonset information.

Examples Use the following syntax to display Kubernetes daemonset information.

```
CLI (network-admin@switch) > k8s-daemonset-show
cluster-name name                  namespace      desired-cnt ready-cnt last-changed
------------ --------------------- -------------- ----------- --------- ------------
k8s01        speaker               metallb-system 6           6         23:24:49
k8s01        csi-cephfsplugin      rook-ceph      6           6         23:24:50
k8s01        csi-rbdplugin         rook-ceph      6           6         23:24:50
k8s01        calico-node           kube-system    6           6         23:24:50
k8s01        fluentd-elasticsearch kube-system    6           6         23:24:50
k8s01        kube-proxy            kube-system    6           6         23:24:50
k8s01        nodelocaldns          kube-system    6           6         23:24:50
k8s02        fluentd-elasticsearch kube-system    6           6         23:25:22
k8s02        kube-flannel-ds       kube-system    6           6         23:25:22
k8s02        kube-proxy            kube-system    6           6         23:25:22
```

k8s-deployment-show

Deployments represent a set of multiple, identical Pods with no unique identities. A deployment runs multiple replicas of your application, and automatically replaces any instances that fail or become unresponsive. In this way, deployments help ensure that one or more instances of your application are available to serve user requests. This command is used to display Kubernetes deployment information.

Syntax `k8s-deployment-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes node.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the deployment.
`namespace` *`namespace-string`*	Name of the namespace.
`replicas` *`replicas-number`*	The total replicas of pod.
`ready-replicas` *`ready-replicas-number`*	The ready replicas of pod.
`selector` *`selector-string`*	The pod label in deployment.
`action none|add|remove|update`	The last action performed.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes deployment information.

Examples Use the following syntax to display Kubernetes deployment information.

```
CLI (network-admin@switch) > k8s-deployment-show
cluster-name name                      namespace            replicas ready-replicas selector                          last-changed
------------ ------------------------- -------------------- -------- -------------- --------------------------------- ------------
arista       my-app                    default              1        1              app:my-app                        01:07:38
arista       pingtest                  default              2        2              app:pingtest                      01:07:38
arista       kubernetes-dashboard      kubernetes-dashboard 1        1              k8s-app:kubernetes-dashboard      01:07:38
arista       dashboard-metrics-scraper kubernetes-dashboard 1        1              k8s-app:dashboard-metrics-scraper 01:07:39
arista       hello-world               default              5        5              run:load-balancer-example         01:07:39
arista       petstore                  default              1        1              app:petstore                      01:07:39
arista       discovery                 gloo-system          1        1              gloo:discovery                    01:07:39
arista       gloo                      gloo-system          1        1              gloo:gloo                         01:07:39
arista       ingress                   gloo-system          1        1              gloo:ingress                      01:07:39
arista       ingress-proxy             gloo-system          1        1              gloo:ingress-proxy                01:07:39
arista       coredns                   kube-system          2        2              k8s-app:kube-dns                  01:07:39
```

k8s-endpoint-show

This command is used to display information about Pods targeted by a service (Pod IP addresses) in a Kubernetes cluster.

Syntax `k8s-endpoint-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the endpoint.
`namespace` *`namespace-string`*	Specify the namespace.
`selector` *`selector-string`*	Specify the label selector.
`target-ports` *`target-ports-string`*	Ports targeted on ports.
`endpoints` *`endpoints-string`*	The list of pod IP addresses.
`action none|add|remove|update`	The last changed action.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display information about Pods targeted by a service (Pod IP addresses) in a Kubernetes cluster.

Examples Use the following syntax to display Kubernetes endpoint information.

```
CLI (network-admin@switch) > k8s-endpoint-show

cluster-name name                      namespace            endpoints                last-changed
------------ ------------------------- -------------------- ------------------------
-------------
arista       gloo                      gloo-system          10.244.1.112
0824,02:01:19
arista       ingress-proxy             gloo-system          10.244.1.113
0824,02:01:19
arista       kube-dns                  kube-system          10.244.0.11,10.244.0.10
0824,02:01:19
arista       dashboard-metrics-scraper kubernetes-dashboard 10.244.0.12
0824,02:01:19
arista       kubernetes-dashboard      kubernetes-dashboard 10.244.0.13
0824,02:01:19
arista       petstore                  default              10.244.1.114
0826,07:54:22
```

k8s-impact-show

The Kubernetes visibility feature allows you to proactively determine the impact on containerized applications during switch outages or server replacements. Use this command to view the impact on a Kubernetes deployment, Daemonset, service, or Pods in the occasion of a switch or host replacement.

Syntax `k8s-impact-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistic collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistic collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`host` *`host-string`*	The host or node for which the impact needs to be checked.
`switch` *`fabric-node name`*	The switch for which the impact needs to be checked.
`namespace` *`namespace-string`*	The namespace.
`deployment` *`deployment-string`*	The Kubernetes deployment name.
`daemonset` *`daemonset-string`*	The Kubernetes daemonset name.
`service` *`service-string`*	The Kubernetes service name.
`pod` *`pod-string`*	The Kubernetes pod.
`impact unknown|none|partial|full`	The impact on the pod when node or switch is replaced.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the impact on a Kubernetes deployment, Daemonset, service, or Pods in the occasion of a switch or host replacement.

Examples Use the following syntax to display the impact on a Kubernetes deployment, Daemonset, service, or Pods in the occasion of a switch or host replacement.

```
CLI (network-admin@switch) > k8s-impact-show host server-test-94
deployment petstore
```

```
cluster-name namespace deployment pod                      impact  connections
------------ --------- ---------- ------------------------ ------  -----------------------------------------
arista       default   petstore   petstore-9d499b76f-psv8w none    servertest-103:enp1s0f0 -- 16:auriga-colo-1
arista       default   petstore   petstore-9d499b76f-hhmg4 full    servertest-94:enp1s0f0  -- 43:auriga-colo-1
                                                                    servertest-94:enp1s0f1  -- 44:auriga-colo-1
arista       default   petstore   petstore-9d499b76f-qj58s full    servertest-94:enp1s0f0  -- 43:auriga-colo-1
                                                                    servertest-94:enp1s0f0  -- 43:auriga-colo-1
arista       default   petstore   petstore-9d499b76f-649g6 none    servertest-103:enp1s0f0 -- 16:auriga-colo-1
```

k8s-ingress-show

Kubernetes Ingress manages the external access to services within a cluster. Ingress exposes HTTP, and HTTPS routes from outside the cluster to services within the cluster. Traffic routing is controlled by rules defined on the Ingress resource. An Ingress can give Services externally reachable URLs, load balance traffic, terminate SSL/TLS, and offer name-based virtual hosting. This command is used to display Kubernetes Ingress information.

Syntax `k8s-ingress-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the endpoint.
`namespace` *`namespace-string`*	The namespace.
`host` *`host-string`*	Specify the hostname of the ingress.
`path` *`path-string`*	Path for the ingress rule.
`service-name` *`service-name-string`*	The backend service name.
`service-port` *`service-port-string`*	The backend service port.
`resource-api-group` *`resource-api-group-string`*	The backend resource API group
`resource-kind` *`resource-kind-string`*	The backend resource kind.
`resource-name` *`resource-name-string`*	The backend resource name.
`action none|add|remove|update`	The last action.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes Ingress information.

Examples Use the following syntax to display Kubernetes ingress information.

```
CLI (network-admin@switch) > k8s-ingress-show
cluster-name name                     namespace host             path service-name service-port last-changed
------------ ------------------------ --------- ---------------- ---- ------------ ------------ -------------
arista       petstore-ingress         default   gloo.example.com /.*  petstore     8080         07-12,23:25:22
arista       name-virtual-host-ingress default   foo.bar.com      /    service1     80           07-12,23:25:22
arista       name-virtual-host-ingress default   bar.foo.com      /    service2     80           07-12,23:25:22
```

k8s-network-show

This command is used to display the relation between Kubernetes networking components like ingress, services, and Pods.

Syntax `k8s-network-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`namespace` *`namespace-string`*	Name of the namespace.
`ingress-name` *`ingress-name-string`*	Name of the ingress.
`host` *`host-string`*	The state of the pod.
`type` *`type-string`*	Name of the pod.
`external-ip` *`external-ip-string`*	Displays the external IP for services of type load balancer.
`node-port` *`node-port-string`*	The service node port.
`service-name` *`service-name-string`*	Name of the service.
`selector` *`selector-string`*	The service selector to identify pods.
`endpoints` *`endpoints-string`*	The list of pod IP addresses.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes network information.

Examples Use the following syntax to display information about the Kubernetes networks.

`CLI (network-admin@switch) >` `k8s-network-show ingress-name petstore-ingress`

```
cluster-name namespace ingress-name     service    pod
------------ --------- ---------------- ---------- ----------------------
arista       default   petstore-ingress petstore   petstore9d499b76f-qj58s
                                                           9d499b76f-649g6
                                                           9d499b76f-hhmg4
                                                           9d499b76f-psv8w
                       petstore         petstore   petstore
```

k8s-node-show

The control plane machine, and the worker machines that are part of a Kubernetes cluster are called nodes. This command is used to display information on Kubernetes control plane, and worker nodes.

Syntax `k8s-node-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`node` *`node-string`*	Name of the Kubernetes node.
`role` *`role-string`*	The role assigned to the node.
`status` *`status-string`*	The status of the node.
`ip` *`ip-string`*	The IP address of the node.
`pod-CIDR` *`pod-CIDR-string`*	The Pod CIDR for the node.
`labels` *`labels-string`*	The Pod labels.
`action none|add|remove|update`	The last action performed.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display information on Kubernetes control plane, and worker nodes.

Examples Use the following syntax to display information on Kubernetes control plane, and worker nodes.

```
CLI (network-admin@switch) > k8s-node-show
cluster-name node            role          status       ip            pod-CIDR      last-changed
------------ --------------- ------------- ------------ ------------- ------------- --------------
k8s01        server-test-103 worker        KubeletReady 192.168.99.22 10.244.2.0/24 11-11,05:59:13
k8s01        server-test-93  control plane KubeletReady 192.168.99.20 10.244.0.0/24 11-11,06:02:21
k8s01        server-test-94  worker        KubeletReady 192.168.99.21 10.244.1.0/24 11-11,05:58:36
```

k8s-pod-show

Pods are the smallest units that you can deploy using Kubernetes. Pods consist of one or more containers that are always scheduled together. Each Kubernetes pod has a unique IP address. This command is used to display Kubernetes pod information.

Syntax `k8s-pod-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the daemonset.
`namespace` *`namespace-string`*	The namespace.
`ip` *`ip-string`*	The IP address of the pod.
`state` *`state-string`*	The state of the pod.
`container-state container-state-string`	The pod's container high level state.
`node` *`node-string`*	Name of the pod.
`containers` *`containers-string`*	The container images running on the pod.
`labels` *`labels-string`*	The pod labels.
`action none|add|remove|update`	The last action performed.
`connections` *`connections-string`*	The connections to fabric switches.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes pod information.

Examples Use the following syntax to display Kubernetes pod information.

```
CLI (network-admin@switch) > k8s-pod-show format
name,namespace,ip,state,node,containers,labels
```

```
name                                        namespace            ip            state   node           containers          labels
-------------------------------------------  --------------------  -------------  -------  --------------  -------------------
--------------------------------
kube-apiserver-server-test-93               kube-system          192.168.99.20 Running servertest-93  k8s.gcr.io/kube-...
component:kube-apiserver,tier...
kube-proxy-d28w9                            kube-system          192.168.99.22 Running servertest-103 k8s.gcr.io/kube-... controller-
revision-hash:84f9...
kube-flannel-ds-ltctg                       kube-system          192.168.99.22 Running servertest-103 quay.io/coreos/f...
app:flannel,controller-revisi...
dashboard-metrics-scraper-79c5968bdc-hwpcg  kubernetes-dashboard  10.244.1.35     Running  servertest-94   kubernetesui/met...  k8s-
app:dashboard-metrics-scr...
kube-scheduler-server-test-93               kube-system          192.168.99.20 Running servertest-93  k8s.gcr.io/kube-...
component:kube-scheduler,tier...
kube-controller-manager-server-test-93      kube-system            192.168.99.20 Running servertest-93   k8s.gcr.io/kube-...
component:kube-controller-man...
gloo-7dc68dd65b-clz98                       gloo-system          10.244.2.36   Running servertest-103 quay.io/solo-io/... pod-template-
hash:7dc68dd65b,...
```

k8s-service-show

Kubernetes services provide a stable virtual IP addresses for a group of Pods. Unlike Pods, which are non-permanent resources that can be created, and destroyed dynamically, services remain consistent. Services act as loadbalancers, and are based on Linux IPTable or IPVS table. This command is used to display Kubernetes service information.

Syntax `k8s-service-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.
Specify one or more of the following options:	
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time of statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time of statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration of statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	Statistics collected since start time.
`older-than` *`duration: #d#h#m#s`*	Display statistics older than the specified duration.
`within-last` *`duration: #d#h#m#s`*	Display statistics within the last specified duration.
`name` *`name-string`*	Name of the daemonset.
`namespace` *`namespace-string`*	Name of the namespace.
`type` *`type-string`*	The service type.
`service-ip` *`service-ip-string`*	The service IP address.
`external-ip external-ip-string`	The external IP address for services of type load balancer.
`selector` *`selector-string`*	The label selector for the service.
`ports` *`ports-string`*	The ports for the service.
`target-ports` *`target-ports-string`*	The ports targeted on pods.
`action none|add|remove|update`	The last action performed.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes service information.

Examples Use the following syntax to display Kubernetes service information.

```
CLI (network-admin@switch) > k8s-service-show layout vertical
cluster-name:  k8s02
name:          kubernetes
namespace:     default
type:          ClusterIP
service-ip:    10.96.0.1
ports:         443/TCP
last-changed:  01-30,23:25:21
cluster-name:  k8s02
name:          my-service
namespace:     default
type:          ClusterIP
service-ip:    10.98.20.142
ports:         71/TCP
last-changed:  01-30,23:25:21
cluster-name:  k8s02
name:          kube-dns
namespace:     kube-system
type:          ClusterIP
service-ip:    10.96.0.10
ports:         53/UDP,53/TCP,9153/TCP
last-changed:  01-30,23:25:23
```

k8s-show

This command is used to display information about the Kubernetes cluster.

Syntax `k8s-show`

`cluster-name` *`cluster-name-string`*	Name of the Kubernetes cluster.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Kubernetes cluster information.

Examples Use the following syntax to display Kubernetes cluster information.

```
CLI (network-admin@switch) > k8s-show
cluster-name
------------
k8s02
k8s01
```

k8s-trace-paths

You can inspect all the paths that Kubernetes Pods or Kubernetes nodes use to communicate with each other across the fabric. This command is used to specify the source, and destination to view the available paths between them.

Syntax `k8s-trace-paths`

`src-pod` *`src-pod-string`*	Name of the Kubernetes source pod.
`dest-pod` *`dest-pod-string`*	Name of the Kubernetes destination pod.
`src-node` *`src-node-string`*	Name of the Kubernetes source node.
`dest-node` *`dest-node-string`*	Name of the Kubernetes destination node.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the available paths between two Kubernetes pods or nodes.

Examples Use the following syntax to display the available paths between two Kubernetes pods or nodes.

`CLI (network-admin@switch) >` `k8s-trace-paths src-pod petstore dst-pod ingress-proxy`

```
server-test-94:enp1s0f0 -- swp1:Leaf1:swp2 -- swp3:spine1:swp4 -- swp5:Leaf3:swp6 -
enp1s0f0:server-test-103
server-test-94:enp1s0f0 -- swp1:Leaf1:swp2 -- swp3:spine2:swp4 -- swp5:Leaf3:swp6 -
enp1s0f0:server-test-103
server-test-94:enp1s0f0 -- swp1:Leaf1:swp2 -- swp3:spine1:swp4 -- swp5:Leaf4:swp6 -
enp1s0f0:server-test-103
server-test-94:enp1s0f0 -- swp1:Leaf1:swp2 -- swp3:spine1:swp4 -- swp5:Leaf3:swp7 -
swp7:Leaf4:swp6--enp1s0f0:server-test-103
```

L Commands

l2-check-fix

It is possible for Layer 2 entries to go out of sync between what is present in the hardware, and in software. This command checks the status of Layer 2 entries, logs the errors, and fixes them when possible.

Syntax `l2-check-fix`

`mac` *`mac-address`*	Specifies the virtual router ID from 0 to 15.
`vnet vnet-name`	Specifies the vNet name.
`bd bridge-domain-name`	Specifies the bridge domain.
`vlan` *`vlan-id`*	Specifies the VLAN ID.
`public-vlan` *`vlan-id`*	Specify the public VLAN assigned to the vPort.
`vxlan` *`vxlan-id`*	Specify if you want to check, and fix out of synch VXLANs IDs of vPorts.
`sw-port` *`port-number`*	Specify the software port.
`sw-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	Specify the software state to check.
`hw-port` *`port-number`*	Specify the port number of the hardware.
`tunnel-name` *`tunnel-name-string`*	Specify the tunnel name.
`hw-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|`	Specify the hardware state to check, and fix.

excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete	
fix-action none|add-to-hardware|removefrom-hardware|fix-port-in-hardware|fix-tunnel-in-hardware|FAILED-add-to-hardware|FAILED-remove-from-hardware|FAILED-fix-port-in-hardware|FAILED-fix-tunnel-in-hardware|delete-port-mac|mark-port-mac	Specifies the action used to fix the entry.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The option `igmp-mac`, `user-flush`, `vxlan-loopback`, `router` added to parameters sw-state, and `hw-state`. The options `delete-port-mac`, and `mark-port-mac` added to the parameter `fix-action`. The parameter `public-vlan` also added.
Version 2.6.2	Additional parameters added to `sw-state` and `hw-state`.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The options `invalid-vlan|owner-lost|cluster-link-down|vxlan-router` added to The parameters `sw-state`, and `hw-state`.

Usage Use this command to verify, and fix Layer 2 entries that are out of sync in the Layer 2 table.

Examples Use the following syntax to fix out of sync Layer 2 table entries.

```
CLI (network-admin@switch) > l2-check-fix vlan 25
```

l2-check-show

It is possible for Layer 2 entries to go out of sync between what is present in the hardware, and in software. This command displays the status of Layer 2 entries.

Syntax `l2-check-show`

`mac` *`mac-address`*	The virtual router ID from 0 to 15.
`vnet vnet-name`	The vNET name.
`bd bridge-domain-name`	The bridge domain.
`vlan` *`vlan-id`*	The VLAN ID.
`public-vlan` *`vlan-id`*	The public VLAN assigned to the vPort.
`vxlan` *`vxlan-id`*	Specify if you want to check, and fix out of sync VXLANs IDs of vPorts.
`sw-port` *`port-number`*	The software port.
`sw-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	The software state to check.
`hw-port` *`port-number`*	The hardware port number.
`tunnel-name` *`tunnel-name-string`*	The tunnel name.
`hw-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|`	The hardware state to check, and fix.

`excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	
`fix-action none|add-to-hardware|removefrom-hardware|fix-port-in-hardware|fix-tunnel-in-hardware|FAILED-add-to-hardware|FAILED-remove-from-hardware|FAILED-fix-port-in-hardware|FAILED-fix-tunnel-in-hardware|delete-port-mac|mark-port-mac`	The action used to fix the entry.

Defaults None.

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The option `igmp-mac`, `user-flush`, `vxlan-loopback`, `router` added to parameters `sw-state` and `hw-state`. The options `delete-port-mac` and `mark-port-mac` added to the parameter `fix-action`. The parameter `public-vlan` added.
Version 2.6.2	Additional parameters added to `sw-state` and `hw-state`.
Version 3.0.0	The parameter `l2-net` added.
Version 5.1.1	The options `invalid-vlan|owner-lost|cluster-link-down|vxlan-router` added to the parameters `sw-state`, and `hw-state`.

Usage Use this command to display Layer 2 table entries.

Examples To display the Layer 2 entries, and states, use the following command:

```
CLI (network-admin@switch) > l2-check-show
switch: Matched: 8
```

l2-history-show

This command displays historical information about Layer 2 entries on the switch.

Syntax `l2-history-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	A point in time for displaying historical information.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for Layer 2 history collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for Layer 2 history collection.
`duration duration: #d#h#m#s`	The duration to collect the Layer 2 history.
`interval duration: #d#h#m#s`	The intervals that data is collected Layer 2 history.
`since-start`	Specifies to display all of the Layer 2 history since collection began on the fabric.
`older than duration: yyyy-mm-ddThh:mm:ss`	A point in tjme for displaying historical information.
`within-last duration: yyyy-mm-ddThh:mm:ss`	The start time for Layer 2 history collection.
`log-type l2-save|l3-save|restart|l2-modify|l2-delete|l3-modify|l3-delete`	Filter output by the log type of each entry. The log-type column displays when a vPort is created, modified, saved, or deleted.
`caller init|config|status|switch-cb|cluster|gre|ARP|router|flow-cb|vdp|vlag|port|inject|evict|vxlan|stats|vnm-vnic|adjacency|stp|trunk|intsw|ttl1|flood|flush|retire|loop|dhcp|fabric|table|l3-age-out|vlan|l2-checker|igmp|l2-age-out|port-mirror|mac-move|cluster-status|cluster-status-delete|vxlan-routing|subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up|evpnsnoop-browse`	The feature making the change for this entry.
`last-caller init|config|status|switch-cb|cluster|gre|ARP|router|flow-cb|vdp|vlag|port|inject|evict|vxlan|stats|vnm-vnic|adjacency|stp|trunk|intsw|ttl1|flood|flush|retire|loop|dhcp|fabric|table|l3-age-out|vlan|l2-checker|igmp|l2-age-out|port-mirror|mac-move|cluster-status|cluster-status-delete|vxlan-routing|subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up|evpnsnoop-`	The most recent caller for this entry.

browse	
reason activate|deactivate|port-move|ip-move|ip-remove|batch-move|retire|break-loop|break-loop-timeout|create|modify|delete|policy|owner-status|remove-node|port-flags|check-owner|trunk-port-add|trunk-port-remove|move-router-if|age-out|hw-remove|restart|undo|flush|update-vxlan-vlan|needs-peer-status|owner-lost|owner-change|update-peer-only|user-delete|done|vm-metadata|excess-move-state-change	The reason for history entry.
last-reason activate|deactivate|port-move|ip-move|ip-remove|batch-move|retire|break-loop|break-loop-timeout|create|modify|delete|policy|owner-status|remove-node|port-flags|check-owner|trunk-port-add|trunk-port-remove|move-router-if|age-out|hw-remove|restart|undo|flush|update-vxlan-vlan|needs-peer-status|owner-lost|owner-change|update-peer-only|user-delete|done|vm-metadata|excess-move-state-change	The most recent reason for this entry.
changes owner|mac|vnet|bd|inner-vlan|public-vlan|vxlan|num-ips|config-intf|intf|ports|state|local-intf|local-ports|local-state|alt-owner|alt-owner-port|alt-owner-ports|alt-owner-state|svc-name|hostname|entity|power|cpus|os|portgroup|pg-vlans|vswitch|vs-type|vnic-type|config|rem-switch|rem-intf|rem-ports|peer-intf|peer-state|peer-owner-state|status|vtep-ip|tunnel|create-time|last-seen|last-seen-since|vxlan-lru|hit|migrate|drops|hw-index|rt-if|hw-flags|mc-index	Specifies what changed in this entry.
count *count-number*	Filter output by the number of entries summed using the sum-by argument.
owner node *name*	The Owner ID.
mac *mac-address*	Filter output by the Filter output by MAC address.
vnet *vnet-name*	Filter output by vNET name.

`vlan` *`vlan-id`*	Filter output by the VLAN ID.
`inner-vlan` *`0..4095`*	Q-in-Q inner VLAN assigned to vPort
`public-vlan` *`vlan-id`*	Filter output by public VLAN.
`vxlan` *`vxlan-id`*	Filter output by the VXLAN ID.
`ip` *`ip-address`*	Filter output by the IP address.
`num-ips` *`num-ips-number`*	Specify the number of IP addresses for the Layer 2 entry.
`config-intf` *`config-intf-number`*	Filter output by the configured interface of the Layer 2 entry.
`intf` *`intf-number`*	Filter output by the interface number. This is the port or trunk number of the Layer 2 entry.
`ports` *`port-list`*	Filter output by the list of ports.
`state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected| excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	Filter output by the state of the Layer 2 entry.
`svc-name` *`svc-name-string`*	Filter output by service name.
`hostname` *`hostname-string`*	Filter output by the host name.
`entity` *`entity-string`*	Filter output by the VM or VM Kernel device name.
`power none|powered-off|powered-on|standby|suspended|unknown`	Filter by the vPort power status.
`portgroup` *`portgroup-string`*	Filter by the port group.
`pg-vlans` *`vlan-list`*	Filter by port group VLANs.
`vswitch` *`vswitch-string`*	Filter output by vSwitch name associated with VM MAC address.

`vs-type none|host-vs|distributed-vs|unknown`	Filter output by vSwitch type.
`vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL| rep|p-NFC|r-NFC|mgmt|unknown`	Filter output by VNIC type.
`config none|owner|ip|port|hostname|hypervisor|vm-id|vm-name| vm-flavor|memory|cpus|disk|os`	The VM configuration.
`memory` *`memory-number`*	Filter output by the amount of memory assigned to the VM.
`cpus` *`cpus-number`*	Filter output by the number of CPUs assigned to the VM.
`disk` *`disk-number`*	Filter output by the disk number where the VM is installed.
`os os-string`	Filter output by the OS installed on the VM.
`rem-switch` *`node name`*	Filter output by the remote switch name.
`rem-intf` *`rem-intf-number`*	Filter output by the remote interface number.
`rem-ports port-list`	Filter output by the remote ports.
`peer-intf` *`peer-intf-number`*	Filter output by vPort peer interface.
`peer-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	Filter by the vPort peer state.
`peer-owner-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-`	Filter by the vPort peer owner state.

port-not-cluster-link|sw-active|anycast| hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync| excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete	
status phy-up|up|disabled|hw-nat-loop| mirror-loop|mirror-to|inuse| PN-switch|PN-fabric|PN-other| PN-cluster|PN-internal| PN-hypervisor|PN-guest|snmp-host|host|uplink|drop-pkts|no-pktin|no-fwd|no-flood|STP-BPDUs|LLDP| trunk|l3-port| remote-l3-port|vdp|dhcp| dhcpsvr|blocked|no-BPDU|LACP-PDUs| vlag-active|vlag-blocked|stp-edge-port|LACP-wait|LACP-fallback|adjacency-wait| adjacency-check|vlag-wait|multicast-router|host-disabled|loop|congested|vxlan-loopback|vlan-up|vm-kernel|vm|pnic|vle-wait|phy-down|down|enabled|err-disabled| err-bpdu-guard|mac-violation| stp-bpdu-guard|stp-root-guard|defer-bringup-wait	Filter output by the status of the Layer 2 entry.
vtep-ip *ip-address*	The IP address of the remote VTEP.
tunnel *tunnel-string*	Filter output by the tunnel name.
create-time date/time: *yyyy-mm-ddTHH:mm:ss*	Filter output by the time that the vPort was created.
last-seen date/time: *yyyy-mm-ddTHH:mm:ss*	Filter output by the time that the vPort was last seen on the fabric.
vxlan-lru date/time: *yyyy-mm-ddTHH:mm:ss*	Filter output by the number of received hits.
hit *hit-number*	Filter output by the number of times that the vPort migrated on the fabric.
migrate *migrate-number*	Filter output by the number of drops on the fabric.
drops *drops-number*	Filter output by the time that the vPort was created.
hw-index *hw-index-number*	Filter output by the hardware index number.
rt-if *rt-if-string*	Filter by the router interface.
hw-flags invalid-vlan|invalid-port	Filter by hardware flags.
mc-index *mc-index-number*	The multicast group index in hardware.

Defaults None

Access CLI

History

Version 2.3.2	Command introduced.
Version 2.4	The parameters `peer-`, `hw-index`, and `rf-if` added.
Version 2.6.2	New parameters added. Some parameters removed, `vm-id`, `hypervisor`, `vm-name`, `vm-flavor`, and `vm-status`.
Version 3.1.0	The parameters `ND`, and `vtep-ip` added.

Usage Use this command to display history of Layer 2 entries.

Examples To display Layer 2 information, use the following command:

```
CLI (network-admin@switch) > l2-history-show
time     log-type  reason             owner   mac               vlan ports state  hostname
status
-------- --------- ----------------- ------- ----------------- ---- ----- ------ --------
-----------
19:43:35 l2-modify deactivate,age-out switch1 64:0e:94:c0:04:63 1     21-22

19:48:13 l2-modify activate,modify     switch1 64:0e:94:c0:03:b3 1     21-22 active

19:50:37 l2-modify activate,modify     switch1 64:0e:94:c0:03:ab 1     69     active switch1   PN-
internal
19:59:36 l2-modify activate,modify     switch1 64:0e:94:c0:04:63 1     21-22 active

20:28:35 l2-modify deactivate,age-out switch1 64:0e:94:c0:03:ab 1     69             switch1   PN-
internal
20:28:35 l2-modify deactivate,age-out switch1 64:0e:94:c0:03:b3 1     21-22
```

l2-setting-modify

This command modifies the Layer 2 settings in the configuration.

Syntax `l2-setting-modify`

`aging-time` *`seconds`*	Configures the aging time in Layer 2. You can configure a value from 1 to 2000000. The default value for aging time is 300 seconds.
`software-aging|no-software-aging`	Specify if you want to enable software aging or not. This is ON by default. This parameter controls how the aging of the L2 table entries is performed by NetVisor OS. When OFF, the aging is performed by the Ethernet switch ASIC. It is not recommended to change this setting.
`l2-max-count` *`l2-max-count-number`*	Specify the maximum count for Layer 2 entries.
`l2-checker|no-l2-checker`	Specify if you want to enable Layer 2 checker.
`l2-checker-interval duration:` *`#d#h#m#`*	Specify the interval between Layer 2 checks.
`l3-arp-max-count` *`l3-arp-max-count-number`*	Specify the number of maximum ARPs for Layer 3 entries.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4	The parameters `software-aging`, `l2-checker`, and `l2-checker-interval` added.
Version 5.1.1	The parameter `l2-max-count` added.

Usage Use this command to modify the Layer 2 aging time in seconds.

Examples To modify the aging time to 360 seconds, use the following command:

```
CLI (network-admin@switch) > l2-setting-modify aging-time 360
```

l2-setting-show

This commands displays the Layer 2 settings in the configuration.

Syntax `l2-setting-show`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display details about Layer 2 settings.

Examples To display the Layer 2 settings, use the following command:

```
CLI (network-admin@switch) > l2-setting-show

switch:                             Pleiades24
aging-time(s):                      300
l2-max-count:                       1300000
l2-cur-count:                       36
l2-active-count:                    13
l2-max-mem:                         1.81G
l2-cur-mem:                         32.6K
l3-arp-max-count:                   1300000
l3-arp-cur-count:                   7
l3-arp-max-mem:                     624M
l3-arp-cur-mem:                     2.13K
```

l2-static-multicast-group-create

This command is used to create a Layer 2 static multicast group. Hosts join multicast groups either by sending an unsolicited IGMP join message or by sending an IGMP join message in response to a general query from a multicast router (the switch forwards general queries from multicast routers to all ports in a VLAN). When you specify group membership for a multicast group address statically, the static setting supersedes any IGMP snooping learning. Multicast group membership lists can consist of both static, and IGMP snooping-learned settings.

Syntax `l2-static-multicast-group-create`

`group-mac` *`mac-address`*	Specify a MAC address for the Layer 2 static multicast group.
`vlan` *`vlan-id`*	Specify a VLAN ID for the multicast group.
`ports` *`port-list`*	Specify a list of ports for the multicast group.

Defaults None

Access network-admin

History

Version 2.3	Command introduced.

Usage Use this command to create a Layer 2 static multicast group.

Examples To create a L2 static multicast group on MAC address, 0050.3e8d.6400, VLAN 25, and ports 10-12, use the following syntax:

```
CLI (network-admin@switch) > l2-static-multicast-group-create
group-mac 0050.3e8d.6400 vlan 25 ports 10-12
```

l2-static-multicast-group-delete

This command is used to delete a Layer 2 static multicast group. Hosts join multicast groups either by sending an unsolicited IGMP join message or by sending an IGMP join message in response to a general query from a multicast router (the switch forwards general queries from multicast routers to all ports in a VLAN). When you specify group membership for a multicast group address statically, the static setting supersedes any IGMP snooping learning. Multicast group membership lists can consist of both static, and IGMP snooping-learned settings.

Syntax `l2-static-multicast-group-delete`

`group-mac` *`mac-address`*	Specify a MAC address for the multicast group.
`vlan` *`vlan-id`*	Specify a VLAN ID for the multicast group.

Defaults None

Access network-admin

History

Version 2.3	Command introduced.
Version 3.0.0	The parameter `vnet` added.

Usage Use this command to delete a Layer 2 static multicast group.

Examples To delete a L2 static multicast group on MAC address, 0050.3e8d.6400, and VLAN 25, use the following syntax:

```
CLI (network-admin@switch) > l2-static-multicast-group-delete
group-mac 0050.3e8d.6400 vlan 25 ports 10-12
```

l2-static-multicast-group-show

This command is used to display information about a Layer 2 static multicast group. Hosts join multicast groups either by sending an unsolicited IGMP join message or by sending an IGMP join message in response to a general query from a multicast router (the switch forwards general queries from multicast routers to all ports in a VLAN). When you specify group membership for a multicast group address statically, the static setting supersedes any IGMP snooping learning. Multicast group membership lists can consist of both static, and IGMP snooping-learned settings.

Syntax `l2-static-multicast-group-show`

`group-mac` *`mac-address`*	A MAC address for the multicast group.
`vlan` *`vlan-id`*	A VLAN ID for the multicast group.
`ports` *`port-list`*	A list of ports for the multicast group.

Defaults None

Access network-admin

History

Version 2.3	Command introduced.
Version 3.0.0	The parameter `vnet` added.

Usage Use this command to display a Layer 2 static multicast group.

Examples To display a L2 static multicast group on MAC address, 0050.3e8d.6400, VLAN 25, and ports 10-12, use the following syntax:

```
CLI (network-admin@switch) > l2-static-multicast-group-show group-mac 0050.3e8d.6400
```

l2-static-multicast-group-port-add

This command is used to add ports to a Layer 2 static multicast group, without causing traffic disruption.

Syntax `l2-static-multicast-group-port-add`

`group-mac` *`mac-address`*	Specify a MAC address for the multicast group.
`vlan` *`vlan-id`*	Specify a VLAN ID for the multicast group.
`switch` *`switch-name`*	Specify the switch name.
`ports` *`port-list`*	Specify a list of ports for the multicast group.

Defaults None

Access network-admin

History

Version 6.0.0	Command introduced.

Usage Use this command to add ports to a Layer 2 static multicast group.

Examples To add port 36 to a multicast group, use the command:

```
CLI (network-admin@leaf1) l2-static-multicast-group-port-add group-mac
01:00:5e:7f:00:12 vlan 25 ports 36
```

l2-static-multicast-group-port-remove

This command is used to remove ports from a Layer 2 static multicast group, without causing traffic disruption.

Syntax `l2-static-multicast-group-port-remove`

`group-mac` *`mac-address`*	Specify a MAC address for the multicast group.
`vlan` *`vlan-id`*	Specify a VLAN ID for the multicast group.
`switch` *`switch-name`*	Specify the name of the switch
`ports` *`port-list`*	Specify a list of ports for the multicast group.

Defaults None

Access network-admin

History

Version 6.0.0	Command introduced.

Usage Use this command to remove ports from a Layer 2 static multicast group.

Examples To remove port 36 from a multicast group, use the command:

```
CLI (network-admin@leaf1) l2-static-multicast-group-port-remove group-mac 01:00:5e:7f:00:12 vlan 25 ports 36
```

l2-table-flush

This command is used to clear information about the Layer 2 settings.

Syntax `l2-table-flush`

Specify either zero or both options:	
`mac` *`mac-address`*	Enter the MAC address.
`vlan` *`vlan-id`*	Specifies the VLAN identifier.
`ports` *`port-list`*	Specifies the port list.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Used to flush the Layer 2 information.

Examples To flush the Layer 2 table information from VLAN 25, use the following command:

```
CLI (network-admin@switch) > l2-table-flush vlan 25
```

l2-table-show

To display Layer 2 flows in the forwarding table of the switch datapath, use this command.

Syntax `l2-table-show`

`owner node` *`name`*	The node name for the L2 table.
`mac` *`mac-address`*	The source MAC address for the flow.
`ip` *`ip-address`*	The IP address of the source for the flow.
`vnet` *`vnet-name`*	The vNET name.
`bd` *`bridge-domain name`*	Specify the bridge domain name assigned to vport.
`l2-net` *`l2-net name`*	The Layer 2 network.
`vlan` *`vlan-id`*	The VLAN identifier for the flow.
`public-vlan` *`vlan-id`*	The public VLAN.
`vxlan` *`vxlan-id`*	The ID for the VXLAN.
`ip` *`ip-address`*	The IP address.
`num-ips` *`num-ips-number`*	The number of IP addresses.
`config-intf` *`config-intf-number`*	Specifies a configured interface number.
`intf intf-number`	The interface number.
`ports` *`port-list`*	The source port number for the flow.
`state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete`	The state of the vPort.

svc-name *svc-name-string*	The service name.
hostname *hostname-string*	Specifies a hostname.
entity entity-string	The VM or VM Kernel device name.
power none|powered-off|powered-on| standby|suspended|unknown	The power status.
cpus *cpus-number*	The number of CPUs assigned to the VM.
disk *disk-number*	The number of disks assigned to the VM.
os *os-string*	The name of the operating system (OS) running on the VM.
portgroup portgroup-string	The port group associated with the VM MAC Address.
pg-vlans vlan-list	The VLANs associated with the port group.
vswitch vswitch-string	The vSwitch associated with the NIC.
vs-type none|host-vs|distributed-vs| unknown	The vSwitch type.
vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL| rep| p-NFC|r-NFC|mgmt| unknown	The vNIC type.
config none|switch|ip|port| hostname|hypervisor| vm-id|vm-name|vm-flavor|memory|cpus| disk|os	The configuration on the host.
rem-switch *node-name*]	A remote switch.
rem-intf *rem-intf-number*	A remote switch interface.
rem-ports *port-list*	A remote switch port list.
peer-intf *peer-intf-number*	Filter output by vPort peer interface.
peer-state active|static|vrrp|tunnel| software|needs-peer-status|port-mac| hit|ageout-check|moving|loop-probe| local-tunnel|igmp-mac|user-flush| vxlan-loopback|router|update-peer-only| active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-	Filter by the vPort peer state.

vlan|owner-lost|cluster-link-down| vxlan-router|peer-force-resync| excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp| evpn-def-gw|evpn-delete	
peer-owner-state active|static|vrrp| tunnel|software|needs-peer-status| port-mac|hit|ageout-check|moving| loop-probe|local-tunnel|igmp-mac| user-flush|vxlan-loopback|router| update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active| anycast|hsrp|invalid-vlan| owner-lost|cluster-link-down|vxlan-router| peer-force-resync|excess-mac-move-detected|excess-ip-move-detected| retry|evpn|evpn-wo-bgp|evpn-def-gw| evpn-delete	Filter by the vPort peer owner state.
status phy-up|up|disabled|hw-nat-loop|mirror-loop| mirror-to|inuse| PN-switch|PN-fabric| PN-other|PN-cluster|PN-internal| PN-hypervisor|PN-guest|snmp-host|host| uplink|drop-pkts|no-pktin|no-fwd|no-flood| STP-BPDUs|LLDP|trunk|l3-port|remote-l3-port|vdp|dhcp|dhcpsvr|blocked|no-BPDU|LACP-PDUs|vlag-active| vlag-blocked|stp-edge-port|LACP-wait| LACP-fallback| adjacency-wait| adjacency-check|vlag-wait|multicast-router|host-disabled|loop| congested| vxlan-loopback|vlan-up|vle|vle-wait| phy-down|down| enabled|err-disabled| err-bpdu-guard|mac-violation| stp-bpdu-guard|stp-root-guard||defer-bringup-wait	The status of the entry.
vtep-ip *ip-address*	The IP address of the remote VTEP.
tunnel *tunnel-string*	Specifies a tunnel name, if configured.
create-time date/time: yyyy-mm-ddThh:mm:ss	The date, and time that the flow was inserted into the Layer 2 table.
last-time date/time: yyyy-mm-ddThh:mm:ss	The most recent date, and time that a packet matched the flow.

`vxlan-lru date/time: yyyy-mm-ddThh:mm:ss`	The last received update time for a VXLAN.
`hit` *`number-of-hits`*	The number of packets that matched the flow.
`migrate` *`number-of-migrates`*	The number of different ports that received packets matching the flow.
`drops` *`number-of-drops`*	The number of packets matching the flow that were dropped.
`hw-index` *`hw-index-number`*	The hardware index number.
`rt-if` *`rt-if-string`*	The router interface.
`hw-flags invalid-vlan|invalid-port`	Specifies any vPort hardware flags.
`mc-index` *`mc-index-number`*	The Layer 2 multicast group index in hardware.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `state` added.
Version 2.2.4	The parameters `config-intf`, `rem-switch`, `rem-intf`, and `rem-ports` added.
Version 2.2.5	The parameters `vlag-active`, `vlag-blocked`, `stp-edge-port`, deprecated. The parameters `l3-port` and `remote-l3-port` added.
Version 2.3	The parameters `vlag-active`, `vlag-blocked`, `stp-edge-port` added. The parameters `vm-status`, `tunnel`, and `vxlan-lru` added.
Version 2.4	The parameters `peer-`, `hw-index`, and `rf-if` added.
Version 2.6.2	The parameters `ip`, `num-ip`, `svc-name`, `entity`, `power`, `portgroup`, `pg-vlans`, `vswitch`, `vs-type`, `vnic-type`, and `hw-flags` added. The parameters `hypervisor`, `vm-id`, `vm-name`, `vm-flavor`, `vm-status`,

	`memory`, and `blocked-port` deprecated.
Version 3.1.0	The parameters `ND`, and `vtep-ip` added.
Version 5.2.0	The parameter `bd` added.
Version 6.1.0	The options `evpn`, `evpn-wo-bgp`,`evpn-def-gw`,`evpn-delete` added to the `state` parameter.

Usage Each switch has automatic safeguards to avoid forwarding loops in Layer 2 multipathing. This feature operates independently of Spanning Tree Protocol (STP) if STP is enabled. This command lists the Layer 2 flows in the forwarding table of the switch datapath. If there are ports in the blocked state may indicate the presence of loops in Layer 2 multipathing.

Examples To display the Layer 2 table, use the following command:

```
CLI (network-admin@switch) > l2-table-show
switch mac               vlan ip            ports state  status migrate
------ ---------------- ---- ------------- ----- ------ ------ -------
switch 64:0e:94:c0:03:b7 1                  19-20 active        364
switch 64:0e:94:c0:04:67 1                  21-22 active        2321
switch 66:0e:94:6f:71:75 1    192.168.25.32       active host   230570
switch 66:0e:94:70:87:42 1    192.168.25.33 61,65 active host   178989
switch 66:0e:94:9c:8a:1c 1    192.168.25.31 61,65 active host   2687
switch 66:0e:94:dc:e0:95 1    192.192.192.4 53,57 active host   287280
switch f2:d1:52:9d:dd:4d 1                  21-22 active        68512
```

l3-check-fix

Layer 3 entries can become unsynchronized between the software table, and the hardware table. When routes are modified while the routes are updating on the network, this can occur. Use this command to fix any unsynchronized Layer 3 table entries.

Syntax `l3-check-fix`

`vrid ID`	Specifies the virtual router ID from 0 to 15.
`ip` *`ip-address`*	Specifies the IP address of the entry.
`prelen` *`length`*	Specifies the prefix length ranging from 0 to 128.
`vnet` *`vnet-name`*	Specify the vNET name.
`bd` *`bridge-domain-name`*	specify the bridge domain name.
`vlan` *`vlan-id`*	Specifies the VLAN ID.
`mac` *`mac-address`*	Specifies the MAC address.
`fix-action none|add-host-to-hardware| remove-host-from-hardware| re-add-host-to-hardware|add-route-to-hardware|remove-route-from-hardware| re-add-route-to-hardware| none-hardware-only-route|none-cached-route| FAILED-add-host-to-hardware| FAILED-remove-host-from-hardware| FAILED-add-route-to-hardware|FAILED-remove-route-from-hardware`	Specifies the action used to fix the entry.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to fix Layer 3 entries that are out of synch in the Layer 3 table.

Examples Use the following syntax to fix out of synch Layer 3 table entries.

```
CLI (network-admin@switch) > l3-check-fix
```

l3-check-show

Layer 3 entries can become unsynchronized between the software table, and the hardware table. This is useful when routes are modified while the routes are updating on the network. Use this command to fix any unsynchronized Layer 3 table entries.

Syntax `l3-check-show`

`vrid ID`	The virtual router ID from 0 to 15.
`ip` *`ip-address`*	The IP address of the entry.
`prelen` *`length`*	The prefix length from 0 to 128.
`vnet` *`vnet-name`*	The vNET name.
`bd` *`bridge-domain-name`*	The bridge domain.
`vlan` *`vlan-id`*	The VLAN ID.
`fix-action none|add-host-to-hardware| remove-host-from-hardware| re-add-host-to-hardware|add-route-to-hardware|remove-route-from-hardware| re-add-route-to-hardware| none-hardware-only-route|none-cached-route| FAILED-add-host-to-hardware| FAILED-remove-host-from-hardware| FAILED-add-route-to-hardware|FAILED-remove-route-from-hardware`	The action used to fix the entry.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to displays Layer 3 entries that are out of synch in the Layer 3 table.

Examples Use the following syntax to display out of synch Layer 3 table entries.

```
CLI (network-admin@switch) > l3-check-show
switch:
Matched                    : 0
switch: OK: 0
```

l3-history-show

This command displays historical information about Layer 3 entries on the switch.

Syntax `l3-history-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies a point in time for displaying historical information.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for Layer 3 history collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for Layer 3 history collection.
`duration duration: #d#h#m#s`	The duration to collect the Layer 3 history.
`interval duration: #d#h#m#s`	The intervals that data is collected Layer 3 history.
`since-start`	Specifies to display all of the Layer 3 history since collection began on the fabric.
`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies a point in time for displaying historical information.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for Layer 3 history collection.
`older-than duration: #d#h#m#s`	Display history older than the specified duration.
`within-last duration: #d#h#m#s`	The statistic within last specified duration.
`log-type l2-save|l3-save|restart|l2-modify|l2-delete|l3-modify|l3-delete`	Filter output by the log type of each entry. The log-type column displays when a Layer 3 entry is created, modified, saved, or deleted.
`caller init|config|status|switch-cb|cluster|gre|ARP|router|flow-cb| vdp|vlag|port|inject|evict|vxlan|stats|vnm-vnic|adjacency|stp| trunk|intsw|ttl1|flood|flush|retire|loop|dhcp|fabric|table| l3-age-out|vlan|l2-checker|igmp|l2-age-out|port-mirror| mac-move|cluster-status|cluster-status-delete|vxlan-routing|subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up|evpnsnoop-browse`	The feature that made the change for this entry.
`last-caller init|config|status|switch-cb|`	The most recent caller for this entry.

cluster|gre|ARP|router|flow-cb| vdp|vlag|port|inject|evict|vxlan|stats|vnm-vnic|adjacency|stp| trunk|intsw|ttl1|flood|flush|retire|loop|dhcp|fabric|table| l3-age-out|vlan|l2-checker|igmp|l2-age-out|port-mirror| mac-move|cluster-status|cluster-status-delete|vxlan-routing|subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up|evpnsnoop-browse	
reason activate|deactivate|port-move|ip-move|ip-remove|batch-move|retire|break-loop|break-loop-timeout|create|modify|delete| policy|owner-status|remove-node|port-flags|check-owner| trunk-port-add|trunk-port-remove|move-router-if|age-out|hw-remove|restart|undo|flush|update-vxlan-vlan| needs-peer-status|owner-lost|owner-change|update-peer-only|user-delete|done|vm-metadata|excess-move-state-change	The reason for history entry.
last-reason activate|deactivate|port-move|ip-move|ip-remove| batch-move|retire|break-loop|break-loop-timeout|create|modify| delete|policy|owner-status|remove-node|port-flags|check-owner| trunk-port-add|trunk-port-remove|move-router-if|age-out| hw-remove|restart|undo|flush|update-vxlan-vlan| needs-peer-status|owner-lost|owner-change|update-peer-only| user-delete|done|vm-metadata	The most recent reason for this entry.
changes owner|mac|vnet|public-vlan|ip|num-ips|config-intf|intf|ports| state|local-intf|local-ports|local-state|alt-owner|alt-owner-port|alt-owner-ports|alt-owner-state|svc-name| hostname|entity|power|cpus|os|portgroup|pg-vlans|vswitch|vs-type|vnic-type|config|rem-switch|rem-intf|rem-ports| peer-intf|peer-state|peer-owner-state|status|tunnel|create-time|last-seen|vxlan-lru|hit|migrate|drops|hw-index|rt-if|hw-flags	Specifies what changed in this entry.
count *count-number*	Filter output by the number of entries summed using the sum-by argument.
owner node *name*	Filter output by the owner.

mac *mac-address*	Filter output by MAC address.
vnet *vnet-name*	Filter output by the vNET name.
l2-net *l2-net-name*	Filter output by the Layer 2 network name.
vlan *vlan-id*	Filter output by the VLAN ID.
public-vlan *vlan-id*	Filter output by the public VLAN ID.
vxlan *vxlan-id*	Filter output by the VXLAN ID.
ip *ip-address*	Filter output by the IP address.
num-ips *num-ips-number*	Specify the number of IP addresses for the Layer 3 entry.
config-intf *config-intf-number*	Filter output by the configured interface of the Layer 3 entry.
intf *intf-number*	Filter output by the interface number. This is the port or trunk number of the Layer 3 entry.
ports *port-list*	Filter output by the list of ports.
state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac| user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active| hsrp	Filter output by the state of the Layer 3 entry.
svc-name *svc-name-string*	Filter output by service name.
hostname *hostname-string*	Filter output by the host name.
entity *entity-string*	Filter output by the VM or VM Kernel device name.
power none|powered-off|powered-on|standby|suspended|unknown	Filter by the vPort power status.
portgroup *portgroup-string*	Filter by the port group.

`pg-vlans` *`vlan-list`*	Filter by port group VLANs.
`vswitch` *`vswitch-string`*	Filter output by vSwitch name associated with VM MAC address.
`vs-type none|host-vs|distributed-vs| unknown`	Filter output by vSwitch type.
`vnic-type untagged|tagged|trunked|vm-mgmt| vm-kernel|vMotion|vSAN|FTL| rep|p-NFC|r-NFC|mgmt|unknown`	Filter output by VNIC type.
`memory` *`memory-number`*	Filter output by the amount of memory assigned to the VM.
`cpus` *`cpus-number`*	Filter output by the number of CPUs assigned to the VM.
`disk` *`disk-number`*	Filter output by the disk number where the VM is installed.
`os` *`os-string`*	Filter output by the OS installed on the VM.
`config none|owner|ip|port|hostname| hypervisor|vm-id|vm-name| vm-flavor| memory|cpus|disk|os`	Filter output by the configuration of the VM.
`blocked-port` *`port-list`*	Filter output by a list of ports to block for the VM.
`rem-switch` *`node name`*	Filter output by the remote switch name.
`rem-intf` *`rem-intf-number`*	Filter output by the remote interface number.
`rem-ports port-list`	Filter output by the remote ports.
`peer-intf` *`peer-intf-number`*	Filter output by the vPort peer interface.
`peer-state active|static|vrrp|tunnel| software|needs-peer-status|port-mac|hit| ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback| router|pdate-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp`	Filter output by the vPort peer state.

`peer-owner-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|pdate-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag| peer-port-not-orphaned|peer-port-not-cluster-link|sw-active| hsrp`	Filter output by the vPort peer owner state.
`status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to|inuse| PN-switch|PN-fabric|PN-other|PN-cluster|PN-internal|PN-hypervisor|PN-guest|snmp-host|host|uplink|drop-pkts| no-pktin|no-fwd|no-flood|STP-BPDUs|LLDP|trunk|l3-port|remote-l3-port|vdp|dhcp|dhcpsvr|blocked|no-BPDU|LACP-PDUs| vlag-active|vlag-blocked|stp-edge-port|LACP-wait|LACP-fallback|adjacency-wait|adjacency-check|vlag-wait|multicast-router|host-disabled|loop|vxlan-loopback|vlan-up|vle|vle-wait|phy-down|down| enabled|err-disabled|err-bpdu-guard|mac-violation| stp-bpdu-guard|stp-root-guard`	Filter output by the status of the Layer 3 entry.
`vtep-ip` *`ip-address`*	The IP address of the remote VTEP.
`tunnel` *`tunnel-string`*	Filter output by the tunnel name.
`create-time date/time: yyyy-mm-ddTHH:mm:ss`	Filter output by the time that the Layer 3 entry was created.
`last-seen date/time: yyyy-mm-ddTHH:mm:ss`	Filter output by the time that the Layer 3 entry was last seen on the fabric.
`vxlan-lru date/time: yyyy-mm-ddTHH:mm:ss`	Filter output by the number of received hits.
`hit` *`hit-number`*	Filter output by the number of times that the Layer 3 entry migrated on the fabric.
`migrate` *`migrate-number`*	Filter output by the number of drops on the fabric.
`drops` *`drops-number`*	Filter output by the time that the Layer 3 entry was created.
`hw-index` *`hw-index-number`*	Filter output by the hardware index number.
`rt-if` *`rt-if-string`*	Filter output by the router interface.

`hw-flags invalid-vlan|invalid-port`	Filter output by hardware flags.

Defaults None

Access CLI

History

Version 2.3.2	Command introduced.
Version 2.4	The parameters `l2-checker|igmp|l2-age-out|port-mirror|mac-move` added. The parameters `peer-`, `hw-index`, and `rt-if` added.
Version 2.4.1	The parameters `vnet`, `public-vlan`, and `hw-flags` added. The options, `user-flush|vxlan-loopback|router` added to `state`, `peer-state`, and `peer-owner-state`. The option, `cluster-status` added to `caller`, and `last-caller`. The options, `update-vxlan-vlan| needs-peer-status|owner-lost|owner-change` added to `reason` and `last-reason`.
Version 2.6.2	The parameters `ip`, `num-ip`, `svc-name`, `entity`, `power`, `portgroup`, `pg-vlans`, `vswitch`, `vs-type`, `vnic-type`, and `hw-flags` added. The parameters `hypervisor`, `vm-id`, `vm-name`, `vm-flavor`, `vm-status`, `memory`, and `blocked-port` deprecated.
Version 3.1.0	The parameter `vtep-ip` added.

Usage Use this command to display history of Layer 3 entries.

Examples To display Layer 2 information, use the following command:

```
CLI (network-admin@switch) > l3-history-show
time     log-type  reason             owner   mac               vlan ip            state
-------- --------- ------------------ ------- ----------------- ---- ------------- ------
20:12:49 l3-modify retire,modify              66:0e:94:70:87:42 1    192.168.25.33
20:12:49 l3-modify modify             switch1 66:0e:94:70:87:42 1    192.168.25.33
20:12:51 l3-modify retire,modify              66:0e:94:70:87:42 1    192.168.25.33
20:12:51 l3-modify modify             switch1 66:0e:94:70:87:42 1    192.168.25.33
20:18:14 l3-modify activate,create    switch1 66:0e:94:c6:a5:dc 1    200.1.30.1    active
20:18:23 l3-modify activate,create    switch1 66:0e:94:dd:86:e9 1    200.1.40.1    active
20:18:25 l3-modify activate,create    switch1 66:0e:94:c5:fa:8e 1    200.1.50.1    active
20:21:47 l3-modify activate,create    switch1 66:0e:94:db:f5:a0 1    100.0.3.2     active
20:21:49 l3-modify activate,modify    switch1 66:0e:94:db:b4:8d 1    100.0.3.1     active
20:30:45 l3-modify deactivate,age-out switch1 66:0e:94:dd:86:e9 1    200.1.40.1
20:30:45 l3-modify deactivate,age-out switch1 66:0e:94:c5:fa:8e 1    200.1.50.1
```

```
20:30:45 l3-modify deactivate,age-out switch1 66:0e:94:c6:a5:dc 1    200.1.30.1
20:35:12 l3-modify activate,create    switch1 66:0e:94:dc:f6:7e 1    100.0.4.2     active
20:40:45 l3-modify deactivate,age-out switch1 66:0e:94:db:f5:a0 1    100.0.3.2
20:40:45 l3-modify deactivate,age-out switch1 66:0e:94:db:b4:8d 1    100.0.3.1
20:44:17 l3-modify retire,modify              66:0e:94:70:87:42 1    192.168.25.33
20:44:17 l3-modify modify             switch1 66:0e:94:70:87:42 1    192.168.25.33
```

l3-route-show

This command displays information about Layer 3 route entries on the switch.

Syntax `l3-route-show`

`vrf_name` *`vrf_name-string`*	The VRF name.
`vrf_vnet` *`vrf_vnet-string`*	The VNET for the VRF.
`network` *`ip-address`*	The network address.
`netmask` *`netmask`*	The mask for the network.
`gateway-ip` *`ip-address`*	The gateway IP address.
`router-mac` *`mac-address`*	The router mac address.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display Layer 3 route table information

Examples To display Layer 2 information, use the following command:

`CLI (network-admin@switch) >` `l3-route-show`

l3-setting-modify

This command allows you to modify the Layer 3 settings.

Syntax `l3-setting-modify`

Specify one or more of the following options:	
`aging-time`	Specifies the aging time between 0 to 2000000 seconds. Use 0 (zero) to disable aging time. The default aging time is 600 seconds.
`convergence-time` *`seconds`*	Specifies the unicast convergence time on bootup. This is a value from 0 to 3600 seconds.
`l3-checker|no-l3-checker`	Enable or disable Layer 3 checking.
`l3-checker-interval duration: #d#h#m#`	Specify the interval between Layer 3 checks.
`l3-checker-fix|no-l3-checker-fix`	Specify if after checking Layer 3 entries to fix the incorrect entries.

Defaults None

Access CLI

Usage Use this command to modify the Layer 3 setting.

Examples To modify the Layer 3 aging-time setting, use the following command:

```
CLI (network-admin@switch) > l3-setting-modify aging-time 1000
```

l3-setting-show

This command allows you to display the Layer 3 settings.

Syntax `l3-setting-show`

Defaults None

Access CLI

Usage Use this command to show the Layer 3 setting.

Examples To display the Layer 3 setting, use the following command:

```
CLI (network-admin@switch) > l3-setting-show
switch:                switch1
aging-time(s):         600
convergence-time(s):   60
l3-checker:            disabled
l3-checker-interval:   10m
l3-checker-fix:        disabled
```

l3-table-show

This command allows you to display the Layer 3 table settings.

Syntax `l3-table-show`

Specify one or more of the following options:	
mac *mac-address*	The MAC address.
ip *ip-address*	The IP address.
vnet *vnet-name*	Name of the vNET.
bd *bridge-domain name*	The bridge domain.
vlan *0..4095*	The VLAN ID.
public-vlan *0..4095*	The public VLAN assigned to the vPort
vxlan *0..16777215*	The assigned VXLAN.
intf intf-number	The interface.
rt-if *rt-if-string*	The router interface.
hw-intf *hw-intf-number*	Displays the interface programmed in hardware.
state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete	The flags.
owner-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-	The owner-state flags.

port-not-cluster-link|sw-active| anycast|hsrp|invalid-vlan|owner-lost| cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected| retry|evpn|evpn-wo-bgp|evpn-def-gw| evpn-delete	
peer-state active|static|vrrp|tunnel| software|needs-peer-status|port-mac| hit|ageout-check|moving|loop-probe| local-tunnel|igmp-mac|user-flush| vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active| hsrp	The peer-state flags.
egress-id *egress-id-number*	The hardware egress ID.
create-time date/time: yyyy-mm-ddThh:mm:ss	The time entry created.
last-seen date/time: yyyy-mm-ddThh:mm:ss	The last time seen on network.
hit *hit-number*	The number of hits.
tunnel *tunnel-string*	The tunnel name.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameters public-vlan, owner-state, peer-state and tunnel added. The options user-flush|vxlan-loopback|router added to parameters state, owner-state, and peer-state.
Version 2.6.2	The parameters hw-intf and egress-id added. The options update-peer-only| active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|hsrp added to parameters state, owner-state, and peer-state.

Version 3.0.0	The parameter `l2-net` added.

Usage Use this command to show the Layer 3 table setting.

Examples To display the Layer 3 table setting, use the following command:

```
CLI (network-admin@switch) > l3-table-show
switch mac               ip            vlan state
------ ----------------- ------------- ---- ------
switch 00:12:c0:80:3b:3d 1.1.1.1       1
switch 00:12:c0:80:3b:27 1.1.1.2       1
switch 66:0e:94:9c:8b:ef 10.0.62.1     62
switch 66:0e:94:70:15:f9 10.0.62.2     62
switch 66:0e:94:9c:8a:1c 192.168.25.31 1    active
switch 66:0e:94:6f:b9:3f 192.168.25.32 1
switch 66:0e:94:70:e0:16 192.168.25.33 1    active
switch 00:12:c0:80:3b:3d 192.188.1.110 1
switch 00:12:c0:80:3b:27 192.188.1.120 1
switch 66:0e:94:9c:8b:ef 2001:62::1    62
switch 66:0e:94:70:15:f9 2001:62::2    62
switch 66:0e:94:9c:8b:ef fe80::62:1    62
switch 66:0e:94:70:15:f9 fe80::62:2    62
```

lacp-modify

This command is used to modify Link Aggregation Control Protocol (LACP) parameters on the switch.

Syntax `lacp-modify`

Specify one or more of the following options:	
`enable|disable`	Specify to enable or disable LACP on the switch.
`system-priority` *`priority`*	Specifies the priority for the configuration. The default value is 32768 with a range of 1 to 65535.

Defaults The default system-priority is 32768.

Access CLI

History

Version 1.2.6	Command introduced.

Usage Use this command to enable or disable LACP, and set the priority.

Examples To enable LACP with a priority of 3567, use the following command:

```
CLI (network-admin@switch)> lacp-modify enable system-priority 3576
```

lacp-show

This command is used to display information about Link Aggregation Control Protocol (LACP) configurations on the switch.

Syntax `lacp-show`

`switch` *`switch-name`*	Name of the switch in the configuration.
`enable|disable`	Specifies if LACP is enabled or disabled.
`system-priority priority`	The priority for the configuration. The default value is 32768 with a range of 1 to 65535.
`system-id` *`id-string`*	The ID of the switch in the configuration. LACP uses the system priority with the MAC address to form the system ID, and also during negotiation with other systems.

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Use this command to display information about the LACP configuration.

Examples To display LACP information, use the following syntax

```
CLI (network-admin@switch) > lacp-show
switch:          switch
enable:          yes
system-priority: 32768
system-id:       0x8000660e9470e016
```

lacp-port-stats-settings-modify

This command is used to modify the settings for LACP port statistics.

Syntax `lacp-port-stats-settings-modify`

`enable|disable`	Specify if you want to enable or disable LACP port statistics.
`interval duration: #d#h#m#s`	Specify the interval between statistics collection.
`disk-space disk-space-number`	Specify the amount of disk space for the statistics.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display settings for LACP port statistics collection.

Examples To modify settings for LACP port statistics, and disable statistics collection, use the following syntax:

```
CLI (network-admin@switch) > lacp-port-stats-settings-modify
disable
```

lacp-port-stats-settings-show

Syntax `lacp-port-stats-settings-show`

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display LACP port statistics settings.

Examples To display settings for LACP port statistics, use the following syntax:

```
CLI (network-admin@switch) > lacp-port-stats-settings-show
switch:     switch
enable:     yes
interval:   1m
disk-space: 50M
```

lldp-show

This command is used to display Link Layer Discovery Protocol (LLDP) information on the switch. Link Layer Discovery Protocol (LLDP) allows Ethernet network devices such as switches, and routers to receive, and transmit device-related information to directly connected devices on the network that are also using the protocols, and to store the information that is learned about other devices.

Syntax `lldp-show`

Specify any of the following options:	
`local-port` *`local-port-number`*	The local port where the LLDP packet is received.
`bezel-port` *`bezel-port-string`*	The bezel port.
`chassis-id` *`chassis-id-string`*	The switch chassis ID.
`port-id` *`port-id-string`*	The port of the switch sending the LLDP packet.
`sys-name` *`sys-name-string`*	The system name.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 7.0.0	The Parameter `bezel-port` added.

Usage Use this command to display LLDP information on the switch.

Examples To display all LLDP information, use the following command:

`CLI (network-admin@switch) >` `lldp-show`

```
switch local-port bezel-port chassis-id        port-id           port-desc          sys-name
------ ---------- ---------- ---------------- ----------------- ----------------- ---------------------------
switch 8          8          09000fad         8                 PN Switch Port(8)  spine1
switch 12         12         09000f18         12                PN Switch Port(12) spine2
switch 13         13         00:e0:81:e4:03:6c 00:12:c0:80:1c:04 enp1s0f0          leaf-1c.pluribusnetworks.com
switch 14         13.2       00:e0:81:e4:02:64 90:e2:ba:15:fc:c9 enp1s0f1          leaf-1d.pluribusnetworks.com
switch 15         13.3       00:e0:81:e4:02:64 90:e2:ba:15:fc:c8 enp1s0f0          leaf-1d.pluribusnetworks.com
```

log-admin-audit-modify

This command is used to enable the collection of NetVisor auditing logs.

Syntax `log-admin-audit-modify`

`disable|enable`	Specifies to enable or disable auditing and by default it is set to disabled.

Defaults Disabled

Access CLI

History

Version 2.5	Command introduced.
Version 3.1.0	Command deprecated.
Version 5.1.0	Command re-added.

Usage Use this command to enable the collection of NetVisor auditing logs.

Examples To enable the feature, use the following syntax:

```
CLI (network-admin@switch) > log-admin-audit-modify  enable
```

log-admin-audit-show

This command is used to display auditing functionality.

Syntax `log-admin-audit-show`

Defaults Disabled

Access CLI

History

Version 2.5	Command introduced.
Version 3.1.0	Command deprecated.

Usage Use this command to display auditing functionality.

Examples To display auditing functionality, use the following syntax:

```
CLI (network-admin@switch) > log-admin-audit-show
switch: switch
enable: yes
```

log-audit-exception-create

This command is used to control which CLI, `shell` and `vtysh` commands are subject to auditing. If a command is subject to auditing, the command is logged in the audit log, and sent to the TACACS+ server as authorization, and accounting messages.

Syntax `log-audit-exception-create`

`cli|shell|vtysh`	Specify the type of audit exception
`pattern` *`pattern-string`*	Specify a regular expression to match exceptions.
`any|read-only|read-write`	Specify the access type to match exceptions
`scope local|fabric`	Specify the scope of exceptions.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a log audit exception for TACACS+.

Examples To create a log audit exception, use the following syntax:

```
CLI (network-admin@switch) > log-audit-exception-create
```

log-audit-exception-delete

This command is used to control which CLI, shell and vtysh commands are subject to auditing. If a command is subject to auditing, the command is logged in the audit log, and sent to the TACACS+ server as authorization, and accounting messages.

Syntax `log-audit-exception-delete`

`cli|shell|vtysh`	Specify the type of audit exception
`pattern` *`pattern-string`*	Specify a regular expression to match exceptions.
`any|read-only|read-write`	Specify the access type to match exceptions

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to delete a log audit exception.

Examples To delete a log audit exception, use the following syntax:

```
CLI (network-admin@switch) > log-audit-exception-delete
```

log-audit-exception-show

This command is used to control which CLI, `shell` and `vtysh` commands are subject to auditing. If a command is subject to auditing, the command is logged in the audit log, and sent to the TACACS+ server as authorization, and accounting messages.

Syntax `log-audit-exception-show`

`cli|shell|vtysh`	Specify the type of audit exception
`pattern` *`pattern-string`*	Specify a regular expression to match exceptions.
`any|read-only|read-write`	Specify the access type to match exceptions
`scope local|fabric`	Specify the scope of exceptions.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about log audit exceptions.

Examples To display information about log audit exceptions, use the following syntax:

```
CLI (network-admin@switch) > log-audit-exception-show
switch type  pattern          access    scope
------ ----- ---------------- --------- -----
switch cli                    read-only local
switch shell ^/usr/bin/nvmore any       local
switch cli   vport-inject     any       local
switch cli   vport-evict mac  any       local
```

log-alert-show

This command displays information about the log alerts on the switch.

Syntax `log-alert-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The timestamp for the log file.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the log file.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the log file.
`duration duration: #d#h#m#s`	The duration of the log file.
`interval duration: #d#h#m#s`	The intervals that alerts occurred in the duration.
`since-start`	Displays alerts collected from the start.
`older-than duration: #d#h#m#s`	Displays alerts older than the duration.
`within-last duration: #d#h#m#s`	Displays alerts collected within the last duration.
`switch node name`	Name of the switch collecting the alert data.
`code code-number`	The code number of the alert.
`name name-string`	The program name.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to display information about the alert log.

Examples To view the alert logs, issue the `log-alert-show` command:

```
CLI (network-admin@switch) > log-alert-show
No problems found
```

log-audit-show

This command displays information about the log audit configuration.

Syntax `log-audit-show`

Specify between 0, and 2 of the following options:	
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the audit log.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the audit log.
`duration duration: #d#h#m#s`	The duration of the audit log.
Specify any of the following options:	
`program program-string`	The program type.
`pid pid-number`	The product indentifiier.
`name name-string`	The name to match.
`code code-number`	The code number.
`level critical|error|warn|note|info`	The severity level.
`vnet vnet-name`	The vNET name.
`remote_switch node name`	The name of the remote switch.
`user user-name`	The username.
`client-pid client-pid-number`	The client program identifier.
`client-addr ip-address`	The client IP address.
`port port-number`	The port number.
`vlan vlan-id`	The VLAN identifier.
`vxlan vxlan-id`	The VXLAN identifier.
`count number`	Displays the count between 1, and 50000.
`starting-point starting-point-number`	The starting point of the log audit.
`length length-number`	The length of the log audit.
`reverse|no-reverse`	Specifies if the log is displayed in reverse or not.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameters `starting-point`, `length`, and `reverse` added.
Version 2.2.5	The IP address is logged as part of a user login event.
Version 6.0.0	The keyword `info` added to the parameter `level`.

Usage Use this command to display information about the audit log.

Examples To display information about log audits, use the following command:

```
CLI (network-admin@switch1) > log-audit-show
category time                          name          code  level user               client-addr  message

-------- ------------------------------ ------------- ----- ----- ------------------
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------
audit    2022-02-03,09:58:01.431873-08:00 shell_command 33000 info  network-admin(root)              Command "ls --color=auto" status exit-
code=0
audit    2022-02-03,09:58:44.723339-08:00 shell_command 33000 info  network-admin(root)              Command "ls --color=auto" status exit-
code=0
audit    2022-02-03,09:59:03.517379-08:00 shell_command 33000 info  network-admin(root)              Command "ls --color=auto" status exit-
code=0
audit    2022-02-03,10:50:26.377979-08:00 shell_command 33000 info  network-admin(root)              Command "nvauditsh" status exit-code=0

audit    2022-02-03,10:50:26.381026-08:00 shell_command 33000 info  network-admin       10.140.0.66  Command "sudo su" status exit-code=0

audit    2022-02-03,10:50:27.058889-08:00 shell_command 33000 info  network-admin       10.140.0.66  Command "bash" status exit-code=0

audit    2022-02-03,10:50:27.059543-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "shell" result success

audit    2022-02-04,04:53:01.538596-08:00 user_command  11001 info  network-admin       10.140.0.57  Command "l3-settings-modify" result
failure: "Unrecognized command "l3-settings-modify""
audit    2022-02-04,05:11:03.674616-08:00 user_command  11001 info  network-admin       10.140.0.57  Command "[" result failure: "Unrecognized
command "["""
audit    2022-02-07,04:43:07.120607-08:00 user_command  11001 info  network-admin       10.140.0.106 Command "vlan-create id 123 ports 21
scope local vxlan 12345" result success
audit    2022-02-07,10:37:36.799465-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
host server-ext-7c" result failure: "Missing required argument scope"
audit    2022-02-07,10:37:41.315385-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
host server-ext-7c scope local" result success
audit    2022-02-07,10:40:58.705772-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-delete name
testsys" result success
audit    2022-02-07,10:41:04.488446-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
host server-ext-7c scope local port 10514" result success
audit    2022-02-07,10:43:55.282730-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "vlan-create id 100 scope local"
result success
audit    2022-02-07,10:44:31.759821-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-modify name testsys
message-format structured" result success
audit    2022-02-07,10:44:51.878142-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "vlan-delete id 100" result
success
audit    2022-02-07,10:45:08.666358-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "vlan-create id 100 scope local"
result success
audit    2022-02-07,10:52:51.739158-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-delete name
testsys" result success
```

```
audit    2022-02-07,10:53:29.120571-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-modify name testsys
transport tcp-tls scope local port 10514" result failure: "Unable to find admin-syslog to modify"
audit    2022-02-07,10:53:41.499865-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
transport tcp-tls scope local port 10514" result failure: "Missing required argument host"
audit    2022-02-07,10:53:51.961906-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
transport tcp-tls scope local port 10514 host server-ext-7c" result success
audit    2022-02-07,10:54:01.042365-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "admin-syslog-create name testsys
transport tcp-tls scope local port 10514 host server-ext-7c" result failure: "admin-syslog with name testsys already exists"
audit    2022-02-07,10:54:09.866597-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "vlan-create id 101 scope local"
result success
audit    2022-02-07,10:54:35.091144-08:00 user_command  11001 info  network-admin       10.140.0.66  Command "syslog-tls-cert-import" result
failure: "Missing required argument "file-ca"
```

log-event-show

This command displays information about the log event configuration.

Syntax `log-event-show`

Specify between 0, and 2 of the following options:	
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the log file.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the log file.
`duration duration: #d#h#m#s`	The duration of the log file.
Specify any of the following options:	
`program program-string`	The program type.
`pid pid-number`	The program identifier.
`name name-string`	The program name.
`code code-number`	The code number.
`level critical|error|warn|note|info`	Specify one among the options as the severity level.
`event-type system|port|tcp|stp|igmp|lldp|lacp|vdp|ecp|evb|ptp|storage|tacacs|mld|mroute|vport|lacp-port-event`	The type of event.
`vnet vnet-name`	The associated vNET.
`remote_switch node name`	The name of the remote switch.
`user user-name`	The username.
`client-pid client-pid-number`	The client program identifier.
`client-addr ip-address`	The client IP address.
`port port-number`	The port number.
`vlan vlan-id`	The VLAN identifier.
`vxlan vxlan-name`	The VXLAN identifier.
`count number`	The count in a range from 1 to 50000.
`starting-point starting-point-number`	The starting point of the log audit.
`length length-number`	The length of the log audit.
`reverse|no-reverse`	Specifies if the log is reverse or not reverse.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The event type TACACS added.
Version 2.2	The parameters `starting-point`, `length`, and `reverse` added.
Version 2.3.2.1	The options `mld|mroute|vport` added to event type.
Version 3.0.0	The options `lacp-port`, and `lacp-port-event` added.
Version 6.0.0	The parameter `level` added.

Usage This command is used to display information about the event log configuration.

Examples To display information about log events, use the following command:

```
CLI (network-admin@switch)1 > log-event-show
category time                          name             code  level event-type port vlan message

--------  ------------------------------  ----------------  -----  -----  ----------  ----  ----
-------------------------------------------------------------
event     2022-02-14,10:36:09.526322-08:00 adj_trunk_create 11106 info   port        19          ADJ
Create Auto Trunk: port1=19 port2=20
event     2022-02-14,10:36:09.568790-08:00 stp_port_state   11026 info   port        272   1     STP Port
State Change: port=272 vlan=1: Disabled -> Discarding
event     2022-02-14,10:36:09.568874-08:00 stp_port_state   11026 info   port        19    1     STP Port
State Change: port=19 vlan=1: Disabled -> Discarding
event     2022-02-14,10:36:09.568928-08:00 stp_port_state   11026 info   port        20    1     STP Port
State Change: port=20 vlan=1: Disabled -> Discarding
event     2022-02-14,10:36:09.569067-08:00 stp_port_state   11026 info   port        272   20    STP Port
State Change: port=272 vlan=20: Disabled -> Discarding
event     2022-02-14,10:36:09.569128-08:00 stp_port_state   11026 info   port        19    20    STP Port
State Change: port=19 vlan=20: Disabled -> Discarding
event     2022-02-14,10:36:09.569181-08:00 stp_port_state   11026 info   port        20    20    STP Port
State Change: port=20 vlan=20: Disabled -> Discarding
event     2022-02-14,10:36:09.569491-08:00 stp_port_state   11026 info   port        272   300   STP Port
State Change: port=272 vlan=300: Disabled -> Discarding
event     2022-02-14,10:36:09.569549-08:00 stp_port_state   11026 info   port        19    300   STP Port
State Change: port=19 vlan=300: Disabled -> Discarding
event     2022-02-14,10:36:09.569598-08:00 stp_port_state   11026 info   port        20    300   STP Port
State Change: port=20 vlan=300: Disabled -> Discarding
event     2022-02-14,10:36:09.569774-08:00 stp_port_state   11026 info   port        19    1     STP Port
State Change: port=19 vlan=1: Disabled -> Discarding
event     2022-02-14,10:36:09.569847-08:00 stp_port_state   11026 info   port        19    20    STP Port
State Change: port=19 vlan=20: Disabled -> Discarding
event     2022-02-14,10:36:09.569914-08:00 stp_port_state   11026 info   port        19    300   STP Port
State Change: port=19 vlan=300: Disabled -> Discarding
event     2022-02-14,10:36:09.570164-08:00 port_up          11002 info   port        19          Port=19
up
```

log-event-settings-modify

This command allows you to modify the log event settings.

Syntax `log-event-settings-modify`

Specify one or more of the following options:	
`system|no-system`	Specifies system events.
`port|no-port`	Specifies the port event.
`tcp|no-tcp`	Specifies TCP events
`stp|no-stp`	Specifies the STP events.
`igmp|no-igmp`	Specifies IGMP events.
`lldp|no-lldp`	Specifies LLDP events.
`lacp|no-lacp`	Specifies LACP events.
`tacacs|no-tacacs`	Specifies TACACS events.
`mld|no-mld`	Specifies MLD events.
`mroute|no-mroute`	Specifies multicast routing events.
`vport|no-vport`	Specifies vPort events.
`lacp-port-event|no-lacp-port-event`	Specifies to log LACP port events.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter TACACS added.
Version 2.2.5	The parameter `LACP` added.
Version 2.3	The parameters `mld` and `mroute` added.
Version 2.3.1	The parameter `vport` added.
Version 2.6.2	The parameter `lacp-port-event` added.

Usage Use this command to modify log event settings including the type of event.

Examples To modify the log event settings to exclude vPort events, use the following command:

```
CLI (network-admin@switch) > log-event-settings-modify  no-vport
```

log-event-settings-show

This command allows you to display the log event settings.

Syntax `log-event-settings-show`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display log event settings including the type of event.

Examples To display the log event settings, use the following command:

```
CLI (network-admin@switch)1 > log-event-settings-show
switch:          switch
system:          on
port:            on
tcp:             off
stp:             off
igmp:            off
lldp:            off
lacp:            off
tacacs:          on
mld:             off
mroute:          off
vport:           off
lacp-port-event: off
```

log-session-show

This command displays session log information.

Syntax `log-session-show`

Specify between 0, and 2 of the following options:	
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the log file.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the log file.
`duration duration: #d#h#m#s`	The duration of the log file.
Specify any of the following options:	
`program program-string`	The program type.
`pid pid-number`	The program identifier.
`name name-string`	The program name.
`code code-number`	The code number.
`level critical|error|warn|note|info`	Specify one among the options as the severity level.
`event-type system|port|tcp|stp|igmp|lldp|lacp|vdp|ecp|evb|ptp|storage|tacacs|mld|mroute|vport|lacp-port-event`	The type of event.
`vnet vnet-name`	The associated vNET.
`remote_switch node name`	The name of the remote switch.
`user user-name`	The username.
`client-pid client-pid-number`	The client program identifier.
`client-addr ip-address`	The client IP address.
`port port-number`	The port number.
`vlan vlan-id`	The VLAN identifier.
`vxlan vxlan-name`	The VXLAN identifier.
`count number`	Displays the count in a range from 1 to 50000.
`starting-point starting-point-number`	The starting point of the log audit.
`length length-number`	The length of the log audit.
`reverse|no-reverse`	Specifies if the log is reverse or not reverse.

Defaults None

Access CLI

History

Version 6.0.0	The parameter `level` added.

Usage

Use this command to display information about the session log.

Examples

To display information about log events, use the following command:

```
CLI (network-admin@switch1) > log-session-show
category time                           name   code  level user          client-addr  message
-------- ------------------------------ ------ ----- ----- ------------- ------------ -------
session  2021-01-16,00:40:23.525410-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:40:30.266126-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-16,00:40:31.716202-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:46:49.981397-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-16,00:47:10.044128-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:47:21.662696-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-16,00:48:01.324399-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:48:18.458754-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:48:22.865170-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-16,00:49:46.237315-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,00:55:44.239227-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-16,01:01:01.758368-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-16,02:01:11.991085-08:00 login  11099 info  network-admin 10.13.44.34  login
session  2021-01-16,02:01:37.155399-08:00 logout 11100 info  network-admin 10.13.44.34  logout
session  2021-01-16,02:01:45.877829-08:00 login  11099 info  network-admin 10.13.44.34  login
session  2021-01-16,02:02:01.817602-08:00 logout 11100 info  network-admin 10.13.44.34  logout
session  2021-01-17,22:42:19.380620-08:00 login  11099 info  network-admin 10.140.0.243 login
session  2021-01-17,22:42:21.831851-08:00 logout 11100 info  network-admin 10.140.0.243 logout
session  2021-01-18,06:18:59.680515-08:00 login  11099 info  network-admin 10.140.0.159 login
session  2021-01-18,08:30:39.773671-08:00 logout 11100 info  network-admin 10.140.0.159 logout
session  2021-01-18,18:43:46.545491-08:00 login  11099 info  network-admin 10.140.0.159 login
```

log-system-show

This command displays information about the log system configuration.

Syntax `log-system-show`

Specify between 0, and 2 of the following options:	
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for the log file.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for the log file.
`duration duration: #d#h#m#s`	The duration of the log file.
Specify any of the following options:	
`program program-string`	The program type.
`pid pid-number`	The program identifier.
`name name-string`	The program name.
`code code-number`	The code number.
`level critical|error|warn|note|info`	The severity level of the event.
`vnet vnet-name`	The vNET name.
`remote_switch node name`	The name of the remote switch.
`user user-name`	The username.
`client-pid client-pid-number`	The client program identifier.
`client-addr ip-address`	The client IP address.
`port port-number`	The port number.
`vlan vlan-id`	The VLAN identifier.
`vxlan vxlan-name`	The VXLAN identifier.
`count number`	The count in a range from 1 to 50000.
`starting-point starting-point-number`	The starting point of the log audit.
`length length-number`	The length of the log audit.

`reverse|no-reverse`	Specifies if the log is reverse or not reverse.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 6.0.0	The keyword `info` added to `level`.

Usage Use this command to display information about the audit log.

Examples To display information about system logging, use the following command:

```
CLI (network-admin@pleiades25) > log-system-show format all layout vertical
count 2
category:
system time:            2021-09-27,06:57:54.743025-07:00
name:                   tx_port_bw_th_exceed
code:                   11551
level:                  note
port:                   9
message:                Egress port bandwidth threshold exceeded at port=9
category:
system time:            2021-09-27,06:59:34.747463-07:00
name:                   tx_port_bw_th_not_exceed
```

log-system-counters-reset

This command resets the log counters on the switch.

Syntax `log-system-counters-reset`

`reset-time` *`reset-time-string`*	Specify the reset time.

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Use this command to reset log counters.

Examples To reset log counters, use the following commands:

```
CLI (network-admin@switch) > log-system-counters-reset
```

log-system-counters-show

This command displays the log counters on the switch.

Syntax `log-system-counters-show`

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Usage Use this command to display log counters.

Examples To display log counters, use the following command:

```
CLI (network-admin@switch) > log-system-counters-show
switch critical error warn note info
------ -------- ----- ---- ---- ----
switch 82       381   248  2361 0
```

M Commands

mac-limit-modify

You can now limit the number of MAC addresses per port. You can configure port security only on ports. Details about port security for ports are as follows:

- Access ports—You can configure port security on interfaces that you have configured as Layer 2 access ports. On an access port, port security applies only to the access VLAN.
- Trunk ports—You can configure port security on interfaces that you have configured as Layer 2 trunk ports.

Syntax `mac-limit-modify`

`port` *`port-list`*	Specify the port or port list.
`mac-limit` *`mac-limit-number`*	Specify the number of MAC addresses to limit on the port.
`mac-limit-action log|disable`	Specify the action to take if the MAC address limit is exceeded.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 5.1.0	The option, `drop`, removed from `mac-limit-action` parameter.

Usage Use this command to modify the MAC address limits on ports.

Examples To modify the number of MAC addresses on ports, use the following syntax:

```
CLI (network-admin@switch) > mac-limit-modify port 25 mac-limit 3
mac-limit-action disable
```

mac-limit-show

You can now limit the number of MAC addresses per port. You can configure port security only on ports. Details about port security for ports are as follows:

- Access ports—You can configure port security on interfaces that you have configured as Layer 2 access ports. On an access port, port security applies only to the access VLAN.
- Trunk ports—You can configure port security on interfaces that you have configured as Layer 2 trunk ports.

Syntax `mac-limit-show`

`port` *`port-list`*	The port or port list.
`mac-limit` *`mac-limit-number`*	The number of MAC addresses to limit on the port.
`mac-limit-action log|disable`	The action to take if the MAC address limit is exceeded.
`num-macs` *`num-macs-number`*	The number of MAC addresses learned on the port.

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 5.1.0	The option `drop` removed from `mac-limit-action` parameter.

Usage Use this command to display information about MAC address limits on ports.

Examples To display information about MAC address limits on ports, use the following syntax:

```
CLI (network-admin@switch1) > mac-limit-show
switch  port mac-limit mac-limit-action num-macs
------- ---- --------- ---------------- --------
switch1 1    0         log              0
switch1 5    0         log              0
switch1 9    0         log              0
switch1 13   0         log              0
```

mac-pool-show

This command is used to display MAC pool.

Syntax `mac-pool-show`

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display information about MAC pool.

Examples To display information about MAC address limits on ports, use the following syntax:

```
CLI (network-admin@switch1) > mac-pool-show
switch: switch-3
switch: switch-1
switch: switch-2
```

mcast-show

This command displays multicast group information for a switch.

Syntax `mcast-show`

`group-ip` *`muticast-ip-address`*	The IP address for the multicast group.
`vnet` *`vnet-name`*	The vNET name.
`l2-net` *`l2-net-name`*	The Layer 2 network name.

Defaults Unless otherwise specified, all multicast group membership information for the local switch is displayed.

Access CLI

History

Version 1.2	Command introduced.
Version 3.0.0	The parameter `l2-net` added.

Usage Hosts, and adjacent switches on IPv4 networks can establish multicast group memberships.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mcast-show
switch group-ip  vnet bd vlan group-id group-ports
------ --------- ---- -- ---- -------- -----------
switch 239.4.9.3         1    33554434 0,16-18
switch 239.4.9.7         1    33554436 16-18,69
switch 239.4.9.4         1    33554435 16-18,69
```

mgmt-session-show

In earlier versions of NetVisor, NetVisor did not support viewing current user sessions using the CLI. This can be very useful for security, and troubleshooting. NetVisor now lists all currently logged-in users along with the IP they are connecting from, and the login time when you execute the command, `mgt-session-show`.

Syntax `mgmt-session-show`

`user` *`user-string`*	The user name.
`cli-user` *`cli-user-string`*	Name used to log into the switch.
`pid` *`pid-number`*	The process ID.
`terminal` *`terminal-string`*	The terminal.
`from-ip` *`ip-address`*	The IP address for the user.
`login-time date/time:` *`yyyy-mm-ddTHH:mm:ss`*	The time and date that the user logged into the switch.
`remote-node` *`remote-node-string`*	Name of the remote node.
`vnet` *`vnet-string`*	The vNET assigned to the user.
`type cli|api|shell`	The type of login session.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display users logged into the switch.

Examples To display users logged into the switch, NAT-1, use the following syntax:

```
CLI (network-admin@switch) > mgmt-session-show
switch user cli-user      pid    terminal from-ip     login-time          type
------ ---- ------------- ------ -------- ----------- ------------------- ----
switch root network-admin 394801 pts/0    10.140.0.54 2022-01-11,19:36:09 cli
```

mirror-create

This command is used to create mirror ports, and flows. Network engineers or administrators use port mirroring to analyze, and debug data or diagnose errors on a network. It helps administrators keep a close eye on network performance, and alerts them when problems occur. It can be used to mirror either inbound or outbound traffic (or both) on single or multiple interfaces.

Syntax `mirror-create`

`name` *`name-string`*	Specify a name for the mirror configuration.
`direction ingress|egress| bidirection`	Specify a direction for the mirrored traffic.
`out-port` *`port-list`*	Specify the port for outgoing traffic.
`out-trunk` *`trunk name`*	Specify the name of the outgoing trunk configuration.
`in-port` *`port-list`*	Specify the port for incoming traffic. Supported ports are 1-64 on the F64 platform. The parameter `all`, is not supported.
`filtering port| vflow-and-port|vflow-or-port`	Specify the filter type for the configuration.
`enable|disable`	Enable or disable the configuration.
`other-egress-out allow|prevent`	Specify if other outgoing traffic is allowed or prevented. The default value is `prevent`.
`span-encap none|over-ip|over-vlan`	Specify the mirror span type. The default type is none.
`span-local-ip` *`ip-address`*	Specify the local IPv4 address for the mirror span.
`span-remote-ip` *`ip-address`*	Specify the remote IPv4 address fpr the mirror span.
`span-src-mac` *`mac-address`*	Specify the source MAC address for the mirror span.
`span-dst-mac` *`mac-address`*	Specify the destination MAC address for the mirror span.
`span-tagging-vlan` *`vlan-id`*	Specify the mirror span VLAN tagging ID. The default value is none.
`span-tos` *`integer`*	Specify the mirror span ToS from 0 to 255. The default value is 0.
`nvie-mirror|no-nvie-mirror`	Specify to mark this mirroring as an NVIE mirror, and mirror traffic to NVIE VM.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.4	The parameter `span-` introduced.
Version 2.6.2	The parameter `nvie-mirror` added.

Usage Use this command to create mirrored traffic or ports for analyzing traffic.

Examples To create a mirror configuration, mirror-port, with the direction egress, port 73, inbound port 33, filtering by port, and allow other egress traffic, use the following syntax:

```
CLI (network-admin@switch) > mirror-create name mirror-port
direction egress out-port 73 in-port 33 enable other-egress-out
allow
```

mirror-delete

This command is used to delete a mirror configuration.

Syntax `mirror-delete`

`name` *`name-string`*	Specify a name for the mirror configuration.

Defaults None

Access CLI

History

Version 2.2	Command introduced.

Usage Use this command to delete a mirror configuration.

Examples To delete a mirror configuration, mirror-port, use the following syntax:

```
CLI (network-admin@switch) > mirror-delete name mirror-port
```

mirror-modify

This command allows you to modify a port mirror configuration.

Syntax `mirror-modify`

`name` *`name-string`*	Specify the name of the mirror configuration to modify.
Specify any of the following options:	
`direction disabled|ingress|egress|bidirection`	Specify the direction of the traffic that you want to mirror on the port.
`out-port` *`port-list`*	Specify the list of ports for outgoing network traffic.
`out-trunk` *`trunk-name`*	Specify the trunk name for the outgoing trunk.
`in-port` *`port-list`*	Specify the list of ports for incoming network traffic.
`filtering port|vflow-and-port|vflow-or-port`	Specify the type of traffic to filter.
`enable|disable`	Enable or disable port mirroring on the network.
`other-egress-out allow|prevent`	Specify if other outgoing traffic is allowed or prevented.
`span-encap none|over-ip|over-vlan`	Specify the mirror span type. The default type is none.
`span-local-ip` *`ip-address`*	Specify the local IPv4 address for the mirror span.
`span-remote-ip` *`ip-address`*	Specify the remote IPv4 address fpr the mirror span.
`span-src-mac` *`mac-address`*	Specify the source MAC address for the mirror span.
`span-dst-mac` *`mac-address`*	Specify the destination MAC address for the mirror span.
`span-tagging-vlan` *`vlan-id`*	Specify the mirror span VLAN tagging ID. The default value is none.
`span-tos` *`integer`*	Specify the mirror span ToS from 0 to 255. The default value is 0.
`nvie-mirror|no-nvie-mirror`	Specify to mark this mirroring as an NVIE mirror, and mirror traffic to NVIE VM.

Defaults None.

Access CLI

History

Version 1.2	`port-mirror-modify` introduced.
Version 2.0	Command changed to `mirror-modify`.
Version 2.1	The parameter `out-trunk` added.
Version 2.2.2	The parameter `direction` added.
Version 2.2.3	The parameter `policy`, changed to `filtering`. The parameter `other-egress-out` added.
Version 2.4	The parameter `span-` introduced.
Version 2.6.2	The parameter `nvie-mirror` added.

Usage Port mirroring is used to send copies of network traffic on one port to a network monitoring connection on another port. You can use this command to enable or disable port mirroring as well as designate the ports to use for it.

Examples To enable port mirroring on outbound ports 3-5, and inbound ports 8-9, use the following command:

```
CLI (network-admin@switch) > mirror-modify out-port 3-5 in-port 8-9
mirroring
```

mirror-show

This command is used to display information about port mirroring on the switch.

Syntax `mirror-show`

`name` *`name-string`*	A name for the mirror configuration.
`id`	The mirror ID assigned by nvOS.
`direction ingress|egress|bidirection`	A direction for the mirrored traffic.
`out-port` *`port-list`*	The port for outgoing traffic.
`out-trunk` *`trunk name`*	The name of the outgoing trunk configuration.
`loopback-port` *`loopback-port-number`*	The loopback port for mirrored traffic.
`in-port` *`port-list`*	The port for incoming traffic.
`filtering port| vflow-and-port|vflow-or-port`	The filter type for the configuration.
`enable|disable`	Enable or disable the configuration.
`other-egress-out allow|prevent`	Specifies if other outgoing traffic is allowed or prevented.
`span-encap none|over-ip|over-vlan`	The mirror span type. The default type is none.
`span-local-ip` *`ip-address`*	The local IPv4 address for the mirror span.
`span-remote-ip` *`ip-address`*	The remote IPv4 address fpr the mirror span.
`span-src-mac` *`mac-address`*	The source MAC address for the mirror span.
`span-dst-mac` *`mac-address`*	The destination MAC address for the mirror span.
`span-tagging-vlan` *`vlan-id`*	The mirror span VLAN tagging ID. The default value is none.
`span-tos` *`integer`*	The mirror span ToS in a range from 0 to 255. The default value is 0.
`nvie-mirror|no-nvie-mirror`	Specify to mark this mirroring as an NVIE mirror, and mirror traffic to NVIE VM.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.0	Command changed to `mirror-show`.
Version 2.4	The parameter `span-` introduced.
Version 2.6.2	The parameter `nvie-mirror` added.

Usage Use this command to display port mirroring information.

Examples To display information about port mirroring, use the following command:

```
CLI (network-admin@pleiades25) > mirror-show
name    direction out-port in-port filtering      enable other-egress-out nvie-mirror
------- --------- -------- ------- -------------- ------ ---------------- -----------
mirror11 ingress   130      1-128   vflow-and-port yes    prevent          false
```

mld-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.

MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic will be forwarded to all the switch ports, impacting switch performance.

Syntax `mld-show`

`group-ip` *`ip-address`*	Name of the IP group for the MLD configuration.
`node-ip` *`ip-address`*	Name of the IP host for the MLD configuration.
`vnet` *`vnet-name`*	Name of the vNET assigned to the MLD configuration.
`l2-net` *`l2-net-name`*	Name of the Layer 2 network.
`vlan` *`vlan-id`*	The VLAN ID for the MLD configuration.
`port` *`port-number`*	The number of the port for the MLD configuration.
`source-ip` *`ip-address`*	The IP source name for the MLD configuration.
`node-type host|router|switch`	The node type as host or router.
`expires` *`expires-number(s)`*	The ageout time.

Defaults None

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameter `switch` deprecated. The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.

Usage Default behavior, when MLD is not configured, forwards multicast traffic to all the switch ports, impacting switch performance.

Examples To display MLD parameters for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-show
switch  group-ip    node-ip                 vlan port source  expires(s)
------- ----------- ----------------------- ---- ---- ------- ----------
```

```
switch1 ff03::69    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::68    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::67    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::66    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::65    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::64    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::63    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::62    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::61    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::60    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::59    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::58    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::57    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
switch1 ff03::56    fe80::200:aff:fe6c:50de 1    8    0.0.0.0 237
```

mld-router-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-router-show`

`node-ip` *`ip-address`*	Name of the IP node for the MLD configuration.
`vnet` *`vnet-name`*	Name of the vNET assigned to the MLD configuration.
`l2-net` *`l2-net-name`*	Name of the Layer 2 network.
`vlan` *`vlan-id`*	The ID of the VLAN for the MLD configuration.
`port` *`port-number`*	The number of the port for the MLD configuration.

Defaults None.

Access History

Version 2.3	Command introduced.
Version 2.4.1	The parameters `group-ip`, `source-ip`, `node-type`, and `expires` deprecated. The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.

Usage Default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display MLD router parameters for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-router-show
switch node-ip                   vlan port
------ ------------------------- ---- ----
switch fe80::6273:5cff:fed0:45ff 1    129
switch fe80::6273:5cff:fed0:45ff 1    14
```

mld-snooping-modify

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when you do not configure MLD Snooping, NetVisor forwards multicast traffic to all the switch ports, impacting switch performance.

Syntax `mld-snooping-modify`

`scope local|fabric`	Modify the scope of MLD Snooping to local or fabric.
`enable|disable`	Enable, disable MLD Snooping. Default: disable
`mldv1-vlans` *`vlan-list`*	VLANs on which to enable snooping, and use MLDv1 protocol. Default: none
`mldv2-vlans` *`vlan-list`*	VLANs on which to enable snooping, and use MLDv2 protocol. Default 1 - 4092
`snoop-linklocal-vlans` *`vlan-list`*	Allow snooping of link-local groups (ff02::/16) on these vlans. Default 1 - 4092
`snoop-nd-vlans` *`vlan-list`*	Allow snooping of ND SN Multicast addresses (ff02::1:ff/104) on these vlans. Default 1 - 4092
`query-interval` *`seconds`*	Specify the interval between queries in seconds.
`query-max-response-time` *`seconds`*	Specify the maximum response time for a query.

Defaults See above description

Access CLI

History

Version 2.3	Command introduced.
Version 2.4	The parameters `version` and `snoop-link` introduced.
Version 2.5.2	The parameters `version`, `snoop-linklocal` and `snoop-nd` deprecated. The parameters `mldv1-vlans`, `mldv2-vlans`, `snoop-linklocal-vlans`, and `snoop-nd-vlans` introduced.
Version 3.1.0	The parameters `query-interval` and `query-max-response-time` added.

Usage Use this command to modify the scope of MLD Snooping, enable snooping on specific VLANs, link-local groups, or ND SN multicast addresses, or to disable snooping.

Examples To modify the scope from local to fabric use the following syntax:

```
CLI (network-admin@switch) > mld-snooping-modify scope fabric
```

mld-snooping-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.

Syntax `mld-snooping-show`

Defaults None.

Access CLI

History

Version 2.3	Command introduced.
Version 2.4	The parameters `version` and `snoop-link` introduced.
Version 2.5.2	The parameters `version`, `snoop-linklocal` and `snoop-nd` deprecated. The parameters `mldv1-vlans`, `mldv2-vlans`, `snoop-linklocal-vlans`, and `snoop-nd-vlans` introduced.
Version 3.1.0	The parameters `query-interval` and `query-max-response-time` added.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display the format for all options for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-snooping-show format all
switch:                    switch
enable:                    no
mldv1-vlans:               none
mldv2-vlans:               1-4092
snoop-linklocal-vlans:     none
snoop-nd-vlans:            none
query-interval(s):         60
query-max-response-time(s): 10
```

mld-static-group-create

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-group-create`

`group-ip` *`ip-address`*	Specifies the name of the IP group for the MLD configuration.
`vlan` *`vlan-id`*	Specifies the VLAN ID for the MLD configuration.
`ports` *`port-list`*	Specifies the list of the ports for the MLD configuration

Defaults None.

Access CLI

History

Version 2.3	Command introduced.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To create a multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-group-create
```

mld-static-group-delete

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic will be forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-group-delete`

`group-ip` *`ip-address`*	Specifies the name of the IP group for the MLD configuration to be deleted.
`vlan` *`vlan-id`*	Specifies the VLAN ID for the MLD configuration to be deleted.

Defaults None.

Access CLI

History

Version 2.3	Command introduced.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic will be forwarded to all the switch ports, impacting switch performance.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-group-delete
```

mld-static-group-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-group-show`

`group-ipv6` *`ip-address`*	Name of the IP group for the MLD configuration.
`vnet` *`vnet-name`*	The vNET name.
`vlan` *`vlan-id`*	The ID of the VLAN for the MLD configuration.
`ports` *`port-list`*	The number of the port for the MLD configuration.

Defaults None.

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage When MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display MLD parameters for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-group-show
```

mld-static-source-create

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-source-create`

`source-ip` *`ip-address`*	Specifies the source IPv6 address for the MLD configuration.
`group-ip` *`ip-address`*	Specifies the source of the IP group for the MLD configuration.
`vlan` *`vlan-id`*	Specifies the ID of the VLAN for the MLD configuration.
`vnet` *`vnet-name`*	Specifies the vNET name.
`l2-net` *`l2-net-name`*	Specifies the name of the Layer 2 network.
`ports` *`port-list`*	Specifies the list of the ports for the MLD configuration.

Defaults None.

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.

Usage The default behavior, when MLD is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-source-create
```

mld-static-source-delete

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic will be forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-source-delete`

`source-ip` *`ip-address`*	Specifies the source IPv6 address for the MLD configuration to be deleted.
`l2-net` *`l2-net-name`*	Specifies the name of the Layer 2 network.
`group-ip` *`ip-address`*	Specifies the source of the IP group for the MLD configuration to be deleted.
`vlan` *`vlan-id`*	Specifies the ID of the VLAN for the MLD configuration to be deleted.

Defaults None.

Access CLI

History

Version 2.3.0	Command introduced.
Version 3.0.0	The parameter `l2-net` added.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance. For this CLI, the group has to be seated statically already.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-source-delete
```

mld-static-source-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-static-source-show`

`group-ip` *`ip-address`*	The group IP address.
`vnet` *`vnet-name`*	The vNET name.
`l2-net` *`l2-net-name`*	Name of the Layer 2 network.
`vlan` *`vlan-id`*	Name of the VLAN.
`source-ip` *`ip-address`*	The source IP address.
`host-ip` *`ip-address`*	The IP address of the host.
`ports` *`port-list`*	The list of ports.

Defaults None.

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameter `switch` deprecated. The parameter `vnet` added.
Version 3.0.0	The parameter `l2-net` added.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-static-source-show
  switch:                 switch-01
  group-ip:               ff02::1:ff11:1111
  vlan:                   100
  source-ip:              2001:db8::2:1
```

```
host-ip:                fe80::3636:3bff:fece:44f2
ports:                  8,69,129
```

mld-stats-show

Multicast Listener Discovery (MLD) is a Layer 3 multicast protocol used between IPv6 hosts, and routers similar to how IGMP is used for IPv4. MLD snooping allows a switch to examine MLD packets, and make forwarding decisions based on their content.
MLD snooping constrains IPv6 multicast traffic at Layer 2 by configuring Layer 2 LAN ports dynamically to forward IPv6 multicast traffic only to those ports that want to receive it.
The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Syntax `mld-stats-show`

`vlan` *`vlan-id`*	Name of the VLAN.

Defaults None.

Access

History

Version 2.3.0	Command introduced.

Usage The default behavior, when MLD Snooping is not configured, multicast traffic is forwarded to all the switch ports, impacting switch performance.

Examples To display all multicast group memberships for the local switch, use the following command:

```
CLI (network-admin@switch) > mld-stats-show
switch vlan v1-queries v2-queries v1-member-reports v2-member-reports done-group
queries-sent drops ignored
------ ---- ---------- ---------- ---------------- ---------------- ----------
------------ ----- -------
switch 0    0          0          0                 0                 0          0
          0     0
switch 0    0          0          0                 0                 0          0
          0     0
```

mld-switches-show

This command is used to display switches with MLD protocol enabled.

Syntax `mld-switches-show`

`node-ip` *`ip-address`*	The node IP address.
`vnet` *`vnet-name`*	Name of the vNET assigned to the MLD configuration.
`l2-net` *`l2-net-name`*	Name of the Layer 2 network.
`vlan` *`vlan-id`*	The ID of the VLAN for the MLD configuration.
`port` *`port-number`*	The port number.

Defaults None

Access CLI

History

Version 2.3.3	Command introduced.
Version 2.4.1	The parameters `group-ip`, `source-ip`, `node-type`, and `expires`, deprecated. The parameters `vnet`, and `vlan` added.
Version 3.0.0	The parameter `l2-net` added.

Usage Displays information about MLD switches.

Examples To display MLD switches, use the following syntax:

```
CLI (network-admin@switch) > mld-switches-show
switch node-ip vlan port
------ ------- ---- ----
switch fe80::  1    4
switch fe80::  1    4
```

mst-config-create

Multiple Spanning Tree Protocol as defined in IEEE802.1s or IEEE802.1Q-2005 provides the ability to manage multiple VLANs from a single MST instance. MST allows the formation of MST regions that can run multiple MST instances (MSTIs). Multiple regions, and other STP bridges are interconnected using one single Common Spanning Tree (CST).

Syntax `mst-config-create`

`instance-id` *`id`*	Specify an ID for the MST configuration.
`vlans` *`vlan-list`*	Specify the list of VLANs associated with the MST configuration.
`bridge-priority` *`bridge-priority-number`*	Specify the bridge priority for the MST configuration. The bridge priority is a value from 0 to 65536, with a default value of 0. The value increments by 4096 each time. So for example, values can be 0, 4096, 8192, up to 65536.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage This command is used to create a MST configuration on the switch.

Examples To create a MST configuration with the ID 10, VLANs 12-15, and bridge-priority of 4096, use the following syntax:

```
CLI (network-admin@switch) > mst-config-create instance-id 10 vlans
12-15 bridge-priority 4096
```

mst-config-delete

Multiple Spanning Tree Protocol as defined in IEEE802.1s or IEEE802.1Q-2005 provides the ability to manage multiple VLANs from a single MST instance. MST allows the formation of MST regions that can run multiple MST instances (MSTIs). Multiple regions, and other STP bridges are interconnected using one single Common Spanning Tree (CST).

Syntax `mst-config-delete`

`instance-id` *`id`*	Displays an ID for the MST configuration. This is a number between 0, and 63.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage This command is used to delete a MST configuration on the switch.

Examples To delete a MST configuration with the ID 10, use the following syntax:

```
CLI (network-admin@switch) > mst-config-delete instance-id 10
```

mst-config-modify

Multiple Spanning Tree Protocol as defined in IEEE802.1s or IEEE802.1Q-2005 provides the ability to manage multiple VLANs from a single MST instance. MST allows the formation of MST regions that can run multiple MST instances (MSTIs). Multiple regions, and other STP bridges are interconnected using one single Common Spanning Tree (CST).

Syntax `mst-config-modify`

`instance-id` *`id`*	Specify an ID for the MST configuration. This is a number between 0, and 63.
`vlans` *`vlan-list`*	Specify the list of VLANs associated with the MST configuration.
`bridge-priority` *`bridge-priority-number`*	Specify the bridge priority for the MST configuration. The bridge priority is a value from 0 to 65536, with a default value of 0. The value increments by 4096 each time. So for example, values can be 0, 4096, 8192, up to 65536.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage This command is used to modify information about a MST configuration on the switch.

Examples To modify a MST configuration with the ID 10, VLANs 13-16, and bridge-priority of 4096, use the following syntax:

```
CLI (network-admin@switch) > mst-config-modify instance-id 10 vlans
13-16 bridge-priority 4096
```

mst-config-show

Multiple Spanning Tree Protocol as defined in IEEE802.1s or IEEE802.1Q-2005 provides the ability to manage multiple VLANs from a single MST instance. MST allows the formation of MST regions that can run multiple MST instances (MSTIs). Multiple regions, and other STP bridges are interconnected using one single Common Spanning Tree (CST).

Syntax `mst-config-show`

`instance-id` *`id`*	Specify an ID for the MST configuration. This is a number between 0, and 63.
`vlans` *`vlan-list`*	Specify the list of VLANs associated with the MST configuration.
`bridge-priority` *`bridge-priority-number`*	Specify the bridge priority for the MST configuration. The bridge priority is a value from 0 to 65536, with a default value of 0. The value increments by 4096 each time. So for example, values can be 0, 4096, 8192, up to 65536.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage This command is used to display a MST configuration on the switch.

Examples To display a MST configuration with the ID 10, VLANs 13-16, and bridge-priority of 4096, use the following syntax:

```
CLI (network-admin@switch) > mst-config-show
switch instance-id vlans        bridge-priority
------ ----------- ------------ ---------------
Leaf1  0           21-4093,4095 32768
Leaf1  10          1-20         32768
Leaf1  64          4094         32768
```

N Commands

node-info

This command displays information about the local node switch in the fabric.

Syntax `node-info`

Defaults None.

Access CLI

History

Version 1.2	Command introduced.

Usage To show information about a local switch node in the fabric, use this command.

Examples Use the following command to display node information:

```
CLI (network-admin@switch) > node-info

name:                                                   pubdev03
fab-name:                                               TAC
mgmt-ip:                                                10.9.100.50/16
mgmt-vnet:
in-band-ip:                                             192.168.42.30/24
in-band-vnet:
in-band-vlan-type:                                      public
fab-tid:                                                66
cluster-tid:                                            8
out-port:                                               0
version:                                                2.4.204019818,pn-nvOS-2.4.1-2040112371
state:                                                  online
firmware-upgrade:                                       not-required
device-state:                                           ok
```

node-show

This command displays information about all nodes in the fabric. This command can only be invoked at the network-administrator access level.

Syntax `node-show`

`name` *`fabric-node-name`*	Name of the fabric node to display information.
`id` *`id-string`*	The identifier for the fabric node
`serial` *`serial-string`*	The serial string for the fabric node
`fab-name` *`fab-name`*	Name of the fabric node
`fab-id`	The fabric identifier
`cluster-id`	The cluster identifier.
`local-mac` *`mac-address`*	The local MAC address of the fabric
`fabric-network in-band|mgmt|vmgmt`	The interface for sending fabric packets.
`mgmt-vnet` *`vnet-name`*	The management vNET.
`mgmt-public-vlan` *`vlan-id`*	The management public VLAN ID.
`mgmt-ip` *`ip-address`*	The IP address for the management NIC
`mgmt-netmask` *`netmask`*	The netmask for the IP address
`mgmt-mac` *`mac-address`*	The MAC address for the management interface.
`vmgmt-ip ip-address`	The IP address of the virtual management interface.
`vmgmt-netmask netmask`	The netmask of the virtual management interface.
`vmgmt-mac mac-address`	The MAC address of the virtual management interface.
`vmgmt-vnet vnet name`	The vNET name for the virtual management interface.
`vmgmt-vlan` *`vlan-id`*	The VLAN ID of the virtual management interface.
`vmgmt-public-vlan` *`vlan-id`*	The public VLAN for the virtual management interface.
`vmgmt-secondary-macs secondary-macs-string`	The secondary MAC address of the virtual management interface.
`mgmt-secondary-macs secondary-mac-`	The secondary MAC address for the management

`string`	interface.
`in-band-ip` *`ip-address`*	The IP address for the in-band interface to the switch control plane.
`in-band-netmask` *`netmask`*	The netmask for the in-band interface to the switch control plane.
`in-band-mac` *`mac-address`*	The MAC address for the in-band interface to the switch control plane.
`in-band-vnet` *`vnet-name`*	The in-band vNET.
`in-band-vlan` *`vlan-id`*	The VLAN identifier for the in-band interface to the switch control plane can be reached on Layer 2.
`in-band-vlan-type public|private`	The in-band VLAN type as public or private.
`in-band-public-vlan vlan-id`	The public VLAN ID.
`in-band-secondary-macs secondary-mac-string`	The secondary MAC address for the in-band interface.
`fab-tid` *`fab-tid-number`*	The fabric identifier.
`cluster-tid` *`cluster-tid-number`*	The cluster identifier.
`out-port` *`out-port-number`*	The port number where the switch multicasts the fabric discovery messages to other Pluribus Networks switch.
`version` *`version-string`*	The current OS version.
`state offline|online|in-band-only-online|mgmt-only-online| fabric_joined|setup-required|fabric-required| fresh-install`	The state of the fabric.
`firmware_upgrade not-required| required|reboot-required`	Specifies if a firmware upgrade is required.
`device_state ok|error|simulator`	The state of the switch.
`ports` *`ports-number`*	The port list used by the fabric.
`keepalive-timeout high resolution time: #n`	The keepalive timeout.

Defaults None.

Access network-admin

History

Version 1.2	Command introduced.
Version 2.3	The parameter `fab-mcast` deprecated.
Version 2.4.1	The parameters `mgmt-vnet`, `mgmt-public-vlan`, `in-band-vnet`, `in-band-vlan-type`, and `in-band-public-vlan` added. The options `in-band-only-online` and `mgmt-only-online` added to the parameter `state`.
Version 2.6.2	The parameters `vmgmt-*`, and `keepalive` added.

Usage

To show information about all switch nodes on the network, use this command. This command is useful if you have a node that hasn't joined a fabric, and you want to view all nodes on the network. This command is not available at the vNET manager access level.

Examples

Use the following command to display node information:

```
CLI (network-admin@switch) > node-show
id:                     167772387
name:                   pubdev03
fab-name:               TAC
fab-id:                 a0000e3:57c0c0ea
cluster-id:             a000024:1
local-mac:              64:0e:94:28:03:56
fabric-network:         in-band
control-network:        in-band
mgmt-ip:                10.9.100.50/16
mgmt-mac:               64:0e:94:28:03:58
mgmt-vnet:
mgmt-public-vlan:       0
mgmt-secondary-macs:
in-band-ip:             192.168.42.30/24
in-band-mac:            64:0e:94:28:03:56
in-band-vnet:
in-band-vlan:           0
in-band-vlan-type:      public
in-band-public-vlan:    0
in-band-secondary-macs:
fab-tid:                66
cluster-tid:            8
out-port:               0
version:                2.4.204019818,pn-nvOS-2.4.1-2040112371
state:                  online
firmware-upgrade:       not-required
device-state:           ok
ports:                  72
```

nv-queue-mirror-modify

This command is used to enable/disable queue packet mirroring.

Syntax `nv-queue-mirror-modify`

`name` *`nv-queue-pkt-mirror-list name`*	Specify the name of the queue.
`status disable|enable`	Specify the status of mirroring for the queue.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to enable/disable queue packet mirroring.

Examples To enable/ disable queue packet mirroring, use the following syntax:

CLI (network-admin@switch) > `nv-queue-mirror-modify`

nv-queue-mirror-show

This command is used to display the packet mirroring setting for a queue.

Syntax `nv-queue-mirror-show`

`name` *`nv-queue-pkt-mirror-list name`*	The name of the queue.
`status disable|enable`	The status of mirroring for the queue.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the packet mirroring setting for a queue .

Examples To display the packet mirroring setting for a queue, use the following syntax:

CLI (network-admin@switch) > `nv-queue-mirror-show`

```
switch name                          status
------ ---------------------------- -------
switch eventq-guaranteed-0          disable
switch eventq-guaranteed-1          disable
switch eventq-guaranteed-2          disable
switch eventq-guaranteed-3          disable
switch eventq-guaranteed-cache      disable
switch util-0                       disable
switch util-1                       disable
switch util-2                       disable
switch util-3                       disable
switch util-cache                   disable
switch eventq-droppable-0           disable
switch eventq-droppable-1           disable
switch eventq-droppable-2           disable
switch eventq-droppable-3           disable
switch eventq-droppable-cache       disable
switch l2-update-droppable-0        disable
switch l2-update-droppable-1        disable
switch l2-update-droppable-2        disable
switch l2-update-droppable-3        disable
switch l2-update-droppable-cache    disable
switch mcast-route-guaranteed-0     disable
switch mcast-route-guaranteed-1     disable
switch mcast-route-guaranteed-2     disable
switch mcast-route-guaranteed-3     disable
switch mcast-route-guaranteed-cache disable
switch ipmc-droppable-0             disable
switch ipmc-droppable-1             disable
switch ipmc-droppable-2             disable
switch ipmc-droppable-3             disable
```

```
switch ipmc-droppable-cache         disable
```

nv-queue-stats-clear

This command is used to clear high priority packets such as LACP, LLDP, ARP, and STP. This is useful when you want to see how the packet queues are used, and troubleshoot the operating system based on this information.

Syntax `nv-queue-stats-clear`

name *nv-queue-stats-list name*	Specify the name of the queue.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to clear the statistics collection settings for packet queues.

Examples To clear statistics collection for packet queues, use the following syntax:

```
CLI (network-admin@switch) > nv-queue-stats-clear name nv-queue-stats-list name
```

nv-queue-stats-show

This command is used to display ONVL high priority packets such as LACP, LLDP, ARP, and STP. This is useful when you want to see how the packet queues are used, and troubleshoot ONVL based on this information.

Syntax `nv-queue-stats-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The time to start the statistic collection.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time of to statistic collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time of statistic collection.
`duration duration: #d#h#m#s`	The duration of statistic collection.
`interval duration: #d#h#m#s`	The interval between statistic collection.
`since-start`	The statistics collected since the start time.
`older-than duration: #d#h#m#s`	The statistics older than the initial time.
`within-last duration: #d#h#m#s`	The statistics collected within the last time.
`name` *`nv-queue-stats-list name`*	Name of the queue.
`q-high` *`q-high-number`*	Specify to display the highest count in queue.
`q-low` *`q-low-number`*	Specify to display the lowest count in queue.
`q-max` *`q-max-number`*	Specify to display the maximum queue size.
`q-in` *`q-in-number`*	Specify to display the number of items inserted into queue
`q-out` *`q-out-number`*	Specify to display the number of items removed from queue.
`q-delay-high` *`high resolution time: #ns`*	Specify to display the highest delay from insertion to removal from the queue.
`q-delay-samples` *`q-delay-samples-number`*	The number of delay samples queue.
`q-delay-avg high` *`resolution time: #ns`*	The average sampled delay from insertion to removal.
`q-overflow` *`q-overflow-number`*	Specifies if insertion failed because queue was full.
`q-underflow` *`q-underflow-number`*	Specifies that the allocation failed because queue was empty.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.
Version 2.3.1	The parameters `q-delay-avg`, `q-overflow`, and `q-underflow` added.

Usage Use this command to modify the statistics collection settings for packet queues.

Examples To disable statistics collection for ONVL packet queues, use the following syntax:

CLI (network-admin@switch) > `nv-queue-stats-show`

```
switch name                   q-high q-in  q-out q-delay-high q-delay-avg q-overflow q-underflow
------ ---------------------- ------ ----- ----- ------------ ----------- ---------- -----------
switch eventq-droppable-0     0      0     0     0.00ns       0.00ns      0          0
switch eventq-droppable-1     1      7648  7648  0.00ns       12.0ns      0          0
switch eventq-droppable-2     0      31    31    0.00ns       3.44us      0          0
switch eventq-droppable-3     0      17    17    0.00ns       8.44us      0          0
switch eventq-droppable-cache 512    7696  7696  0.00ns       0.00ns      0          0
switch l2-update-droppable-0  0      0     0     0.00ns       0.00ns      0          0
switch l2-update-droppable-1  0      0     0     0.00ns       0.00ns      0          0
switch l2-update-droppable-2  0      105   105   0.00ns       2.89us      0          0
switch l2-update-droppable-3  2      8367  8367  6.02us       9.00ns      0          0
```

nv-queue-stats-settings-modify

This command is used to modify the parameters to collect high priority packets such as LACP, LLDP, ARP, and STP into a receiving queue on the CPU. This is useful when you want to see how the packet queues are used, and troubleshoot the operating system based on this information.

Syntax `nv-queue-stats-settings-modify`

`enable|disable`	Enable or disable statistics collection.
`interval duration: #d#h#m#s`	Modify the interval to collect statistics.
`disk-space` *`disk-space-number`*	Modify the disk-space allocated for statistics.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.

Usage Use this command to modify the statistics collection settings for the operating system packet queues.

Examples To disable statistics collection for nvOS packet queues, use the following syntax:

```
CLI (network-admin@switch) > nv-queue-stats-settings-modify  disable
```

nv-queue-stats-settings-show

This command is used to display the parameters used to collect high priority packets such as LACP, LLDP, ARP, and STP into a receiving queue on the CPU. This is useful when you want to see how the packet queues are used, and troubleshoot nvOS based on this information.

Syntax `nv-queue-stats-settings-show`

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.

Usage Use this command to display the statistics collection settings for nvOS packet queues.

Examples To display statistics collection for nvOS packet queues, use the following syntax:

```
CLI (network-admin@switch) > nv-queue-stats-settings-show
switch:     switch1
enable:     yes
interval:   1m
disk-space: 50M
```

O Commands

object-location-modify

The command displays any objects with a location field, and the current locations. The modify commands allows you to batch move objects from one location to another.

Syntax `object-location-modify`

`location fabric-node` *`name`*	Specify the current location of the object.
`new-location node` *`name`*	Specify the new location of the object.

Defaults None

Access CLI

History

Version 2.5.0	Command introduced.
Version 2.6.2	The parameters `type` and `name` deprecated.

Usage Use this command to migrate objects to new locations in the fabric.

Examples To modify a location use the following syntax:

```
CLI (network-admin@switch) > object-location-modify  location
Spine16 new-location Leaf1
```

object-location-show

The command displays any objects with a location field, and the current locations. The modify commands allows you to batch move objects from one location to another.

Syntax `object-location-show`

`location fabric-node` *`name`*	The current location of the object.
`type` *`type-string`*	The type of object.
`name` *`name-string`*	Name of the object.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to migrate objects to new locations in the fabric.

Examples To display an object location use the following syntax:

`CLI (network-admin@switch) >` `object-location-show`

```
switch type         name      location
------ ------------ --------- ----------
switch vrouter      vr1       0
switch vrouter      vr2       switch
switch vnet-manager vnet1-mgr switch
```

openvswitch-create

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command creates an Open vSwitch instance on the switch.

Syntax `openvswitch-create name`

`name` *`name-string`*	Specify a name for the Open vSwitch instance.
`vnet` *`vnet-name`*	Specify the vNET name for Open vSwitch.
`tunnel-ip` *`ip-address`*	Specify the IP address for the tunnel.
`Specify any of the following options:`	
`dedicated-vnet-service|shared-vnet-service`	Specify if Open vSwitch is a dedicated or shared vNET service.
`shared-vnet-mgr` *`vnet-manager name`*	Specify the vNET manager to share with if this is a shared service.
`location fabric-node name`	Specify the location of the service.
`storage-pool` *`storage-pool-name`*	Specify a storage pool to apply to the vNET.
`gateway` *`ip-address`*	Specify gateway IP address for service.
`cert-name` *`cert-name-string`*	Specify the certificate name for SSL connections
`ca-cert-name` *`ca-cert-name-string`*	Specify the CA Certificate name for SSL connections
`cert-location none|global|container`	Specify the Certificate location - global or within container.
`global-vtep|local-vtep`	Specify the hardware VTEP associated with Open vSwitch.
`bfd|no-bfd`	Specify if you want to enable BFD for OVSDB created tunnels.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameters `tunnel` and `vtep` added.
Version 2.5	The parameters `gateway`, `db-conn-type`, `db-port`, `db-socket`, and `db-ip` are

	deprecated.
Version 2.5.4	The parameter `shared-vnet-mgr`, `cert-name`, `ca-cert-name`, and `cert-location` added.
Version 2.6.2	The parameter `gateway` deprecated.
Version 3.0.0	The parameter `bfd` added.

Usage Use this command to create an Open vSwitch instance on a vNET.

Examples To create an OpenvSwitch instance, Open-One, on vNET, opvnet, as a dedicated service, with storage pool, vry-lrg-str, use the following command:

```
CLI (network-admin@switch) > openvswitch-create name Open-One vnet
opvnet dedicated-vnet-service storage-pool vry-lrg-str
```

openvswitch-show

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command displays an Open vSwitch instance on the switch.

Syntax `openvswitch-show`

`id`	The ID assigned to the service.
`name` *`name-string`*	Name for the Open vSwitch instance.
Specify any of the following options:	
`type vnet-mgr|vrouter|netzone|orphaned|netvm|nat|netvmm|ovs`	The type of vNET.
`scope local|fabric`	The scope for Open vSwitch.
`vnet` *`vnet-name`*	The vNET name for Open vSwitch.
`is-global true|false`	Specify if service is global.
`location fabric-node` *`name`*	The location of the Open vSwitch instance.
`cert-name` *`cert-name-string`*	The certificate name for SSL connections.
`ca-cert-name` *`ca-cert-name-string`*	The CA Certificate name for SSL connections.
`cert-location none|global|container`	The Certificate location - global or within container.
`db-conn-type unix-socket|tcp|punix-socket-listen|tcp-listen|ssl|default`	The type of database connection.
`db-ip` *`ip-address`*	The IP address of the database.
`db-port` *`db-port-number`*	The port number to listen on for the database.
`db-socket` *`db-socket-string`*	The socket for the database.
`mode standalone|master|slave`	The current operating mode for openvswitch.
`tunnel-ip` *`ip-address`*	The IP address for the tunnel.
`global-vtep|local-vtep`	The hardware VTEP associated with Open vSwitch.
`bfd|no-bfd`	Specify if you want to enable BFD for OVSDB created tunnels.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameters `tunnel` and `vtep` added.
Version 2.5.4	The parameter `shared-vnet-mgr`, `cert-name`, `ca-cert-name`, and `cert-location` added.
Version 2.6.2	The parameter `mode` added.
Version 3.0.0	The parameter `bfd` added.

Usage Use this command to display Open vSwitch instance information on a vNET.

Examples To display an Open vSwitch instance, Open-One, use the following command:

```
CLI (network-admin@switch) > openvswitch-show
name                                          type scope  vnet                                      is-global vnet-service state
location   cert-location db-conn-type mode   global-vtep tunnel-ip
---------------------------------------------- ---- ------ ---------------------------------------- --------- ------------ -------
---------- ------------- ------------ ------ ----------- ------------
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_1  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVBL01 global        default      master true        172.16.128.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_2  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVBL02 global        default      slave  true        172.16.128.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_3  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL01 global        default      master true        172.16.129.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_4  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL02 global        default      slave  true        172.16.129.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_5  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL03 global        default      master true        172.16.130.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_6  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL04 global        default      slave  true        172.16.130.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_7  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL05 global        default      slave  true        172.16.131.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_8  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL06 global        default      master true        172.16.131.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_9  ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL07 global        default      slave  true        172.16.132.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_10 ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL08 global        default      master true        172.16.132.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_11 ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL09 global        default      master true        172.16.133.3
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_12 ovs  fabric vnet-9b6ecd39-26fa-43cf-a599-cf0e32286278 false     dedicated    enabled
EQ0NFVCL10 global        default      slave  true        172.16.133.3
```

openvswitch-delete

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command removes an Open vSwitch instance on the switch.

Syntax `openvswitch-delete`

`name` *`name-string`*	Name for the Open vSwitch instance.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to delete an Open vSwitch instance on a vNET.

Examples To delete an Open vSwitch instance, Open-One, on vNET, opvnet, use the following command:

```
CLI (network-admin@switch) > openvswitch-delete name Open-One vnet
opvnet db-ip 10.9.31.141
```

openvswitch-modify

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command modifies an Open vSwitch instance on the switch.

Syntax `openvswitch-modify`

`name` *`name-string`*	Specify a name for the Open vSwitch instance.
Specify between 0, and 7 of the following options:	
`gateway` *`ip-address`*	Specify the gateway IP address.
`tunnel-ip` *`ip-address`*	Specify the IP address for the tunnel.
`global-vtep|local-vtep`	Specify the hardware VTEP associated with Open vSwitch.
`cert-name` *`cert-name-string`*	Specify the certificate name for SSL connections
`ca-cert-name` *`ca-cert-name-string`*	Specify the CA Certificate name for SSL connections
`cert-location none|global| container`	Specify the Certificate location - global or within container
`location` *`fabric-node name`*	Specify the location of the service.
`storage-pool` *`storage-pool-name`*	Specify a storage pool to apply to the vNET.
`bfd|no-bfd`	Specify if you want to enable BFD for OVSDB created tunnels.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameters `vnet`, `dedicated-vnet-service|shared-vnet-service disable| enable`, `storage-pool`, `gateway db-conn-type`, `db-ip`, `db-port`, `db-socket` deprecated.
Version 2.5.4	The parameters `cert-name`, `ca-cert-name`, and `cert-location` added.

Version 3.0.0	The parameter `bfd` added.

Usage Use this command to modify an Open vSwitch instance on a vNET, and to accept TLS certificates.

Examples To modify an Open vSwitch instance, Open-One, on vNET, opvnet, and add the database IP address, 10.9.31.141, use the following command:

```
CLI (network-admin@switch) > openvswitch-modify name Open-One vnet
opvnet db-ip 10.9.31.141
```

openvswitch-hwvtep-dump

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command creates a dump of OVSDB hardware VTEP tables.

Syntax `openvswitch-hwvtep-dump`

`name` *`name-string`*	Specify the name of the service config.

Defaults None

Access CLI

History

Usage Use this command to create a dump of OVSDB hardware VTEP tables.

Examples To generate a dump of OVSDB hardware VTEP tables, use the command:

```
CLI (network-admin@switch) > openvswitch-hwvtep-dump
```

openvswitch-hwvtep-manager-add

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command adds an Open vSwitch interface to the switch.

Syntax `openvswitch-hwvtep-manager-add`

`name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify one or both of the following options:	
`manager-type odl|nsx`	Specify the type of HWVTEP manager.
`connection-method unix-socket|tcp|unix-socket-listen|tcp-listen|ssl|default`	Specify the connection method for the HWVTEP manager interface.
`ip` *`ip-address`*	Specify the IP address of the controller.
`username` *`username-string`*	Specify the username.
`password` *`password-string`*	Specify the password.
`port` *`port-number`*	Specify the port number of the database.
`auto-service-binding|no-auto-service-binding`	Specify if you want a VTEP automatically or manually added as a hardware device to NSX.

Defaults None

Access CLI

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameters `manager-type`, `username`, and `password` added.
Version 3.0.0	The parameter `auto-service-binding|no-auto-service-binding` added.

Usage Use this command to add an HWVTEP manager interface.

Examples To add an HWVTEP manager interface, hwvtep-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-hwvtep-manager-add name
hwvtep-1
```

openvswitch-hwvtep-manager-remove

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command removes a HWVTEP manager interface to the switch.

Syntax `openvswitch-hwvtep-manager-remove`

`name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
`ip` *`ip-address`*	Specify the database IP address.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to remove an HWVTEP manager interface.

Examples To remove an Open vSwitch controller, hwvtep-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-hwvtep-manager-remove name
hwvtep-1
```

openvswitch-hwvtep-manager-show

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command displays information about a HWVTEP interface to the switch.

Syntax `openvswitch-hwvtep-manager-show`

`name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify one or both of the following options:	
`manager-type odl|nsx`	The type of HWVTEP manager.
`ip` *`ip-address`*	The IP address of the database.
`controller-ip` *`ip-address`*	The controller IP address.
`connection-method unix-socket|tcp| unix-socket-listen|tcp-listen|ssl| default`	The connection method for the HWVTEP manager interface.
`username` *`username-string`*	The username.
`password` *`password-string`*	Specify the password.
`port` *`port-number`*	The port number of the database.
`status` *`status`*	The controller status.
`auto-service-binding|no-auto-service-binding`	Displays if a VTEP is automatically or manually added as a hardware device to NSX.

Defaults None

Access CLI

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameters `manager-type`, `username`, and `controller-ip` added.
Version 3.0.0	The parameter `auto-service-binding|no-auto-service-binding` added.

Usage Use this command to display an Open vSwitch interface.

Examples To display a HWVTEP manager, hwvtep-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-hwvtep-manager-show
name                                    manager-type connection-method ip
```

```
       port status
-------------------------------------------  ------------  -----------------
--------------  ----  ------
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_1 odl          tcp
192.168.40.254  6640  ACTIVE
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_2 odl          tcp
192.168.40.254  6640  ACTIVE
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_3 odl          tcp
192.168.40.254  6640  ACTIVE
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_4 odl          tcp
192.168.40.254  6640  ACTIVE
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_5 odl          tcp
192.168.40.254  6640  ACTIVE
ovsdb-1753b7a3-6b13-41dc-9a8b-0baabbd4048c_6 odl          tcp
192.168.40.254  6640  ACTIVE
```

openvswitch-interface-add

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command adds an Open vSwitch interface to the switch.

Syntax `openvswitch-interface-add`

`ovs-name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify one or both of the following options:	
`ip` *`ip-address`*	Specify the IP address for the interface.
`netmask netmask`	Specify the netmask.
`assignment none|static|dhcp|dhcpv6|autov6`	Specify the method of IP address assignment.
`linklocal` *`ip-address`*	Specify the IPv6 Link Local address.
`vnet` *`vnet-name`*	Specify interface VLAN vNET.
`bd` *`bridge-domain name`*	Specify the bridge domain name.
`vlan` *`vlan-id`*	Specify the VLAN assigned to the interface.
`vlan-type public|private`	Specify the type of VLAN for the interface.
`if mgmt|data|span`	Specify the interface type.
`alias-on alias-on-string`	Specify an alias if desired.
`exclusive|no-exclusive`	Specify if the interface is exclusive or not.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`vrrp-id` *`id`*	Specify the ID assigned by VRRP.
`vrrp-primary vrrp-primary-string`	Specify the primary interface for VRRP.
`vrrp-priority 0..254`	Specify the VRRP priority for the interface.
`vrrp-adv-int` *`milliseconds`*	Specify the VRRP advertisement interval in milliseconds. The range is 10 to 40950 with a default value of 1000.
`vrrp-preempt-mode disable|enable`	Used to allow/prevent high priority BACKUP from becoming MASTER.
`secondary-macs secondary-macs-string`	Specify a secondary MAC address for the interface.
`if-nat-realm internal|external`	Specify the NAT interface realm.
`priority-tag|no-priority-tag`	Specify the VLAN 0 priority tag on forwarded

	traffic.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameter `if-nat-realm` added.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to add an Open vSwitch interface.

Examples To add an Open vSwitch interface for OVS **openvswitch-1**, use the following command:

```
CLI (network-admin@switch) > openvswitch-interface-add  ovs-name
openvswitch-1 ip 10.10.10.10 vlan 20
```

openvswitch-interface-modify

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command modifies an Open vSwitch interface to the switch.

Syntax `openvswitch-interface-modify`

`ovs-name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify one or both of the following options:	
`ip` *`ip-address`*	Specify the IP address for the interface.
`netmask netmask`	Specify the netmask.
`assignment none|static|dhcp|dhcpv6|autov6`	Specify the method of IP address assignment.
`linklocal` *`ip-address`*	Specify the IPv6 Link Local address.
`vnet` *`vnet-name`*	Specify interface VLAN vNET.
`bd` *`bridge-domain name`*	Specify the bridge domain name.
`vlan` *`vlan-id`*	Specify the VLAN assigned to the interface.
`vlan-type public|private`	Specify the type of VLAN for the interface.
`if mgmt|data|span`	Specify the interface type.
`alias-on alias-on-string`	Specify an alias if desired.
`exclusive|no-exclusive`	Specify if the interface is exclusive or not.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`vrrp-id` *`id`*	Specify the ID assigned by VRRP.
`vrrp-primary vrrp-primary-string`	Specify the primary interface for VRRP.
`vrrp-priority 0..254`	Specify the VRRP priority for the interface.
`vrrp-adv-int` *`milliseconds`*	Specify the VRRP advertisement interval in milliseconds. The range is 10 to 40950 with a default value of 1000.
`vrrp-preempt-mode disable|enable`	Used to allow/prevent high priority BACKUP from becoming MASTER.
`secondary-macs secondary-macs-string`	Specify a secondary MAC address for the interface.
`if-nat-realm internal|external`	Specify the NAT interface realm.

`priority-tag|no-priority-tag`	Specify the VLAN 0 priority tag on forwarded traffic.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameter `if-nat-realm` added.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to modify an Open vSwitch interface.

Examples To modify an Open vSwitch interface, and enable the NIC, openvswitch-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-interface-modify name
openvswitch-1 nic-enable
```

openvswitch-interface-remove

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command removes an Open vSwitch interface to the switch.

Syntax `openvswitch-interface-remove`

`ovs-name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify the following interface option:	
`nic` *`nic-string`*	Specify the NIC to remove from the interface.
`l3-port` *`l3port-usable-port-name`*	Specify the Layer 3 port.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to remove an Open vSwitch interface.

Examples To remove an Open vSwitch, openvswitch-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-interface-remove name
openvswitch-1
```

openvswitch-interface-show

Open vSwitch is a multilayer virtual switch licensed by Apache 2.0. It is designed to enable massive network automation through programmable extensions. This command displays information about an Open vSwitch interface to the switch.

Syntax `openvswitch-interface-show`

`ovs-name` *`name-string`*	This parameter is not configurable. It defaults to the name that you used to create the Open vSwitch service.
Specify one or both of the following options:	
`nic` *`nic-string`*	The virtual NIC assigned to interface.
`ip` *`ip-address`*	The IP address for the interface.
`netmask netmask`	The netmask.
`assignment none|static|dhcp|dhcpv6|autov6`	The method of IP address assignment.
`ip2` *`ip-address`*	Second IP address.
`netmask2 netmask`	Second IP netmask.
`assignment2 none|static|dhcp|dhcpv6|autov6`	Type of IP address assignment.
`linklocal` *`ip-address`*	The IPv6 Link Local address.
`assignment-linklocal none|static|dhcp|dhcpv6|autov6`	Type of IPv6 linklocal address assignment
`mac mac-address`	Interface MAC address.
`vnet` *`vnet-name`*	Specify interface VLAN vNET.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The VLAN assigned to the interface.
`vlan-type public|private`	The type of VLAN for the interface.
`public-vlan 0..4095`	Interface public VLAN.
`if mgmt|data|span`	The interface type.
`alias-on alias-on-string`	Specify an alias if desired.
`exclusive|no-exclusive`	Specify if the interface is exclusive or not.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`nic-state down|up`	The NIC state.

`is-primary true|false`	Primary VRRP interface.
`is-primary2 true|false`	Primary VRRP interface for Second IP.
`vrrp-id` *`id`*	The ID assigned by VRRP.
`vrrp-primary vrrp-primary-string`	The primary interface for VRRP.
`vrrp-priority 0..254`	The VRRP priority for the interface.
`vrrp-adv-int` *`milliseconds`*	The VRRP advertisement interval in milliseconds. The range is 10 to 40950 with a default value of 1000.
`vrrp-state slave|master`	State of VRRP.
`vrrp-preempt-mode disable|enable`	Used to allow/prevent high priority BACKUP from becoming MASTER.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address for the interface.
`if-nat-realm internal|external`	The NAT interface realm.
`priority-tag|no-priority-tag`	The VLAN 0 priority tag on forwarded traffic.
`vrf` *`vrf-name`*	Name of VRF.
`sec-addresses` *`sec-addresses-number`*	Number of IP, and IPv6 addresses configured on this interface.

Defaults None

Access CLI

History

Version 2.4	Command introduced.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameter `if-nat-realm` added.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to display interface information about an Open vSwitch interface.

Examples To display information about an Open vSwitch interface, openvswitch-1, use the following command:

```
CLI (network-admin@switch) > openvswitch-interface-show
ovs-name nic     ip               mac               vlan vlan-type nic-state mtu
priority-tag
-------- ------- ---------------- ----------------- ---- --------- --------- ----
```

```
------------
ovs-los1 eth4.14 192.168.14.31/24 66:0e:94:dd:ff:58 14   public    up        1500
off
```

openvswitch-rest-config-create

This command is used to create openvswitch configuration for vRest.

Syntax `openvswitch-rest-config-create`

user-name user name	Specifies the username for vRest access.
ip-address *ip-address-string*	Specifies the IP address where vRest service is running.

Defaults None

Access CLI

History

Usage Use this command to create openvswitch configuration for vRest.

Examples To create an openvswitch configuration, use the following command:

```
CLI (network-admin@switch) > openvswitch-rest-config-create
```

openvswitch-rest-config-delete

This command is used to delete openvswitch configuration for vRest.

Syntax `openvswitch-rest-config-delete`

user-name user name	Specifies the username for vRest access.

Defaults None

Access CLI

History

Usage Use this command to create openvswitch configuration for vRest.

Examples To delete an openvswitch configuration, use the following command:

```
CLI (network-admin@switch) > openvswitch-rest-config-delete
```

openvswitch-rest-config-show

This command is used to display openvswitch configuration for vRest.

Syntax `openvswitch-rest-config-show`

user-name user name	The username for vRest access

Defaults None

Access CLI

History

Usage Use this command to display openvswitch configuration for vRest.

Examples To display an openvswitch configuration, use the following command:

```
CLI (network-admin@switch) > openvswitch-rest-config-show
```

P Commands

pager

Syntax `pager on|off`

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage This command is used to paginate long show output in the CLI.

Examples To set the pagination to on, use the following command:

```
CLI (network-admin@switch) > pager on
```

ping

This command is used to verify connectivity on the network.

Syntax `ping [-s] host`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Ping another device on the network to ensure connectivity on the network.

Examples Ping 192.10.10.1 using the following syntax:

```
CLI (network-admin@switch) > ping 192.10.10.1
192.10.1.1 is alive
```

or

```
CLI (network-admin@switch) > ping 10.9.9.1
PING 10.9.9.1 (10.9.9.1) 56(84) bytes of data.
64 bytes from 10.9.9.1: icmp_seq=1 ttl=255 time=0.229 ms
64 bytes from 10.9.9.1: icmp_seq=2 ttl=255 time=0.224 ms
64 bytes from 10.9.9.1: icmp_seq=3 ttl=255 time=0.248 ms
64 bytes from 10.9.9.1: icmp_seq=4 ttl=255 time=0.164 ms
64 bytes from 10.9.9.1: icmp_seq=5 ttl=255 time=0.123 ms
64 bytes from 10.9.9.1: icmp_seq=6 ttl=255 time=0.180 ms
64 bytes from 10.9.9.1: icmp_seq=7 ttl=255 time=0.121 ms
64 bytes from 10.9.9.1: icmp_seq=8 ttl=255 time=0.160 ms
64 bytes from 10.9.9.1: icmp_seq=9 ttl=255 time=0.149 ms
64 bytes from 10.9.9.1: icmp_seq=10 ttl=255 time=0.164 ms
```

pn-script-run

NetVisor version 5.1.0 provides the ability to run shell commands or scripts using a REST API or through CLI commands. As a network administrator or as an admin user, you can run the scripts from the directories /opt/nvOS/bin/pn-scripts directory for packaged scripts or /usr/bin/pn-scripts directory for custom scripts, as NetVisor delivers all files as part of pn-upgrade agent package.

Syntax `pn-script-run`

`name` *`name-string`*	Specify the name of the script.

Defaults None.

Access CLI

History

Version 5.1.0	Command introduced.

Usage Run built-in or user scripts on a switch.

Example To run a built-in script, use the following syntax:

```
CLI (network-admin@switch)01> pn-script-run name testscript.sh
```

pn-script-show

This command is used to show PN scripts.

Syntax `pn-script-show`

`name` *`name-string`*	Specify the name of the script.

Defaults None.

Access CLI

History

Version 5.1.0	Command introduced.

Usage Displays built-in or user scripts on a switch.

Example To display built-in scripts, use the following syntax:

```
CLI network-admin@switch > pn-script-show
   switch:  pn-lab1
   pn-lab1:  /opt/nvOS/bin/pn-scripts/:
   testscript.sh
   pn-testscript.sh
```

port-association-create

This command is used to create port associations, and assign policies to them. Port association groups are used to enable switch failover. It requires a 10G link between two switches.

> **Caution**! Using the virtual-wire parameter places the switch into the Virtual Wire mode, and disables other features on the switch. This parameter requires a license. Please contact your sales person or local partner for more information.

Syntax `port-association-create`

`name` *`name-string`*	Specify a name for the port state association.
`master-ports` *`port-list`*	Specify a list of ports to act as master ports.
`slave-ports` *`port-list`*	Specify a list of ports to act as slave ports.
`virtual-wire|no-virtual-wire`	Specify if you want the associated ports to form a "virtual wire". Once you put the switch into virtual wire mode, you disable all other features on the switch.
`bidir|no-bidir`	Specify if you want the port state tracking to be bi-directional or not.
`policy all-masters|any-master`	Specify a policy for the port association. The default is `all-masters`.
`monitor-ports` *`port-list`*	Specify a list of ports not used by port association to monitor.
`enable|no-enable`	Specify if you want to enable port association in hardware.

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.
Version 2.4	The parameter `virtual-wire`, and `bidir` added.

Version 2.5.2	The parameter `monitor-ports` added.
Version 3.0.0	The parameter `enable` added.

Usage Use this command to create port associations.

Examples To create a port association, ports-assoc, with a master port list of ports 11-12, and slave port list of 45-46, use the following command:

```
CLI (network-admin@switch) > port-association-create name ports-assoc master-ports 11-12 slave-ports 45-46
```

port-association-delete

This command is used to delete port associations.

Syntax `port-association-delete`

`name` *`name-string`*	Specify a name for the port state association.

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.

Usage Use this command to delete port associations.

Examples To delete a port association, ports-assoc, use the following command:

```
CLI (network-admin@switch) > port-association-delete name ports-assoc
```

port-association-modify

This command is used to modify port associations.

Syntax `port-association-modify`

`name` *`name-string`*	Specify a name for the port state association.
Specify one or more of the following options:	
`master-ports` *`port-list`*	Specify a list of ports to act as master ports.
`slave-ports` *`port-list`*	Specify a list of ports to act as slave ports.
`policy all-masters|any-master`	Specify a policy for the port association. The default is `all-masters`.
`virtual-wire|no-virtual-wire`	Specify if you want the associated ports to form a "virtual wire". Once you put the switch into virtual wire mode, you disable all other features on the switch.
`bidir|no-bidir`	Specify if you want the port state tracking to be bi-directional or not.
`monitor-ports` *`port-list`*	Specify a list of ports not used by port association to monitor.
`enable|no-enable`	Specify if you want to enable port association in hardware.

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.
Version 2.4	The parameter `virtual-wire`, and `bidir` added.
Version 2.5.2	The parameter `monitor-ports` added.
Version 3.0.0	The parameter `enable` added.

Usage Use this command to modify port associations.

Examples To modify a port association, ports-assoc, and change the slave port list to 71-72, use the following command:

```
CLI (network-admin@switch) > port-association-modify name ports-
assoc slave-ports 71-72
```

port-association-show

Use this command to display port associations.

Syntax `port-association-show`

`name` *`name-string`*	Name for the port association.
`master-ports` *`port-list`*	A list of ports to act as master ports.
`slave-ports` *`port-list`*	A list of ports to act as slave ports.
`policy all-masters|any-master`	A policy for the port association.
`virtual-wire|no-virtual-wire`	Specify if you want the associated ports to form a "virtual wire". Once you put the switch into virtual wire mode, you disable all other features on the switch.
`bidir|no-bidir`	Specify if you want the port state tracking to be bi-directional or not.
`monitor-ports` *`port-list`*	A list of ports not used by port association to monitor.
`enable|no-enable`	Specify if you want to enable port association in hardware.

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.
Version 2.4	The parameter `virtual-wire`, and `bidir` added.
Version 2.5.2	The parameter `monitor-ports` added.
Version 3.0.0	The parameter `enable` added.

Usage Use this command to display port associations.

Examples To display a port association, with a master port of 45, and slave port of 6, use the following command:

```
CLI (network-admin@switch) > port-association-show
name                     master-ports slave-ports policy      virtual-wire bidir
enable
------------------------ ------------ ----------- ----------- ------------ -----
------
_PA_PATH_eri-scorp2-path 45           6           all-masters true         false
enable
```

port-association-path-create

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to add a port association path.

Syntax `port-association-path-create`

`name` *`name-string`*	Specify a name for the port association to apply the service.
`topology topology name`	Specify a fabric topology name.
`node1 fabric-node name`	Specify the name of the fabric node.
`node1-port node1-port-number`	Specify the port on the node 1.
`node2 fabric-node name`	Specify the name for link node 2
`node2-port node2-port-number`	Specify the port on the node 2.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a port association path.

Examples To create a port association path from switch1 to switch2, use the following syntax:

```
CLI (network-admin@switch) > port-association-path-create  name
path1 node1 switch1 node1-port 20 node2 switch2 node2-port 30
```

port-association-path-delete

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to delete a port association path.

Syntax `port-association-path-delete`

`name` *`name-string`*	Specify a name for the port association to apply the service.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a port association path.

Examples To delete a port association path, use the following syntax:

```
CLI (network-admin@switch) > port-association-path-create  name
path1
```

port-association-path-show

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to display a port association path configuration.

Syntax `port-association-path-show`

`name` *`name-string`*	Name for the port association to apply the service.
`topology topology name`	Fabric topology name.
`node1 fabric-node name`	Name for the link node 1.
`node1-port node1-port-number`	The port on the node 1.
`node2 fabric-node name`	Name for the link node 2
`node2-port node2-port-number`	The port on the node 2.
`status down|up`	The path status.
`path path-string`	The path string.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display a port association path configuration.

Examples To create a port association path from switch1 to switch2, use the following syntax:

```
CLI (network-admin@switch) > port-association-path-show name path1
```

port-association-service-add

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to add a port association service.

Syntax `port-association-service-add`

`port-association-name` *`name-string`*	Displays the name of the port association to apply the service.
`switch` *`name-string`*	Displays the switch name where the service is located.
`inline-service` *`inline-service-name`*	Displays the name of the Inline Service.
`order` *`number`*	Displays a number to designate the order of the service. This is a value between 1, and 65535
`policy-action fail-open|fail-closed`	Displays a policy action when the service fails on the network.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to add a port association service.

Examples To add a port association service on leaf1, inline-service, NGFW, order 1, and fail-policy fail-open, use the following syntax:

```
CLI (network-admin@switch) > port-association-service-add  port-association-name CHAIN switch leaf1 inline-service NGFW order 1 fail-policy  fail-open
```

port-association-service-modify

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to modify a port association service.

Syntax `port-association-service-modify`

`port-association-name` *`name-string`*	Displays the name of the port association to apply the service.
`switch` *`name-string`*	Displays the switch name where the service is located.
`inline-service` *`inline-service-name`*	Displays the name of the Inline Service.
`order` *`number`*	Displays a number to designate the order of the service. This is a value between 1, and 65535
`policy-action fail-open|fail-closed`	Displays a policy action when the service fails on the network.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to add a port association service.

Examples To modify a port association service, and change the inline-service to IDS, use the following syntax:

```
CLI (network-admin@switch) > port-association-service-modify port-association-name CHAIN inline-service NGFW
```

port-association-service-remove

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to remove a port association service.

Syntax `port-association-service-remove`

`port-association-name` *`name-string`*	Displays the name of the port association to apply the service.
`switch` *`name-string`*	Displays the switch name where the service is located.
`inline-service` *`inline-service-name`*	Displays the name of the Inline Service.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to remove a port association service.

Examples To remove a port association service on leaf1, inline-service, NGFW, use the following syntax:

```
CLI (network-admin@switch) > port-association-service-remove port-association-name CHAIN switch leaf1 inline-service NGFW
```

port-association-service-show

The Inline Service feature manages service chains for Layer 1 Virtual Wire switches. The term, Inline Services, refers to services attached to a Layer 1 Virtual Wire switch such as Next-Generation Firewall (NGFW), Intrusion Detection System (IDS), Intrusion Prevention System (IPS), and Distributed Denial of Service attack (DDoS) Prevention.

When an Inline Service fails, a policy determines if traffic is allowed to bypass the Inline Services or if the traffic is blocked until the Inline Services recovers.

This command is used to display information about a port association service.

Syntax `port-association-service-show`

`port-association-name` *`name-string`*	Name of the port association to apply the service.
Specify any of the following arguments:	
`inline-service` *`inline-service-name`*	Name of the Inline Service.
`order` *`number`*	A number to designate the order of the service. This is a value between 1, and 65535
`policy-action fail-open|fail-closed`	A policy action when the service fails on the network.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about a port association service.

Examples To display information about a port association service, use the following syntax:

```
CLI (network-admin@switch) > port-association-service-show
```

port-autoneg-mode-modify

Associate a FEC mode with ports. Use this command to configure autoneg mode on the ports.

Syntax `port-autoneg-mode-modify`

`port` *`port-list`*	Specifies the port number or list of ports.
`mode sys-default|none|cl73|cl73-msa`	Specify the port autoneg mode: sys-default: depends on the configured speed. See default values below. none: auto negotiation mode is disabled cl73: using clause 73 cl73-msa: use clause 73 multi-source agreement **Note**: The FEC modes vary for different port speeds.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to configure autoneg mode on the ports.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To configure the autoneg mode on port 81, use the following command:

```
CLI (network-admin@switch) > port-autoneg-mode-modify port 81
mode
sys-default
none
cl73
cl73-msa
```

port-autoneg-mode-show

Associate a FEC mode with ports. Use this command to display the autoneg mode.

Syntax `port-fec-mode-show`

`port` *`port-list`*	The port number or list of ports.
`mode sys-default|none|cl73|cl73-msa`	The port autoneg mode. sys-default: depends on the configured speed. See default values below. none: auto negotiation mode is disabled cl73: using clause 73 cl73-msa: use clause 73 multi-source agreement **Note**: The FEC modes vary for different port speeds. See table below.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the autoneg mode.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To display the autoneg mode for port 81, use the following command:

```
CLI (network-admin@switch) > port-autoneg-mode-show port 81
switch port   mode
------ -----  -----------
switch 1-130  sys-default
```

port-autoneg-status-show

Use this command to display the port autoneg status.

Syntax `port-autoneg-status-show`

`port` *`port-list`*	The port number or list of ports.
`configured-mode sys-default|none|cl73|cl73-msa`	The autoneg mode configured on a port.
`negotiated-mode sys-default|none|cl73|cl73-msa`	The autoneg mode negotiated on a port

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the port autoneg status.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To display the autoneg status for port 81, use the following command:

```
CLI (network-admin@switch) > port-autoneg-status-show port 81
switch  port  configured_mode  negotiated_mode
------  ----  ---------------  ---------------
switch 81   none             none
```

port-buffer-settings-modify

You can modify the buffer utilization settings for ports on a switch.

Syntax `port-buffer-settings-modify`

Specify one or more of the following options:

`enable|disable`	Specify if you want to disable port buffering. Port buffering is enabled by default.
`interval duration: #d#h#m#s`	Specify the interval for buffering on the port.
`disk-space disk-space-number`	Specify the disk space for storing the buffer.

Defaults None

Access CLI

History

Version 2.2.1	Command introduced.

Usage In some cases, you may want to buffer packets leaving, and entering the ports on the switch.

Examples To modify the interval from the default value of 1 minute to 2 minutes, use the following command:

```
CLI (network-admin@switch) > port-buffer-settings-modify interval
2m
```

port-buffer-settings-show

You can display the buffer utilization settings for ports on a switch.

Syntax `port-buffer-settings-show`

Defaults None

Access CLI

History

Version 2.2.1	Command introduced.

Usage In some cases, you may want to buffer packets leaving, and entering the ports on the switch.

Examples To display the buffer information, use following command:

```
CLI (network-admin@switch) > port-buffer-settings-show
switch:     Spine-1
enable:     yes
interval:   1m
disk-space: 50M
```

port-buffer-show

You can display the buffer utilization, percentage, and size, for ports on a switch.

Syntax `port-buffer-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The time to display port buffering.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time to display port buffering.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time to display port buffering.
`duration duration: #d#h#m#s`	The duration to display port buffering.
`interval duration: #d#h#m#s`	Specify an interval to display port buffering.
`since-start`	The start time to display port buffering.
`older-than duration: #d#h#m#s`	Specify an older-than time period to display port buffering.
`within-last duration: #d#h#m#s`	The within last time period to display port buffering.
`port port-list`	The port list.

Defaults None

Access CLI

History

Version 2.2.1	Command introduced.

Usage In some cases, you may want to buffer packets leaving, and entering the ports on the switch.

Examples To display the buffer information, use following command:

```
CLI (network-admin@switch) > port-buffer-show
switch port ingress-used-buf ingress-used-buf-val egress-used-buf egress-used-buf-
val
------ ---- ---------------- -------------------- ---------------
-------------------
switch 12   0%               0                    0%               0

switch 21   0%               0                    0%               0

switch 22   0%               0                    0%               0
```

```
switch 61   0%                0                     0%                0
switch 65   0%                0                     0%                0
switch 69   0%                0                     0%                0
switch 70   0%                0                     0%                0
switch 71   0%                0                     0%                0
switch 72   0%                0                     0%                0
```

port-breakout-config-modify

This command is used to configure the port breakout mode.

Syntax `port-breakout-config-modify`

`port` *`port-list`*	Specifies the port number or list of ports.
`breakout sys-default|400g-1x|100g-4x|100g-2x`	Specify the port breakout mode: System-default: each bezel port is 400G/PAM4 for the first two entries, then 100G/PAM4 for third entry, and 100G/NRZ for fourth entry.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to modify the port breakout configuration.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To set the port speed, use the following command:

```
CLI (network-admin@switch) > port-config-modify port 5 speed 100g
```

port-breakout-config-show

This command is used to display the port breakout configuration.

Syntax `port-breakout-config-show`

`port` *`port-list`*	The port number or list of ports.
`breakout sys-default|400g-1x|100g-4x|100g-2x`	Specify the port breakout mode: System-default: each bezel port is 400G/PAM4 for the first two entries, then 100G/PAM4 for third entry, and 100G/NRZ for fourth entry.
`status sys-default|400g-1x|100g-4x|100g-2x`	The port breakout mode status.
`present|no-present`	Indicates if a transceiver is present or not.
`type unknown|sfp|qsfp28|qsfp56-dd|sfp-dd`	The transceiver type.
`match unknown|match|not-match`	Indicates whether configured mode is a match for the installed transceiver.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the port breakout configuration.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To display the port breakout mode configuration, use following command:

```
CLI (network-admin@switch) > port-breakout-config-show port 5
switch port breakout present type    match
------ ---- -------- ------- ------ -----
switch 5    100g-2x  yes     qsfp28 match
```

port-bw-threshold-alert-modify

This command is used to modify port bandwidth monitoring.

Syntax `port-bw-threshold-alert-modify`

`port` *`port-list`*	Specify the list of ports to be monitored.
`bw-threshold` *`bw-thresholdstring`*	Specify the bandwidth threshold as a percentage of the total bandwidth of the ports. The default value is 0, which means that bandwidth monitoring is disabled by default.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify port bandwidth monitoring.

Examples To configure the bandwidth threshold as 25 percent for ports 24 to 26, use the command:

```
CLI (network-admin@switch) > port-bw-threshold-alert-modify port
24-26 bw-threshold 25
```

port-bw-threshold-alert-show

This command is used to display port bandwidth monitoring.

Syntax `port-bw-threshold-alert-show`

`port` *`port-list`*	Specify the list of ports to be monitored.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display port bandwidth monitoring.

Examples To configure the bandwidth threshold as 25 percent for ports 24 to 26, use the command:

```
CLI (network-admin@switch) > port-bw-threshold-alert-show
switch port bw-threshold
------ ---- ------------
switch 24   25%
switch 25   25%
switch 26   25%
```

port-bw-threshold-mon-int-modify

This command is used to modify port bandwidth monitoring interval.

Syntax `port-bw-threshold-mon-int-modify`

`monitor-interval` *`10..300`*	Specify a port bandwidth monitoring interval. The allowed range of values is between 10, and 300 seconds. The default value is 30 seconds.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify port bandwidth monitoring interval.

Examples To set a port bandwidth monitoring interval of 45 seconds, use the command:

```
CLI (network-admin@switch) > port-bw-threshold-mon-int-modify
monitor-interval 45
```

port-bw-threshold-mon-int-show

This command is used to display port bandwidth monitoring interval.

Syntax `port-bw-threshold-mon-int-show`

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display port bandwidth monitoring interval.

Examples To display the monitoring interval configuration, use the command:

```
CLI (network-admin@switch) > port-bw-threshold-mon-int-show
monitor-interval: 45
```

Port Configuration Commands

port-config-modify

This command is used to modify port configuration on a switch. You can use this command to configure breakout of ports.

Syntax `port-config-modify`

`port` *`port-list`*	Specify a single port or a list of ports. **Note:** If more than one port is specified, the list must be comma-separated without spaces.
Specify any of the following options:	
`intf` *`intf-number`*	Specify a physical interface for the port.
`speed disable|10m|100m|1g|2.5g|10g|25|40g|50g|100g`	Specify the port speed. Ports configured for speeds of 1G must be equipped with SFP transceivers. Ports configured for 10G or higher must be equipped with SFP+ or QSFP+ transceivers.
`egress-rate-limit unlimited`	Specify an egress rate limit for the port.
`eth-mode [sr4|lr4|cr4|caui4|sr|lr|cr]`	Select one of the ethernet modes from the available options.
`autoneg|no-autoneg`	Specify if the port auto-negotiates the port speed with a peer.
`jumbo|no-jumbo`	Specify if the port forwards jumbo frames.
`enable|disable`	Specify if the port is enabled, and forwards or drops frames.
`lacp-priority` *`integer`*	Specify the LACP priority for the port. If you specify a low value for the priority, the port has a higher priority. This is a value between 1, and 65535.
`reflect|no-reflect`	Specify if the port reflects frames received for loopback testing.

`edge-switch|no-edge-switch`	Specify if the port connects to another Pluribus Networks device or is an uplink to a third-party switch or host.
`pause|no-pause`	Specify if you want to pause traffic on the port.
`description` *`description-string`*	Specify the port description.
`loopback|no-loopback`	Specify to use loopback or no loopback.
`vxlan-termination|no-vxlan-termination`	Specify if a VXLAN terminates on a port.
`mirror-receive-only|no-mirror-receive-only`	Specify if the port receives mirrored traffic only.
`port-mac-address` *`mac-address`*	Specify the MAC address for the physical port.
`loop-vlans` *`vlan-list`*	Specifies VLANs that are looping on the network.
`send-port` *`send-port-number`*	Specify the port to send traffic.
`routing|no-routing`	Specify if the port is participating in routing on the switch.
`defer-bringup|no-defer-bringup`	Specify if you want to delay port activation.
`host-enable|host-disable`	Specify if you want host-facing ports enabled or disabled.
`crc-check-enable|crc-check-disable`	Specify if you want CRC checking performed by the port. This is applicable to a switch in Virtual Wire mode. The default value is `crc-check-disable`.
`dscp-map dscp-map name | none`	Specify a DSCP map name to enable on port.
`local-switching|no-local-switching`	Specify if local switching is allowed on the port.

`allowed-tpid vlan|q-in-q|q-in-q-old`	Specify the allowed TPID in addition to 0x8100 on VLAN header
`fabric-guard|no-fabric-guard`	Specify if you want loop detection enabled on the port.
`fec|no-fec|fec-auto`	Specify to enable port forward correction error (FEC) mode.

Defaults The default port speed is 10G per second. Autonegotiation, and jumbo frames are disabled by default. The port is enabled by default.

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.6	The optional parameters for LACP added.
Version 2.1	The parameters `loopback`, `mirror-receive`, `port-mac-address`, `vlag-failover`, and `send-port` added. The parameter `lacp-mode` deprecated.
Version 2.2.6	The parameter `egress-rate-limit` introduced.
Version 2.3	The parameters `rem-rswitch-port-mac`, and `routing|no-routing` added.
Version 2.4	The parameter `host-enable`, and `loop-vlans` added.
Version 2.4.1	The parameter `rem-port-mac-address` deprecated. The parameter `intf` added.
Version 2.5.2	The parameter `crc-check-enable|crc-check-disable` introduced.
Version 2.5.3	The parameters `reflect|no-reflect`, `vxlan-termination`, `dscp-map`, and `local-switching` added.

Version 2.6.0	The parameter `fabric-guard`, and `allowed-tpid` added.
Version 3.0.0	The parameter `bw-bps` added.
Version 5.1.0	The following parameter deprecated: • `bw-bps` The following parameters introduced: • additional Ethernet modes • `defer-bringup|no-defer-bringup` • `fec|no-fec|fec-auto`

Usage Server-switches are equipped with network data ports for host or inter-switch communication. This command configures the settings of a specific network data port of all data ports on the local switch.

Examples To configure port 17 on a switch to operate at 1 Gbps without jumbo frames, use the following command:

```
CLI (network-admin@switch) > port-config-modify port 17 speed 1G
autoneg off jumbo off
```

port-config-show

This command is used to display port settings on the switch.

Syntax `port-config-show`

`port` *`port-list`*	A port or list of ports.
`speed disable|10m|100m|1g|2.5g|10g|25g|40g|50g|100g|200g|400g`	The port speed. Ports configured for speeds of 1G must be equipped with SFP transceivers. Ports configured for 10G or higher must be equipped with SFP+ or QSFP+ transceivers.
`bw-bps` *`bw-bps-number`*	Specify the bandwidth bps for the port.
`egress-rate-limit unlimited`	The egress rate limit for the port.
`eth-mode unconfigured|disabled|1000base-x|sgmii|1000base-kx|2500base-x|6Gbase-kr|6Gbase-cr|10Gbase-kr|10Gbase-cr|10Gbase-sr|AN-73|Xaui|10Gbase-kx4|10Gbase-cx4|24Gbase-kr4|24Gbase-cr4|40Gbase-kr4|xlaui|40Gbase-cr4|40Gbase-sr4|no-phy-present|MII|gmii|TBI|10G-XGMII|1G-RGMII|sfi|xfi|cx|kr4|sr4|lr4|er4|cr4|cx4|kx4|caui4|kr2|er2|cr2|sr2|lr2|xlaui2|cx2|sr|lr|er|cr|kx|kr|zr|base-x|sys-default|caui|aoc|xlppi|psm4|base_t|base_cx|base_lx|base_sx`	The Ethernet mode.
`autoneg|no-autoneg`	Displays if the port auto-negotiates the port speed with a peer.
`jumbo|no-jumbo`	Displays if the port forwards jumbo frames. Jumbo frames are Ethernet frames with more than 1500 bytes of payload.
`enable|disable`	Displays if the port is enabled, and forwards or drops frames.
`lacp-priority` *`integer`*	The LACP priority for the port. This is a value between 1, and 65535 with a default value of 32768.

`reflect|no-reflect`	Displays if the port reflects frames received for loopback testing.
`edge-switch|no-edge-switch`	Displays if the port connects to another Pluribus Networks device or is an uplink to a third-party switch or host.
`pause|no-pause`	Displays if the port traffic is paused or not.
`description` *`description-string`*	A description for the port.
`loopback|no-loopback`	Displays to use loopback or no loopback.
`vxlan-termination|no-vxlan-termination`	Displays if a VXLAN terminates on a port.
`mirror-only|no-mirror-receive-only`	Displays if you want the port to receive mirrored traffic only.
`vle` *`vle name`*	The vLE on this port.
`updown_time high resolution time: #ns`	The updown time.
`send-port` *`send-port-number`*	The port number to send in packets.
`loop-vlans` *`vlan-list`*	The VLANs that are looping on the network.
`routing|no-routing`	Displays if the port is participating in routing on the switch.
`cluster-port|no-cluster-port`	Specifies whether the port is a cluster port.
`defer-bringup|no-defer-bringup`	Specify if you want to delay port activation.
`host-enable|host-disable`	Displays if you want host-facing ports enabled or disabled.
`crc-check-enable|crc-check-disable`	Displays if you want CRC checking performed by the port. This is applicable to a switch in Virtual Wire mode. The default value is `crc-check-disable`.
`dscp-map dscp-map name|none`	A DSCP map name to enable on port.
`local-switching|no-local-switching`	Displays if local switching is allowed on the port.

`allowed-tpid vlan|q-in-q|q-in-q-old`	Specify the allowed TPID in addition to 0x8100 on VLAN header
`rhost` *`rhost-string`*	The physical remote host.
`fabric-guard|no-fabric-guard`	Displays if user wants loop detection enabled on the port.
`fec|no-fec`	The port forward error correction (FEC) mode.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.6	The optional parameters for LACP added.
Version 2.1	The parameters `loopback`, `mirror-receive`, `vlag-failover`, and `send-port` added.
Version 2.2.6	The parameter `egress-rate-limit`, introduced.
Version 2.3.1	Multiple parameters for LACP added.
Version 2.4	The parameter `host-enable`, and `loop-vlans` added.
Version 2.4.1	The parameters `lacp-fallback`, `lacp-fallback-timeout`, and `lacp-individual` deprecated.
Version 2.5.2	The parameter `crc-check-enable|crc-check-disable`, introduced.
Version 2.5.3	The parameters `reflect|no-reflect`, `vxlan-termination`, `dscp-map`, and `local-switching` added.
Version 2.6.0	The parameter `fabric-guard`, and `allowed-tpid` added.

Version 3.0.0	The parameter `bw-bps` added.
Version 5.1.0	The following parameter deprecated: • `bw-bps` The following parameters introduced: • additional Ethernet modes • `defer-bringup|no-defer-bringup` • `fec|no-fec|fec-auto`

Usage Server-switches are equipped with network data ports for host or inter-switch communication. This command configures the settings of a specific network data port of all data ports on the local switch.

Examples To display information about all ports on a switch, use the following command :

```
CLI (network-admin@switch) > port-config-show
switch:                pleiades25
intf:                  10
name:
port:                  10
speed:                 10g
autoneg:               off
jumbo:                 off
enable:                on
lacp-priority:         32768
reflect:               off
edge-switch:           no
pause:                 no
description:
loopback:              default
mirror_only:           default
rswitch-default-vlan:  0
port-mac-address:      06:b0:00:02:30:0a
```

port-cable-type-modify

The SerDes (serializer/deserializer) link in switch ports have several associated Signal Integrity (SI) parameters that help in shaping the output into a clean, and well-defined signal based on the transmission line characteristics of the signal traces. This output shaping is used to cancel-out factors such as reflection, and signal attenuation, and enables the receiver to get a clean, and well-defined signal. Collectively, these SI parameters are also known as pre-emphasis settings.

You can modify the pre-emphasis (Signal Integrity) settings for specified ports, by overriding the default settings.

Syntax `port-cable-type-modify`

`port` *`port-list`*	Specify the list of ports you want to associate with the cable type.
`type optical|dac`	Specify the port cable assembly type from one of the options.
`cable-sub-type` *`default|ca-n|ca-l|ca-s`*	Specify the port cable assembly type from one of the options. Note that this optional parameter is applicable only for DAC cable types. **Note:** The cable sub type (N, L, or S) is a hardware specific parameter based on the material used by the cable manufacturer. Hence, you must consult the vendor specification to identify the cable assembly type before configuring this parameter.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.

Usage Use this command to associate a cable type with ports.

Examples To modify the cable type of port 1 to optical, use the command:

```
CLI (network-admin@switch) > port-cable-type-modify port 1 type
optical
```

port-cable-type-show

The SerDes (serializer/deserializer) link in switch ports have several associated Signal Integrity (SI) parameters that help in shaping the output into a clean, and well-defined signal based on the transmission line characteristics of the signal traces. This output shaping is used to cancel-out factors such as reflection, and signal attenuation, and enables the receiver to get a clean, and well-defined signal. Collectively, these SI parameters are also known as pre-emphasis settings.

You can display the pre-emphasis (Signal Integrity) settings for specified ports by using this command.

Syntax `port-cable-type-show`

`port` *`port-list`*	The list of ports to be displayed.
`type sys-default|optical|dac|acc-3m|acc-5m|dac-0-5m|dac-1-0m|dac-2-0m|dac-3-0m|dac-5-0m|dac-7-0m`	The cable type to be displayed.
`cable-sub-type default|ca-n|ca-l|ca-s`	The port cable assembly type from one of the options. Note that this optional parameter is applicable only for DAC cable types. **Note:** The cable sub type (N, L, or S) is a hardware specific parameter based on the material used by the cable manufacturer. Hence, you must consult the vendor specification to identify the cable assembly type before configuring this parameter.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.

Usage Use this command to display pre-emphasis settings.

Examples To display the pre-emphasis settings on switch1, use the command:

CLI (network-admin@switch)1 > port-cable-type-show

```
switch  port  type     cable-sub-type
------- ----- -------- --------------
switch1 none  dac      ca-s
switch1 none  dac      ca-l
switch1 none  dac      ca-n
switch1 1-125 dac      default
switch1 none  optical  default
```

port-fec-mode-modify

Associate a FEC mode with ports. Use this command to disable FEC or specify a user requested FEC mode.

Syntax `port-fec-mode-modify`

`port` *`port-list`*	Specifies the port number or list of ports.
`mode sys-default|none|base-r|rsfec|rs544|rs544-2xn`	Specify the port FEC mode: sys-default: depends on the configured speed. See default values in the table below: none: fec mode is disabled base-r: fec is using base-r fec rsfec: fec is using rsfec rs544: fec is using rs544 fec rs544-2xn: fec is using rs544-2xn **Note**: The FEC modes vary for different port speeds.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to modify the port breakout configuration.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To set the port speed, use the following command:

```
CLI (network-admin@switch) > port-config-modify port 5 speed 100g
```

port-fec-mode-show

Use this command to display FEC or specify a user requested FEC mode.

Syntax `port-fec-mode-show`

`port` *`port-list`*	The port number or list of ports.
`mode sys-default|none|base-r|rsfec|rs544|rs544-2xn`	Specify the port FEC mode: sys-default: depends on the configured speed. See default values in the table below. none: fec mode is disabled base-r: fec is using base-r fec rsfec: fec is using rsfec rs544: fec is using rs544 fec rs544-2xn: fec is using rs544-2xn **Note**: The FEC modes vary for different port speeds.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display FEC/ user requested FEC mode.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To display the FEC/ user requested FEC mode, use the following command:

```
CLI (network-admin@switch) > port-fec-mode-show port 5
switch port   mode
------ -----  -----------
switch 1-130  sys-default
```

port-fec-stats-show

You can display the port FEC statistics by using this command.

Syntax `port-fec-stats-show`

`time date/time: yyyy-mm-ddTHH:mm:ss`	The time of statistics collection.
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	The start time for statistics collection.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	Then end time for statistics collection.
`duration duration: #d#h#m#s`	The duration time for statistics collection.
`interval duration: #d#h#m#s`	Then interval between statistics collection.
`since-start`	Specify statistics collection from a start time.
`older-than duration: #d#h#m#s`	Specify to display statistics collection older than the specified time.
`within-last duration: #d#h#m#s`	The within-last time for statistics collection.
`port` *`port-list`*	The port list to display FEC stats.
`BaseR-Fec-Corr` *`BaseR-Fec-Corr-number`*	The number of Base-R FEC packets with correction.
`BaseR-Fec-UnCorr` *`BaseR-Fec-UnCorr-number`*	The number of Base-R FEC packets without correction.
`Rs-Fec-Corr` *`Rs-Fec-Corr-number`*	The number of RS FEC packets with correction.
`Rs-Fec-UnCorr` *`Rs-Fec-UnCorr-number`*	The number of RS FEC packets without correction.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to display the port FEC stats.

Examples To display port FEC stats, use the following syntax:

```
CLI (network-admin@switch) > port-fec-stats-show
switch time     port BaseR-Fec-Corr BaseR-Fec-UnCorr Rs-Fec-Corr Rs-Fec-UnCorr
------ -------- ---- -------------- ---------------- ----------- ------------
switch 12:34:00 5     0              0                0           0
switch 12:34:00 7     0              0                0           0
switch 12:34:00 8     0              0                0           0
switch 12:34:00 9     0              0                0           0
switch 12:34:00 10    0              0                0           0
switch 12:34:00 17    0              0                0           0
```

port-fec-stats-clear

You can clear port FEC statistics by using this command.

Syntax `port-fec-stats-clear`

`port` *`port-list`*	Specify the port list to clear FEC statistics.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to clear port FEC statistics.

Examples To display port FEC stats, use the following syntax:

```
CLI (network-admin@switch) > port-fec-stats-clear
```

port-fec-status-show

You can display the port FEC status by using this command.

Syntax `port-fec-status-show`

`port` *`port-list`*	The port list to display FEC stats.
`configured-mode`	The FEC mode configured on a port.
`negotiated-mode`	The FEC mode negotiated on a port.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to display the port FEC stats.

Examples To display port FEC status, use the following syntax:

`CLI (network-admin@switch1)` `> port-fec-status-show`

port-fec-stats-settings-modify

You can modify the port FEC statistics settings by using this command.

Syntax `port-fec-stats-settings-modify`

`enable|disable`	Specify if you want to enable or disable port FEC statistics collection.
`interval duration: #d#h#m#s`	Specify the interval for statistic collection.
`disk-space` *`disk-space-number`*	Specify the disk-space allocated for statistics (including rotated log files)

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to modify the port FEC statistics settings.

Examples To enable port FEC statistics, use the following syntax:

```
CLI (network-admin@switch)1 > port-fec-stats-settings-modify  enable
```

port-fec-stats-settings-show

You can display the port FEC statistics settings by using this command.

Syntax `port-fec-stats-settings-show`

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to display the port FEC statistics settings.

Examples To display port FEC statistics settings, use the following syntax:

```
CLI (network-admin@switch)1 > port-fec-stats-settings-show
switch:     switch1
enable:     yes
interval:   30m
disk-space: 50M
```

port-force-linkup-add

This command is used to add port(s) for link-up.

Syntax `port-force-linkup-add`

`port-id port-id-number`	Specify the ports allowed for force link-up.
`mode tx|rx`	Specifies the RX or TX side of the port.

Defaults None

Access Network Administrator

History

Version 7.0.0	Command introduced.

Usage Use this command to add port(s) for linkup.

Examples To add port(s) for linkup, use the following syntax:

```
CLI (network-admin@switch)1 > port-force-linkup-add
```

port-force-linkup-remove

This command is used to disable force link-up from ports.

Syntax `port-force-linkup-remove`

`port-id port-id-number`	Specify the ports allowed for link-up.

Defaults None

Access Network Administrator

History

Version 7.0.0	Command introduced.

Usage Use this command to add port(s) for linkup.

Examples To add port(s) for linkup, use the following syntax:

```
CLI (network-admin@switch)1 > port-force-linkup-remove
```

port-force-linkup-show

This command is used to display the port force link-up configuration.

Syntax `port-force-linkup-show`

`port-id` *`port-id-number`*	The ports allowed for link-up.
`mode tx|rx`	The RX or TX side of the port.

Defaults None

Access Network Administrator

History

Version 7.0.0	Command introduced.

Usage Use this command to display the port force link-up configuration.

Examples To display the port force link-up configuration, use the following syntax:

```
CLI (network-admin@switch)1 > port-force-linkup-show
switch ports mode
------ ----- ---
switch 6     tx
```

port-cos-bw-modify

You can modify bandwidth guarantees on switch ports. Currently, Pluribus Networks switches allow rate limiting only for CPU facing (PCIe, data, and span) ports. Using this feature, you can configure bandwidth guarantees at egress CoS (Class of Service) queue level, and manage prioritized traffic. The feature is also used for setting SLAs (Service Level Agreements).

Once you modify the bandwidth, using the command, `post-cos-weight-modify`, no longer works to modify the CoS weight.

Syntax `port-cos-bw-modify`

`cos` *`integer`*	Specify the CoS priority between 0, and 9.
`port` *`port-list`*	Specify the physical port(s).
`min-bw-guarantee` *`min-bw-guarantee-string`*	Specify the minimum bandwidth as a percentage.
`max-bw-limit` *`max-bw-limit-string`*	Specify the maximum bandwidth as a percentage greater than 0.
`weight` *`priority`* `|no-priority`	Specify the scheduling weight, from 1 to 127, after the bandwidth guarantee is met.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameter `weight` added.
Version 6.0.1	Introduced CoS queues 8, and 9.

Usage Use this command to modify CoS bandwidth on a port or range of ports.

Examples To modify the CoS bandwidth to 10 for ports 2-10, use the following syntax:

```
CLI (network-admin@switch) > port-cos-bw-modify port 2-10 cos 5
min-bw 10
```

port-cos-bw-show

You can modify bandwidth guarantees on switch ports. Currently, Pluribus Networks switches allow rate limiting only for CPU facing (PCIe, data, and span) ports. Using this feature, you can configure bandwidth guarantees at egress CoS (Class of Service) queue level, and manage prioritized traffic. The feature is also used for setting SLAs (Service Level Agreements).

Syntax `port-cos-bw-show`

`cos` *`integer`*	The CoS priority between 0, and 9.
`port` *`port-list`*	The physical port(s).
`min-bw-guarantee` *`min-bw-guarantee-string`*	The minimum bandwidth as a percentage.
`max-bw-limit` *`max-bw-limit-string`*	The maximum bandwidth as a percentage.
`weight` *`priority`*	The scheduling weight after the bandwidth guarantee is met.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameter `weight` added.
Version 6.0.1	Introduced CoS queues 8, and 9.

Usage Use this command to display CoS bandwidth information for a port or range of ports.

Examples To display the CoS bandwidth, use the following syntax:

```
 CLI  (network-admin@Spine1)  >  port-cos-bw-show
switch cos port  min-bw-guarantee max-bw-limit weight
------ --- ----- ---------------- ------------ ------
Spine1 0   1-104 0%               100%         16
Spine1 1   1-104 0%               100%         32
Spine1 2   1-104 0%               100%         32
Spine1 3   1-104 0%               100%         32
Spine1 4   1-104 0%               100%         32
Spine1 5   1-104 0%               100%         32
Spine1 6   1-104 0%               100%         64
Spine1 7   1-104 0%               100%         127
Spine1 8   1-104 0%               100%         64
Spine1 9   1-104 0%               100%         127
```

port-cos-stats-show

You can display the Class of Service (CoS) rate settings for ports on a switch.

Syntax `port-cos-stats-show`

`time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The time of statistics collection.
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time for statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time for statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration time for statistics collection.
`interval` *`duration: #d#h#m#s`*	The interval between statistics collection.
`since-start`	The statistics collection from a start time.
`older-than` *`duration: #d#h#m#s`*	Specify to display statistics collection older than the specified time.
`within-last` *`duration: #d#h#m#s`*	The within-last time for statistics collection.
`port` *`port-list`*	The port list to display CoS stats.

Access CLI

History

Version 2.4.0	Command introduced.
Version 3.0.0	Output changed from bytes to bits.
Version 6.0.1	Introduced CoS queues 8, and 9.

Usage In some cases, you may want to display CoS statistics for ports.

Examples To display port CoS statisticss, use the following command:

```
CLI (network-admin@Spine-1) port-cos-stats-show layout vertical
switch:        Spine-1
time:          21:36:59
port:          21
cos0-obits:    0
cos0-dropbits: 0
cos1-obits:    0
cos1-dropbits: 0
```

```
cos2-obits:    0
cos2-dropbits: 0
cos3-obits:    0
cos3-dropbits: 0
cos4-obits:    0
cos4-dropbits: 0
cos5-obits:    0
cos5-dropbits: 0
cos6-obits:    0
cos6-dropbits: 0
cos7-obits:    0
cos7-dropbits: 0
cos8-obits:    0
cos8-dropbits: 0
cos9-obits:    0
cos9-dropbits: 0
```

port-cos-stats-settings-modify

You can modify the Class of Service (CoS) statistics settings for ports on a switch.

Syntax `port-cos-stats-settings-modify`

`enable|disable`	Specify if you want to enable or disable statistics collection for CoS.
`interval duration: #d#h#m#s`	Specify the interval for statistic collection.
`disk-space` *`disk-space-number`*	Specify the amount of disk space to store statistics after collection.

Access CLI

History

Version 2.4.1	Command introduced.

Usage In some cases, you may want to collect statistics on CoS.

Examples To enable statistic collection, use the following command:

```
CLI (network-admin@switch) > port-cos-stats-settings-modify  enable
```

port-cos-stats-settings-show

You can display the Class of Service (CoS) statistics collection settings for ports on a switch.

Syntax `port-cos-stats-settings-show`

Access CLI

History

Version 2.4.1	Command introduced.

Usage In some cases, you may want to display the statistics collection settings for CoS on a port.

Examples To display the settings, use the following command:

```
CLI (network-admin@switch) > port-cos-stats-settings-show
switch:      Spine-1
enable:      yes
interval:    30m
disk-space:  50M
```

port-cos-weight-modify

You can modify the Class of Service (CoS) weight settings for ports on a switch. However, if you have modified the CoS weights using the command, `port-cos-bw-modify`, this command no longer works.

Syntax `port-cos-weight-modify`

`cos0-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos1-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos2-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos3-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos4-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos5-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos6-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos7-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos8-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.
`cos9-weight` *`priority`*	Specify the weight for CoS 0 as an integer between 0, and 127.

Access CLI

History

Version 2.4	Command introduced.
Version 6.0.1	The parameters `cos8-weight`, and `cos9-weight` added.

Usage In some cases, you may want to modify the CoS weight for a port.

Examples To modify the weight of CoS 0, use the following command:

```
CLI (network-admin@switch) > port-cos-weight-modify  cos0-weight  100
```

port-cos-weight-show

You can display the Class of Service (CoS) weight settings for ports on a switch.

Syntax `port-cos-weight-show`

Access CLI

History

Version 2.4	Command introduced.
Version 6.0.1	The parameters `cos8-weight`, and `cos9-weight` added.

Usage In some cases, you may want to display the weight of CoS packets.

Examples To display the weight of CoS packets, use the following command:

```
CLI (network-admin@switch)1 > port-cos-weight-show
switch:           switch1
cos0-weight:  16
cos1-weight:  32
cos2-weight:  32
cos3-weight:  32
cos4-weight:  32
cos5-weight:  32
cos6-weight:  64
cos7-weight:  127
cos8-weight:  64
cos9-weight:  127
cos8-weight:  64
cos9-weight:  127
```

Informational Note: The number of available CoS weight parameters may vary from platform to platform. The CoS queues 8, and 9 are available only on NRU01, NRU02, NRU03, and NRU03-S0301 platforms.

port-cos-rate-setting-modify

You can modify the Class of Service (CoS) rate settings for ports on a switch.

Syntax `port-cos-rate-setting-modify`

`port control-port|data-port|span-ports`	Specify the port to set the CoS rate.
`cos0-rate` *`unlimited|0..10000000`*	Specify the CoS rate for the specified port. On the F64, the default CoS rate is 1,000,000 pps for `pci-e` port, and 100,000 pps for `data` port, and `span` ports. On E68, and E28Q, the default CoS rate is 100,000 pps for all internal ports.
`cos1-rate` *`unlimited|0..10000000`*	
`cos2-rate` *`unlimited|0..10000000`*	
`cos3-rate` *`unlimited|0..10000000`*	
`cos4-rate` *`unlimited|0..10000000`*	
`cos5-rate` *`unlimited|0..10000000`*	
`cos6-rate` *`unlimited|0..10000000`*	
`cos7-rate` *`unlimited|0..10000000`*	
`cos8-rate` *`unlimited|0..10000000`*	
`cos9-rate` *`unlimited|0..10000000`*	

Access CLI

History

Version 2.3.2	Command introduced.
Version 6.0.1	Introduced CoS queues 8, and 9.

Usage In some cases, you may want to limit the number of packets leaving, and entering the ports on the switch.

Examples To set the span ports to a CoS0 rate of 500,00 pps, use the following command:

```
CLI (network-admin@switch) > port-cos-rate-setting-modify  port
span-ports  cos0-rate  500000
```

port-cos-rate-setting-show

You can display the Class of Service (CoS) rate settings for ports on a switch.

Syntax `port-cos-rate-setting-show`

`port control-port|data-port|span-ports`	The port type to set the CoS rate.
`ports port-list`	The ports to set the CoS rate.
`cos0-rate` *`unlimited|0..10000000`*	The CoS rate for the specified port. On the F64, the default CoS rate is 1,000,000 pps for `pci-e` port, and 100,000 pps for `data` port, and `span` ports. On E68, and E28Q, the default CoS rate is 100,000 pps for all internal ports.
`cos1-rate` *`unlimited|0..10000000`*	
`cos2-rate` *`unlimited|0..10000000`*	
`cos3-rate` *`unlimited|0..10000000`*	
`cos4-rate` *`unlimited|0..10000000`*	
`cos5-rate` *`unlimited|0..10000000`*	
`cos6-rate` *`unlimited|0..10000000`*	
`cos7-rate` *`unlimited|0..10000000`*	
`cos8-rate` *`unlimited|0..10000000`*	
`cos9-rate` *`unlimited|0..10000000`*	

Access CLI

History

Version 2.3.2	Command introduced.
Version 6.0.1	The parameters `cos8-rate`, and `cos9-rate` added.

Usage In some cases, you may want to limit the number of packets leaving, and entering the ports on the switch.

Examples To display port CoS rate settings modify, use the following command :

`CLI (network-admin@switch)1 >` `port-cos-rate-setting-show`

```
switch port          ports cos0-rate(pps) cos1-rate(pps) cos2-rate(pps) cos3-
rate(pps) cos4-rate(pps) cos5-rate(pps) cos6-rate(pps) cos7-rate(pps)
------ ------------ ----- -------------- -------------- --------------
-------------- -------------- -------------- -------------- --------------
switch control-port 0     100000         100000         100000         100000
  100000         100000         100000         100000
switch data-port    69    100000         100000         100000         100000
  100000         100000         100000         100000
switch span-ports   70-72 100000         100000         100000         100000
  100000         100000         100000         100000
```

port-cos-stats-clear

You can clear the Class of Service (CoS) rate stats for ports on a switch.

Syntax `port-cos-stats-clear`

`port` *`port-list`*	Specify the port list to clear CoS stats.

Access CLI

History

Version 2.4	Command introduced.

Usage In some cases, you may want to display CoS statistics for ports.

Examples To clear port CoS stats from ports 21-25, use the following command:

```
CLI (network-admin@switch) > port-cos-stats-clear port 21-25
```

port-egress-check

Use this command to check fabric communications when a connection error occurs while using show commands.

Syntax `port-egress-check`

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.

Usage Occasionally, the fabric returns a communication error when show commands are executed at the CLI. This command checks for possible communication on fabric ports.

Examples To use this command, use the following syntax :

```
CLI (network-admin@switch) > port-egress-check
pubdev02: Port 1 -> 1-68 but should be 1 -> 1-72
pubdev02: Port 2 -> 1-68 but should be 2 -> 1-72
pubdev02: Port 3 -> 1-68 but should be 3 -> 1-72
pubdev02: Port 4 -> 1-68 but should be 4 -> 1-72
pubdev02: Port 5 -> 1-68 but should be 5 -> 1-72
pubdev02: Port 6 -> 1-68 but should be 6 -> 1-72
pubdev02: Port 7 -> 1-68 but should be 7 -> 1-72
pubdev02: Port 8 -> 1-68 but should be 8 -> 1-72
pubdev02: Port 9 -> 1-68 but should be 9 -> 1-72
pubdev02: Port 10 -> 1-68 but should be 10 -> 1-72
pubdev02: Port 11 -> 1-68 but should be 11 -> 1-72
pubdev02: Port 12 -> 1-68 but should be 12 -> 1-72
pubdev02: Port 13 -> 1-68 but should be 13 -> 1-72
pubdev02: Port 14 -> 1-68 but should be 14 -> 1-72
pubdev02: Port 15 -> 1-68 but should be 15 -> 1-72
pubdev02: Port 16 -> 1-68 but should be 16 -> 1-72
pubdev02: Port 17 -> 1-68 but should be 17 -> 1-72
pubdev02: Port 18 -> 1-68 but should be 18 -> 1-72
pubdev02: Port 19 -> 1-68 but should be 19 -> 1-72
pubdev02: Port 20 -> 1-68 but should be 20 -> 1-72
pubdev02: Port 21 -> 1-68 but should be 21 -> 1-72
```

port-egress-fix

You can use this command to fix fabric communications when a connection error occurs while using show commands.

Syntax `port-egress-fix`

Defaults None

Access CLI

History

Version 2.2.6	Command introduced.

Usage Occasionally, the fabric returns a communication error when show commands are executed at the CLI. This command fixes communication errors on fabric ports.

Examples To use this command, use the following syntax:

```
CLI (network-admin@switch) > port-egress-fix
pubdev02: Port 1 -> 1-68 but should be 1 -> 1-72
pubdev02: Fixed port 1 -> 1-72
pubdev02: Port 2 -> 1-68 but should be 2 -> 1-72
pubdev02: Fixed port 2 -> 1-72
pubdev02: Port 3 -> 1-68 but should be 3 -> 1-72
pubdev02: Fixed port 3 -> 1-72
pubdev02: Port 4 -> 1-68 but should be 4 -> 1-72
pubdev02: Fixed port 4 -> 1-72
pubdev02: Port 5 -> 1-68 but should be 5 -> 1-72
pubdev02: Fixed port 5 -> 1-72
pubdev02: Port 6 -> 1-68 but should be 6 -> 1-72
pubdev02: Fixed port 6 -> 1-72
pubdev02: Port 7 -> 1-68 but should be 7 -> 1-72
pubdev02: Fixed port 7 -> 1-72
pubdev02: Port 8 -> 1-68 but should be 8 -> 1-72
pubdev02: Fixed port 8 -> 1-72
pubdev02: Port 9 -> 1-68 but should be 9 -> 1-72
pubdev02: Fixed port 9 -> 1-72
pubdev02: Port 10 -> 1-68 but should be 10 -> 1-72
pubdev02: Fixed port 10 -> 1-72
pubdev02: Port 11 -> 1-68 but should be 11 -> 1-72
pubdev02: Fixed port 11 -> 1-72
pubdev02: Port 12 -> 1-68 but should be 12 -> 1-72
pubdev02: Fixed port 12 -> 1-72
pubdev02: Port 13 -> 1-68 but should be 13 -> 1-72
pubdev02: Fixed port 13 -> 1-72
pubdev02: Port 14 -> 1-68 but should be 14 -> 1-72
pubdev02: Fixed port 14 -> 1-72
pubdev02: Port 15 -> 1-68 but should be 15 -> 1-72
pubdev02: Fixed port 15 -> 1-72
```

port-egress-show

Use this command to display information about fabric communications when a connection error occurs while using `show` commands.

Syntax `port-egress-show`

`port` *`port-list`*	The physical port list.
`egress` *`port-list`*	The allowed egress ports.
`rx-only` *`port-list`*	The receive only ports.
`active-active-vlags` *`port-list`*	The active-active VLAG ports.
`loopback` *`port-list`*	The loopback ports.
`mir_prevent_out` *`port-list`*	The ports not participating in mirroring traffic.
`no-local-switching` *`port-list`*	The ports that are impacted by the `no-local-switching` command.

Defaults None

Access CLI

History

Version 2.3	Command introduced.
Version 2.5.3	The optional parameter, local-switching|no-local-switching added.
Version 2.6.2	The parameter local-switching, deprecated.

Usage Occasionally, the fabric returns a communication error when show commands are executed at the CLI. This command displays communication on fabric ports.

Examples To use this command, use the following syntax:

```
CLI (network-admin@switch) > port-egress-show
switch port egress rx-only active-active-vlags loopback mir_prevent_out no-local-
switching
------ ---- ------ ------- ------------------- -------- ---------------
------------------
```

```
switch 1    0-72   none    none                 none     none            none
switch 2    0-72   none    none                 none     none            none
switch 3    0-72   none    none                 none     none            none
switch 4    0-72   none    none                 none     none            none
switch 5    0-72   none    none                 none     none            none
switch 6    0-72   none    none                 none     none            none
switch 7    0-72   none    none                 none     none            none
switch 8    0-72   none    none                 none     none            none
switch 9    0-72   none    none                 none     none            none
switch 10   0-72   none    none                 none     none            none
...
```

Informational Note: The port egress values may vary from platform to platform.

port-lacp-modify

This command allows you to run a port configured with LACP in test mode.

Syntax `port-lacp-modify`

`port` *`port-list`*	Specifies the switch network data port number, range or list of ports to be modified. Range for port numbers is from 1 to 64.
`test-mode none|no-tx|no-rx|no-rx-or-tx`	Specify the test mode for the port.

Defaults None

Access CLI

History

Version 1.2.2	Command introduced.

Usage Use this command to modify a port, and run it in test mode .

Examples To modify port 54, and place it in test mode, no-tx, use the following command:

```
CLI (network-admin@switch) > port-lacp-modify port 54 test-mode no-tx
```

port-lacp-show

This command displays information about network LACP port status.

Syntax `port-lacp-show`

`port` *`port-list`*	The switch network data port number, range or list of ports. Range for port numbers is from 1 to 64.
`neighbor|no-neighbor`	Neighbors of the LACP port.
`name` *`name-string`*	Name of the LACP port.
`port-type none|vlag|trunk`	Specifies if the port is a VLAG or a trunk.
`mode off|passive|active`	The mode as off, passive, or active.
`timeout slow|fast`	The timeout for LACP connections. Slow timeout sends requests after 30 seconds, and fast timeout sends requests after 3 seconds.
`system-id` *`mac-address`*	The MAC address as the system ID.
`lacp-key` *`lacp-key-number`*	The LACP key.
`system-priority` *`system-priority-number`*	The system priority.
`port-priority` *`port-priority-number`*	The port priority.
`aggregatable yes|no`	Specifies if you can aggregate the port or not.
`sync yes|no`	Specifies if the port is synchronized.
`coll yes|no`	Specifies if the port is collecting packets or not.
`dist yes|no`	Specifies if the port is distributing packets or not.
`defaulted yes|no`	Specifies if the port is defaulted or not.

`expired yes|no`	Specifies if the port is expired or not.
`port-state` *`port-state-number`*	Specifies a single port state instead of all ports.
`test-mode none|no-tx|no-rx|no-rx-or-tx`	Specifies if a port is in test mode.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.2	The parameters `lacp-key`, `system-priority`, and `port-priority` added.

Usage Use this command to display information about port status on the switch.

Examples To display the port status, use the following command:

```
CLI (network-admin@switch) > port-lacp-show
switch:          switch
port:            22
name:            t2
port-type:       trunk
mode:            active
timeout:         slow
system-id:        06:c0:00:16:f0:00
lacp-key:        32879
system-priority: 32768
port-priority:   32768
aggregatable:    no
sync:            no
coll:            no
dist:            no
defaulted:       no
expired:         yes
port state:      05c
```

port-lacp-stats-clear

This command clears stats about network LACP ports.

Syntax `port-lacp-stats-clear`

`port` *`port-list`*	Specifies the switch network data port number, range or list of ports. Range for port numbers is from 1 to 64.

Defaults None

Access CLI

History

Version 2.6.2	Command introduced.

Usage Use this command to clear information about LACP port status on the switch.

Examples To clear the port status for port 12, use the following command:

```
CLI (network-admin@switch) > port-lacp-stats-clear
```

port-lacp-stats-show

This command displays information about network LACP port stats.

Syntax `port-lacp-stats-show`

`time date/time: yyyy-mm-ddTHH:mm:ss`	The time to start statistic collection.
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	The start date, and time for statistics collection.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	The end date, and time for statistics collection.
`duration duration: #d#h#m#s`	The duration for statistics collection.
`interval duration: #d#h#m#s`	The interval between statistics collection.
`since-start`	The statistics since the start time.
`older-than duration: #d#h#m#s`	The statistics older than the specified time.
`within-last duration: #d#h#m#s`	The statistics within a specified time.
`port` *`port-list`*	The port list.
`lacp-port-up` *`lacp-port-up-number`*	The LACP port up counter.
`lacp-port-down` *`lacp-port-down-number`*	The LACP port down counter.
`lacp-pdu-tx` *`lacp-pdu-tx-number`*	The LACP PDU TX counter.
`lacp-pdu-rx` *`lacp-pdu-rx-number`*	The LACP PDU RX counter.
`lacp-marker-tx` *`lacp-marker-tx-number`*	The LACP Marker TX counter.
`lacp-marker-rx` `lacp-marker-rx-number`	The LACP Marker RX counter
`lacp-allocate-failure` *`lacp-allocate-failure-number`*	The LACP Allocate tx failure counter.
`lacp-expired` *`lacp-expired-number`*	The LACP Port Expired counter.

`lacp-defaulted` *`lacp-defaulted-number`*	The LACP Port defaulted counter.

Defaults None

Access CLI

History

Version 2.6.2	Command introduced.

Usage Use this command to display information about port status on the switch.

Examples To display the port status, use the following command:

CLI (network-admin@switch) > port-lacp-stats-show

```
switch port name     port-type mode    timeout system-id           lacp-key system-priority port-
priority aggregatable sync coll dist defaulted expired port-state
------ ---- ------- --------- ------ ------- ----------------- -------- ---------------
------------- ------------ ---- ---- ---- --------- ------- ----------
switch 25   new-lag trunk      active fast    06:c0:00:1a:80:00 4         32768            32768
      yes          yes  yes  yes  no        no      0x3f
switch 26   new-lag trunk      active fast    06:c0:00:1a:80:00 4         32768            32768
      yes          yes  yes  yes  no        no      0x3f
switch 27   new-lag trunk      active fast    06:c0:00:1a:80:00 4         32768            32768
      yes          yes  yes  yes  no        no      0x3f
switch 25   new     trunk      active fast    06:c0:00:19:d0:00 2         32768            32768
      yes          yes  yes  yes  no        no      0x3f
switch 26   new     trunk      active fast    06:c0:00:19:d0:00 2         32768            32768
      yes          yes  yes  yes  no        no      0x3f
switch 27   new     trunk      active fast    06:c0:00:19:d0:00 2         32768            32768
      yes          yes  yes  yes  no        no      0x3f
```

port-lldp-modify

This command is used to modify LLDP properties for ports.

Syntax `port-lldp-modify`

`port` *`port-list`*	Specify a list of ports to modify.
`lldp|no-lldp`	Specify LLDP or no LLDP.

Defaults None.

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to modify LLDP parameters

Examples To disable LLDP on port 35, use the following command:

```
CLI (network-admin@switch) > port-lldp-modify port 35 no-lldp
```

port-lldp-show

This command is used to display LLDP properties for ports.

Syntax `port-lldp-show`

`port` *`port-list`*	A list of ports.
`lldp|no-lldp`	Displays if LLDP is ON or OFF.

Defaults None.

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to display LLDP information for a port or list of ports.

Examples To display LLDP information, use the following syntax:

```
CLI (network-admin@switch) > port-lldp-show
switch port lldp
------ ---- ----
switch 1    on
switch 2    on
switch 3    on
switch 4    on
switch 5    on
switch 6    on
switch 7    on
switch 8    on
switch 9    on
switch 10   on
```

port-pfc-create

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to configure PFC on ports.

Syntax `port-pfc-create`

`priority` *`priority`*	Specify a priority for PFC. This is a number between 0, and 7.
`port-list` *`port-list`*	Specify a port list to apply PFC.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to set PFC for link level flow control for traffic on the network.

Examples To create a new PFC configuration on port 2 with a priority group of 2, use the following command:

```
CLI (network-admin@Spine1) > port-pfc-create priority 2 port 1-10
Priority configuration will be effective after restart.
```

port-pfc-delete

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to delete PFC configurations on ports.

Syntax `port-pfc-delete`

`priority` *`priority`*	Specify a priority for PFC. This is a number between 0, and 7.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to delete a PFC priority for link level flow control for traffic on the network.

Examples To delete the PFC priority 2, use the following command:

```
CLI (network-admin@switch) > port-pfc-delete priority 2
```

port-pfc-modify

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to modify PFC priority on ports.

Syntax `port-pfc-modify`

`priority` *`priority`*	Specify a priority for PFC. This is a number between 0, and 7.
`port-list` *`port-list`*	Specify a port list to apply PFC.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to modify PFC for link level flow control for traffic on the network. You can create up to three configurations.

Examples To modify the PFC configuration to port 11-15 with a priority group of 2, use the following command:

```
CLI (network-admin@switch) > port-pfc-modify priority 2 port 11-15
Priority configuration will be effective after restart.
```

port-pfc-show

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to display PFC on ports.

Syntax `port-pfc-show`

`priority` *`priority`*	The priority for PFC. This is a number between 0, and 7.
`port-list` *`port-list`*	The port list to apply PFC.
`error` *`error-string`*	Displays any errors on the port or ports.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to displays PFC information about link level flow control for traffic on the network.

Examples To display a PFC configuration on port 16, use the following command:

```
CLI  (network-admin@Spine1)>  port-pfc-show
port  prioritie(s) gurentee     headroom  alpha
----- ------------ ------------ --------- -------
16    1-5          9216         32000     4
```

port-pfc-stats-clear

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to clear PFC stats on ports.

Syntax `port-pfc-stats-clear`

`port` *`port-list`*	Specify the ports to delete PFC statistics.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to clear PFC stats information about link level flow control for traffic on the network.

Examples To clear PFC stats, use the following command:

CLI (network-admin@Spine1)>`port-pfc-stats-clear`

port-pfc-stats-show

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to display PFC stats on ports.

Syntax `port-pfc-stats-show`

Specify any of the following options:	
`time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The time of statistics collection.
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The start time for statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	The end time for statistics collection.
`duration` *`duration: #d#h#m#s`*	The duration time for statistics collection.
`interval` *`duration: #d#h#m#s`*	An interval between statistics collection.
`since-start`	The statistics collection from a start time.
`older-than` *`duration: #d#h#m#s`*	Specify to display statistics collection older than the specified time.
`within-last` *`duration: #d#h#m#s`*	The within-last time for statistics collection.
`port` *`port-list`*	The port list to display CoS stats.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to displays PFC stats information about link level flow control for traffic on the network.

Examples To display PFC stats, use the following command:

```
CLI (network-admin@Spine1)> port-pfc-stats-show
switch      time      port pri0-rx pri0-tx pri1-rx pri1-tx pri2-rx pri2-tx pri3-rx pri3-tx pri4-rx
pri4-tx pri5-rx pri5-tx pri6-rx pri6-tx pri7-rx pri7-tx
---------- -------- ---- ------- ------- ------- ------- ------- ------- ------- ------- -------
------- ------- ------- ------- ------- ------- -------
switch     01:23:02 12   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 21   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 22   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 61   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 65   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 69   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 70   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 71   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
switch     01:23:02 72   0       0       0       0       0       0       0       0       0       0
    0       0       0       0       0       0
```

port-pfc-stats-settings-modify

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to modify PFC stats settings on ports.

Syntax `port-pfc-stats-settings-modify`

`enable|disable`	Specify if you want to enable or disable PFC statistics collection.
`interval duration: #d#h#m#`	Specify the interval between statistics collection.
`disk-space` *`disk-space-number`*	Specify the amount of disk space for statistics collection.

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to modify PFC stats settings.

Examples To modify PFC stats, use the following command:

```
CLI (network-admin@Spine1)> port-pfc-stats-settings-modify
```

port-pfc-stats-settings-show

Priority Flow Control (PFC) is an IEEE standard (802.1qbb) for link level flow control on Ethernet networks. Functionally, this feature is similar to the IEEE standard 802.3 for PAUSE mechanism, except that it operates at the granularity of individual packet priorities or traffic class, instead of port level. When a queue corresponding to traffic with a particular traffic class reaches a predetermined, either auto or statically set, threshold, the switch chip generates a PFC frame, and sends it back to the sender. For PFC to work effectively end to end on the network, all switches, and hosts in the traffic path are configured to enable PFC, and configured for traffic class to priority mappings.

This command allows you to display PFC stats on ports.

Syntax `port-pfc-stats-settings-show`

Defaults None

Access Network administrator

History

Version 2.5.4	Command introduced.

Usage This command is used to display PFC stats settings information about link level flow control for traffic on the network.

Examples To display PFC stats, use the following command:

```
CLI (network-admin@switch) > port-pfc-stats-settings-show
switch:      switch
enable:      yes
interval:    1m
disk-space:  50M
```

port-phy-config-modify

This command is used for enabling or disabling unreliable LOS configuration.

Syntax `port-phy-config-modify`

`port` *`port-list`*	Specify the port list.
`phy_config los-unreliable`	Enable unreliable LOS configuration.
`phy_config_state disable|enable`	Enable or disable physical port configuration.

Defaults None

Access Network administrator

History

Version 6.1.0	Command introduced.

Usage This command is used to enable or disable unreliable LOS configuration.

Examples To enable unreliable LOS configuration, use the following command:

```
CLI (network-admin@switch) > port-phy-config-modify port 49
phy_config los-unreliable phy_config_state enable
```

Note: This command is available only on the following platforms:

Dell: S4148T-ON, S4148-ON, S4128F-ON, S4128T-ON, S4112F-ON, S4112T-ON, S5232F-ON, S5248F-ON, Z9264, S5224F-ON, S5212F-ON

Ericsson: NRU03, NRU-S0301

Edgecore(Freedom): AS7816-64X (F9664-C), 7726-32X (F9432-C), 7326-56X (F9476-V), 5835-54X (F9460-X)

port-phy-config-show

This command is used for displaying unreliable LOS configuration.

Syntax `port-phy-config-show`

`port` *`port-list`*	The port list.
`phy-config los-unreliable`	Enable unreliable LOS configuration.
`phy-config_state disable|enable`	Enable or disable physical port configuration.

Defaults None

Access Network administrator

History

Version 6.1.0	Command introduced.

Usage This command is used to display unreliable LOS configuration.

Examples To display unreliable LOS configuration on port 49, use the following command:

```
CLI (network-admin@switch) > port-phy-config-show port 49
switch           port phy-config     phy-config_state
---------------- ---- -------------- ----------------
serpens-ptf-test 49   los-unreliable enable
```

Note: This command is available only on the following platforms:

Dell: S4148T-ON, S4148-ON, S4128F-ON, S4128T-ON, S4112F-ON, S4112T-ON, S5232F-ON, S5248F-ON, Z9264, S5224F-ON, S5212F-ON

Ericsson: NRU03, NRU-S0301

Edgecore(Freedom): AS7816-64X (F9664-C), 7726-32X (F9432-C), 7326-56X (F9476-V), 5835-54X (F9460-X)

port-phy-show

This command is used to display information about the physical Layer 1 status of the local switch.

Syntax `port-phy-show`

port *port-list*	Specifies the switch network data port number, range or list of ports. Range for port numbers is from 1 to 64.
bezel-port *bezel-port-string*	The bezel port.
state off|admin-down| adminpwrdown|bist|dfe-tuning| down|local-fault|partially-up| remote-fault|up|failed	The state of the port PHY.
mode off|admin-down| adminpwrdown|bist|dfe-tuning| down|local-fault|partially-up| remote-fault|up|failed	The mode of the port PHY.
autoneg *autoneg-string*	The auto-negotiation setting of the port PHY.
speed *speed-number*	The speed of the port PHY.
eth-mode configured 1000base-x| sgmii|disabled|1000base-kx| 2500base-x|6Gbase-kr|6Gbase-cr| 10Gbase-kr|10Gbase-cr|10Gbase-sr|AN-73|Xaui|10Gbase-kx4| 10Gbase-cx4|24Gbase-kr4|24Gbase-cr4|40Gbase-kr4| XLaui|40Gbase-cr4| 40Gbase-sr4|no-phy-present|MII| GMII|TBI|10G-XGMII|1G-RGMII|sfi| xfi|cx|kr4|sr4|lr4|er4|cr4|cx4| kx4|caui4|kr2|er2|cr2|sr2|lr2| xlaui2|cx2|sr|lr|er|cr|kx|kr|zr| base-x|sys-default|caui|aoc| xlppi|psm4|base_t|base_cx| base_lx|base_sx|10G-SFI|10G-XFI| GMII	Specify the Ethernet mode as 1000 base or Serial Gigabit Media Independent Interface (SGMII).
max-frame *max-frame-number*	The maximum number of frames.

`def-vlan` *`def-vlan-number`*	The default VLAN identifier of the port PHY.
`dfe-mode static|one-shot|continuous|kr`	The DFE mode.
`dfe-coarse not-started|in-progress|complete|error`	The DFE coarse state.
`dfe-fine not-started|in-progress|complete|error`	The DFE fine state.
`fec` *`fec-string`*	The forward error correction (FEC).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `eth-mode` added.
Version 2.2	The options, `disabled|1000base-kx|2500base-x|6Gbase-kr|6Gbase-cr|10Gbase-kr|10Gbase-cr|10Gbase-sr|AN-73|Xaui|10Gbase-kx4|10Gbase-cx4|24Gbase-kr4|24Gbase-cr4|40Gbase-kr4| XLaui|40Gbase-cr4|40Gbase-sr4|no-phy-present|MII|GMII|TBI|10G-XGMII|1G-RGMII|10G-SFI|10G-XFI` added.
Version 3.0.0	The parameter `link-quality` deprecated.
Version 3.1.0	The parameters `GII`, and `disabled` added.
Version 7.0.0	The parameter `bezel-port` added.

Usage Switches are equipped with network data ports for host or inter-switch communication. Use this command to display the status of network data ports on the local switch.

Examples To display the status of network data ports on the switch, use the following command:

```
CLI (network-admin@switch) > port-phy-show
switch port state speed eth-mode   max-frame def-vlan
------ ---- ----- ----- --------- --------- --------
switch 1    down  10000 xfi       1540      1
switch 2    down  10000 xfi       1540      1
switch 3    down  10000 xfi       1540      1
switch 4    down  10000 xfi       1540      1
switch 5    down  10000 xfi       1540      1
switch 6    down  10000 xfi       1540      1
switch 7    down  10000 xfi       1540      1
switch 8    down  10000 xfi       1540      1
switch 9    down  10000 xfi       1540      1
switch 10   down  10000 xfi       1540      1
```

```
switch 11   down  10000 xfi       1540      1
switch 12   up    10000 xfi       1540      1
switch 13   down  10000 xfi       1540      1
switch 14   down  10000 xfi       1540      1
switch 15   down  10000 xfi       1540      1
switch 16   down  10000 xfi       1540      1
switch 17   down  10000 xfi       1540      1
switch 18   down  10000 xfi       1540      1
switch 19   down  10000 xfi       1540      1
switch 20   down  10000 xfi       1540      1
switch 21   down  10000 xfi       1540      1
```

port-show

This command displays information about network data port status.

Syntax `port-show`

port *port-list*	The switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.
bezel-port *bezel-port-string*	The bezel port.
ip *ip-address*	The IP address of a host connected to a switch data port.
mac *mac-address*	The MAC address of a host connected to a switch data port.
vnet vnet name	The VLAN VNET name.
bd bridge-domain name	The bridge domain name.
vlan *vlan-id*	The VLAN identifier. This is a value between 0, and 4095.
vxlan *vxlan-id*	The VXLAN identifier. This is a value between 0, and 16777215.
hostname *hostname*	Name of a host connected to a switch data port.
status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to| inuse| PN-switch|PN-fabric|PN-other|PN-cluster|PN-internal| PN-hypervisor|PN-guest|snmp-host|host|uplink|drop-pkts|no-pktin|no-fwd|no-flood|STP-BPDUs| LLDP|trunk|l3-port|remote-l3-port|vdp|dhcp|dhcpsvr|blocked| no-BPDU|LACP-PDUs|vlag-active| vlag-blocked|stp-edge-port|LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router| host-disabled|loop| vxlan-loopback|vlan-up|vle|vle-wait|phy-down|down| enabled|err-	The status of a switch data port.

`disabled|err-bpdu-guard|mac-violation|stp-bpdu-guard|stp-root-guard||defer-bringup-wait|rx-bw-threshold-exceeded|tx-bw-threshold-exceeded`	
`loop-vlans vlan-list`	The VLANs looping on the ports.
`rem-ip` *`ip-address`*	The IP address of the remote switch.
`lport` *`lport-number`*	The logical port number on the switch.
`rport` *`rport-number`*	The port number on the remote switch.
`config fd|hd|10m|100m|1g|2.5g|10g|40g|loopback|mirror-only|autoneg| fiber|copper|qos|jumbo|pause|asymetric-pause|vxlan-termination|no-local-switching|fec|backplane|200g|400g`	The settings of a switch data port.
`description` *`description-string`*	The description of the port.
`trunk` *`trunk-string`*	The identifier of the trunk that a switch data port is a member of.
`recover-time duration: #d#h#m#s`	The time left for recovery from err-disable state.
`err-bpduguard` *`err-bpduguard-number`*	The total count of err-disables by BPDU guard.
`err-maclimit` *`err-maclimit-number`*	The total count of err-disables by MAC address limit.
`hide-connections`	Specifies whether the connections on switch data ports should be displayed.
`link-detail`	The details of the link such as PHY, link, etc.

Defaults None

Access CLI

History

Version 1.2	Command introduced.

Version 2.2.2	Options for `status` and `config` changed.
Version 2.2.6	The parameters `LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router` added.
Version 2.4	The options `host-disabled|loop|vxlan-loopback|vlan-up` added. The parameter `loop-vlans` added.
Version 2.6.2	The parameters `rem-ip`, `recover-time`, `err-bpduguard`, `err-maclimit`, `hide-connections`, and `link-detail` added.

Usage Use this command to display information about port status on the switch.

Examples To display the port status for port 12, use the following command:

```
CLI (network-admin@switch) > port-show
switch  port ip            mac               switch  status
config      trunk
-------  ----  -------------  -----------------  -------  ---------------------------------------
-----------  -------
switch1 12                                          up,host,LLDP,vlan-up
fd,10g
switch1  21    10.32.32.1      66:0e:94:6f:b7:87  switch2  up,PN-switch,PN-other,LLDP,trunk,vlan-up
fd,10g,      auto-274
switch1  22    10.32.32.1      66:0e:94:6f:b7:87  switch2  up,PN-switch,PN-other,LLDP,trunk,vlan-up
fd,10g,      auto-274
switch1  61    10.32.32.1      66:0e:94:6f:b7:87  switch2  up,PN-switch,PN-other,LLDP,trunk,vlan-up
fd,40g,      auto-275
switch1  65    10.32.32.1      66:0e:94:6f:b7:87  switch2  up,PN-switch,PN-other,LLDP,trunk,vlan-up
fd,40g,      auto-275
switch1  69    192.168.25.33  66:0e:94:70:e8:a0  switch1  up,PN-internal,stp-edge-port,vlan-up
fd,1g,jumbo
switch1 70                                          up,PN-internal,stp-edge-port,vlan-up
fd,1g,jumbo
switch1 71                                          up,PN-internal,stp-edge-port,vlan-up
fd,1g,jumbo
switch1 72                                          up,PN-internal,stp-edge-port,vlan-up
fd,1g,jumbo
```

port-stats-clear

This command is used to clear statistics from a port.

Syntax `port-stats-clear port port-list`

port *port-list*	Specify a list of ports to clear statistics.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to clear statistics from a list of ports

Examples To clear statistics from ports 43-47, use the following command:

```
CLI (network-admin@switch) > port-stats-clear port 43-47
```

port-stats-snmp-show

This command displays SNMP statistics for switch data ports.

Syntax `port-stats-snmp-show`

Specify any of the following options:	
`port` *`port-list`*	Displays one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).
`port-clear-count` *`port-clear-count-number`*	The number of times port-stats-clear or trunk-stats-clear commands were issued on a port or trunk.
`port_clear_time high resolution time: #ns`	The last high resolution time-stamp (in ns) of the last port-stats-clear command.
`port-clear-time duration: #d#h#m#s`	The last port stats clear time. It is initialized with time atnvOS_init by default.
`all-ports`	A flag to specify if you want to view the stats of all ports on the switch. The default view contains only enabled ports.
`counter` *`counter-number`*	The counter number.
`ibytes ibytes-number`	The incoming number of bytes.
`ibits` *`ibits-number`*	The number of incoming bits.
`iUpkts` *`iUpkts-number`*	The number of incoming unicast packets.
`iBpkts` *`iBpkts-number`*	The number of incoming broadcast packets.
`iMpkts` *`iMpkts-number`*	The number of incoming multicast packets.
`iPauseFs` *`iPauseFs-number`*	The number of incoming pause frames.
`iCongDrops` *`iCongDrops-number`*	The number of incoming packets dropped due to congestion.

idiscards *idiscards-number*	The number of incoming packets discarded.
ierrs *ierrs-number*	The number of incoming errors.
obytes *obytes-number*	The number of outgoing bytes.
obits obits-number	The number of outgoing bits.
oUpkts *oUpkts-number*	The number of outgoing unicast packets.
oBpkts *oBpkts-number*	The number of outgoing broadcast packets.
oMpkts *oMpkts-number*	The number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	The number of outgoing pause frames.
oCongDrops *oCongDrops*-number	The number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	The number of outgoing discarded packets.
oerrs *oerrs-number*	The number of outgoing errors.
mtu-errs *mtu-errs-number*	The number of MTU errors.
HER-packets *HER-pts-number*	The number of Head End Replicated (HER) packets.
HER-bytes *HER-bytes-number*	The number of Head End Replicated (HER) bytes.
HER-bits HER-bits-number	The number of Head End Replicated (HER) bits.

Defaults None.

Access CLI

History

Version 3.1.0	Command introduced.

Usage Switches are equipped with network data ports for host or inter-switch communication. This command shows the status of a specific network data port or all network data ports on the local

switch. To see the output in bits, use the option format all.

Examples To display the SNMP statistics for network data ports on the switch, use the following command:

```
CLI (network-admin@Spine-1) > port-stats-snmp-show
switch port ibits iUpkts iBpkts iMpkts iCongDrops ierrs obits oUpkts oBpkts oMpkts oCongDrops
oerrs mtu-errs
------ ---- ----- ------ ------ ------ ---------- ----- ----- ------ ------ ------ ----------
----- --------
switch 12   86.8M 0      0      45.9K  0          0     2.20T 1      9.40K  3.44G  0          0
    0
switch 21   556M  0      0      119K   0          0     33.6G 0      9.34K  61.6M  0          0
    0
switch 22   556M  0      0      119K   0          0     557M  0      0      121K   0          0
    0
switch 61   2.41G 1      4.64K  1.25M  0          0     33.8G 0      0      61.5M  0          0
    0
switch 65   2.35G 0      4.76K  432K   0          1     557M  0      0      119K   0          0
    0
switch 69   3.98G 0      0      736K   0          0     790G  1      9.40K  1.41G  2.03G      0
    0
switch 70   463K  0      0      781    0          0     0     0      0      0      0          0
    0
switch 71   464K  0      0      783    0          0     0     0      0      0      0          0
    0
switch 72   464K  0      0      784    0          0     0     0      0      0      0          0
    0
switch 274  1.11G 0      0      238K   0          0     34.1G 0      9.34K  61.7M  0          0
    0
switch 275  4.76G 1      9.40K  1.67M  0          1     34.3G 0      0      61.6M  0          0
    0
```

port-stats-show

This command displays packet count statistics for switch data ports.

Syntax `port-stats-show`

Specify any of the following options:

`time date/time: yyyy-mm-ddThh:mm:ss`	A time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; SS specifies the 2 digit second of the minute
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	A start time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	An end time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month;

	• HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`duration duration: #d#h#m#s`	The duration in seconds.
`interval duration: #d#h#m#s`	The interval between statistics collection.
`since-start`	Specifies if the statistics are collected from the start of collecting statistics.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the duration in days, hours, minutes, and seconds.
`within-last duration: #d#h#m#s`	Specifies if the statistics are within the duration in days, hours, minutes, and seconds.
`port` *`port-list`*	Specifies one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).
`bezel-port` *`bezel-port-string`*	The bezel port.
`description description-string`	The port description.
`counter` *`counter-number`*	The counter number.
`ibytes ibytes-number`	The incoming number of bytes.
`obits` *`obits-number`*	The number of outgoing bits.
`ibits` *`ibits-number`*	The number of incoming bits.
`iUpkts` *`iUpkts-number`*	The number of incoming unicast packets.
`iBpkts` *`iBpkts-number`*	The number of incoming broadcast packets.

iMpkts *iMpkts-number*	The number of incoming multicast packets.
iPauseFs *iPauseFs-number*	The number of incoming pause frames.
iCongDrops *iCongDrops-number*	The number of incoming packets dropped due to congestion.
idiscards *idiscards-number*	The number of incoming packets discarded.
ierrs *ierrs-number*	The number of incoming errors.
obytes *obytes-number*	The number of outgoing bytes.
oUpkts *oUpkts-number*	The number of outgoing unicast packets.
oBpkts *oBpkts-number*	The number of outgoing broadcast packets.
oMpkts *oMpkts-number*	The number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	The number of outgoing pause frames.
oCongDrops *oCongDrops*-number	DisplaysThe number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	The number of outgoing discarded packets.
oerrs *oerrs-number*	The number of outgoing errors.
mtu-errs *mtu-errs-number*	The number of MTU errors.
HER-pkts *HER-pkts-number*	The number of Head End Replicated (HER) packets.
HER-bytes *HER-bytes-number*	The number of Head End Replicated (HER) bytes.
HER-bits *HER-bits-number*	The number of Head End Replicated (HER) bits.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2.3	The parameter `timestamp` removed.
Version 2.4.1	The parameter `mtu-errs` added.
Version 2.6.0	The parameters `HER-pkts, and HER-bytes` added.
Version 7.0.0	The parameter `bezel-port` added.

Usage Switches are equipped with network data ports for host or inter-switch communication. This command shows the status of a specific network data port or all network data ports on the local switch. To see the output in bits, use the option format all.

Examples To display the packet count statistics for network data ports on the switch, use the following command:

```
CLI (network-admin@Spine-1) > port-stats-show
switch     time     port bezel-port description ibits iUpkts iBpkts iMpkts
iCongDrops ierrs obits oUpkts oBpkts oMpkts oCongDrops oerrs mtu-errs
---------- -------- ---- ---------- ----------- ----- ------ ------ ------
---------- ----- ----- ------ ------ ------ ---------- ----- --------
switch     00:19:18 0    0                      1.46M 868    0      0      0
  0     1.13M 1022   0      0      0          0     0
switch     00:19:18 21   9                      214K  0      4      244    0
  0     123K  0      0      72     0          0     0
switch     00:19:18 25   10                     98.7K 0      0      66     0
  0     207K  0      4      223    0          0     0
switch     00:19:18 29   11                     100K  0      0      85     0
  0     216K  0      4      242    0          0     0
switch     00:19:18 33   12                     76.4K 0      0      38     0
  0     233K  0      4      275    0          0     0
switch     00:19:18 95   29                     116K  0      0      108    0
  0     163K  0      0      168    0          0     0
switch     00:19:18 96   30                     89.4K 0      0      64     0
  0     82.1K 0      0      18     0          0     0
switch     00:19:18 100  31                     95.3K 0      0      67     0
  0     68.6K 0      0      15     0          0     0
switch     00:19:18 101  32                     100K  0      4      63     0
  0     69.8K 0      0      17     0          0     0
```

port-stats-settings-modify

This command is used to modify collecting statistics from a port.

Syntax `port-stats-settings-modify`

Specify one or more of the following options:	
`enable|disable`	Specify if you want to enable or disable statistics collection.
`duration: #d#h#m#s disk-space`	The duration of the interval between collecting statistics.
`disk-space` *`disk-space-number`*	The amount of disk space to store the port statistics.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to clear statistics from a list of ports

Examples To clear statistics from ports 43-47, use the following command:

```
CLI (network-admin@switch) > port-stats-settings-modify port 43-47
```

port-stats-settings-show

This command displays the settings for collecting statistics on a port.

Syntax `port-stats-settings-show`

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display the settings for collecting statistics from ports

Examples To display settings for port statistics collection, use the following command:

```
CLI (network-admin@Spine-1) > port-stats-settings-show
switch:       Spine-1
enable:       yes
interval:     1m
disk-space:   8G
```

port-storm-control-modify

Use this command to modify the storm control configuration on a port.

Storm control prevents traffic on a LAN from disruption by a broadcast, multicast, or unicast storm on a port. A LAN storm occurs when packets flood the LAN, creating excessive traffic, and degrading network performance.

Syntax `port-storm-control-modify`

`port` *`port-list`*	Specify the port list that you want to apply storm control.
Specify between one, and three of the following options:	
`unknown-ucast-level` *`unknown-ucast-level-string`*	Specify the percentage of total available bandwidth that can be used by unicast traffic. The default value is 30%.
`unknown-mcast-level` *`unknown-mcast-level-string`*	Specify the percentage of total available bandwidth that can be used by multicast traffic. The default value is 30%.
`broadcast-level` *`broadcast-level-string`*	Specify the percentage of total available bandwidth that can be used by broadcast traffic. The default value is 30%.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage The thresholds can either be expressed as a percentage of the total available bandwidth that can be used by the broadcast, multicast, or unicast traffic

Examples

```
CLI (network-admin@switch) > port-storm-control-modify port 11
unknown-ucast-leve 1.1
switch intf speed  unknown-ucast-level   unknown-mcast-level  broadcast-level
------ ---   ----     --------------------- -------------------   ----------------
pl-12  11    10g     1.1%                     2.2%                    3.3%
```

port-storm-control-show

This command is used to display information about storm control on a port.

Storm control prevents traffic on a LAN from disruption by a broadcast, multicast, or unicast storm on a port. A LAN storm occurs when packets flood the LAN, creating excessive traffic, and degrading network performance.

Syntax `port-storm-control-show`

`port` *`port-list`*	A port or a list of ports.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage Use this command to display information about ports configured for storm control.

Examples To display information about storm control, use the following syntax:

```
CLI (network-admin@switch) > port-storm-control-show
switch  port  speed  unknown-ucast-level  unknown-mcast-level  broadcast-level  trunk
------  ----  -----  -------------------  -------------------  ---------------  --------
switch 1    10g   30%                  30%                  30%
switch 2    10g   30%                  30%                  30%
switch 3    10g   30%                  30%                  30%
switch 4    10g   30%                  30%                  30%
switch 5    10g   30%                  30%                  30%
switch 6    10g   30%                  30%                  30%
switch 7    10g   30%                  30%                  30%
switch 8    10g   30%                  30%                  30%
switch 9    10g   30%                  30%                  30%
switch 10   10g   30%                  30%                  30%
switch 11   10g   30%                  30%                  30%
switch 12   10g   30%                  30%                  30%
switch 13   10g   30%                  30%                  30%
switch 14   10g   30%                  30%                  30%
switch 15   10g   30%                  30%                  30%
switch 16   10g   30%                  30%                  30%
switch 17   10g   30%                  30%                  30%
switch 18   10g   30%                  30%                  30%
switch 19   10g   30%                  30%                  30%
switch 20   10g   30%                  30%                  30%
switch 21   10g   30%                  30%                  30%              auto-274
switch 22   10g   30%                  30%                  30%              auto-274
```

port-tpid-modify

This command is used to modify the TPID value used for the outer VLANs on a QinQ port.

Syntax `port-tpid-modify`

`port` *`port-list`*	A port or a list of physical ports.
`outer-tpid none|dot1q|q-in-q|q-in-q-old`	Specifies the port outer TPID value.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to modify the outer VLAN's TPID value for a port or list of ports. Possible TPID values are: dot1q (0x8100), q-in-q (0x88A8), q-in-q-old (0x9100), none (default).

Information Starting from NetVisor release 7.0.1, it is possible to configure BD ports in 802.1Q mode and in 802.1ad/QinQ mode on the same switch. When `outer-tpid` is configured as none (default), double tagged packets use the standard 802.1ad encapsulation with the outer TPID equal to 0x88A8 (and the inner TPID equal to 0x8100).

Examples To modify the outer VLANs TPID value, use the following syntax:

```
CLI (network-admin@switch) > port-tpid-modify ports 123,121 outer-tpid q-in-q-old
```

port-tpid-show

This command is used to display the outer VLAN's TPID value of a port.

Syntax `port-tpid-show`

`port` *`port-list`*	A port or a list of physical ports.
`outer-tpid none|dot1q|q-in-q|q-in-q-old`	The port outer TPID value.

Defaults none

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the outer VLAN's TPID value of a port.

Information Starting from NetVisor release 7.0.1, it is possible to configure BD ports in 802.1Q mode and in 802.1ad/QinQ mode on the same switch.

Examples To display information about the outer TPID on ports 121,123 and 32, use the following syntax:

```
CLI (network-admin@switch) > port-tpid-show ports 121,123,32
switch ports outer-tpid
------ ----- ----------
switch 121   q-in-q-old
switch 123   q-in-q-old
test4  32    q-in-q
```

port-vlan-add

This command is used to add a VLAN to a specific port.

Syntax `port-vlan-add`

`port` *`port-number`*	Specify the port number for the VLAN.
`port-desc` *`port-desc-string`*	Specify the description to add the port with that description to the VLAN.
Specify one or both of the following options:	
`vnet` *`vnet-name`*	Specify the vNET name for the port.
`vlans` *`vlans-list`*	Specify the list of VLANs to apply to the port.
`untagged-vlan` *`vlan-id`*	Specify an untagged VLAN to apply to the port. The value can be from 0-4095.

Access CLI

History

Version 1.2	Command introduced.
Version 2.3	The parameters `ports`, `description`, and `active-vlans` deprecated.
Version 2.4.1	The parameter `vnet` added.
Version 7.0.0	The parameter `port-desc` added.

Usage Use this command to add a VLAN to a specific port.

Examples To add an untagged VLAN with the identifier 25 to port 11, use the following command:

```
CLI (network-admin@switch) > port-vlan-add port 11 untagged-vlan 25
```

port-vlan-remove

This command is used to remove a VLAN from a specific port.

Syntax `port-vlan-remove`

`vlans` *`vlan-list`*	Specify the VLAN list to remove from the port.
`vnet` *`vnet-name`*	Specify the vNET name for the port.
`port` *`port-number`*	Specify the port that you want to remove from the configuration.
`port-desc` *`port-desc-string`*	Specify the port description to remove the port with that description.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 7.0.0	The parameter `port-desc` added.

Usage Used to remove VLANs from existing ports.

Examples To remove VLAN list, vlan-remote, from port 25, use the following command:

```
CLI (network-admin@switch) > port-vlan-remove port 25 vlans vlan-remote
```

port-vlan-show

This command is used to display information about VLANs assigned to ports.

Syntax `port-vlan-show`

`vnet` *`vnet-name`*	The vNET name for the port.
`ports` *`port-list`*	The list of ports.
`bezel-port` *`bezel-port-string`*	The bezel port.
`vlans` *`vlans-list`*	The list of VLANs to apply to the port.
`untagged-vlan` *`vlan-id`*	An untagged VLAN to apply to the port. Valid range is between 0, and 4095.
`description` *`description-string`*	The description for the configuration.
`port-desc` *`port-desc-string`*	The port description.
`active-vlans` *`vlan-list`*	A list of active VLANs.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 7.0.0	The parameters `bezel-port`, and `port-desc` added.

Usage Use this command to display information about a VLAN on a specific port.

Examples To display information about an untagged VLANs, use the following command:

```
CLI (network-admin@switch) > port-vlan-show
switch bezel-port port vlans untagged-vlan description activevlans
------ ---------- ---- ----- ------------- ----------- -----------
switch 25         25   10,12 1                         none
```

port-vnet-show

This command is used to view the ports that are assigned to vNETs.

Syntax `port-vnet-show`

name name-string	The vNET name.
managed-ports *port-list*	The vNET exclusive ports.
num-vlans *1..4094*	Number of global VLANs assigned to vNET.
vlans *vlan-list*	VLANs assigned to public VLAN vNET.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display information about a vNET on a specific port.

Examples To display information about ports with assigned vNETs, use the following command:

```
CLI (network-admin@switch) > port-vnet-show
switch name              managed-ports num-vlans vlans
------ ----------------- ------------- --------- -----
switch switch-global     none          0         none
```

port-xcvr-breakout-ability-show

This command to display the available XCVR breakout modes.

Syntax `port-fec-mode-modify`

port *port-list*	The port number or list of ports.
port(s) *port-list*	The list of logical breakout port(s).
bezel-port *bezel-port-string*	The associated bezel port.
vendor-name *vendor-name-string*	The transceiver vendor name.
part-number *part-number-string*	The transceiver part number.
breakout *sys-default|400g-1x|100g-4x|100g-2x*	The port breakout mode.
avail Yes|No	Specifies whether Breakout is available via NetVisor.
advert *advert-string*	The CMIS application descriptor record number.
app-record-hex *app-record-hex-string*	The Raw hex application record.
host-ifc *host-ifc-string*	The Host Interface.
media-type *media-type-string*	The media Type.
media-ifc *media-ifc-string*	The media Interface.
status *status-string*	The sys-default and current breakout flags.

Defaults None

Access CLI

History

Version 7.0.1	Command introduced.

Usage Use this command to display the available XCVR breakout modes.

Information This command is applicable only on Z9432F-ON platform in NetVisor version 7.0.1.

Examples To display an optical module with 2 app records on port 17, use the following command:

```
CLI (network-admin@switch) > port-xcvr-breakout-ability-show port 17
port(s) bezel-port vendor-name part-number breakout avail advert host-ifc
 media-type status
------- ---------- ----------- ----------- -------- ----- ------ ----------
---------- -----------
17      5          DELL EMC    TP2F0       400g-1x  Yes   app-01 400G-GAUI8
mmf        sys-default
17,19   5          DELL EMC    TP2F0       200g-2x  Yes   app-02 200G-GAUI4
mmf        current
```

port-xcvr-memory-show

Use this command to display information about transceiver memory.

Syntax `port-xcvr-memory-show`

ports *port-list*	The specified ports.
pages *pages-string*	The transceiver pages: default, seperate pages with comma.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to display information about transceivers memory.

Examples Use the following syntax to display port 21:

```
CLI (network-admin@switch) > port-xcvr-memory-show
port-xcvr-memory-show port 21 pages 0.1 format all
pages
--------------------------------------------------------------------------------
From Port 21, Base Port 21 port member: 21-24

Page 0x00 Base Port 21 Lower :
0x91 0x00 0x10 0x00 0xff 0x00 0xf0 0xff 0x00 0x01 0x55 0x55 0x55 0x55 0x00 0x00
0x00 0x00 0x00 0x00 0x55 0x55 0x22 0x42 0x00 0x00 0x7d 0x14 0x47 0x4a 0x27 0x10
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x56 0x22 0x56 0x22 0x56 0x22 0x56 0x22 0x56 0x22 0x56 0x22 0x56 0x22
0x56 0x22 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x0f 0xea 0x10 0x3e 0x12 0x36
0x10 0xe6 0x00 0x00 0x00 0x00 0x0f 0xaa 0xaa 0xaa 0xaa 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0xff 0xff 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00

Page 0x00 Base Port 21 Upper :

0x91 0x0c 0x0c 0x80 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x05 0xff 0x02 0x02 0x00
0x00 0x00 0x00 0x40 0x4c 0x55 0x58 0x54 0x45 0x52 0x41 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x1f 0x00 0x25 0x63 0x4c 0x55 0x58 0x36 0x32 0x36 0x30 0x38
0x42 0x4f 0x45 0x20 0x20 0x20 0x20 0x20 0x42 0x20 0x66 0x58 0x0b 0xb8 0x00 0xb5
0x07 0x07 0xff 0xba 0x32 0x30 0x31 0x32 0x30 0x30 0x30 0x30 0x35 0x34 0x20 0x20
0x20 0x20 0x20 0x20 0x32 0x30 0x30 0x33 0x32 0x31 0x20 0x20 0x0c 0x08 0x68 0x59
0x45 0x52 0x49 0x00 0x52 0x44 0x48 0x31 0x30 0x33 0x30 0x33 0x30 0x31 0x2f 0x30
0x32 0x20 0x20 0x20 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x0
```

port-xcvr-show

This command is used to display information about a transceiver installed in a port on the switch.

Syntax `port-xcvr-show`

`port` *`port-list`*	The port list.
`bezel-port` *`bezel-port-string`*	The bezel port.
`vendor-name` *`vendor-name-string`*	The vendor name for the transceiver.
`part-number` *`part-number-string`*	The part number of the transceiver.
`serial-number` *`serial-number-string`*	The serial number.
`type unknown|sfp|qsfp`	The xcvr form factor.
`eth-mode unconfigured|disabled|1000base-x|sgmii|1000base-kx|2500base-x|6Gbase-kr|6Gbase-cr|10Gbase-kr|10Gbase-cr|10Gbase-sr|AN-73|Xaui|10Gbase-kx4|10Gbase-cx4|24Gbase-kr4|24Gbase-cr4|40Gbase-kr4|xlaui|40Gbase-cr4|40Gbase-sr4|no-phy-present|MII|gmii|TBI|10G-XGMII|1G-RGMII|sfi|xfi|cx|kr4|sr4|lr4|er4|cr4|cx4|kx4|caui4|kr2|er2|cr2|sr2|lr2|xlaui2|cx2|sr|lr|er|cr|kx|kr|zr|base-x|sys-default|caui|aoc|xlppi|psm4|base_t|base_cx|base_lx|base_sx`	The xcvr eth-mode.
`cbl-len` *`cbl-len-number`*	The AOC/DOC cable length.
`temp[C]` *`temp[C]-number`*	The port temperature in degrees Centigrade.
`vcc33[V]` *`vcc33[V]-string`*	The 3.3V supply voltage.
`tx-bias[mA] tx-bias[mA]-string`	The transmit bias current (mA).
`tx-pwr[dBm] tx-pwr[dBm]-`*`string`*	The transmit power (dBm).

`rx-pwr[dBm] rx-pwr[dBm]-`*`string`*	The receive power (dBm).

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.0	Transmit, and receiver parameters added for lanes.
Version 7.0.0	The Parameter `bezel-port` added.

Usage Used to display information about SFPs installed in ports on the switch.

Examples

```
CLI (network-admin@switch) > port-xcvr-show
switch port bezel-port vendor-name part-number       serial-number
------ ---- ---------- ----------- ---------------- --------------
switch 2    2          Amphenol    610640003        APF164000361AF
switch 3    2.2        Amphenol    610640003        APF164000361AF
switch 4    2.3        Amphenol    610640003        APF164000361AF
switch 5    2.4        Amphenol    610640003        APF164000361AF
switch 21   9          3M Company  9QA0-111-12-3.00 V30B7205
switch 22   9.2        3M Company  9QA0-111-12-3.00 V30B7205
switch 23   9.3        3M Company  9QA0-111-12-3.00 V30B7205
switch 24   9.4        3M Company  9QA0-111-12-3.00 V30B7205
switch 25   10         3M Company  9QA0-111-12-3.00 V30B7648
switch 26   10.2       3M Company  9QA0-111-12-3.00 V30B7648
switch 27   10.3       3M Company  9QA0-111-12-3.00 V30B7648
switch 28   10.4       3M Company  9QA0-111-12-3.00 V30B7648
switch 29   11         3M Company  9QA0-111-12-3.00 V30B7704
switch 30   11.2       3M Company  9QA0-111-12-3.00 V30B7704
```

prefix-list-create

Create a prefix lists used for Router Advertisement (RA) Guard.

Syntax `prefix-list-create`

`name` *`name-string`*	Displays the name of the prefix list.
`scope local|fabric`	Displays the scope for the prefix list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to create prefix lists.

Examples To create a prefix list, ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > prefix-list-create name ra-prefix-1
scope local
```

prefix-list-delete

Delete a prefix lists used for Router Advertisement (RA) Guard.

Syntax `prefix-list-delete`

`name` *`name-string`*	Displays the name of the prefix list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to delete prefix lists.

Examples To delete a prefix list , ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > prefix-list-delete name ra-prefix-1
```

prefix-list-show

Display information about prefix lists used for Router Advertisement (RA) Guard.

Syntax `prefix-list-show`

`name` *`name-string`*	Name of the prefix list.
`scope local|fabric`	Scope for the prefix list.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about prefix lists configuration.

Examples To display information about prefix lists configurations, ra-prefix-1, use the following syntax :

```
CLI (network-admin@switch) > prefix-list-show name ra-prefix-1
switch     name        scope
---------- ----------- -----
Spine-1    ra-prefix-1 local
```

prefix-list-network-add

Display network information for a Route Advertisement (RA) Guard configuration.

Syntax `prefix-list-network-add`

`name` *`name-string`*	Display the name of the prefix list network.
`network` *`ip-address`*	Display the IP address of the prefix list network.
`netmask` *`netmask`*	Display the netmask for the IP address.

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add network information for a RA Guard configuration.

Examples To add network information for the prefix list network configuration, ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > prefix-list-network-add name ra-
prefix-1 network 1.1.1.1 netmask 255.255.255.0
switch      name          network
---------- ----------- ----------
Spine-1      ra-prefix-1 1.1.1.1/24
```

prefix-list-network-remove

Remove prefix list network information for a Route Advertisement (RA) Guard from the switch configuration.

Syntax `prefix-list-network-remove`

`name` *`name-string`*	Display the name of the prefix list network.
`network` *`ip-address`*	Display the IP address of the prefix list network.
`netmask` *`netmask`*	Display the netmask for the IP address.

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove network information from a RA Guard configuration.

Examples To remove network information for the prefix list network configuration, ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > prefix-list-network-remove name ra-prefix-1
```

prefix-list-network-show

Display network information for a Route Advertisement (RA) Guard configuration.

Syntax `prefix-list-network-show`

`name` *`name-string`*	Name of the prefix list network.

Specify the following network arguments:

`network` *`ip-address`*	The IP address of the prefix list network.
`netmask` *`netmask`*	The netmask for the IP address.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display network information about a RA Guard configuration.

Examples To display network information for the prefix list network configuration, ra-prefix-1, use the following syntax:

```
CLI (network-admin@switch) > prefix-list-network-show
switch      name          network
---------- ----------- ----------
Spine-1     ra-prefix-1 1.1.1.1/24
```

Q Commands

quit

This command allows you to leave command line interface (CLI).

Syntax `quit`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage The quit command is equivalent to the exit command.

Examples To leave the CLI, use the following command:

```
CLI (network-admin@switch) > quit
```

R Commands

role-create

This command creates new user roles, and access controls for a switch.

Syntax `role-create`

`name` *`name-string`*	Specify the name of the user role.
`scope local|fabric`	Specify the scope of the user role.
Specify any of the following options:	
`access read-only|read-write`	Specify the type of access. The default is read-write.
`running-config|no-running-config`	Specify to allow or deny displaying of running configuration of switch.
`shell|no-shell`	Specify to allow or deny shell access.
`sudo|no-sudo`	Specify to permit or deny `sudo` command from the shell prompt.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `vnet` is deprecated. The optional parameters `access`, and `running-config` are added.
Version 2.6.0	The parameters `shell` and `sudo` added.

Usage In a multi-tenant environment, a switch or fabric can be divided into smaller logical segments known as virtual networks (vNETs) using role-based access control (RBAC). This command allows you to create roles, and access controls for the local switch or fabric.

Examples

- To create the role, `network-admin` with access to the fabric, and running configuration, use the following command:

```
CLI (network-admin@switch) > role-create name network-admin scope
fabric access read-write running-config
```

- To create a user role named `role1` having local scope with access to the shell prompt, use the command:

```
CLI (network-admin@switch) > role-create name role1 scope local
shell sudo
```

role-delete

This command is used to delete an existing role from the configuration .

Syntax `role-delete`

`name` *`name-string`*	Specify the name of the role to delete.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage You can remove previously created roles from the switch configuration.

Examples To delete the role `network-admin` use the following command:

```
CLI (network-admin@switch) > role-delete name network-admin
```

role-modify

This command modifies roles, and access controls for a switch.

Syntax `role-modify`

`name` *`name-string`*	Specify the name of the user role.
Specify any of the following options:	
`access read-only|read-write`	Specify the access type for the role. The default role is read-write.
`running-config|no-running-config`	Specify if a user with this the role can use the `running-config-show` command. You may want to limit which users can use `running-config-show` because the command can expose sensitive password information.
`shell|no-shell`	Specify if the user can access the `shell`.
`sudo|no-sudo`	Specify if the user can execute the `sudo` command from the `shell`.
`delete-from-users`	Delete the role from the user.

Defaults None.

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameter `name` added.
Version 2.6.0	The parameters `shell|no-shell`, and `sudo|no-sudo` added.

Usage In a multi-tenant environment, a switch or fabric can be divided into smaller logical segments known as virtual networks (vNETs) using role-based access control (RBAC). This command allows you to modify roles, and access controls for the local switch or fabric.

Examples

- To modify a role, from read-write to read-only, use the following command:

```
CLI (network-admin@switch) > role-modify local-admin access read-only
```

- To create a user `user1` with local scope, and initial role `role1`, use the command:

```
CLI (network-admin@switch) > user-create name user1 scope localinitial-role role1
password:
confirm password:
```

role-show

This command is used to display roles in the switch configuration.

Syntax `role-show`

`id`	
`name` *`name-string`*	Name for the role.
`scope [local|fabric]`	Scope for the role.
`vnet-access vnet name|all`	The VNET access ID.
`access read-only|read-write`	The access type for the role. The default role is read-write.
`running-config|no-running-config`	Specify if a user with this the role can use the `running-config-show` command. You may want to limit which users can use `running-config-show` because the command can expose sensitive password information.
`shell|no-shell`	Specify if the user can access the shell.
`sudo|no-sudo`	Specify if the user can execute the `sudo` command from the shell.
`delete-from-users`	Specifies to delete from users.
`group-id group-id-number`	The group ID.

Defaults None.

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameter `name` added.
Version 2.6.0	The parameters `shell|no-shell`, and

	`sudo|no-sudo` added.

Usage You can view all configured roles in the switch configuration.

Examples To display all roles, use the following command:

```
CLI (network-admin@switch) > role-show
switch name                    scope vnet-access access     running-config shell
sudo
------ ----------------------- ----- ----------- ---------- -------------- -----
----
switch network-admin           local all         read-write permit         deny
deny
switch read-only-network-admin local all         read-only  deny           deny
deny
switch vnet1-admin             local vnet1       read-write deny           deny
deny
```

running-config-show

This command displays information about the current configuration on the switch.

Syntax `running-config-show`

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.5.3	vNET administrator-related information displays when a vNET administrator runs this command.

Usage Displays information about the current configuration on the switch.

Examples To display the configuration, use the following command:

```
CLI (network-admin@switch) > running-config-show
```

The output is lengthy, and includes port information, IP addresses, vNETs, and so on.

To view vNET administrator information:

1. Enable running-config for the vNET admin role, **(vnet1-admin)**:
```
CLI (network-admin@switch) > role-modify name vnet1-admin running-
config
```
2. Log into the vNET, as vnet1-admin, and run the `running-config-show` command:
```
CLI vnet1-admin@switch > running-config-show
storage-pool-create name pool-disk2 device1 disk2
storage-pool-create name test
vnet-manager-modify name vnet1-mgr enable
vnet-manager-service-modify vnet-manager-name vnet1-mgr if eth0 web
storage-hapool-create name hapool1 local-pool pool-di hapool-peer-
pool
pool-disk4 backup-interval 1m
```

S Commands

service-heartbeat-create

NetVisor OS generates a packet from the CPU to send to the receive port of an Inline Service, and the NetVisor vFlow configured for snooping is not port-specific, as NetVisor accepts the response from either the receive port or the transmit port. You configure the heartbeat as an additional parameter for a specific Inline Service.

Syntax `service-heartbeat-create`

`name` *`name-string`*	Specify the name for the Heartbeat Service.
`interval duration: #d#h#m#s`	Specify the interval between heartbeat packets.
`retry` *`retry-number`*	Specify the number of times to retry sending a packet.
`vlan` *`vlan-id`*`5`	Specify a VLAN ID.
`src-mac` *`mac-address`*	Specify the source port MAC address.
`dst-mac` *`mac-address`*	Specify the destination MAC address.
`type normal|pass-through`	Specify the type of heartbeat response as normal or passthrough. A normal response indicates that the Inline Service sends the response. A passthrough response indicates that NetVisor sends the response, and returns it to the Inline Service.
`payload` *`payload-string`*	Specify the payload for the heartbeat packet.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a Heartbeat Service configuration.

Examples To create a Heartbeat Service, use the following syntax:

```
CLI (network-admin@switch) > service-heartbeat-create name FW_probe
```

```
interval 5s retry 3 vlan-id 10 src-mac 64:6e:11:1c:11:11 dst-mac
01:1b:11:01:01:01 type normal payload 54 63 82 ff 01 46 12 ce a2 d4
00 00 00 00 00 00 00 00
```

service-heartbeat-delete

NetVisor OS generates a packet from the CPU to send to the receive port of an Inline Service, and the NetVisor vFlow configured for snooping is not port-specific, as NetVisor accepts the response from either the receive port or the transmit port. You configure the heartbeat as an additional parameter for a specific inline service.

Syntax `service-heartbeat-delete`

name *name-string*	Specify a name for the Heartbeat Service.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to delete a Heartbeat Service configuration.

Examples To delete Heartbeat Service, FW_probe, use the following syntax:

```
CLI (network-admin@switch) > service-heartbeat-delete name FW_probe
```

service-heartbeat-modify

NetVisor OS generates a packet from the CPU to send to the receive port of an Inline Service, and the NetVisor vFlow configured for snooping is not port-specific, as NetVisor accepts the response from either the receive port or the transmit port. You configure the heartbeat as an additional parameter for a specific Inline Service.

Syntax `service-heartbeat-modify`

`name` *`name-string`*	Specify a name for the Heartbeat Service.
`interval duration: #d#h#m#s`	Specify the interval between heartbeat packets.
`retry` *`retry-number`*	Specify the number of times to retry sending a packet.
`payload` *`payload-string`*	Specify the payload for the heartbeat packet.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify a Heartbeat Service configuration.

Examples To modify a Heartbeat Service, use the following syntax:

```
CLI (network-admin@switch) > service-heartbeat-modify name FW_probe
retry 5
```

service-heartbeat-show

NetVisor OS generates a packet from the CPU to send to the receive port of an Inline Service, and the NetVisor vFlow configured for snooping is not port-specific, as NetVisor accepts the response from either the receive port or the transmit port. You configure the heartbeat as an additional parameter for a specific Inline Service.

Syntax `service-heartbeat-show`

`name name-string`	Name for the Heartbeat Service.
`interval duration: #d#h#m#s`	The interval between heartbeat packets.
`retry` *`retry-number`*	The number of times to retry sending a packet.
`vlan` *`vlan-id`*	The VLAN ID.
`src-mac` *`mac-address`*	The source port MAC address.
`dst-mac` *`mac-address`*	The destination MAC address.
`type normal|pass-through`	The type of heartbeat response as normal or passthrough. A normal response indicates that the Inline Service sends the response. A passthrough response indicates that NetVisor sends the response, and returns it to the Inline Service.
`payload` *`payload-string`*	The payload for the heartbeat packet.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display information about a Hearbeat Service configuration.

Examples To display information about a Hearbeat Service configuration, use the following syntax:

```
CLI (network-admin@switch) > service-heartbeat-show
```

service-stats-clear

This command is used to clear service statistics for a switch.

Syntax `service-stats-clear`

`service ftp-data|ftp-control| ssh|telnet|http|https|rpc|sql| imap|ldap|iSCSI|oracle-db|nfs| cifs|iSCSI-target|lockd| openstack-nova|openstack-keystone|openstack-metering| openstack-neutron| openstack-glance|openstack-cinder|, and more`	Specifies the name of the service associated with the well-known UDP or TCP port number. HDFS entries indicate Hadoop services.

Defaults None.

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameters `port` and `bytes`, deprecated.

Usage Unless otherwise specified, aggregate statistics are displayed for all UDP, and TCP services on the switch. Each switch maintains a set of standard flow-based statistics that are continuously tracked, and updated by the switch. Use this command to clear traffic statistics for all UDP, and TCP services on the switch.

Examples To clear service statistics, use the following command:

```
CLI (network-admin@switch) > service-stats-clear
```

service-stats-show

This command is used to display service statistics for a switch.

Syntax `service-stats-show`

`name ftp-data|ftp-control|ssh| telnet|http|https|rpc|sql|imap| ldap|iSCSI|oracle-db|nfs|cifs| iSCSI-target|lockd|openstack-nova|openstack-keystone| openstack-metering|openstack-neutron| openstack-glance| openstack-cinder|...`	Name of the service associated with the well-known UDP or TCP port number. • HDFS • Nutanix • MR-JobTracker • Hive • Ganglia • MySQL • Cassandra
`bytes byte-number`	The number of bytes associated with the service port.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters for OpenStack added.
Version 2.2.5	The parameters `HDFS-` added to support Hadoop.
Version 2.2.6	Parameters added for MR, Hive, HBase, WebHCat, Ganglia, MySQL, Snap, Cassandra, Ganglia, LDAP, and Nutanix.
Version 2.4.1	The parameter `port` deprecated.

Usage Unless otherwise specified, aggregate statistics are displayed for all UDP, and TCP services on the switch. Each switch maintains a set of standard flow-based statistics that are continuously tracked, and updated by the switch. Use this command to display traffic statistics for all UDP, and TCP

services on the switch.

Examples To display service statistics, use the following command:

```
CLI (network-admin@switch) > service-stats-show
port     name    bytes
0        other   90983
22       ssh     9709
80       http    7326910
443      https   1755667
2049     nfs     5540
```

sflow-collector-create

sFlow is an industry standard technology that monitors high speed switched networks. An sFlow Collector gathers information from sFlow Agents on the network. You can create as many sFlow Collectors as required. An sFlow Collector can have a scope of local or fabric.

Syntax `sflow-collector-create`

`collector-ip` *`ip-address`*	Specify the IP address of the sFlow Collector.
`collector-port` *`collector-port-number`*	Specify the port number for the sFlow Collector.
`name` *`name-string`*	Specify a name for the sFlow.
`scope [local|fabric]`	Specify a scope, either fabric or local.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage This command is used to create an sFlow Collector to gather information from the sFlow Agents on the network. If the scope is fabric, then any new switch that joins the fabric receives the sFlow Collector configuration. If the scope is local, then the sFlow Collector is configured only on the local switch.

Examples To create the sFlow Collector, sflow-local, with the IP address of 192.168.18.37 on port 37, and the scope local, use the following syntax:

```
CLI (network-admin@switch) > sflow-collector-create  collector-ip
192.168.18.37 collector-port 37 name sflow-local scope local
```

sflow-collector-delete

This command is used to delete an sFlow Collector from your sFlow configuration.

Syntax `sflow-collector-delete`

`name` *`name-string`*	Specify the name of the sFlow collector.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to delete an existing sFlow Collector.

Examples To delete the sflow collector, sflow-local, use the following command:

```
CLI (network-admin@switch) > sflow-collector-delete name sflow-
local
```

sflow-collector-modify

This command is used to modify an existing sFlow Collector in your sFlow configuration.

Syntax `sflow-collector-modify`

`name` *`name-string`*	Specify the name of the sFlow to be modified.
`collector-ip` *`ip-address`*	Modify the IP address of the sFlow collector.
`collector-port` *`collector-port-number`*	Modify the port number for the sFlow collector.
`scope [local|fabric]`	You cannot modify the scope of the sFlow Collector once configured.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage This command is used to modify an existing sFlow Collector parameters.

Examples To modify the port number of the sFlow Collector, sFlow-local, with the IP address of 192.168.18.37 to port 44, use the following syntax:

```
CLI (network-admin@switch) > sflow-collector-modify name sflow-local collector-ip 192.168.18.37 collector-port 44.
```

sflow-collector-show

This command is used to display the sFlow Collector configuration.

Syntax `sflow-collector-show`

`collector-ip` *`ip-address`*	The IP address of the sFlow collector.
`collector-port` *`collector-port-number`*	The port number of the sFlow collector.
`name` *`name-string`*	Name of the sFlow.
`scope [local|fabric]`	The scope, either fabric or local.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display information about the sFlow Collector.

Examples To display information about sFlow Collector, use the following command:

```
CLI (network-admin@switch) > sflow-collector-show
collector-ip collector-port name            scope
------------ -------------- ------------- ------
10.10.10.12  2055           sf_test       fabric
10.13.26.75  6343           sflow_collect local
```

sflow-create

This command is used to create an sFlow Agent on the network. You can configure an sFlow Agent with a scope local only (on the local switch).

Syntax `sflow-create`

`name` *`name-string`*	Specify a name for the sFlow.
`type ingress|egress`	Specify the type of packet for the sflow Agent. Specify ingress to capture incoming packets, and egress for outgoing packets.
`sample-type raw|cooked`	Specify the sample type for the sFlow Agent. Raw indicates that the packet retains the link level header, and cooked indicates that link level header is removed.
`ports` *`port-list`*	Specify the list of ports to capture packets.
`sample-rate` *`256-16000`*	Specify the sFlow sample rate. The value ranges from 256-16000, and the default value is 4096. Enter zero (0) if you want to disable sFlow sampling.
`counter-polling-interval 0..120`	Specify the sFlow interface statistics for counter polling interval. This is the periodic sampling or polling counters associated with a data source.
`trunc-length` *`trunc-length-number`*	Specify the truncated length of the captured packet.
`agent-id` *`ip-address`*	Specify the IP address of the sFlow agent.

Note: While creating the sFlow, do not configure both the `sample-rate`, and `counter-polling-interval` to zero (0). If you do so, an error message: `sflow-create: Sample-rate/counter-polling-interval both can't be 0` is displayed. However, later, you can change both values to zero (0) using the `sflow-modify` command if desired.

When you configure the `sample-rate`, and `counter-polling-interval` to zero (0) using the `sflow-modify` command, then no packets are sent out for sFlow monitoring.

Defaults The `sample-rate` default value is 4096.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `scope` is deprecated. The parameter `agent-id` added.
Version 2.4.1	The parameter `vnet` added.
Version 6.1.0	The parameter counter-polling-interval added. The parameter `vnet` deprecated.

Usage sFlow Agents capture packets on the network, and send them to the sFlow Collector for analysis. Use this command to configure an sFlow Agent.

Examples To configure an sFlow Agent, SF-agent1, with the sample type raw on ports 21-25, use the following command:

```
CLI (network-admin@switch) > sflow-create name SF-agent1 sample-type raw ports 21-25
```

sflow-delete

This command is used to delete an sFlow Agent from the network configuration.

Syntax `sflow-delete`

name *name-string*	Specify the name of the sFlow agent to delete.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to delete an sFlow Agent.

Examples To delete the sFlow Agent, SF-agent1, use the following command:

```
CLI (network-admin@switch) > sflow-delete name SF-agent1
```

sflow-modify

This command is used to modify an existing sFlow Agent on the network.

Syntax `sflow-modify`

`name` *`name-string`*	Specify the sFlow name you want to modify.
`type ingress|egress`	Modify the type of packet between ingress, and egress. Specify ingress to capture incoming packets, and egress for outgoing packets.
`sample-type raw|cooked`	Modify the sample type for the sFlow agent. Raw indicates that the packet retains the link level header, and cooked indicates that link level header is removed. The default mode is raw.
`ports` *`port-list`*	Modify the list of ports to capture packets.
`sample-rate` *`256-16000`*	Modify the rate of packet sampling by the sflow Agent.
`counter-polling-interval 0..120`	Modify the sFlow counter polling interval. This is the periodic sampling or polling counters associated with a data source.
`trunc-length` *`trunc-length-number`*	Modify the truncated length of the captured packet.
`agent-id` *`ip-address`*	Modify the IP address of the sFlow Agent. This is usually a switch management IP address, and indicates the originator or sample frames provider.

Defaults The `sample-type` default mode is raw. The `sample-rate` default value is 4096.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `scope` is deprecated. The

	parameter `agent-id` added.
Version 2.4.1	The parameter `vnet` added.
Version 6.1.0	The parameter counter-polling-interval added. The parameters `sample-interval`, and `vnet` are deprecated.

Usage sFlow Agents capture packets on the network, and send them to the sFlow Collector for analysis. Use this command to configure an sFlow Agent.

Examples To modify an sFlow Agent, SF-agent1, with sample type raw on ports 21-25, use the following command:

```
CLI (network-admin@switch) > sflow-modify name SF-agent1 sample-type raw ports 21-25
```

sflow-port-add

This command adds a port to the sflow-Agent.

Syntax `sflow-port-add`

`sflow-name` *`name-string`*	Specify the name of the sFlow to add the port.
`ports` *`port-list`*	Specify the list of ports to add to the sFlow Agent.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to add specific ports on a switch to the sFlow Agent.

Examples To add ports 31-33 to sFlow agent SF-agent1, use the following command:

```
CLI (network-admin@switch) > sflow-port-add sflow-name SF-agent1
ports 31-33
```

sflow-port-remove

This command removes a port from the sFlow-Agent.

Syntax `sflow-port-remove`

`sflow-name` *`name-string`*	Specify the name of the sFlow on which you want to remove the port (s).
`ports` *`port-list`*	Specify the list of ports to be removed from the sFlow Agent.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to remove specific ports on a switch associated with the sFlow Agent.

Examples To remove ports 31-33 from sFlow agent SF-agent1, use the following command:

```
CLI (network-admin@switch) > sflow-port-remove sflow-name SF-agent1
ports 31-33
```

sflow-show

Use this command to display information about a sFlow Agent on the network.

Syntax `sflow-show`

`name` *`name-string`*	The sFlow name.
`type ingress|egress`	The sFlow type for the sFlow agent. Specify ingress to capture incoming packets, and egress for outgoing packets.
`sample-type raw|cooked`	The sample type for the sFlow agent. Raw indicates that the packet retains the link level header, and cooked indicates that link level header is removed.
`ports` *`port-list`*	The sFlow ports.
`sample-rate` *`256-16000`*	The sFlow sample rate.
`counter-polling-interval 0..120`	The sFlow interface stats-counter polling interval.
`trunc-length` *`trunc-length-number`*	The truncated length of the sFlow sample.
`agent-id` *`ip-address`*	The local IP address.
`sample-pkt-cnt` *`sample-pkt-cnt-number`*	The sFlow sample packet count.
`sample-drops` *`sample-drops-number`*	The sFlow sample dropped packets.
`malformed-packet-drops malformed-packet-drops-number`	The sFlow malformed packet drops.
`malformed-vlan-packet-drops malformed-vlan-packet-drops-number`	The sFlow malformed vlan packet drops.
`malformed-ip-packet-drops malformed-ip-packet-drops-number`	The sFlow malformed ip packet drops.
`internal-q-drops internal-q-drops-number`	The sFlow internal Q drops.
`oversize-packet-drops oversize-packet-drops-number`	The sFlow over size packet drops.

`internal-nq-drops internal-nq-drops-number`	The sFlow internal nQ drops

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `scope` is deprecated. The parameters `sample-pkt-cnt`, and `sample-drops` added.
Version 2.4.1.	The parameter `vnet` added.
Version 6.1.0	The parameters `counter-polling-interval`, `malformed-packet-drops`, `malformed-vlan-packet-drops`, `malformed-ip-packet-drops`, `internal-q-drops`, `oversize-packet-drops`, and `internal-nq-drops` are added. The parameter`sample-interval` is deprecated.

Usage sFlow Agents capture packets on the network, and send them to the sFlow Collector for analysis. Use this command to display information about an sFlow Agent .

Examples To display the sFlow Agent, SF-agent1, and display in a vertical format, use the following command:

```
CLI (network-admin@switch) > sflow-show name SF-agent1 layout
vertical
switch:                         switch
name:                           SF-agent1
type:                           ingress
sample-type:                    raw
ports:                          25
sample-rate:                    1
trunc-length:                   160
vnet-id:                        0:0
vlan:                           0
agent-id:                       10.14.22.100
sample-pkt-cnt:                 66798
sample-drops:                   0
invalid-vlan-drops:             0
malformed-packet-drops:         0
```

```
malformed-vlan-packet-drops:     0
v6-packet-drops:                 0
malformed-ip-packet-drops:       0
internal-q-drops:                0
oversize-packet-drops:           0
internal-nq-drops:               0
```

sflow-thread-binding-show

This command is used to display the binding information between the sFlows, and the nv-queue messages in the network.

Syntax `sflow-thread-binding-show`

`name` *`name-string`*	The sFlow name.
`thread-id` `thread-id-number`	The unique identifier of the sFlow Agent that binds the sFlows (in groups of 6)
`nv-msg-queue-name` `nv-msg-queue-name-string`	The associated *nv-sflow-msg* queue name, which is the actual software queue used for sFlow sampling.
`nv-cache-queue-name` *`nv-cache-queue-name-string`*	The associated nv sflow cache queue name. This is a pool of buffers. NetVisor allocates one queue from the cache_queue whenever a sample is received from the hardware, which is then queued to the nv_queue. After processing the sampled packet the buffer is released from msg_queue back to cache_queue.

Defaults None.

Access CLI

History

Version 6.1.0	Command introduced. The parameters `thread-id, nv-msg-queue-name, and nv-cache-queue-name` added.

Usage Use this command to display information about the binding between the sFlow Agent, and the nv-queue messages.

Examples To display the binding details, use the following command:

```
CLI (network-admin@switch) > sflow-thread-binding-show
name thread-id       nv-msg-queue-name nv-cache-queue-name
---- --------------- ----------------- -------------------
s1   140323777259264 sflow-packet-q-9  sflow-cache-q-9
s2   140323777259264 sflow-packet-q-9  sflow-cache-q-9
s3   140323777259264 sflow-packet-q-9  sflow-cache-q-9
s4   140323777259264 sflow-packet-q-9  sflow-cache-q-9
s5   140323777259264 sflow-packet-q-9  sflow-cache-q-9
s6   140323777259264 sflow-packet-q-9  sflow-cache-q-9
```

```
s7   140322640197376 sflow-packet-q-10 sflow-cache-q-10
s8   140322640197376 sflow-packet-q-10 sflow-cache-q-10
s9   140322640197376 sflow-packet-q-10 sflow-cache-q-10
s10  140322640197376 sflow-packet-q-10 sflow-cache-q-10
s11  140322640197376 sflow-packet-q-10 sflow-cache-q-10
s12  140322640197376 sflow-packet-q-10 sflow-cache-q-10
s13  140322665375488 sflow-packet-q-11 sflow-cache-q-11
s14  140322665375488 sflow-packet-q-11 sflow-cache-q-11
s15  140322665375488 sflow-packet-q-11 sflow-cache-q-11
```

scp

This command is used to access Secure, Contain, and Protect (SCP) protocol for NetVisor OS.

Syntax `scp`

Defaults None

Access Network Administrator

History

Usage Use this command to transfer files over scp.

Examples To access scp, use the following syntax:

```
CLI (network-admin@switch) > scp
```

sftp

This command is used to access SSH File Transfer Protocol (SFTP) for NetVisor OS.

Syntax `sftp`

Defaults None

Access Network Administrator

History

Usage Use this command to transfer files over SFTP.

Examples To access SFTP, use the following syntax:

```
CLI (network-admin@switch) > sftp
```

shell

This command is used to access the shell for NetVisor OS.

> **Informational Note**: Before you can use the shell command, you must modify the role to allow access to the shell. Use the role-modify command to allow access to the shell.

Syntax `shell`

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to access the shell for NetVisor OS.

Examples To access the shell, use the following syntax:

```
CLI (network-admin@switch) > shell
'admin@switch:~$ '
```

snmp-community-create

This command is used to create SNMP communities to support SNMPv1.

Syntax `snmp-community-create`

`community-string` *`community-string-string`*	Specify the name for the community string.
`community-type read-only|read-write`	Specify the access type for the community.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Communities are used in SNMPv1 as a method of controlling access to information. Use this command to create a community for SNMPv1.

Examples To create a community, snmp-reader, for read-only access, use the following command:

```
CLI (network-admin@switch) > snmp-community-create community-string
snmp-reader community-type read-only
```

snmp-community-delete

This command is used to delete an SNMP community that supports SNMPv1.

Syntax `snmp-community-delete`

`community-string` *`community-string-string`*	Specify the name for the community string to delete.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Communities are used in SNMPv1 as a method of controlling access to information. Use this command to delete a community for SNMPv1.

Examples To delete a community, snmp-reader, use the following command:

```
CLI (network-admin@switch) > snmp-community-delete community-string
snmp-reader
```

snmp-community-modify

This command is used to modify an SNMP community to support SNMPv1.

Syntax `snmp-community-modify`

`community-string` *`community-string-string`*	Specify the name for the community string.
`community-type read-only|read-write`	Specify the access type for the community.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Communities are used in SNMPv1 as a method of controlling access to information. Use this command to modify a community for SNMPv1.

Examples To modify a community, snmp-reader, for read-write access, use the following command:

```
CLI (network-admin@switch) > snmp-community-modify community-string
snmp-reader community-type read-write
```

snmp-community-show

This command is used to display SNMP communities that support SNMPv1.

Syntax `snmp-community-show`

`community-string` *`community-string-string`*	Name for the community string.
`community-type read-only|read-write`	The access type for the community.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Communities are used in SNMPv1 as a method of controlling access to information. Use this command to display communities for SNMPv1.

Examples To display SNMPv1 communities, use the following command:

```
CLI (network-admin@switch) > snmp-community-show
switch     community-string community-type
---------  ---------------- --------------
pleiades1  test                 read-write
pleiades2  test                 read-write
pleiades3  test                   read-write
```

SNMP Engine Commands

snmp-engineid-modify

NetVisor OS allows you to modify the SNMP Engine ID, and retrieve previous SNMP agent information for a switch no longer in use. If you remove a switch from the network, you can modify the SNMP Engine ID to use the old SNMP Engine ID so NetVisor can query, and maintain the same history records for the new switch.

Syntax `snmp-engineid-modify`

`engineid` *`string`*	Specify the 28 character unique ID for the SNMP engine.

Defaults None

Access CLI

History

Version 3.0.0	Command introduced.

Usage Use this command to modify the engine identification for the switch.

Examples To modify the engine identification, use the following command:

```
CLI (network-admin@switch) > snmp-engineid-modify  engineid
0x80001f8880f2af3c6a2528fc51
Warning: All SNMP users will be erased.
Please confirm y/n (Default: n): y
Modified snmp engineID, Deleted all SNMP users.Please re-create SNMP users.
```

snmp-engineid-show

The SNMP engine ID is a unique string of 28 characters that identifies the device for administrative purposes. This command displays the identification of the local SNMP engine, and all remote engines configured on the server-switch.

Syntax `snmp-engineid-show`

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to display the engine identification for the switch.

Examples To display the engine identification, use the following command:

```
CLI (network-admin@switch) > snmp-engineid-show
switch:   pleiades24
engineid: 0x80001f8880f2af3c6a2528fc51
switch:   pleiades26
engineid: 0x80001f8880f2af3c6a2528fc51
switch:   pleiades28
engineid: 0x80001f8880f2af3c6a2528fc51
```

snmp-show

This command is used to display information about SNMP MIBs on the network.

Syntax `snmp-show`

`community-string` *`community-string-string-show`*	The community string for SNMP.
`name` *`snmp-oid name`*	The Object Identifier (OID) to display.
`show-type walk|get|get-next`	Specify the display method for the SNMP MIBs. Use get to retrieve, and display the next SNMP object values. Use get-next to retrieve, and display the SNMP object values associated with the requested object identifier.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display local SNMP MIB object values.

Examples To display the community, snmp-com, use the following command:

```
CLI (network-admin@switch) > show-snmp community-string snmp-com
layout vertical
```

snmp-system-modify

You use this command to modify SNMP system information.

Syntax `snmp-system-modify`

`syscontact` *`syscontact-string`*	Specify the system contact information.
`syslocation syslocation-string`	Specify the system location.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to modify system location information.

Examples To modify SNMP system information, use the following syntax:

```
CLI (network-admin@switch) > snmp-system-modify syscontact johndoe
```

snmp-system-show

You use this command to display SNMP system information.

Syntax `snmp-system-show`

`syscontact` *`syscontact-string`*	The system contact information.
`syslocation syslocation-string`	The system location.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to display system location information.

Examples To display SNMP system information, use the following syntax:

```
CLI (network-admin@switch) > snmp-system-show
```

snmp-system-clear

You use this command to clear SNMP system information.

Syntax `snmp-system-clear`

`syscontact` *`syscontact-string`*	Specify the system contact information.
`syslocation syslocation-string`	Specify the system location.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to clear system location information.

Examples To clear SNMP system information, use the following syntax:

```
CLI (network-admin@switch) > snmp-system-clear syscontact johndoe
```

snmp-trap-enable-modify

This command is used to enable SNMP notifications about link conditions, and common system errors.

Syntax `snmp-trap-enable-modify`

Specify one or more of the following options:

`link-up-down|no-link-up-down`	Specify if you want to send SNMP traps based on port status.
`interface-up-down|no-interface-up-down`	Specify if you want to send SNMP traps for vRouter interface status.
`default-monitors|no-default-monitors`	Specify the monitor to apply to the trap.
`physical-sensors|no-physical-sensors`	Specify to send traps about physical sensors.
`low-disk-space|no-low-disk-space`	Specify to send traps about low disk space.
`low-disk-space-threshold` *`low-disk-space-threshold-string`*	Specify a low disk space threshold as a percentage.
`system-usage|no-system-usage`	Specify to send traps about memory, and CPU usage.
`high-system-usage-threshold` *`high-system-usage-threshold-string`*	Specify a high system usage threshold as a percentage.
`login-failure|no-login-failure`	Specify to send traps about login failures.
`cluster-tr-diverge|no-cluster-tr-diverge`	Specify to send traps when cluster transactions lists diverge.
`lacp-status|no-lacp-status`	Specify to send traps about LACP status.
`vport-modified|no-vport-modified`	Specify to send traps about vPort modifications.
`stp-port-modified|no-stp-port-modified`	Specify to send traps about STP port modifications.

`mirror-to-cpu|no-mirror-to-cpu`	Specify to send traps about mirror to CPU status.
`stp-port-state-failed|no-stp-port-state-failed`	Specify to send traps if the STP port status is `failed`.
`link-congestion-detected|no-link-congestion-detected`	Specify to send traps when link congestion is detected.
`fabric-node-state-changed|no-fabric-node-state-changed`	Specify to send traps when the fabric node state changes.
`stp-new-root|no-stp-new-root`	Specify to send traps when a new STP root is detected..
`stp-topology-changed|no-stp-topology-changed`	Specify to send traps when STP changes are detected.
`vrrp-new-master|no-vrrp-new-master`	Specify to send traps when a new V RRP master is detected.
`disable-start-stop`	Specify if you want to disable **coldstart** and **notifyshutdown** traps.
`cert-expiry|no-cert-expiry`	Specifies the certificate expiry.
`sysup-alert|no-sysup-alert`	Specifies the system up alert.
`port-oir-error-state|no-port-oir-error-state`	Specifies the port oir error state.
`port-bw-threshold-exceed-event|no-port-bw-threshold-exceed-event`	Specifies the port bandwidth threshold exceeded alert.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.3	The parameters `physical-sensors`, `low-disk-space`, `system-usage`, and `login-failure` added.

Version 2.4.1	The parameters `lacp-status`, `vport-modified`, `stp-port-modified`, `mirror-to-cpu`, and `stp-port-state-failed` added.
Version 2.5	The parameters `link-congestion-`, and `fabric-node-state-` added.
Version 2.6.2	The parameters `stp-new-root`, `stp-err-disabled`, and `vrrp-new master` added.
Version 3.0.0	New parameters `disable-start-stop`, and `interface-up-down` added. The parameter `stp-err-disable` changed to `stp-topology-changed`.
Version 5.1.0	The parameters `cluster-tr-diverge|no-cluster-tr-diverge` added.
Version 7.0.0	The parameter `port-bw-threshold-exceed-event` added.

Usage Use this command to use link status for notifications.

Examples To use link status as the notification, use the following command:

```
CLI (network-admin@switch) > snmp-trap-enable-modify link-up-down
```

snmp-trap-enable-show

This command is used to display information about SNMP traps.

Syntax `snmp-trap-enable-show`

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to display information about SNMP traps.

Examples To display SNMP trap information, use the following command:

```
CLI (network-admin@switch) > snmp-trap-enable-show
switch:           Spine-1
link-up-down:     no
default-monitors: no
switch:           Spine-2
link-up-down:     no
default-monitors: no
switch:           Spine-3
link-up-down:     no
default-monitors: no
```

snmp-trap-sink-create

This command is used to specify a SNMPv1 trap receiver for SNMP traps.

Syntax `snmp-trap-sink-create`

`community` *`community-string`*	Specify the community name to send traps.
`type TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM`	Specify the type of SNMP trap.
`dest-host` *`dest-host-string`*	Specify the destination host.
`dest-port` *`dest-port-number`*	Specify the destination port. The default port is 162.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4	The options, `TRAP_TYPE_V3_TRAP| TRAP_TYPE_V3_INFORM` deprecated.

Usage Use this command to send SNMP traps to a receiver. You can configure up to two receivers.

Examples To send TRAP_TYPE_V1_TRAP, from community string, snmp-group, to the destination, trap-recvr, on port 43, use the following command:

```
CLI (network-admin@switch) > snmp-trap-sink-create community snmp-group type TRAP_TYPE_V1_TRAP dest-host 172.21.16.0 trap-recvr dest-port 43
```

snmp-trap-sink-delete

This command is used to delete a SNMPv1 trap receiver for SNMP traps.

Syntax `snmp-trap-sink-delete`

`community` *`community-string`*	Specify the community name to send traps.
`type TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM`	Specify the type of SNMP trap.
`dest-host` *`dest-host-string`*	Specify the destination host.
`dest-port` *`dest-port-number`*	Specify the destination port. The default port is 162.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to delete an SNMP receiver.

Examples To delete community string, snmp-group, and the destination, trap-recvr, on port 43, use the following command:

```
CLI (network-admin@switch) > snmp-trap-sink-delete community snmp-group dest-host snmp-recvr dest-port 43
```

snmp-trap-sink-show

This command is used to display infomation about a SNMPv1 trap receiver for SNMP traps.

Syntax `snmp-trap-sink-show`

`community` *`community-string`*	The community name to send traps.
`type TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM`	The type of SNMP trap.
`dest-host` *`dest-host-string`*	The destination host.
`dest-port` *`dest-port-number`*	The destination port. The default port is 162.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4	The options, `TRAP_TYPE_V3_TRAP| TRAP_TYPE_V3_INFORM` deprecated.

Usage Use this command to display information about an SNMP receiver.

Examples To modify the destination port to 53 for community string, snmp-group, and the destination host, trap-recvr,, use the following command:

```
CLI (network-admin@switch) > snmp-trap-sink-show community snmp-group
```

snmp-user-create

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure, and more flexible. You can also require that users must authenticate, and use encryption.

Syntax `snmp-user-create`

`user-name` *`name-string`*	Specify the user name.
`auth-password` *`auth-password-string`*	Specify the authentication password.
`auth|no-auth`	Specify if authentication is required or not.
`auth-hash md5|sha`	Specify the type of authentication hashing algorithm.
`priv-password` *`priv-password-string`*	Specify the password for privileges mode.
`priv|no-priv`	Specifies if privileges are assigned or not.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameter `auth-password`, and `priv-password` added.
Version 2.6.0	The parameter `auth-hash` added.

Usage Use this command to create users for SNMPv3.

Examples To create SNMPv3 users, use the following command:

```
CLI (network-admin@switch) > snmp-user-create
```

snmp-user-delete

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure, and more flexible. You can also require that users must authenticate, and use encryption.

Syntax `snmp-user-delete`

`user-name` *`name-string`*	Specifies the user name.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Use this command to delete a user configured for SNMPv3.

Examples To display SNMPv3 user information, use the following command:

```
CLI (network-admin@switch) > snmp-user-delete
```

snmp-user-modify

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure, and more flexible. You can also require that users must authenticate, and use encryption.

Syntax `snmp-user-modify`

`user-name` *`name-string`*	Specify the user name.
`auth-password` *`auth-password-string`*	Specify the authentication password.
`auth|no-auth`	Specify if authentication is required or not.
`auth-hash md5|sha`	Specify the type of authentication hashing algorithm.
`priv-password` *`priv-password-string`*	Specify the password for privileges mode.
`priv|no-priv`	Specifies if privileges are assigned or not.

Default None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameter `auth-password`, and `priv-password` added.
Version 2.6.0	The parameter `auth-hash` added.

Usage Use this command to modify parameters configured for SNMPv3 users.

Examples To modify SNMPv3 user information, use the following command:

```
CLI (network-admin@switch) > snmp-user-modify
```

snmp-user-show

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure, and more flexible. You can also require that users must authenticate, and use encryption.

Syntax `snmp-user-show`

`user-name` *`name-string`*	The user name.
`auth-password` *`auth-password-string`*	The authentication password.
`auth|no-auth`	Specify if authentication is required or not.
`auth-hash md5|sha`	The type of authentication hashing algorithm.
`priv-password` *`priv-password-string`*	The password for privileges mode.
`priv|no-priv`	Specifies if privileges are assigned or not.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameter `auth-password`, and `priv-password` added.
Version 2.6.0	The parameter `auth-hash` added.

Usage Use this command to display information about users configured for SNMPv3.

Examples To display SNMPv3 user information, use the following command:

```
CLI (network-admin@switch) > snmp-user-show
```

snmp-v3-trap-sink-create

This command is used to specify a SNMPv3 trap receiver for SNMP traps.

Syntax `snmp-trap-sink-create`

`user-name` *`user-name-string`*	Specify the user name to send traps.
`type TRAP_TYPE_V3_TRAP| TRAP_TYPE_V3_INFORM`	Specify the type of SNMP trap.
`dest-host` *`dest-host-string`*	Specify the destination host.
`dest-port` *`dest-port-number`*	Specify the destination port.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4	The options, `TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM` deprecated.
Version 2.4.1	The parameters `engine-id`, `auth-password`, `auth|no-auth`, `priv-password`, and `priv|no-priv` deprecated.

Usage Use this command to send SNMPv3 traps to a receiver.

Examples To send TRAP_TYPE_V3_TRAP, from community string, snmp-group, to the destination, trap-recvr, on port 43, use the following command:

```
CLI (network-admin@switch) > snmp-v3-trap-sink-create snmp-group
dest-host snmp-recvr dest-port 43
```

snmp-v3-trap-sink-delete

This command is used to remove an SNMPv3 trap receiver from the configuration.

Syntax `snmp-v3-trap-sink-delete`

`user-name` *`user-name-string`*	Specify the user name to send traps.
`dest-host` *`dest-host-string`*	Specify the destination host.
`dest-port` *`dest-port-number`*	Specify the destination port.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4	The parameter `engine-id` deprecated.

Usage Use this command to remove an SNMPv3 trap receiver from the configuration.

Examples To remove the user, snmp-admin, and destination host, snmpv3-receiver, from destination port 67, use the following command:

```
CLI (network-admin@switch) > snmp-v3-trap-sink-delete  user-name
snmp-admin  dest-host  snmpv3-receiver  dest-port  67
```

snmp-v3-trap-sink-show

This command is used to display information about a SNMPv3 trap receiver for SNMP traps.

Syntax `snmp-trap-sink-show`

`user-name` *`user-name-string`*	The user name to send traps.
`type TRAP_TYPE_V3_TRAP| TRAP_TYPE_V3_INFORM`	The type of SNMP trap.
`dest-host` *`dest-host-string`*	The destination host.
`dest-port` *`dest-port-number`*	The destination port.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4	The options `TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM` deprecated.

Usage Use this command to display information about an SNMPv3 receiver configuration.

Examples To display information about an SNMPv3 receiver, use the following command:

```
CLI (network-admin@switch) > snmp-v3-trap-sink-show
```

snmp-vacm-create

This command is used to create View Access Control Models (VACM) for SNMPv3.

Syntax `snmp-vacm-create`

`user-type rouser|rwuser`	Specifies the SNMP user type.
`user-name` *`snmp-user user-name`*	Specifies the SNMP administrator name.
`oid-restrict` *`oid-restrict-string`*	Specifies the restrict OID.
`auth|no-auth`	Specifies whether authentication is required or not.
`priv|no-priv`	Specifies if the privileges are assigned or not.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to create View Access Control Models (VACM) for SNMPv3.

Examples To create VACMs for SNMP, use the following command:

```
CLI (network-admin@switch) > snmp-vacm-create
```

snmp-vacm-delete

This command is used to remove View Access Control Models (VACM) for SNMPv3.

Syntax `snmp-vacm-delete`

`user-name` *`snmp-user user-name`*	Specifies the SNMP administrator name.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete View Access Control Models (VACM) for SNMPv3.

Examples To delete VACMs for SNMP, use the following command:

```
CLI (network-admin@switch) > snmp-vacm-delete
```

snmp-vacm-modify

This command is used to modify View Access Control Models (VACM) for SNMPv3.

Syntax `snmp-vacm-modify`

`user-name` *`snmp-user user-name`*	Specifies the SNMP administrator name.
one or more of the following options:	
`user-type` *`rouser`*`|`*`rwuser`*	Specifies the SNMP user type.
`oid-restrict` *`oid-restrict-string`*	Specifies the restrict OID.
`auth|no-auth`	Specifies whether authentication is required or not.
`priv|no-priv`	Specifies if the privileges are assigned or not.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify View Access Control Models (VACM) for SNMPv3.

Examples To modify VACMs for SNMP, use the following command:

```
CLI (network-admin@switch) > snmp-vacm-modify
```

snmp-vacm-show

This command is used to display View Access Control Models (VACM) for SNMP.

Syntax `snmp-vacm-show`

`user-type` *`rouser|rwuser`*	The SNMP user type.
`user-name` *`snmp-user user-name`*	The SNMP administrator name.
`oid-restrict` *`oid-restrict-string`*	The restrict OID.
`view` *`view-string`*	The view type.
`auth|no-auth`	Specifies whether authentication is required or not.
`priv|no-priv`	Specifies if the privileges are assigned or not.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display View Access Control Models (VACM) for SNMPv3.

Examples To display VACMs for SNMP, use the following command:

```
CLI (network-admin@switch) > snmp-vacmshow
user-type  user-name  oid-restrict  view  auth  priv
---------  ---------  ------------  ----  ----  ----
rouser     snmp-user  sysContact          no    no
```

software-license-import-product-ids

This command is used to import product identification used with software licenses.

Syntax `software-license-import-product-ids`

`pid-file sftp-files` *`name`*	Specify the name of the product ID file to import into the switch.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage To license a switch, you must import the product ID file.

Examples To import the product ID file named, nvos-pids, use the following command:

```
CLI (network-admin@switch) > software-license-import-product-ids
pid-file sftp-files nvos-pids
```

software-license-install

This command is used to install software licenses on the switches.

Syntax `software-license-install`

`key` *`key-string`*	Specify the key string for the license.

Defaults None

Access CLI

History

Version 2.0	Command introduced.

Usage Some features in NetVisor require license keys in order to activate them.

Examples To install the license key, 98874377282894729728 97ghg, use the following command:

```
CLI (network-admin@switch) > software-license-install key
98874377282894729728 97ghg
```

software-license-show

This command is used to display information about software licenses installed on the switch.

Syntax `software-license-show`

`license-id` *`license-id-string`*	The license ID string.
`id` *`id-number`*	The ID.
`description` *`description-string`*	The description of the license.
`prompt` *`prompt-string`*	The prompt string.
`key` *`key-string`*	The generated keys.
`feature` *`feature-string`*	The licensed features.
`upgrade yes|no]`	Specifies if the license is upgradeable.
`upgrade-from` *`upgrade-from-string`*	The software version to upgrade from.
`sysconfig yes|no`	The system configuration.
`pending yes|no`	Specifies if the verification of the license is pending.
`pid-file` *`sftp-files name`*	The PID file name.
`expires-on` *`expires-on-string`*	The expiration date.
`status unknown|VALID|EXPIRING| GRACE|EXPIRED]`	The license status.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display information about software licenses installed on a switch.

Examples To display the license information, use the following command:

```
CLI (network-admin@pleiades25) > software-license-show
switch:           pleiades25
license-id:     F-ASDF-NVOS2.0
description:  Freedom  F-Line  Advanced Software Defined Fabric License for Netvisor
2.x
key:                    sung,decrypt,true,airdrop
feature:        all
upgrade-from:
```

software-show

This command is used to display the currently running version of the software on the local switch.

Syntax `software-show`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage This command displays the currently running version of the software installed on the local switch

Examples To display the software version installed on the local switch, use the following command:

```
CLI (network-admin@switch) > software-show
version:          5.1.2-5010215459
```

software-upgrade

This command is used to upgrade the operating system on the switch.

Syntax `software-upgrade`

`package` *`upgrade-package-name.pkg`*	Specify the file names for the software upgrade.
`upload-server` *`upload-server-string`*	Specify if you want to upload the configuration file a SFTP server.
`auto-reboot|no-auto-reboot`	Automatically reboot after software upgrade or not (default: yes).
`software-upgrade-abort`	Indicate software upgrade to abort upgrade operation when ready.
`software-upgrade-reboot`	Indicate software upgrade to reboot the switch when ready.
`software-upgrade-instant-status-show`	Displays the current status of software upgrade.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 3.1.0	The parameter `upload-server` added.
Version 6.1.0	The Parameter `auto-reboot|no-auto-reboot` added. The commands `software-upgrade-abort`, `software-upgrade-instant-status-show`, `software-upgrade-reboot` added.

Usage A switch can contact an upgrade server, either directly or through a proxy, to configure another version of the OS. This command launches the OS upgrade process on the local switch.

Examples To launch the OS upgrade process on the local switch, use the following command:

```
CLI (network-admin@switch) > software-upgrade package release-2.4
```

software-upgrade-abort

This command is used to indicate software upgrade to abort upgrade operation when ready.

Syntax `software-upgrade-abort`

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command is used to indicate software upgrade to abort upgrade operation when ready.

Examples To abort upgrade operation, use the following command:

```
CLI (network-admin@switch) > software-upgrade-abort
```

software-upgrade-instant-status-show

This command is used to display the current status of software upgrade.

Syntax `software-upgrade-instant-status-show`

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command is used to display the current status of software upgrade.

Examples To display the current status of software upgrade, use the following command:

```
CLI (network-admin@switch) > software-upgrade-instant-status-show
```

software-upgrade-reboot

This command is used indicate software upgrade to reboot the switch when ready.

Syntax `software-upgrade-reboot`

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command is used to indicate software upgrade to reboot the switch when ready.

Examples To abort upgrade operation, use the following command:

```
CLI (network-admin@switch) > software-upgrade-reboot
```

software-upgrade-status-show

This command is used to display the software upgrade status on a switch.

Syntax `software-upgrade-status-show`

Defaults None

Access CLI

History

Version 2.2	Command introduced.

Usage You can use this command to track the status of a software upgrade on a switch.

Examples To view the status of a software upgrade, use the following syntax:

```
CLI (network-admin@switch) > software-upgrade-status-show
log:                No upgrade in progress.
```

ssh

This command allows you to use the protocol, Secure Shell (SSH) to remotely log into a host from a switch.

Syntax `ssh host -l user`

`host`	Specifies the hostname or IP address of a host.
`user`	Specifies a configured user on the host.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A switch can remotely log into another host. This command initiates a remote login using a secure, encrypted communication with the SSH protocol.

Examples To remotely log into the switch at 10.1.1.1 as the admin, use the following command:

```
CLI (network-admin@switch) > ssh admin@10.1.1.1
```

ssh-known-hosts-delete

This command allows you to delete outdated SSH fingerprints from the `known_hosts` file on a switch.

Syntax `ssh-known-hosts-delete`

Defaults None.

History

Version 1.2.1	Command introduced.

Usage Allows you to delete SSH fingerprints from previous logins.

Examples To delete the fingerprint from the switch, use the following command:

```
CLI (network-admin@switch) > ssh-known-hosts-delete
```

static-arp-create

This command adds the capability of supporting static ARP in the ARP cache.

Syntax `static-arp-create`

`scope local|cluster|fabric`	Specify the scope of the group. The default scope is local.
`ip ip-address`	Specify the host IP address to bind with the MAC address.
`mac mac-address`	Specify the unicast MAC address to bind with the IP address of the host.

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage Use this command to create a static ARP entry in the ARP cache.

Examples To create an ARP entry between two hosts, use the following syntax:

```
CLI (network-admin@switch) > static-arp-create ip 172.148.0.0 mac
00:12:00:88:0c:00
```

static-arp-delete

This commands deletes the unicast static ARP from the configuration.

Syntax `static-arp-delete`

ip ip-address	Specify the IP address of the host that is binding with the MAC address.

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage Use this command to delete the unicast static ARP entry.

Examples To delete a static ARP entry for IP address, 172.148.0.0, use the following syntax:

```
CLI (network-admin@switch) > static-arp-delete ip 172.148.0.0
```

static-arp-show

This command displays information about the static ARP entry.

Syntax `static-arp-show`

`scope local|cluster|fabric`	The scope of the group. The default scope is local.
`ip ip-address`	The host IP address to bind with the MAC address.
`mac mac-address`	The unicast MAC address to bind with the IP address of the host.

Defaults None

Access Network Administrator

History

Version 5.1.1	Command introduced.

Usage Use this command to display the details of a static ARP entry.

Examples To display static ARP entry, use the following syntax:

```
CLI (network-admin@switch) > static-arp-show scope local ip
172.148.0.0
switch scope ip           mac
------ ----- ----------- -----------------
switch local 172.148.0.0 00:12:00:88:0c:00
```

static-ecmp-group-create

This command adds the capability of supporting multiple nexthops for Equal Cost Multipath (ECMP) routing to single destinations as part of Policy-Based Routing (PBR).

Syntax `static-ecmp-group-create`

`group-name` *`group-name-string`*	Specify an ECMP group name.
`scope local|cluster|fabric`	Specify the scope of the group. The default scope is local.
`vrouter-name` *`vrouter name`*	Specify the vRouter name.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`vnet` *`vnet-name`*	Specify the vNET for the static ECMP group. Note: `vnet` is an optional parameter that you can specify along with `vrf`.
`hash-type static-fixed|resilient`	Specify the type of ECMP hash for the group. Resilient hashing helps minimize the flow remapping across ECMP groups, and LAGs in a load-balanced.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.
Version 6.0.0	The parameters `vrf`, and `vnet` added.

Usage Use this command to create a static ECMP group.

Examples To create an ECMP group named GR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-create group-name
GR1
```

static-ecmp-group-delete

This commands removes ECMP groups from the configuration.

Syntax `static-ecmp-group-delete`

`group-name` *`group-name-string`*	Specify an ECMP group name.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.

Usage Use this command to delete a static ECMP group.

Examples To delete an ECMP group named GR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-delete  group-name
GR1
```

static-ecmp-group-modify

This commands modifies the ECMP configuration.

Syntax `static-ecmp-group-modify`

`group-name` *`group-name-string`*	Specify an ECMP group name.
`vrouter-name` *`vrouter name`*	Specify the vRouter name.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`vnet` *`vnet-name`*	Specify the vNET name. Note: `vnet` is an optional parameter that you can specify along with `vrf`.
`hash-type static-fixed|resilient`	Specify the type of ECMP hash for the group. Resilient hashing helps minimize the flow remapping across ECMP groups, and LAGs in a load-balanced system.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.
Version 6.0.0	The parameters `vrf`, and `vnet` added.

Usage Use this command to modify a static ECMP group.

Examples To modify an ECMP group named GR1, and add vRouter, VR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-modify  group-name
GR1 vrouter VR1
```

static-ecmp-group-show

This command displays information about Equal Cost Multipath (ECMP) routing groups.

Syntax `static-ecmp-group-show`

`group-name` *`group-name-string`*	An ECMP group name.
`scope local|cluster|fabric`	The scope of the group. The default scope is local.
`vrouter-name` *`vrouter name`*	The vRouter name.
`vrf vrf-name`	Name of the VRF.
`vnet` *`vnet-name`*	The vNET name.
`vrid` *`vrid-number`*	The hardware vRouter ID.
`hw-ecmp-id` *`hw-ecmp-id-number`*	The static ECMP group hardware ID.
`hash-type static-fixed|resilient`	The type of ECMP hash for the group. Resilient hashing helps minimize the flow remapping across ECMP groups, and LAGs in a load-balanced.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.
Version 6.0.0	The parameters `vrf`, and `vnet` added.

Usage Use this command to display a static ECMP group.

Examples To display ECMP groups, use the following syntax:

```
CLI (network-admin@switch)1 > static-ecmp-group-show gr1
switch  group-name scope vrf  vnet vrid hw-ecmp-id hash-type
------- ---------- ----- ---- ---- ---- ---------- -------------
switch1 gr1        local vrf1 0:0  1    200256     static-fixed
```

static-ecmp-group-nh-add

Add a nexthop destination to a static ECMP group configuration.

Syntax `static-ecmp-group-nh-add`

`group-name` *`group-name-string`*	Specify the ECMP group name.
`ip` *`ip-address`*	Specify the IP address of the gateway.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.

Usage Use this command to add a nexthop to a static ECMP configuration.

Examples To add a nexthop IP address, 172.21.16.23, to group, GR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-nh-add  group-name
GR1 ip 172.21.16.23
```

static-ecmp-group-nh-remove

Remove a nexthop destination from a static ECMP group configuration.

Syntax `static-ecmp-group-nh-remove`

`group-name` *`group-name-string`*	Specify the ECMP group name.
`ip` *`ip-address`*	Specify the IP address of the gateway.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.

Usage Use this command to remove a nexthop from a static ECMP configuration.

Examples To remove a nexthop IP address, 172.21.16.23, to group, GR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-nh-remove group-name
GR1 ip 172.21.16.23
```

static-ecmp-group-nh-show

Display a nexthop destination to a static ECMP group configuration.

Syntax `static-ecmp-group-nh-show`

`group-name` *`group-name-string`*	The ECMP group name.
`ip` *`ip-address`*	The IP address of the gateway.
`vlan` *`vlan-id`*	The VLAN of the nexthop.
`egress-id` *`egress-id-number`*	The hardware egress ID.

Defaults None

Access Network Administrator

History

Version 5.0.0	Command introduced.

Usage Use this command to display a nexthop information for a static ECMP configuration.

Examples To display the configuration, GR1, use the following syntax:

```
CLI (network-admin@switch) > static-ecmp-group-nh-show  group-name
GR1
group-name ip            vlan egress-id
---------- ------------- ---- ---------
gr1        172.21.16.23  24    -1
```

Spanning Tree Protocol Commands

stp-modify

Use this command to modify the Spanning Tree Protocol (STP).

Syntax `stp-modify`

`mst-config-name` *`name-string`*	Specify the name of the Multiple Spanning Tree (MST) configuration.
`enable|disable`	Specify if you want to enable or disable STP.
`stp-mode rstp|mstp`	Specify the STP mode as RSTP or MSTP.
Specify one or more of the following options:	
`bpdus-bridge-ports|bpdus-all-ports`	Specify if you want BPDU packets to bridge specific ports or all ports.
`bridge-priority` *`bridge-priority-number`*	Specify the bridge priority.
`hello-time` *`seconds`*	Specify the hello time in seconds. This is a value between 1, and 10 seconds. The default value is 2 seconds.
`forwarding-delay` *`seconds`*	Specify the forwarding delay in seconds. This is a value between 4, and 30 seconds.
`max-age` *`seconds`*	Specify the maximum age of the bridge. This is a value between 6, and 40 seconds. The default value is 20 seconds.
`mst-max-hops` *`number`*	Specify the maximum hop count for MSTP BPDUs. The default value is 20 with a range of 1 to 32 hops.
`mst-config-name` *`mst-config-name-string`*	Specify the name of the MST configuration instance.
`mst-config-revision` *`mst-config-revision-number`*	Specify an MST revision number from 0 to 65535.

`root-guard-wait-time` *seconds*	Specify the time to wait for root guard in seconds. The range is 0 (disable) to 300 seconds with a default value of 20 seconds.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4	The parameters `mst-config`, `stp-mode`, and `mst-max-hops` added.
Version 3.0.0	The parameter `root-guard-wait-time` added.
Version 6.0.1	The parameter `mst-config-revision`, and `mst-config-name` added.

Usage STP is a standard inter-switch protocol used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and cause a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. Use this command to enable or disable STP on the network.

Examples To enable STP, use the following command:

```
CLI (network-admin@switch) > stp-modify enable
```

stp-show

This command is used to display information about Spanning Tree Protocol (STP) state.

Syntax `stp-show`

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4	The parameters `mst-config`, and `mst-max-hops` added.
Version 3.0.0	The parameter `root-guard-wait-time` added.
Version 6.0.1	The parameter `mst-config-revision`, `mst-config-name`,`mst-config-digest`, `mst-digest-mismatch-on-ports`, `mst-digest-mismatch-on-peer-ports`, `mst-config-id-mismatch-on-ports`, `mst-config-id-mismatch-on-peer-ports`, `mst-revision-mismatch-on-ports`, `mst-revision-mismatch-on-peer-ports` added.

Usage STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. Use this command to enable or disable STP on the network.

Examples To display STP information, use the following command:

```
CLI (network-admin@switch)1 > stp-show
switch:                          switch1
enable:                          yes
stp-mode:                        mstp
bpdus-bridge-ports:              yes
bridge-id:                       66:0e:94:93:05:f1
hello-time:                      2
forwarding-delay:                15
max-age:                         20
mst-max-hops:                    20
mst-config-name:                 Pluribus
mst-config-revision:             0
```

```
mst-config-digest:                    9ae933ff602798b5e8b9a9c575f5c642
mst-digest-mismatch-on-ports:         none
mst-digest-mismatch-on-peer-ports:    none
mst-config-id-mismatch-on-ports:      none
mst-config-id-mismatch-on-peer-ports: none
mst-revision-mismatch-on-ports:       none
mst-revision-mismatch-on-peer-ports:  none
root-guard-wait-time:                 20
```

stp-port-event-show

This command is used to display information about port events on the switch.

Syntax `stp-port-event-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	A specific time for an event.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The time that the event began.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The time that the event ended.
`duration duration: #d#h#m#s`	The duration in days, hours, minutes, and seconds.
`interval duration: #d#h#m#s`	The interval between the events.
`since-start`	Specifies if the event is requested since the start time.
`older-than duration: #d#h#m#s`	Specifies if the event is older than the requested duration.
`within-last duration: #d#h#m#s`	Specifies if the event is within the last requested duration.
`port port-number`	The port number of the event.
`vlan` *`vlan-list`*	The VLAN list for the event.
`instance` *`instance-number`*	The instance for the STP events collection.
`count` *`count-number`*	The number of events.
`initial-state Disabled|Blocking|Listening|Learning|Forwarding`	The initial state of the event.
`other-state Disabled|Blocking|Listening|Learning|Forwarding`	Specifies if the event had other states.
`final-state Disabled|Blocking|Listening|Learning|Forwarding`	The final state of the event.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4.1	The parameter `instance` added.

Usage

Use this command to display port event information for STP.

Examples

To display STP port events, use the following command:

```
CLI (network-admin@switch) > stp-port-event-show
```

stp-port-modify

This command is used to configure Bridge Protocol Data Unit (BPDU) processing by one or more ports on a switch.

Syntax `stp-port-modify`

`port` *`port-list`*	Specifies the switch network data port number, range or list of ports to be modified. Range for port numbers is from 1 to 64.
Specify one or more of the following options:	
`block|no-block`	Specify if the port blocks BPDUs.
`filter|no-filter`	Specify if the port filters BPDUs.
`edge|no-edge`	Specify if the port is an Edge port. The port can transition directly to a forwarding state but lose Edge port status as soon as any BPDU packets are received.
`bpdu-guard|no-bpdu-guard`	Specify if BPDU guard is on or off.
`root-guard|no-root-guard`	Specify if root guard is on or off.
`priority` *`integer`*	Specify the STP port priority as a value between 0, and 240. The default value is 128.
`cost` *`number`*	Specify the cost as a number between 1, and 200000000. The default value is 2000.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `edge|no-edge` added to support RSTP. The parameter `guard|no-guard` added.

Version 2.3	The parameter `cost` added.
Version 2.4.1	The parameter `priority` added.
Version 2.6.0	The parameter `guard` changed to `bpdu-guard`, and a new parameter `root-guard` added.

Usage STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. BPDUs are used in the election of the STP root switch, and should not be received from an end host port. This command can block one port or multiple ports from processing BPDUs to prevent a malicious end host from masquerading as a switch, and participating in the STP root election.If a BPDU is received by a port that is configured to block BPDUs, the port is shut down. Alternatively, you can filter BPDUs on a port. If the port is configured to filter BPDUs, the BPDU packet is dropped but the port is not shut down.

Examples To block BPDUs, and shut down port 17, use the following command:

```
CLI (network-admin@switch) > stp-port-modify port 17 block on
```

stp-port-show

This command is used to display the configuration for Bridge Protocol Data Unit (BPDU) processing by one or more ports on a switch.

Syntax `stp-port-show`

`port` *`port-list`*	Specify the switch network data port number, list of ports, or a range of ports. The range must be a port number between 1 to 64.
`block off|on`	Specify if the port blocks BPDUs.
`filter off|on`	Specify if the port filters BPDUs.
`port-fast|no-port-fast`	Specify if the port is enabled for PortFast. PortFast allows a port to enter the forwarding state almost immediately by dramatically decreasing the time of the listening, and learning states.
`edge|no-edge`	Specify if the port is an Edge port. The port can transition directly to a forwarding state but lose Edge port status as soon as any BPDU packets are received.
`bpdu-guard|no-bpdu-guard`	Specify if BPDU guard is on or off.
`root-guard|no-root-guard`	Specify if root guard is on or off.
`priority` *`integer`*	Specify the STP port priority as a value between 0, and 240. The default value is 128.
`cost` *`number`*	Specify the cost as a number between 1, and 200000000. The default value is 2000.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.

Version 2.2	The parameter `edge|no-edge` added to support RSTP. The parameter `guard|no-guard` added.
Version 2.3	The parameter `cost` added.
Version 2.4.1	The parameter `priority` added.
Version 2.6.0	The parameter `guard` changed to `bpdu-guard`, and a new parameter `root-guard` added.

Usage STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP.

Examples To display configuration information, use the following command:

```
 CLI (network-admin@switch) > stp-port-show port 17
switch: pubdev01
port:   55
block:  off
filter: off
edge:   yes
guard:  no
switch: pubdev01
port:   65
block:  off
filter: off
guard:  no
switch: pubdev01
port:   66
block:  off
filter: off
guard:  no
```

stp-port-state-show

This command is used to display information about the state of Spanning Tree Protocol (STP) ports.

Syntax `stp-port-state-show`

vlan *vlan-id*	The VLAN identifier for the STP instance.
ports *port-list*	The STP ports.
stp-state *Disabled|Discarding|Learning|Forwarding*	The forwarding state.
role *Disabled|Root|Designated|Alternate|Backup*	The port role.
selected-role *Disabled|Root|Designated|Alternate|Backup*	The selected port role.
state *new-info|proposing|proposed|agreed|agreed|learn|learning|forward|forwarding|reselect|selected|reroot|rcvd-bpdu|rcvd-msg|rcvd-tc|rcvd-tc-ack|send-rstp|tc-prop|tc-ack|update-info|sync|synced|disputed|fdb-flush|online|looping|manual-online|edge|vlag-local-up|vlag-remote-up|requested-online|first-sync|p-is-d|p-is-m|root-guard-active*	The port state machine state.
designated-priority *designated-priority-string*	The designated priority vector.
port-priority *port-priority-string*	The port priority vector.
message-priority *message-priority-string*	The message priority vector.
info-is *disabled|received|mine|aged*	The origin of the port information.
designated-times *designated-times-string*	The designated times: age, max age, hello, forward delay
port-times *port-times-string*	The port times: age, max age, hello, forward delay.

`message-times` *`message-times-string`*	The message times: age, max age, hello, forward delay.
`hello-timer` *`hello-timer-number`*	The hello time value.
`topology-timer` *`topology-timer-number`*	The topology timer value.
`forward-timer` *`forward-timer-number`*	The forward timer value.
`rcvd-info-timer` *`rcvd-info-timer-number`*	The received info timer value.
`recent-root-timer` *`recent-root-timer-number`*	The recent root timer value.
`recent-backup-timer` *`recent-backup-timer-number`*	The recent backup timer value.
`edge-delay-timer` *`edge-delay-timer-number`*	The edge delay timer value.
`migration-timer` *`migration-timer-number`*	The migration timer value.
`sm-table-bits` *`sm-table-bits-number`*	The state machine table state.
`sm-table` *`sm-table-string`*	The state machine table description
`vlag-peer-port` *`vlag-peer-port-number`*	The VLAG peer port if it is an active-active VLAG.
`peer|no-peer`	The STP peer state.

Defaults None.

Access CLI

History

Version 2.4.1	Command introduced.

Usage STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multipathing, and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that interoperate in a heterogeneous,

multi-vendor switch environment. Use this command to enable or disable STP on the network.

Examples To display STP port state information, use the following command:

```
CLI (network-admin@switch) > stp-port-state-show
```

stp-state-show

This command is used to display information about the state of Spanning Tree Protocol (STP).

Syntax `stp-state-show`

`vlan` *`vlan-id`*	The VLAN identifier for the STP instance.
`ports` *`port-list`*	The STP ports.
`instance-id` *`instance-id-number`*	The STP instance ID.
`name` *`name-string`*	The name of the Spanning Tree Group (STG) for the STP instance.
`bridge-id` *`mac-address`*	The MAC address of the bridge switch.
`bridge-priority` *`bridge-priority-number`*	The priority for the bridge switch.
`root-id` *`mac-address`*	The root switch MAC address of the root switch.
`root-priority` *`root-priority-number`*	The priority for the root switch.
`root-port` *`root-port-number`*	The root port for STP.
`root-port(peer)` *`root-port(peer)-number`*	The peer root port for STP.
`hello-time` *`hello-time-number`*	The interval, in seconds, between the generation of configuration messages by the root switch.
`forwarding-delay` *`forwarding-delay-number`*	The number of seconds that the interface waits before changing from its spanning-tree learning, and listening states to the forwarding state.
`max-age` *`max-age-number`*]	The amount of time that the switch stores protocol information received on an interface.
`internal|no-internal`	Specifies if it is an internal port.

`[peer|no-peer]`	Specifies if it is a peer port or not.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `blocking`, removed, and `edge`, `designated`, `alternate`, `backup`, `vlag-mirror`, `internal`, and `peer` added to support RSTP.
Version 2.2.6	The parameter `root-port(peer)` added.
Version 2.3	The following parameters are deprecated: • disabled • learning • forwarding • discarding • edge • designated • alternate • backup • vlag-mirror
Version 2.3.1	The parameter `ports` added.
Version 2.4.1	The parameter `instance-id` added.

Usage STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches, and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multipathing, and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that interoperate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.

Examples To display STP information, use the following command:

```
CLI (network-admin@switch) > stp-state-show
switch:           pleiades25
vlan:             1
name:             stg-default-stg
bridge-id:        64:0e:94:18:00:8f
bridge-priority:  32769
root-id:          64:0e:94:18:00:8f
root-priority:    32769
root-port:        0
hello-time:       2
forwarding-delay: 15
max-age:          20
disabled:         none
learning:         none
forwarding:       12,56,65-66,255
discarding:       none
edge:             65-66
designated:       12,56,65-66,255
alternate:        none
backup:           none
vlag-mirror:      none
```

Subnet Commands

subnet-create

To facilitate optimal east-west routing while supporting transparent virtual machine mobility, leaf switches are assigned the same gateway IP, and MAC address for each locally defined subnet. Having the same gateway IP, and MAC address helps ensure a default gateway presence across all leaf switches. It removes the suboptimal routing inefficiencies associated with separate centralized gateways.

This command allows you to assign subnets to VLANs, and VXLANs.

Syntax `subnet-create`

`name` *`name-string`*	Specify the name for the subnet.
`description` *`description-string`*	Specify the subnet description.
`scope local|cluster|fabric`	Specify the scope of the subnet.
`vnet` *`vnet name`*	Specify the vNET name to assign to the subnet.
`vxlan` *`vlan vxlan`*	Specify the VXLAN to assign to the subnet
`vrf` *`vrf name`*	Specify the VRF to assign to the subnet.
`network` *`ip-address`*	Specify the IP address to assign to the subnet.
`netmask` *`netmask`*	Specify the netmask of the IP address.
`anycast-gw-ip` *`ip-address`*	Specify the IP address for the anycast gateway.
`network6` *`ip-address`*	Specify the IPv6 subnet address.
`netmask6 netmask`	Specify the IPv6 netmask.
`anycast-gw-ip6` *`ip-address`*	Specify the IPv6 address for the anycast gateway.
`packet-relay enable|disable|none`	Specify the packet relay as enabled, disabled, or none.

`forward-proto dhcp`	Specify the forwarding packet protocol. The parameter only accepts DHCP as the protocol.
`forward-ip` *`ip-address`*	Specify the IPv4 address for forwarding the packet.
`forward-ip2` *`ip-address`*	Specify the second IPv4 address for forwarding the packet.
`forward-ip6` *`ip-address`*	Specify the IPv6 address for forwarding the packet.
`forward-ip6-2` *`ip-address`*	Specify the second IPv6 address for forwarding the packet.
`flood enable|disable|none`	Specify the flooding state of BUM traffic.
`enable|disable`	Enable or disable the subnet.
`evpn-export-leaked-networks permit|deny`	Specifies the exporting leaked subnets to EVPN overlay.

Defaults

None

Access

Network Administrator

History

Version 3.0.0	Command introduced.
Version 3.1.0	The parameters `network6`, `netmask6`, `anycast-gw-ip6`, `packet-relay`, `forward-proto`, `forward-ip`, `forward-ip6`, and `enable|disabled` added.
Version 5.1.0	The following parameters added: • `forward-ip2` • `forward-ip6-2` *`ip-address`*

Version 6.0.0	The parameter `description` added.
Version 7.0.0	The parameter `evpn-export-leaked-networks` added.

Usage Use this command to create a subnet.

Examples To create a subnet, subnet-one, use the following syntax:

```
CLI (network-admin@switch) > subnet-create name subnet-one scope
fabric vnet vnet-1 vlan 35 vxlan 1001 network 172.21.16.0 netmask
255.255.255.0 vrf vrf-1 anycast-gw-ip 172.21.16.1
```

Additional Information In the above example, 172.21.16.1 acts as a default gateway for hosts in VLAN 35 / VXLAN 1001.

subnet-delete

To facilitate optimal east-west routing while supporting transparent virtual machine mobility, leaf switches are assigned the same gateway IP, and MAC address for each locally defined subnet. Having the same gateway IP, and MAC address helps ensure a default gateway presence across all leaf switches. It removes the suboptimal routing inefficiencies associated with separate centralized gateways.

This command allows you to delete a subnet.

Syntax `subnet-delete`

`name` *`name-string`*	Specify the name of the subnet.
`vnet` *`vnet name`*	Specify the vNET name to assign to the subnet.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove a subnet.

Examples To remove a subnet, subnet-one, use the following syntax:

```
CLI (network-admin@switch) > subnet-delete name subnet-one vnet
vnet-1 vrf vrf-1
```

subnet-modify

To facilitate optimal east-west routing while supporting transparent virtual machine mobility, leaf switches are assigned the same gateway IP, and MAC address for each locally defined subnet. Having the same gateway IP, and MAC address helps ensure a default gateway presence across all leaf switches, and removes the suboptimal routing inefficiencies associated with separate centralized gateways.

This command allows you to modify a subnet.

Syntax `subnet-modify`

`name` *`name-string`*	Specify the name for the subnet.
`vnet` *`vnet name`*	Specify the vNET name to assign to the subnet.
One or more of the following options:	
`description` *`description-string`*	Specify the subnet description.
`vlan` *`vlan id`*	Specify the VLAN to assign to the subnet.
`network` *`ip-address`*	Specify the IP subnet network.
`netmask` *`netmask`*	Specify the IP subnet netmask.
`vxlan` *`vlan vxlan`*	Specify the VXLAN to assign to the subnet
`network` *`ip-address`*	Specify the IP address to assign to the subnet.
`netmask` *`netmask`*	Specify the netmask of the IP address.
`anycast-gw-ip` *`ip-address`*	Specify the IP address for the anycast gateway.
`network6` *`ip-address`*	Specify the IPv6 subnet address.
`netmask6 netmask`	Specify the IPv6 netmask.
`anycast-gw-ip6` *`ip-address`*	Specify the IPv6 address for the anycast gateway.

`packet-relay enable|disable|none`	Specify the packet relay as enabled, disabled, or none.
`forward-proto dhcp`	Specify the forwarding packet protocol. The parameter only accepts DHCP as the protocol.
`forward-ip` *`ip-address`*	Specify the IPv4 address for forwarding the packet.
`forward-ip2` *`ip-address`*	Specify the second IPv4 address for forwarding the packet.
`forward-ip6` *`ip-address`*	Specify the IPv6 address for forwarding the packet.
`forward-ip6-2` *`ip-address`*	Specify the second IPv6 address for forwarding the packet.
`flood enable|disable|none`	Specify the flooding state of BUM traffic.
`enable|disable`	Enable or disable the subnet.
`evpn-export-leaked-networks permit|deny`	Specify the exporting leaked subnets to EVPN overlay.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.
Version 3.1.0	The parameters `network6`, `netmask6`, `anycast-gw-ip6`, `packet-relay`, `forward-proto`, `forward-ip`, `forward-ip6`, and `enable|disabled` added.
Version 5.1.0	The following parameters added: • `forward-ip2` • `forward-ip6-2` *`ip-address`*

Version 6.0.0	The parameter `description` added.
Version 7.0.0	The parameter `evpn-export-leaked-networks` added.

Usage Use this command to modify a subnet configuration.

Examples To modify the subnet, subnet-one, and change the scope to local, use the following syntax:

```
CLI (network-admin@switch) > subnet-modify name subnet-one scope
local
```

subnet-show

To facilitate optimal east-west routing while supporting transparent virtual machine mobility, leaf switches are assigned the same gateway IP, and MAC address for each locally defined subnet. Having the same gateway IP, and MAC address helps ensure a default gateway presence across all leaf switches. It removes the suboptimal routing inefficiencies associated with separate centralized gateways.

This command allows you to display subnet configurations.

Syntax `subnet-show`

`name` *`name-string`*	Name for the subnet.
`description` *`description-string`*	The subnet description.
`scope local|cluster|fabric`	The scope of the subnet.
`vnet` *`vnet name`*	The vNET name to assign to the subnet.
`vlan` *`vlan id`*	The VLAN to assign to the subnet.
`vxlan` *`vlan vxlan`*	The VXLAN to assign to the subnet
`network` *`ip-address`*	The IP address to assign to the subnet.
`netmask` *`netmask`*	The netmask of the IP address.
`anycast-gw-ip` *`ip-addresss`*	The IP address for the anycast gateway.
`network6` *`ip-address`*	The IPv6 subnet address.
`netmask6 netmask`	The IPv6 netmask.
`anycast-gw-ip6` *`ip-address`*	The IPv6 address for the anycast gateway.
`linklocal ip-address`	The IPv6 Link Local address.
`packet-relay enable|disable|none`	The packet relay as enabled, disabled, or none.
`forward-proto dhcp`	The forwarding packet protocol. The parameter only accepts DHCP as the protocol.

`forward-ip` *`ip-address`*	The IPv4 address for forwarding the packet.
`forward-ip2` *`ip-address`*	The second IPv4 address for forwarding the packet.
`forward-ip6` *`ip-address`*	The IPv6 address for forwarding the packet.
`forward-ip6-2` *`ip-address`*	The second IPv6 address for forwarding the packet.
`flood enable|disable|none`	Specifies the flooding state of BUM traffic.
`state init|ok|vxlan not found| vxlan deactivated|not-in-hw| vrouter interface exists`	The subnet state.
`leaked-on leaked-on-string`	The leaked VRF list.
`hw-state|no-hw-state`	The subnet state in rib/fib.
`enable|disable`	Enable or disable the subnet.
`evpn-export-leaked-networks permit|deny`	Specifies the exporting leaked subnets to EVPN overlay.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.
Version 3.1.0	The parameters `network6`, `netmask6`, `anycast-gw-ip6`, `packet-relay`, `forward-proto`, `forward-ip`, `forward-ip6`, and `enable|disabled` added.
Version 5.1.0	The following parameters added: • `forward-ip2` • `forward-ip6-2` *`ip-address`*

Version 6.0.0	The parameter `description` added.
Version 7.0.0	The parameter `evpn-export-leaked-networks` added.

Usage Use this command to display a subnet configuration.

Examples To display a subnet configuration, sub1, use the following syntax:

```
CLI (network-admin@switch)1 > subnet-show name vlan-235 format
name,scope,vlan,vxlan,vrf,network,state,enable,evpn-export-leaked-
subnets

name     scope  vlan  vxlan  vrf  network     state enable evpn-export-leaked-subnets
-------- ------ ----- ------ ---- ----------- ----- ------ ---------------------------
vlan-235 fabric 235   10235  vrf3 13.1.5.0/24 ok    yes    deny
```

switch

This command is used to login remotely to another switch in the fabric.

Syntax `switch`

`switch-name` *`name-string`*	Specify the switch name in the fabric.
`id` *`switch-id`*	Specify the identifier of the switch.
`command`	Specify the command, and arguments to execute on the remote switch.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage The Command Line Interface (CLI) can be used to login remotely from any switch to another switch in the fabric. Use this command to remotely log into another switch, and execute commands on it.

Examples To log into **switch-ops** from **switch-eng**, use the following command:

```
CLI (network-admin@switch-eng)> switch name switch-ops
```

To log into switch-ops, and execute the command `node-info`, use the following command:

```
CLI (network-admin@switch-eng) > switch name switch-ops node-info
Name:                   switch-ops
fab-name:               pn-fab
mgmt-ip:                10.10.10.7/16
mgmt-vlan:              0
out-port:               0
version:                1.2.2633,pn-nvos-b144a-kvm
state:                  enabled
ports:                  72
```

switch-config-copy-to-import

This command is used to create a configuration file to import onto another switch.

Syntax `switch-config-copy-to-import`

`export-file switch-config` *`name-string`*	Specify a name for the exported configuration file.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to copy a configuration, and export it to another switch.

Examples To copy the configuration, use the following command:

```
CLI (network-admin@switch) > switch-config-copy-to-import  export-file  conf080113
```

switch-config-export

This command is used to create a configuration file to import onto another switch.

Syntax `switch-config-copy-export`

Specify any of the following options:	
`export-file` *`name-string`*	Specify a name for the exported configuration file.
`upload-server` *`upload-server-string`*	Specify if you want to upload the configuration file to a server using Secure Copy Protocol (SCP).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 3.0.0	The parameters `upload-server` and `server-password` added to support SCP.
Version 3.1.0	The parameter `server-password` deprecated.
Version 5.2.1	The parameter `upgrade-location-mappings` is deprecated.

Usage Use this command to export a configuration file.

Examples To export a file, use the following command:

```
CLI (network-admin@switch) > switch-config-copy-export  export-file
config800113
```

switch-config-import

This command is used to import a configuration file.

Syntax `switch-config-import`

`import-file` *`name-string`*	Specify a name for the exported configuration file.

Specify any of the following options:

`apply-system-config|ignore-system-config`	Specify to apply the imported configuration or ignore the imported file, and keep the current configuration.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to import a configuration file.

Examples To import a copy of the existing configuration, use this command:

```
CLI (network-admin@switch) > switch-config-import import-file
switch10
```

switch-config-reset

This command is used to reset the configuration on a switch.

Syntax `switch-config-reset`

Defaults None.

Access CLI

History

Version 2.0.1	Command introduced.

Usage Use this command to reset the configuration on the switch.

Examples To reset the configuration, use the following command:

```
CLI (network-admin@switch) > switch-config-reset
```

Caution: Using this command resets the configuration back to default settings.

switch-config-show

This command is used to display configuration information about a switch.

Syntax `switch-config-show`

`import-file` *`switch-config import-file`*	Specifies the name of the imported configuration file.
`export-file` *`switch-config export-file`*	Specifies the name of the exported configuration file.
`apply-system-config|ignore-system-config`	Specify to apply system configuration file to the server switch.
`upload-server` *`upload-server-string`*	Specify if you want to upload the configuration file to a server using Secure Copy Protocol (SCP).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 3.0.0	The parameters `upload-server` and `server-password` added to support SCP.
Version 3.1.0	The parameter `server-password`, deprecated.

Usage Use this command to display information about import, and export file settings on the switch .

Examples To display the configuration, use the following command:

```
 CLI (network-admin@switch) > switch-config-show
switch   export-file
-------- -------------------------------------------------------
pubdev01 switch-config-reset-backup.2014-10-22T13.14.53.tar.gz
pubdev01 test.2014-02-24T09.06.51.tar.gz
pubdev01 switch-config-reset-backup.2014-06-30T12.23.10.tar.gz
pubdev01 ext13base.2013-12-11T06.50.40.tar.gz
pubdev02 switch-config-reset-backup.2014-06-30T13.11.43.tar.gz
```

```
pubdev02 switch-config-reset-backup.2014-10-22T13.39.18.tar.gz
pubdev02 mantis-switch-config.2013-10-10T10.13.23.tar.gz
pubdev02 switch-config-reset-backup.2015-01-21T10.55.14.tar.gz
pubdev03 switch-config-reset-backup.2014-12-08T16.35.58.tar.gz
pubdev03 switch-config-reset-backup.2014-12-08T17.30.42.tar.gz
```

switch-group-create

This feature allows you to create a switch group, and you can create as many switch groups as needed. You provide a name to a group of switches, and a switch can be a member of more than one group.

Syntax `switch-group-create`

`name` *`name-string`*	Specify a name for the switch group.
`description` *`description-string`*	Specify a description for the switch group.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to create a switch group.

Examples To create a switch group named Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-create name Rack-1
description rack-1 in small lab
```

switch-group-delete

This feature allows you to delete a switch group.

Syntax `switch-group-delete`

`name` *`name-string`*	Specify a name for the switch group.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete a switch group.

Examples To delete a switch group, use the following syntax:

```
CLI (network-admin@switch) > switch-group-delete
```

switch-group-modify

This feature allows you to modify a switch group.

Syntax `switch-group-modify`

`name` *`name-string`*	Specify a name for the switch group.
`description` *`description-string`*	Specify a description for the switch group.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to modify a switch group.

Examples To modify a switch group named Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-modify name Rack-1
description rack-1 in ECB
```

switch-group-show

This feature allows you to display a switch group.

Syntax `switch-group-show`

`name` *`name-string`*	Name for the switch group.
`description` *`description-string`*	A description for the switch group.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display a switch group.

Examples To display a switch group named Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-show name Rack-1
```

switch-group-member-add

This feature allows you to add a member to a switch group. A switch can be a member of more than one group.

Syntax `switch-group-member-add`

`name` *`name-string`*	Specify the name of the switch group to add the member.
`member` *`fabric-node name`*	Specify the name of the switch to add as a member.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to add a switch to a switch group.

Examples To add a switch, lab-spine01, to the switch group, Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-member-add name Rack-1
member lab-spine01
```

switch-group-member-remove

This feature allows you to remove a member from a switch group. A switch can be a member of more than one group.

Syntax `switch-group-member-remove`

`name` *`name-string`*	Specify the name of the switch group to remove the member.
`member` *`fabric-node name`*	Specify the name of the switch to remove as a member.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to remove a switch to a switch group.

Examples To remove a switch, lab-spine01, from the switch group, Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-member-remove name Rack-1
member lab-spine01
```

switch-group-member-show

This feature allows you to remove a member from a switch group. A switch can be a member of more than one group.

Syntax `switch-group-member-show`

`name` *`name-string`*	Name of the switch group to add the member.
`member` *`fabric-node name`*	Name of the switch to add as a member.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display switches in a switch group.

Examples To display a switch, lab-spine01, from the switch group, Rack-1, use the following syntax:

```
CLI (network-admin@switch) > switch-group-member-show name Rack-1
member lab-spine01
```

switch-info-show

This command displays information about the switch.

Syntax `switch-info-show`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 3.0.0	Parameters for disk information added.

Usage Use this command to display information about the switch.

Examples To display information about the switch, use the following command:

```
CLI (network-admin@switch) > switch-info-show
switch:              draco-dev01
model:               S6000-ON
chassis-serial:      1741PN8500213
cpu1-type:           Intel(R) Atom(TM) CPU S1220   @ 1.60GHz
cpu2-type:           Intel(R) Atom(TM) CPU S1220   @ 1.60GHz
cpu3-type:           Intel(R) Atom(TM) CPU S1220   @ 1.60GHz
cpu4-type:           Intel(R) Atom(TM) CPU S1220   @ 1.60GHz
system-mem:          7.66G
switch-device:       OK
fan1-status:         OK
fan2-status:         OK
fan3-status:         OK
fan4-status:         OK
fan5-status:         OK
fan6-status:         OK
ps1-status:          OK
ps2-status:          FAULT
disk-model:          16GB SATA Flash Drive
disk-firmware:       SFDDA01C
disk-size:           14.9G
disk-type:           Solid State Disk, TRIM Supported
bios-vendor:         American Megatrends Inc.
bios-version:        4.6.5
```

Informational Note: The show output information varies from platform to platform.

switch-local

This command is used to execute CLI commands on the local switch. In some network topologies, complex names may be assigned to switches. switch-local executes commands on a local switch without specifying the switch name.

Syntax `switch-local`

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.

Usage Use this command to execute commands on a local switch. Once you enter a specific CLI command, you can revert to the scope local.

Examples To execute a command on a local switch, use the following example:

```
CLI (network-admin@switch) > switch-local port-config
```

To execute commands on the fabric, enter a command without `switch-local` specified in the command line.

```
CLI (network-admin@switch) > vlan-modify
```

switch-mode-modify

NetVisor OS uses this command to change the mode of the switch to store, and forward or virtual wire mode.

Syntax `switch-mode-modify`

`switch-mode store-and-forward| virtual-wire`	Specify either store, and forward (normal mode) or virtual wire mode. Virtual wire mode accepts only Layer 1 commands.

Access Network administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to change the switch mode.

Examples To change the switch mode from virtual wire to store-and-forward, use the following syntax:

CLI (network-admin@switch) `> switch-mode-modify switch-mode store-and-forward`

switch-mode-show

NetVisor OS uses this command to display the mode of the switch to store, and forwardor virtual wire mode.

Syntax `switch-mode-show`

Defaults None

Access Network administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display the switch mode.

Examples To display the switch mode, use the following syntax:

```
CLI (network-admin@switch) > switch-mode-show
switch:      switch-2
switch-mode: store-and-forward
switch:      switch-1
switch-mode: store-and-forward
```

switch-poweroff

This command is used to power off the switch.

Syntax `switch-poweroff`

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to power off the switch.

Examples To power off the switch, use the following command:

```
CLI (network-admin@switch) > switch-poweroff
```

> **Note:** This command is supported only on NSU, NRU01, NRU02, NRU03, and NRU-S0301 platforms.

switch-reboot

This command is used to reboot a local switch.

Syntax `switch-reboot`

Defaults None.

Access `CLI - this is a local switch only command.`

History

Version 1.2.1	Command introduced.

Usage Use this command to reboot the local switch. You cannot execute this command to reboot another switch on the network.

Examples To reboot the switch, use the following command:

```
CLI (network-admin@switch) > switch-reboot
```

switch-nic-info-show

This command displays the NIC information for management, and rear-facing interfaces.

Syntax `switch-nic-info-show`

name *switch-nic-stats-list-name*	Name of the interface for which the NIC information has to be displayed.

Defaults None.

Access CLI

History

Version 5.1.2	Command introduced.

Usage Use this command to display the NIC information for management, and rear-facing interfaces.

Examples The NIC information for the interface eth0 can be viewed through the command:

```
CLI (network-admin@switch) > switch-nic-info-show name eth0
name driver version firmware         speed rxqnum txqnum rxqsize txqsize autoneg rxpause txpause
---- ------ ------- ---------------- ----- ------ ------ ------- ------- ------- ------- -------
eth0 igb    5.4.0-k 3.25, 0x800005cd 1000  4      4      4096    4096    on      on      off
```

switch-nic-stats-show

This command displays NIC statistics for management, and rear-facing interfaces.

Syntax `switch-nic-stats-show`

Specify any of the following options to display the corresponding information.	
`time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	Specify the time to start statistics collection.
`start-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	Specify the start date, and time for statistics collection.
`end-time` *`date/time: yyyy-mm-ddTHH:mm:ss`*	Specify the end date, and time for statistics collection.
`duration` *`duration: #d#h#m#s`*	Specify the duration for statistics collection.
`interval` *`duration: #d#h#m#s`*	Specify the interval for statistics collection.
`since-start`	Displays statistics from the start.
`older-than` *`duration: #d#h#m#s`*	Displays statistics older than the specified date, and time.
`within-last` *`duration: #d#h#m#s`*	Displays statistics within the specified duration.
`name` *`switch-nic-stats-list name`*	Specify the name of the interface for which statistics has to be displayed.

Defaults None.

Access CLI

History

Version 5.1.2	Command introduced without parameters.
Version 6.0.0	Parameters added.

Usage Use this command to display NIC statistics for management, and rear-facing interfaces.

Examples To display the NIC statistics for eth0 interface with a vertical layout, use the command:

```
CLI (network-admin@switch) > switch-nic-stats-show name eth0 layout
vertical
name:       eth0
ipkts:      2.85M
ibytes:     2.38G
opkts:      492K
obytes:     261M
ierrs:      0
oerrs:      0
idrops:     0
odrops:     0
imcast:     1.76M
omcast:     131K
ibcast:     7.18K
obcast:     25
mcast:      1.76M
bcast:      0
ioverruns:  0
rxnobuf:    0
icrcerrs:   0
iframeerrs: 0
ififoerrs:  0
ofifoerrs:  0
ilongerrs:  0
ishorterrs: 0
ipkts_0:    1.08M
ipkts_1:    495K
ipkts_2:    558K
ipkts_3:    756K
...
opkts_0:    113K
opkts_1:    142K
opkts_2:    115K
opkts_3:    122K
opkts_4:    0
...
idrops_0:   0
idrops_1:   0
...
idrops_22:  0
idrops_23:  0
```

switch-nic-stats-settings-modify

This command modifies NIC statistics settings.

Syntax `switch-nic-stats-settings-modify`

Specify one or more of the following options:

`enable|disable`	Enable or disable statistics colection.
`interval duration : #d#h#m#s`	Specify the time interval to collect NIC statistics.
`disk-space` *`disk-space-number`*	Specify the disk-space allocated for statistics (including rotated log files)

Defaults None.

Access CLI

History

Version 6.0.0	Command introduced without parameters.

Usage Use this command to modify NIC statistics settings.

Examples To enable the NIC statistics for a switch, use the command:

```
CLI (network-admin@switch) > switch-nic-stats-settings-modify
enable
```

switch-nic-stats-settings-show

This command displays NIC statistics settings on a switch.

Syntax `switch-nic-stats-settings-show`

Defaults None.

Access CLI

History

Version 6.0.0	Command introduced without parameters.

Usage Use this command to display NIC statistics settings

Examples To display the NIC statistics settings on a switch, use the command:

```
CLI (network-admin@switch1) > switch-nic-stats-settings-show
switch:      switch1
enable:      yes
interval:    1m
disk-space:  50M
```

switch-route-create

This command is used to create routing setups on a switch.

Syntax `switch-route-create`

`network` *`ip-address`*	Specify the destination IPv4 or IPv6 address.
`netmask` *`netmask`*	Specify the destination netmask.
Specify one or more of the following options:	
`gateway-ip` *`ip-address`*	Specify the gateway IPv4 or IPv6 address.
`nic switch-nic` *`nic`*	Specify the NIC.
`metric` *`integer`*	Specify the metric for the route as an integer between 1, and 4294967295.

Defaults None.

Access CLI

History

Version 2.3.0	Command introduced.
Version 3.0	The parameter `metric` added.

Usage Use this command to create routes from switch to switch.

Examples To create routing setup on a switch, use the command:

```
CLI (network-admin@switch) > switch-route-create
```

switch-route-delete

This command is used to delete the routing setup of a switch.

Syntax `switch-route-delete`

`network` *`ip-address`*	Specify the destination IPv4 or IPv6 address.
`netmask` *`netmask`*	Specify the destination netmask.
Specify one or more of the following options:	
`gateway-ip` *`ip-address`*	Specify the gateway IPv4 or IPv6 address.
`nic switch-nic` *`nic`*	Specify the NIC.

Defaults None.

Access CLI

History

Version 2.3	Command introduced without parameters.

Usage Use this command to delete routes from one switch to another switch.

Examples To delete routing setup on a switch, use the command:

```
CLI (network-admin@switch) > switch-route-delete
```

switch-route-modify

This command is used to modify the routing setup of a switch.

Syntax `switch-route-modify`

`network` *`ip-address`*	Specify the destination IPv4 or IPv6 address.
`netmask` *`netmask`*	Specify the destination netmask.
Specify one or more of the following options:	
`gateway-ip ip-address`	Specify the gateway IPv4 or IPv6 address.
`nic switch-nic` *`nic`*	Specify the NIC.
`metric` *`integer`*	Specify the metric for the route as an integer between 1, and 4294967295.

Defaults None.

Access CLI

History

Version 2.3.0	Command introduced.
Version 3.0	The parameter `metric` added.

Usage Use this command to modify routes from switch to switch.

Examples To modify routing setup on a switch, use the command:

```
CLI (network-admin@switch) > switch-route-modify
```

switch-route-show

This command is used to display switch to switch routes.

Syntax `switch-route-show`

`network` *`ip-address`*	The destination IPv4 or IPv6 address.
`netmask` *`netmask`*	The destination netmask.
Specify one or more of the following options:	
`gateway-ip` *`ip-address`*	The gateway IPv4 or IPv6 address.
`nic switch-nic` *`nic`*	The NIC.
`metric` *`integer`*	The metric for the route as an integer between 1, and 4294967295.

Defaults None.

Access CLI

History

Version 2.3.0	Command introduced.
Version 3.0	The parameter `metric` added.

Usage Use this command to display routes from switch to switch.

Examples To display switch routes, use the following command:

```
CLI (network-admin@switch) > switch-route-show
```

switch-setup-modify

This command is used to modify the setup of a switch.

Syntax `switch-setup-modify`

Specify one or more of the following options:	
`switch-name` *`name-string`*	Specify the name of the switch.
`mgmt-ip` *`ip-address`*	Specify the IP address that allows you to connect to the management interface through the dedicated 1000/100/10 Mbps `mgmt0` or `mgmt1` RJ45 management ports of the switch.
`mgmt-netmask` *`netmask`*	Specify the netmask for the IP address.
`mgmt-ip-assignment none`	Specify the IP assignment type for the management interface.
`mgmt-ip6` *`ip-address`*	Specify the IPv6 IP address.
`mgmt-netmask-ip6` *`netmask`*	Specify the IPv6 netmask.
`mgmt-ip6-assignment none`	Specify the IPv6 assignment type for the management interface.
`in-band-ip` *`ip-address`*	Specify the IP address to connect to the management interface through the network data ports of the switch.
`in-band-netmask` *`netmask`*	Specify the netmask for the IP address.
`in-band-ip6` *`ip-address`*	Specify an IPv6 address for the in-band interface.
`in-band-netmask-ip6` *`netmask`*	Specify the netmask.
`in-band-ip6-assign none|auto|conf`	Specify in-band IPv6 address assignment for the in-band interface.
`gateway` *`ip-address`*	Specify the IP address of the gateway that

	connects to the outside IP network.
gateway-ip6 *ip-address*	Specify the IPv6 address of the gateway that connects to the outside IP network.
loopback-ip *ip-address*	Specify the loopback IPv4 address.
loopback-ip6 *ip-address*	Specify the loopback IPv6 address.
dns-ip *ip-address*	Specify the IP address of the primary DNS for the switch.
dns-secondary-ip *ip-address*	Specify the IP address of a secondary DNS for the switch.
domain-name *domain-name-string*	Specify the domain name for the switch.
ntp-server *ntp-server-string*	Specify the name or IP address of the NTP server.
ntp-secondary-server *ntp-secondary-server-string*	Specify the name or IP address of the secondary NTP server. You can unset a configured NTP secondary server by using an empty string ("") as parameter. You can use either single-quotes ('') or double-quotes ("") to indicate the empty string.
timezone *timezone-name*	Specify the timezone for the switch.
eula-accepted true|false	Specify if the EULA is accepted or not.
eula_timestamp date/time: yyyy-mm-ddThh:mm:ss	Specify the timestamp for the EULA.
password *password-string*	Specify a password for the switch.
date *yyyy-mm-ddThh:mm:ss*	Specify the date using the designated format.
analytics-store default| optimized	Specify if you want to use the default analytics store or an optimized store. If you select optimized, you must have Fusion IO cards installed for storage.
force|no-force	Force the analytics store to change even if

	it means removing data.
`enable-host-ports| disable-host-ports`	Host ports are disabled by default.
`motd` *`motd-string`*	Specify a "Message of the Day" string to display on the switch. You may enter up to 511 characters including spaces. This is a temporary or short term message to identify situations such as downtime, etc.
`banner` *`banner-string`*	Specify a banner to display on the switch. You may enter up to 511 characters including spaces. This is a static message that can be used to display switch information such as server identity.
`enable-disk-mirror|disable-disk-mirror`	Specify to enable or disable disk mirroring. This option is available only on NRU03, and NRU-S0301 platforms.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `delete-mgmt-backup` is deprecated. The parameters `eula`, and `analytics store` added.
Version 2.2	The parameters to support IPv6 added.
Version 2.2.3	The parameters `motd` and `banner` added.
Version 2.3	The parameters for LAG on the management interface added.
Version 2.4	The parameters `force` and `enable-host-ports` added.
Version 2.6.1	The parameter `secondary-ntp-server` added.

Version 2.6.2	The parameter `mgmt-lacp-mode` deprecated.
Version 3.0.0	IPv6 parameters added for the in-band, and management interfaces.
Version 3.1.0	The parameter `phone-home` is deprecated.
Version 6.0.0	Option to unset `ntp-secondary-server` introduced.
Version 6.1.0	The parameters `enable-disk-mirror|disable-disk-mirror` are added. This is available only on NRU03, and NRU-S0301 platforms.

Usage Each switch must be setup when initially installed on the network. Use this command to modify the switch parameters.

Examples To set up the switch with the name, PN-switch-1, IP address 10.9.9.71 on a /16 subnet with the gateway 10.9.9.1, DNS servers 10.9.9.11 and 10.9.9.1, the domain name pluribusnetworks.com, and NTP server, 0.uspool.ntp.org. The switch is located in the US/Pacific timezone, and the administrator is network-admin.

```
CLI (network-admin@switch) > switch-setup-modify name PN-switch-1
mgmt-ip 10.9.9.71 mgmt-netmask 16 gateway 10.9.9.1 dns 10.9.9.11
dns-secondary 10.9.9.1 domain-name pluribusnetworks.com ntp-server
0.us.pool.ntp.org username network-admin password adm1n
```

switch-setup-show

This command is used to display basic setup parameters for a switch.

Syntax `switch-setup-show`

Defaults None.

Access

History

Version 1.2.1	Command introduced without parameters.

Usage Each switch requires an initial setup before installing on the network. Use this command to display basic parameters for the local switch.

Examples To display basic parameters, use the following command:

```
CLI (network-admin@switch) > switch-setup-show
switch-name:          switch-1
mgmt-ip:              10.14.24.76/23
mgmt-ip-assignment:   static
mgmt-ip6:             2222::3/92
mgmt-ip6-assignment:  static
mgmt-link-state:      up
mgmt-link-speed:      1g
in-band-ip:           192.168.103.76/24
in-band-ip6:          5555::3/92
gateway-ip:           10.14.24.1
gateway-ip6:          2222::100
dns-ip:               172.16.1.4
dns-secondary-ip:     10.135.1.13
domain-name:          pluribusnetworks.com
ntp-server:           0.ubuntu.pool.ntp.org
ntp-secondary-server: 1.ubuntu.pool.ntp.org
timezone:             Etc/UTC
date:                 2018-01-10,16:51:44
phone-home:           no
hostid:               184551677
location-id:          2
analytics-store:      default
enable-host-ports:    yes
banner:
```

switch-status-show

This command is used to display the status of the switch.

Syntax `switch-status-show`

`start-time date/time: yyyy-mm-ddThh:mm:ss`	Specify a time to start statistic collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	Specify a time to end statistic collection.
`duration duration: #d#h#m#s`	Specify the duration of statistic collection.
`interval duration: #d#h#m#s`	Specify an interval between statistic collection.
`since-start| no-since-start`	Display statistics collected since start-time.
`older-than duration: #d#h#m#s`	Display statistics older than the specified time.
`within-last duration: #d#h#m#s`	Display statistics within the last time.
`name` *`name-string`*	Displays the hardware name.
`value value-number`	Displays the hardware value.
`units degrees-C|volts|rpm`	Displays the hardware units.
`state ok|fault|fatal`	Displays the hardware state.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to display the status of a switch.

Examples To display the status, use the following command:

```
CLI (network-admin@switch) > switch-status-show
switch     name            value units     state
---------- --------------- ----- --------- -----
```

```
pleiades25 Switch Temp     37    degrees-C ok
pleiades25 CPU1 Temp       41    degrees-C ok
pleiades25 CPU2 Temp       45    degrees-C ok
pleiades25 System Temp     39    degrees-C ok
pleiades25 Peripheral Temp 30    degrees-C ok
pleiades25 PCH Temp        45    degrees-C ok
pleiades25 switch-5.0v           volts     ok
pleiades25 switch-2.5v           volts     ok
pleiades25 switch-0.95v          volts     ok
pleiades25 switch-1.8v           volts     ok
pleiades25 switch-1.2v           volts     ok
pleiades25 fan-1           7050  rpm       ok
pleiades25 fan-2           8057  rpm       ok
pleiades25 fan-3           8057  rpm       ok
pleiades25 fan-4           7050  rpm       ok
Switch:                         netops-1
x86-system-temp[C]:             37
x86-peripheral-temp[C]:         27
x86-pch-temp[C]   :             43
x86-s-vtt:                      ok
x86-1p1v:                       ok
x86-1p5v:                       ok
x86-3p3v:                       ok
x86-3p3vsb:                     ok
x86-5p0v:                       ok
x86-5p0vsb:                     ok
x86-12p0v:                      ok
x86-vbat:                       ok
switch-temp[C]:                 45
switch-0p95v:                   ok
switch-1p8v:                    45
switch-t1p2v:                   fault
fan1-speed[RPM]:                3525
fan2-speed[RPM]:                3525
fan3-speed[RPM]:                3525
fan4-speed[RPM]:                3760
```

switch-status-settings-modify

This command is used to modify the settings for a switch status.

Syntax `switch-status-settings-modify`

Specify one or more of the following options:	
`enable|disable`	Specify if you want to enable or disable collecting information about the switch status.
`interval duration: #d#h#m#s`	Specify an interval duration to collect status information.
`disk-space` *`disk-space-number`*	Specify the disk size for the status information.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to modify the settings for collecting status information on the switch.

Examples To modify the disk space to 4Gb, use the following command:

```
CLI (network-admin@switch) > switch-status-settings-modify disk-space 4g
```

switch-status-settings-show

This command is used to display the settings for a switch status.

Syntax `switch-status-settings-show`

`enable|disable`	Specify if you want to enable or disable collecting information about the switch status.
`interval duration: #d#h#m#s`	An interval duration to collect status information.
`disk-space` *`disk-space-number`*	The disk size for the status information.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display the settings for collecting status information on the switch.

Examples To modify the disk space to 4Gb, use the following command:

```
CLI (network-admin@switch) > switch-status-settings-show

  switch:           pubdev01
  enable:          yes
  interval:      1m
  disk-space:  50M
  switch:           pubdev03
  enable:          yes
  interval:      1m
  disk-space:  50M
  switch:           pubdev02
  enable:          yes
  interval:      1m
  disk-space:  50M
```

switch-vnic-create

Use this command to create a virtual Network Interface Card (vNIC) on the switch.

Syntax `switch-vnic-create`

`ip` *`ip-address`*	Specify the IP address of the vNIC.
`netmask` *`netmask`*	Specify the netmask.
`assignment [none|dhcp|dhcpv6|autov6]`	Specify the method of IP address assignment.
`linklocal` *`ip-address`*	Specify the IPv6 link local IP address.
`vnet` *`vnet name`*	Specify the vNET name.
`l2-net` *`l2-net-name`*	Specify the name of the Layer network.
`vlan` *`vlan-id`*	Specify the VLAN assigned to the vNIC.
`vlan-type public|private`	Optionally, specify the VLAN type assigned to the vNIC.
`if [mgmt|data|span]`	Specify the type of interface for the vNIC.
`alias-on` *`alias-on-string`*	Specify an alias if desired.
`vm-nic-type [e1000|virtio]`	Specify the type of vNIC.
`exclusive|no-exclusive`	Specify if the vNIC is exclusive to a zone. Adding this parameter may improve performance on the vNIC.
`nic-enable|nic-disable`	Specify if the vNIC is enabled or disabled.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address for the interface.
`sriov-vf|no-sriov-vf`	Specify if the NIC is an SRIOV (single root input/output virtualizatio) interface.
`mirror-traffic true|false`	Specify if you want to mirror traffic to the

	VNIC.
`if-nat-realm internal|external`	Specify a NAT interface realm.
`priority-tag|no-priority-tag`	Specify to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive`, and `nic` added.
Version 2.2.5	The parameter `secondary-macs` added.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameters `sriov-vf`, `mirror-traffic`, and `if-nat-realm` added.
Version 3.0.0	The following parameters added: `linklocal`, `vnet`, `l2-net`.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to create vNICs on the switch. This is useful if you want to assign a vNIC to the server-switch without adding virtual services.

Examples To create a vNIC with an IP address of 192.168.1.47/24, on VLAN 101, data, and vNIC type e1000, and exclusive, use the following command:

```
CLI (network-admin@switch) > switch-vnic-create ip 192.168.1.47/24
vlan 101 if data vm-nic-type e1000 exclusive
```

switch-vnic-delete

This command is used to remove a virtual Network Interface Card (vNIC) from the switch.

Syntax `switch-vnic-delete`

`nic` *`nic-string`*	Specify the vNIC to delete from the switch. This is autogenerated when the vNIC is created.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to delete a vNIC from a switch. Use the switch-vnic-show command to display a list of configured vNICs on the switch.

Examples To delete the vNIC, eth0.3, use the following command:

```
CLI (network-admin@switch) >switch-vnic-delete nic eth0.3
```

switch-vnic-modify

This command is used to modify a virtual Network Interface Card (vNIC) on the switch.

Syntax `switch-vnic-modify`

`nic` *`nic-string`*	Specify the vNIC to modify.
Specify one or more of the following options:	
`ip` *`ip-address`*	Specify the IP address of the vNIC.
`netmask` *`netmask`*	Specify the netmask.
`assignment [none|dgcp|dhcpv6]`	Specify the method of IP address assignment.
`linklocal` *`ip-address`*	Specify the IPv6 link local IP address.
`vnet` *`vnet name`*	Specify the vNET name.
`l2-net` *`l2-net-name`*	Specify the name of the Layer network.
`vlan` *`vlan-id`*	Specify the VLAN assigned to the vNIC.
`vlan-type public|private`	Optionally, specify the VLAN type assigned to the vNIC.
`if [mgmt|data|span]`	Specify the type of interface for the vNIC.
`alias-on` *`alias-on-string`*	Specify an alias if desired.
`vm-nic-type [e1000|virtio]`	Specify the type of vNIC.
`exclusive|no-exclusive`	Specify if the vNIC is exclusive to a zone. Adding this parameter may improve performance on the vNIC.
`nic-enable|nic-disable`	Specify if the vNIC is enabled or disabled.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address for the interface.

`sriov-vf|no-sriov-vf`	Specify if the NIC is an SRIOV (single root input/output virtualizatio) interface.
`mirror-traffic true|false`	Specify if you want to mirror traffic to the VNIC.
`if-nat-realm internal|external`	Specify a NAT interface realm.
`priority-tag|no-priority-tag`	Specify to add a VLAN 0 priority tag on forwarded traffic.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive`, and `nic` added.
Version 2.2.5	The parameter `secondary-macs` added.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameters `sriov-vf`, `mirror-traffic`, and `if-nat-realm` added.
Version 3.0.0	The following parameters added: `linklocal`, `vnet`, `l2-net`.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to modify vNICs on the switch. This is useful if you want to assign a vNIC to the server-switch without adding virtual services.

Examples To modify a vNIC with an IP address of 192.168.1.47/24, on VLAN 101, data, and change the vNIC type e1000, use the following command:

```
CLI (network-admin@switch) > switch-vnic-modify ip 192.168.1.47/24
vlan 101 if data vm-nic-type e1000
```

switch-vnic-show

This command is used to display information about a virtual Network Interface Card (vNIC) on the switch.

Syntax `switch-vnic-show`

`nic` *`nic-string`*	The vNIC to modify.
Specify one or more of the following options:	
`ip` *`ip-address`*	The IP address of the vNIC.
`netmask` *`netmask`*	The netmask.
`assignment [none|dgcp|dhcpv6]`	The method of IP address assignment.
`linklocal` *`ip-address`*	The IPv6 link local IP address.
`vnet` *`vnet name`*	The vNET name.
`l2-net` *`l2-net-name`*	Name of the Layer network.
`vlan` *`vlan-id`*	The VLAN assigned to the vNIC.
`vlan-type public|private`	The VLAN type assigned to the vNIC.
`if [mgmt|data|span]`	The type of interface for the vNIC.
`alias-on` *`alias-on-string`*	Specify an alias if desired.
`vm-nic-type [e1000|virtio]`	The type of vNIC.
`exclusive|no-exclusive`	Specify if the vNIC is exclusive to a zone. Adding this parameter may improve performance on the vNIC.
`nic-enable|nic-disable`	Specify if the vNIC is enabled or disabled.
`secondary-macs` *`secondary-macs-string`*	The secondary MAC address for the interface.

`sriov-vf|no-sriov-vf`	Specify if the NIC is an SRIOV (single root input/output virtualization) interface.
`mirror-traffic true|false`	Specify if you want to mirror traffic to the VNIC.
`if-nat-realm internal|external`	The NAT interface realm.
`priority-tag|no-priority-tag`	Specify to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive`, and `nic` added.
Version 2.2.5	The parameter `secondary-macs` added.
Version 2.4.1	The parameter `vxlan` deprecated. The parameter `vlan-type` added.
Version 2.6.2	The parameters `sriov-vf`, `mirror-traffic`, and `if-nat-realm` added.
Version 3.0.0	The following parameters added: `linklocal`, `vnet`, `l2-net`.
Version 3.1.0	The parameter `priority-tag|no-priority-tag` added.

Usage Use this command to display information about vNICs on the switch.

Examples To display a vNIC, use the following command:

```
CLI (network-admin@switch) > switch-vnic-show
```

syslog-tls-cert-clear

This command clears a Certificate Signing Request (CSR) for a TLS connection to a syslog server.

Syntax `syslog-tls-cert-clear`

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to delete imported certificates for TLS connections.

Examples To clear imported certificates, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-clear
```

syslog-tls-cert-import

This command imports certificates from the SFTP/import directory on the switch.

Syntax `syslog-tls-cert-import`

`file-ca` *`file-ca-string`*	Specify the name of the CA certificate file.
`file-cert` *`file-cert-string`*	Specify the name of the switch certificate file signed by the CA.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to import certificates for TLS connections.

Examples To clear imported certificates, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-import file-ca ca.pem
file-cert my-cert.pem
```

syslog-tls-cert-info-show

This command displays certificates information.

Syntax `syslog-tls-cert-info-show`

`cert-type ca|intermediate|server`	The type of the certificate: CA, intermediate or server.
`subject` *`subject-string`*	The subject of the server.
`issuer` *`issuer-string`*	The issuer of the certificate.
`serial-number` *`serial-number-number`*	The serial number of the certificate.
`valid-from` *`valid-from-string`*	The time from which the certificate is valid.
`valid-to` *`valid-to-string`*	The time at which the certificate expires, and is no longer valid.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command view certificate information .

Examples To display certificate information, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-info-show
```

syslog-tls-cert-request-create

This command creates a certificate request for the TLS connection.

Syntax `syslog-tls-cert-request-create`

`country country-string`	Specify the country as a two letter code.
`state state-string`	Specify the state or province.
`city` *`city-string`*	Specify the city.
`organization` *`organization-string`*	Specify the organization.
`organizational-unit` *`organizational-unit-string`*	Specify the organizational unit.
`common-name` *`common-name-string`*	Specify the common name.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to generate a certificate request for TLS connections.

Examples To clear imported certificates, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-request-create  country
US state CA city Palo Alto organization engineering organizational-
unit QA common-name pluribusnetworks.com
```

syslog-tls-cert-request-show

This command displays a certificate request for the TLS connection.

Syntax `syslog-tls-cert-request-show`

`cert-type ca|intermediate|server`	The type of certificate.
`subject` *`subject-string`*	The subject of the certificate.
`issuer` *`issuer-string`*	The issuer of the certificate.
`serial-number` *`serial-number-number`*	The serial number of the certificate.
`valid-from` *`valid-from-string`*	The time from which the certificate is valid.
`valid-to` *`valid-to-string`*	The expiration date of the certificate.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to display a certificate request for TLS connections.

Examples To display requested certificates, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-request-show
```

syslog-tls-cert-show

This command displays certificates from the SFTP/import directory on the switch.

Syntax `syslog-tls-cert-import`

`file-ca` *`file-ca-string`*	The CA certificate file name.
`file-cert` *`file-cert-string`*	Name of the switch certificate file signed by the CA.
`cert-ca` *`cert-ca-string`*	The CA cert.
`cert-switch` *`cert-switch-string`*	The switch certificate.

Defaults None

Access CLI

History

Version 2.5	Command introduced.

Usage Use this command to import certificates for TLS connections.

Examples To display imported certificates, use the following syntax:

```
CLI (network-admin@switch) > syslog-tls-cert-show
```

system-diagnostics-hw-limits-show

This command is used to display information about the ASIC Limits.

Syntax `system-diagnostics-hw-limits-show`

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display information about the ASIC Limits.

Examples To display imported certificates, use the following syntax:

```
CLI (network-admin@switch) > system-diagnostics-hw-limits-show
```

system-diagnostics-show

NetVisor uses this command to displays information about the platform system diagnostics.

Syntax `system-diagnostics-show`

`name bios|system|cpu|memory|asicErrors|all`	Specify the area of the platform to display. The default value is all.

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about platform system areas.

Examples To display system diagnostics, use the following syntax:

```
CLI (network-admin@switch) > system-diagnostics-show
# dmidecode 2.12
SMBIOS 2.8 present.

Handle 0x0000, DMI type 0, 24 bytes
BIOS Information
 Vendor: American Megatrends Inc.
 Version: 5.6.5
 Release Date: 11/20/2014
 Address: 0xF0000
 Runtime Size: 64 kB
 ROM Size: 6144 kB
...
```

system-state-modify

NetVisor version 6.0.1 introduces the Maintenance Mode feature in which the software prevents user traffic from entering or leaving a switch, and gracefully steers the traffic to network peers. This mode is useful during hardware or software maintenance of the switch including Return Merchandise Authorization (RMA), correction of out of sync fabric transactions, cluster re-peer, switch power down or reboot, and software upgrade. This functionality is supported on cluster nodes, non-cluster spine nodes, and standalone switches. In a use case where you need to enable maintenance mode on a standalone switch, you must ensure that an alternate path exists if the switch goes down. Use this command to modify system state, and enable maintenance mode.

Syntax `system-state-modify`

`maintenance-enable|maintenance-disable`	Enable or disable maintenance mode.

Defaults Maintenance mode is disabled by default.

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to modify system state, and enable maintenance mode.

Examples

```
CLI (network-admin@switch) > system-state-modify maintenance-enable
```

system-state-show

NetVisor version 6.0.1 introduces the Maintenance Mode feature in which the software prevents user traffic from entering or leaving a switch, and gracefully steers the traffic to network peers. This mode is useful during hardware or software maintenance of the switch including Return Merchandise Authorization (RMA), correction of out of sync fabric transactions, cluster re-peer, switch power down or reboot, and software upgrade. This functionality is supported on cluster nodes, non-cluster spine nodes, and standalone switches. In a use case where you need to enable maintenance mode on a standalone switch, you must ensure that an alternate path exists if the switch goes down. Use this command to display system state.

Syntax `system-state-show`

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display system state.

Examples

```
CLI (network-admin@switch) > system-state-show
Maintenance mode, Ports disabled
```

system-stats-history-average-show

In releases prior to NetVisor version 6.10, the `system-stats-show` command provided instantaneous values of CPU usage, which was not representative of the average CPU usage over a duration. NetVisor release 6.1.0 improves the infrastructure for collecting, and displaying system statistics to provide average usage information. NetVisor currently supports viewing of historical CPU, and memory usage over the last 24 hours with a granularity of up to 10s. To view the average system usage statistics over the last 10 to 60 seconds, use the command:

Syntax `system-stats-history-average-show`

`over-last` *`duration:#s`*	Specify a duration for average usage statistics (in multiples of 10s from 10s up to 60s). **Note:** You cannot specify the duration in days, hours, or minutes.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to view the average system usage statistics.

Examples To view the average system usage statistics over the last 40 seconds, use the command

```
CLI (network-admin@switch) > system-stats-history-average-show
over-last 40s
time      mem-used(%) cpu-used(%) over-last
-------- ----------- ----------- ---------
02:00:34 54          3           40s
```

Note: System statistics history must be enabled (`system-stats-history-settings-modify enable`) for you to be able to use the `system-stats-history-average-show` command successfully.

system-stats-history-settings-modify

In releases prior to NetVisor version 6.10, the system-stats-show command provided instantaneous values of CPU usage, which was not representative of the average CPU usage over a duration. NetVisor release 6.1.0 improves the infrastructure for collecting, and displaying system statistics to provide average usage information. NetVisor currently supports viewing of historical CPU, and memory usage over the last 24 hours with a granularity of up to 10s. You can enable or disable the collection of system statistics history by using the `system-stats-history-settings-modify` command:

Syntax `system-stats-history-settings-modify`

`enable|disable`	Enable or disable system statistics history collection. The default status is `enable`.

Defaults The default status is `enable`.

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to enable or disable system statistics history.

Examples To disable system statistics history, use the following command:

```
CLI (network-admin@switch) > system-stats-history-settings-modify
enable
```

system-stats-history-settings-show

In releases prior to NetVisor version 6.10, the system-stats-show command provided instantaneous values of CPU usage, which was not representative of the average CPU usage over a duration. NetVisor release 6.1.0 improves the infrastructure for collecting, and displaying system statistics to provide average usage information. NetVisor currently supports viewing of historical CPU, and memory usage over the last 24 hours with a granularity of up to 10s. You can view the of system statistics history settings by using the `system-stats-history-settings-show` command:

Syntax `system-stats-history-settings-show`

Defaults The default status is `enable`.

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to view system statistics history settings.

Examples To view the settings for collection of system statistics history, use the command:

```
CLI (network-admin@switch1) > system-stats-history-settings-show
switch:         switch1
enable:        yes
read-interval:  10s
```

system-stats-history-show

In releases prior to NetVisor version 6.10, the `system-stats-show` command provided instantaneous values of CPU usage, which was not representative of the average CPU usage over a duration. NetVisor release 6.1.0 improves the infrastructure for collecting, and displaying system statistics to provide average usage information. NetVisor currently supports viewing of historical CPU, and memory usage over the last 24 hours with a granularity of up to 10s.

To display system statistics history over the last one minute (with a granularity of 10s), last 1 hour (with a granularity of 1 minute), and last 24 hours (with a granularity of 1 hour), use the `system-stats-history-show` command.

Syntax `system-stats-history-show`

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to view system statistics history.

Examples To view the system statistics history over up to last 24 hours, use the command:

```
CLI  (network-admin@switch)  >  system-stats-history-show
### Usage over last 1 minute, 60 minutes, and last 24 hours ###

time           mem-used(%) cpu-used(%) cpu-peak(%) over-last
-------------- ----------- ----------- ----------- ---------
06:20:55       83          5                       10s
06:20:45       83          6                       10s
06:20:35       83          6                       10s
06:20:25       83          7                       10s
06:20:15       83          7                       10s
06:20:05       83          11                      10s
06:20:05       82          6           11          1m
06:19:05       82          5           6           1m
06:18:05       82          5           6           1m
06:17:05       82          5           6           1m
06:16:05       82          5           6           1m
06:15:05       82          5           6           1m
06:14:05       82          5           6           1m
06:13:05       82          5           6           1m
06:12:05       82          5           6           1m
06:11:05       82          5           6           1m
06:10:05       82          5           6           1m
06:09:05       82          5           6           1m
06:08:05       82          5           6           1m
06:07:05       82          5           6           1m
06:06:05       82          5           6           1m
06:05:05       82          6           6           1m
06:04:05       82          5           6           1m
06:03:05       82          5           6           1m
06:02:05       82          6           6           1m
06:01:05       82          5           6           1m
06:00:05       82          5           6           1m
05:59:05       82          5           6           1m
05:58:05       82          5           6           1m
05:57:05       82          5           6           1m
05:56:05       82          5           6           1m
```

```
05:55:05       82          5           6           1m
05:54:05       82          5           6           1m
05:53:05       82          5           6           1m
05:52:05       82          5           6           1m
05:51:05       82          5           6           1m
05:50:05       82          5           8           1m
05:49:05       82          5           6           1m
05:48:05       82          5           6           1m
05:47:05       82          5           6           1m
05:46:05       82          5           6           1m
05:45:05       82          5           6           1m
05:44:05       82          5           6           1m
05:43:05       82          5           6           1m
05:42:05       82          6           6           1m
05:41:05       82          5           6           1m
05:40:05       82          5           6           1m
05:39:05       82          5           6           1m
05:38:05       82          5           6           1m
05:37:05       82          5           6           1m
05:36:05       82          5           8           1m
05:35:05       82          5           6           1m
05:34:05       82          5           6           1m
05:33:05       82          4           5           1m
05:32:05       82          5           6           1m
05:31:05       82          5           6           1m
05:30:05       82          5           6           1m
05:29:05       82          5           6           1m
05:28:05       82          5           6           1m
05:27:05       82          5           6           1m
05:26:05       82          5           6           1m
05:25:05       82          5           6           1m
05:24:05       82          5           6           1m
05:23:05       82          5           6           1m
05:22:05       82          5           6           1m
05:21:05       82          5           6           1m
05:48:05       82          5           6           1h
04:48:05       82          5           6           1h
03:48:05       83          5           6           1h
02:48:05       82          5           6           1h
01:48:05       82          5           6           1h
00:48:05       83          5           6           1h
03-07,23:48:05 82          6           49          1h
03-07,22:48:05 82          5           6           1h
03-07,21:48:05 82          5           6           1h
03-07,20:48:05 82          5           6           1h
03-07,19:48:05 82          5           6           1h
03-07,18:48:05 82          5           6           1h
03-07,17:48:05 82          5           6           1h
03-07,16:48:05 82          5           6           1h
03-07,15:48:05 82          5           6           1h
03-07,14:48:05 82          5           6           1h
03-07,13:48:05 82          5           6           1h
03-07,12:48:05 82          5           6           1h
03-07,11:48:05 82          5           6           1h
03-07,10:48:05 82          5           6           1h
03-07,09:48:05 82          5           6           1h
03-07,08:48:05 82          5           6           1h
03-07,07:48:05 82          5           6           1h
03-07,06:48:05 82          5           25          1h
```

Note: The system statistics history values are populated with time. For example, ifyou want to view the statistics history for the last 24 hours, nvOSd must have run for the last 24 hours with system statistics history enabled.

system-stats-settings-modify

This command is used to modify the settings for collecting switch stats.

Syntax `switch-stats-settings-modify`

Specify one or more of the following options:	
`enable|disable`	Specify if you want to enable or disable collecting information about the switch status.
`interval duration: #d#h#m#s`	Specify an interval duration to collect status information.
`disk-space` *`disk-space-number`*	Specify the disk size for the status information.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to modify the settings for collecting status information on the switch.

Examples To modify the disk space to 4GB, use the following command:

```
CLI (network-admin@switch) > system-stats-settings-modify  disk-space 4g
```

system-stats-settings-show

This command is used to display the settings for collecting switch statistics.

Syntax `system-stats-settings-show`

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display the settings for collecting statistics on the switch.

Examples To display system statistics settings, use the following command:

```
CLI (network-admin@switch) > system-stats-settings-show
switch:       pleiades24
enable:       yes
interval:    1m
disk-space:  50M
```

system-stats-show

This command is used to display information about system statistics.

Syntax `system-stats-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies a specific time, and date to display statistics.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	Specifies the start time of the system stats.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	Specifies the end time of the system stats.
`duration duration: #d#h#m#s`	Specifies the duration in the format `#d#h#m#s`
`interval` *`duration: #d#h#m#s`*	Specifies the number of seconds to reprint the system stats to the CLI.
`older-than duration: #d#h#m#s`	Specifies stats older than a specific duration.
`within-last duration: #d#h#m#s`	Specifies stats that occurred within the last duration.
`uptime duration: #d#h#m#s`	Specifies the uptime of the switch.
`paging` *`paging-number`*	Specifies the number pages collected.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 3.0.0	The parameter `cpu-total` added in the output.
Version 6.1.0	The parameter `cpu-avg` added in the output.

Usage Use this command to display system statistics.

Examples To display system statistics, use the following command:

```
CLI (network-admin@switch) > system-stats-show format all layout vertical
switch:        switch1
uptime:        7h5m41s
used-mem:      54%
used-mem-val:  3.84G
used-swap:     0%
used-swap-val: 0
paging:        0
cpu-user:      4%
cpu-sys:       4%
cpu-total:     9%
cpu-idle:      90%
cpu-avg:       3%
```

system-settings-modify

This command allows you to modify system settings to optimize NetVisor performance.

Syntax `system-settings-modify`

`optimize-arps|no-optimize-arps`	Enable or disable ARP optimization. This feature is ON by default. When ON, the NetVisor OS sends all ARP requests, and Gratuitous ARP requests to the local CPU of the corresponding switch, and responds to ARP requests on behalf of the intended ARP targets. This feature corresponds to an ARP-proxy function on the corresponding switch. It is assumed that ARP requests, and Gratuitous ARP requests are used by NetVisor OS to learn the MAC address to IPv4 address mapping, as well as Unknown Unicast, and Broadcast traffic when The parameters `manage-unknown-unicast` or `manage-broadcast` are ON. When OFF, the NetVisor learns, and bridges ARP requests on the switch ASIC instead of relying on the local CPU.
`lldp|no-lldp`	Enable or disable LLDP discovery.
`policy-based-routing|no-policy-based-routing`	Enable or disable policy-based routing.
`optimize-nd|no-optimize-nd`	Enable or disable Neighbor Discovery optimization. This feature is ON by default. When ON, NetVisor OS sends all Neighbor Solicitations, and Unsolicited Neighbor Advertisements to the local CPU of the corresponding switch, responds to Neighbor Solicitation requests on behalf of the intended ND targets themselves. This feature corresponds to an ND-proxy function on the corresponding switch. Neighbor Solicitations, and Unsolicited Neighbor Advertisements are used by NetVisor OS to learn the MAC address to IPv6 address mapping, as well as Unknown Unicast, and Broadcast traffic when tThe parameters `manage-unknown-unicast` or `manage-broadcast` are ON. When OFF, the NetVisor learns, and bridges Neighbor Solicitations on the switch ASIC instead of relying on NetVisor OS.

`reactivate-mac|no-reactivate-mac`	Enable or disable reactivation of aged out MAC entries. This feature is ON by default. When ON, if a vPort entry is looked up, and found as inactive, the corresponding l2-table entry is re-activated on the switch. When OFF, the traffic is flooded on the corresponding broadcast domain by theNetVisor OS. Please note that l2-table entries are refreshed on the Ethernet switch ASIC every time it is used, otherwise it is removed after a time of inactivity corresponding to configured aging period. Requires unknown-unicast to be enabled.
`reactivate-vxlan-tunnel-mac|no-reactivate-vxlan-tunnel-mac`	Enable or disable enable reactivation of MAC entries over VXLAN tunnels.
`manage-unknown-unicast|no-manage-unknown-unicast`	Enable or disable unknown unicast management. This feature is ON by default. NetVisor sends all unknown-unicast traffic to the local CPU of the corresponding switch. NetVisor learns the source of unknown-unicast packets, and floods the packets on the corresponding unknown-unicast domain. When OFF, all unknown-unicast traffic is flooded on the corresponding unknown-unicast domain by the switch instead of relying on NetVisor OS.
`manage-broadcast|no-manage-broadcast`	Enable or disable broadcast management. This feature is ON by default. NetVisor sends all broadcast traffic to the local CPU of the corresponding switch. NetVisor learns the source of broadcast packets, and floods the packets on the corresponding broadcast domain. When OFF, all unicast traffic is flooded on the corresponding broadcast domain by the switch instead of relying on NetVisor OS.
`manage-wake-on-lan|no-manage-wake-on-lan`	Enable wake-on-lan management.
`auto-trunk|no-auto-trunk`	Enable or disable auto trunking.
`auto-host-bundle|no-auto-host-bundle`	Enable or disable host auto bundling.
`cluster-active-active-routing| no-cluster-active-active-routing`	Enable or disable active-active cluster

	routing.
routing-over-vlags|no-routing-over-vlags	Enable or disable routing to VLAGs from cluster links.
source-mac-miss to-cpu|copy-to-cpu	Control unknown source MAC address learn behavior.
optimize-datapath disable|cluster-only|all	Specify the datapath optimization for cluster, fabric and vRouter communication: · disable: disables datapath optimization. · cluster-only: enables datapath optimization for cluster-only, where cluster traffic is redirected to cluster 4094 vNIC. · all: enables datapath optimization for fabric and data traffic. The default value is all.
cpu-class-enable|no-cpu-class-enable	Enable or disable CPU class.
usb-port|no-usb-port	Enable or disable the USB port on the front of the switch. This is only applicable to switches with ONVL.
use-igmp-snoop-l2|use-igmp-snoop-l3	Use Layer 2 or Layer 3 tables for IGMP snooping.
vle-tracking-timeout *seconds*	Specify vLE tracking timeout in seconds from 3 to 30 seconds.
pfc-buffer-limit *pfc-buffer-limit-string*	Percentage of global system buffer space allowed for PFC.
cosq-weight-auto|no-cosq-weight-auto	Specify if you want to adjust queue weights automatically.
lossless-mode|no-lossless-mode	Specifies lossless mode.
stagger-queries|no-stagger-queries	Specify if you want to stagger sending IGMP queries on the network.
qsfp28-port-mode none|6x40G|4x100G	Configure the QSFP28 port mode as 6x40G or 4x100G.

`sfp28-port-mode 48x25G| 36x25G+12x10G/1G| 24x25G+24x10G/1G`	Configure the sfp28 port mode using one of the three options. Note: This parameter is available only on AS7326-56X / F9480-V Platforms.
`host-refresh|no-host-refresh`	Specify if you want to enable refreshing host ARP entries to keep L2 entries active.
`proxy-conn-retry|no-proxy-conn-retry`	Enable or disable proxy connection retry.
`proxy-conn-max-retry` *`integer`*	Specify the maximum number of proxy connection retry attempts from 0 to 20.
`proxy-conn-retry-interval` *`mseconds`*	Specify the number of milliseconds, from 100 to 2000, to wait between proxy connection retry attempts.
`nvos-debug-logging|no-nvos-debug-logging`	Specify the logging mode.
`optimize-rxlos|no-optimize-rxlos`	Enable or disable processing of port modules that do not support RXLOS.
`manage-l2-uuc-drop|no-manage-l2-uuc-drop`	Enable or disable L2 Unknown Unicast Drop towards data port.
`xcvr-link-debug|no-xcvr-link-debug`	Enable or disable receiver link debug.
`fastpath-bfd|no-fastpath-bfd`	Enable or disable BFD path optimization.
`linkscan-interval` *`10000..1000000`*	Specify the linkscan interval as a value between 10000µs, and 1000000µs. The default value is 150000µs. **Note:** This parameter is not in effect when the link scan mode is hardware.
`linkscan-mode software|hardware`	Specify the link scan mode as hardware or software. Software link scan mode is enabled by default.
`single-pass-l2-known-multicast| no-single-pass-l2-known-multicast`	Specify to enable or disable single-pass L2 forwarding of known multicast traffic.
`single-pass-flood|no-single-pass-flood`	Enable or disable single-pass flood.

`single-pass-riot|no-single-pass-riot`	Specify to enable or disable the switches to perform routing in, and out of tunnels (RIOT) in a single pass (that is, without requiring the loopback trunk). **Note**: This option is available only on NRU03, and NRU-S03 platforms, and on the Dell S4100, and S5200 Series.
`hybrid-mode|no-hybrid-mode`	Specify to enable switch to working standard, and transparent mode.
`batch-move-mac-hw-group-for-vlan-only|no-batch-move-mac-hw-group-for-vlan-only`	Specify to enable or disable the HW batch move for MAC by group for VLAN network only.
`memory-tracker|no-memory-tracker`	Enable memory footprint tracker.
`symmetric-hash|no-symmetric-hash`	Enables or disables symmetric hashing.
`hash-suppress-unidir-fields|no-hash-suppress-unidir-fields`	Enables or disables unidir fields suppression in symmetric hashing.
`prioritize-rx-reasons|no-prioritize-rx-reasons`	Specify to prioritize BCM RX Reasons over TCP Analytics vFlow.
`hash-inner-ip-over-gre|no-hash-inner-ip-over-gre`	Specify to control the fields used in the hash for v4/v6 over v4/v6 GRE.
`multiple-tunnel-next-hops|no-multiple-tunnel-next-hops`	Specify to enable multiple tunnel next hops on same port.
`l3-use-host-table|no-l3-use-host-table`	Specifies L3 Routes (such as EVPN type-5 routes) use host table for /32, and /128 routes.
`offline-notification-new-thread|no-offline-notification-new-thread`	Enables or disables new thread to send offline notifications when switch goes down.
`uplink-oversubscription-action default|warn|error`	Specifies nvOS action towards uplink oversubscription.

Defaults All parameters enabled by default.

Access Network Administrator

History

Version 2.5.2	Command introduced.
Version 2.5.3	The parameters `auto-host-trunk`, and `cluster-active-active-routing` added.

Version 2.6.0	The parameters `policy-based-routing`, `auto-vlag-bundle`, `lldp`, `block-loops`, `source-mac-miss`, `cpu-class`, `igmp-snooping` and `usb` added.
Version 3.0.0	The parameters `stagger-queries`, `cosq-weight-auto` and `vle-tracking-timeout` added.
Version 3.1.0	The parameters `host-refresh`, `proxy-conn-retry`, `proxy-conn-max-retry`, and `proxy-conn-retry-interval` added.
Version 5.1.0	The parameter `nvos-debug-logging|no-nvos-debug-logging` added.
Version 5.2.0	The parameter `fastpath-bfd|no-fastpath-bfd` added
Version 6.0.0	The parameters `linkscan-mode`, and `single-pass-flood` added.
Version 6.0.1	The parameters `cos-8-and-9-queue`, and `batch-move-mac-hwgroup-for-vlan-only` added.
Version 6.1.1	The parameter `offline-notification-new-thread` added.
Version 7.0.0	The parameters `sfp28-port-mode`, and `l3-use-host-table|no-l3-use-host-table` added.

Usage Use this command to enable or disable system settings. However, it is recommended that you do not modify the settings without consulting Pluribus Networks.

Examples To disable auto-trunking, use the following syntax:

```
CLI (network-admin@switch) > system-settings-modify no-auto-trunk
```

system-settings-show

This command allows you to display system settings that optimize NetVisor performance.

Syntax `system-settings-show`

Defaults All parameters enabled by default.

Access Network Administrator

History

Version 2.5.2	Command introduced

Usage Use this command to display system settings. However, it is recommended that you do not modify the settings without consulting Pluribus Networks.

Examples To display system settings, use the following syntax:

```
CLI (network-admin@switch) > system-settings-show
optimize-arps:                        off
lldp:                                 on
policy-based-routing:                 off
optimize-nd:                          off
reactivate-mac:                       on
reactivate-vxlan-tunnel-mac:          on
manage-unknown-unicast:               off
manage-broadcast:                     off
block-loops:                          off
auto-trunk:                           on
auto-host-bundle:                     off
cluster-active-active-routing:        on
fast-route-download:                  off
fast-interface-lookup:                on
routing-over-vlags:                   off
source-mac-miss:                      copy-to-cpu
igmp-snoop:                           use-l3
vle-tracking-timeout:                 3
pfc-buffer-limit:                     40%
cosq-weight-auto:                     off
port-cos-drop-stats-interval(s):      disable
lossless-mode:                        off
snoop-query-stagger:                  no-stagger-queries
host-refresh:                         off
proxy-conn-retry:                     on
proxy-conn-max-retry:                 3
proxy-conn-retry-interval:            500
manage-l2-uuc-drop:                   on
```

```
optimize-rxlos:                        off
fastpath-bfd:                          off
linkscan-interval:                     150000
linkscan-mode:                         software
single-pass-l2-known-multicast:        off
single-pass-flood:                     off
single-pass-riot:                      off
xcvr-oir-debug-port:                   none
cos-8-and-9-queue:                     off
batch-move-mac-hw-group-for-vlan-only: off
```

T Commands

tech-support-show

This command is used to assist Pluribus Networks Technical Assistance Center (TAC) when troubleshooting a switch.

Syntax `tech-support-show`

Defaults None

Access CLI

History

Version 2.0	Command introduced

Usage Information in the show output provides Pluribus TAC with logs, and statistics to begin the investigation on any technical issues. This command output is not comprehensive, and may require additional details. While running the `tech-support-show` command, you should enable logging in your SSH client for capturing the output to be sent to Pluribus TAC.

Examples To display information about a switch, use the following command (the output displayed here is only a sample of the complete output):

```
CLI (network-admin@switch) > tech-support-show
==================  admin-service-show  =====================
if:                mgmt
ssh:              on
nfs:              on
web:              on
web-ssl:        off
web-ssl-port:  443
web-port:       80
snmp:             off
net-api:        on
icmp:             on
if:                data
ssh:              on
nfs:              on
web:              on
web-ssl:        off
web-ssl-port:  443
web-port:       80
snmp:             off
net-api:        on
icmp:             on
==================  admin-sftp-show  ========================
sftp-user:        sftp
enable:             yes
```

topology-create

This command is used to create a named topology entity.

Syntax `topology-create`

name *name-string*	Specify the name of the fabric topology.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to create a named topology entity.

Examples To create a topology named topo1, use the following syntax:

```
CLI (network-admin@switch) > topology-create name topo1
```

topology-delete

This command is used to delete a named topology entity.

Syntax `topology-delete`

`name` *`name-string`*	Specify the name of the fabric topology.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete a named topology entity.

Examples To delete a topology named topo1, use the following syntax:

CLI *(network-admin@switch)* > `topology-delete name topo1`

topology-import

This command is used to import existing vLEs into a topology, and store the endpoints' information (switch name, and port).

Syntax `topology-import`

`name` *`name-string`*	Specify the name of the fabric topology.
`type vflow|vle`	Specify the type of connection as vFlow or vLE.
`vflow-name` *`vflow name`*	Specify the vFlow name.
`vle-name` *`vle name`*	Specify the vLE name.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to import existing vLEs into a topology, and store the endpoints' information (switch name, and port).

Examples To import a topology named topo1, use the following syntax:

CLI *(network-admin@switch)* > `topology-import name topo1`

topology-modify

This command is used to create/delete the vLEs, and the associated VLANs configured in a topology.

Syntax `topology-modify`

`name` *`name-string`*	Specify the name of the fabric topology.
`enable|disable`	Specify whether to deploy or clear vFlow configurations.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to update a named topology entity.

Examples To deploy or clear all configuration by topology, use the following syntax:

`CLI (network-admin@switch) >` `topology-modify`

topology-node-show

This command is used to display network topology nodes.

Syntax `topology-node-show`

`name` *`name-string`*	Name of the fabric topology.
`node` *`fabric-node name`*	Name for the first link node.
`local-port` *`local-port-number`*	The port on the first fabric node.
`peer-node` *`fabric-node name`*	Name for the second link node.
`remote-port` *`remote-port-number`*	The port on the second fabric node.
`enable|disable`	Specify the topology link state for path calculation.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display network topology nodes.

Examples To display network topology nodes, use the following syntax:

```
CLI (network-admin@switch) > topology-node-show
```

topology-show

This command is used to display a named topology entity.

Syntax `topology-show`

`name` *`name-string`*	Name of the topology.
`enable|disable`	Specify whether to deploy or clear vFlow configurations
`type vflow|vle`	The type of connection as vFlow or vLE.
`vflow-name` *`vflow name`*	The vFlow name.
`vle-name` *`vle name`*	The vLE name.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display a named topology entity.

Examples To display a network topology, use the following syntax:

`CLI (network-admin@switch)` > `topology-show`

topology-vle-add

This command is used to specifiy the vLE name to be added to a topology, the node, and the node ports between which the vLE needs to be set up.

Syntax `topology-vle-add`

`name` *`name-string`*	Specify the name of the topology.
`vle-name` *`vle name`*	Specify the vLE name.
`node1` *`fabric-node name`*	Specify the name for the first fabric node.
`node2` *`fabric-node name`*	Specify the name for the second fabric node.
`node-1-port` *`node-1-port-number`*	Specify the port number on first node.
`node-2-port` *`node-2-port-number`*	Specify the port number on second node.
`vlan` *`0..4095`*	Specifies the VLAN for vLE.
`vxlan` *`0..16777215`*	Specifies the VXLAN for vLE.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to add vLEs in a topology.

Examples To add vLEs in a topology, use the following syntax:

`CLI (network-admin@switch)` > `topology-vle-add`

topology-vle-remove

This command is used to remove vLEs from a topology.

Syntax `topology-vle-remove`

name *name-string*	Specify the name of the topology.
vle-name *vle name*	Specify the vLE name.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to remove vLEs from a topology.

Examples To remove vLEs from a topology, use the following syntax:

CLI (network-admin@switch) > `topology-vle-remove`

topology-vle-modify

This command is used to update the vLE, the node, and the node ports between which the vLE needs to be set up.

Syntax `topology-vle-modify`

`name` *`name-string`*	Specify the name of the topology.
`vle-name` *`vle name`*	Specify the vLE name.
`node-1-port` *`node-1-port-number`*	Specify the port number on first node.
`node-2-port` *`node-2-port-number`*	Specify the port number on second node.
`vlan` *`0..4095`*	Specifies the VLAN for vLE.
`vxlan` *`0..16777215`*	Specifies the VXLAN for vLE.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to update vLEs in a topology.

Examples To update vLEs in a topology, use the following syntax:

CLI (network-admin@switch) > `topology-vle-modify`

topology-vle-show

This command is used to display the vLE, the node, and the node ports between which the vLE needs to be set up.

Syntax `topology-vle-show`

`name` *`name-string`*	The name of the topology.
`vle-name` *`vle-name-string`*	The vLE name.
`node1` *`fabric-node name`*	Name for the first fabric node.
`node2` *`fabric-node name`*	Name for the second fabric node.
`node-1-port` *`node-1-port-number`*	The port number on first node.
`node-2-port` *`node-2-port-number`*	The port number on second node.
`vlan` *`0..4095`*	The VLAN for vLE.
`vxlan` *`0..16777215`*	The VXLAN for vLE.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display vLEs in a topology.

Examples To display vLEs in a topology, use the following syntax:

`CLI (network-admin@switch)` > `topology-vle-show`

topology-vlink-add

In a topology, you can store the endpoint information for a Network Packet Broker (NPB) vFlow in the form of a Virtual Link (vLink). A vLink stores both the bidirectional vPG endpoints of a vFlow, and when you enable the topology, NetVisor automatically creates a vFlow between the two vPGs with protocol transparency enabled. This command is used to add vLinks to a network topology.

Syntax `topology-vlink-add`

`name` *`name-string`*	Specify the name of the topology.
`vlink-name` *`vlink-name-string`*	Specify the vLink name.
`endpoint1` *`vpg name`*	Specifies vLink for first the endpoint.
`endpoint2` *`vpg name`*	Specifies vLink for the second endpoint.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to add vLinks to a network topology.

Examples To add vLinks to an NPB topology, use the following syntax:

`CLI (network-admin@switch)` > `topology-vlink-add`

topology-vlink-modify

In a topology, you can store the endpoint information for a Network Packet Broker (NPB) vFlow in the form of a Virtual Link (vLink). A vLink stores both the bidirectional vPG endpoints of a vFlow, and when you enable the topology, NetVisor automatically creates a vFlow between the two vPGs with protocol transparency enabled. This command is used to to modify vLink configuration in a topology.

Syntax `topology-vlink-modify`

`name` *`name-string`*	Specify the name of the topology.
`vlink-name` *`vlink-name-string`*	Specify the vLink name.
Between any of the two options:	
`endpoint1` *`vpg name`*	Specifies vLink for first the endpoint.
`endpoint2` *`vpg name`*	Specifies vLink for the second endpoint.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to modify vLink configuration in a topology.

Examples To update vLinks to a topology, use the following syntax:

`CLI (network-admin@switch)` > `topology-vlink-modify`

topology-vlink-remove

In a topology, you can store the endpoint information for a Network Packet Broker (NPB) vFlow in the form of a Virtual Link (vLink). A vLink stores both the bidirectional vPG endpoints of a vFlow, and when you enable the topology, NetVisor automatically creates a vFlow between the two vPGs with protocol transparency enabled. This command is used to remove vLinks from a topology.

Syntax `topology-vlink-remove`

`name` *`name-string`*	Specify the name of the topology.
`vlink-name` *`vlink-name-string`*	Specify the vLink name.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to remove vLinks from a topology.

Examples To remove vLinks from a topology, use the following syntax:

CLI (network-admin@switch) > `topology-vlink-remove`

topology-vlink-show

In a topology, you can store the endpoint information for a Network Packet Broker (NPB) vFlow in the form of a Virtual Link (vLink). A vLink stores both the bidirectional vPG endpoints of a vFlow, and when you enable the topology, NetVisor automatically creates a vFlow between the two vPGs with protocol transparency enabled. This command is used to display vLinks on a topology.

Syntax `topology-vlink-show`

`name` *`name-string`*	Specify the name of the topology.
`vlink-name` *`vlink-name-string`*	Specify the vLink name.
`endpoint1` *`vpg name`*	Specifies vLink for first the endpoint.
`endpoint2` *`vpg name`*	Specifies vLink for the second endpoint.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display vLinks In a topology.

Examples To display vLinks In a topology, use the following syntax:

```
CLI   (network-admin@switch) > topology-vlink-show
name   vlink-name endpoint1 endpoint2
----- ---------- --------- --------
topo1 flow1      vpg1      vpg2
```

traceroute

This command is used to display route information to a host.

Syntax `traceroute [options]`

Defaults None

Access CLI

History

Version 2.2.4	Command introduced

Usage Use this command to display route information to a host.

Examples To see the routes between a switch, and yodel.com, use the following command:

```
CLI (network-admin@switch) > traceroute yodel.com
traceroute: Warning: yodel.com has multiple addresses; using 98.138.253.109
traceroute: Warning: Multiple interfaces found; using 10.9.100.100 @ igb0
traceroute to yodel.com (98.138.253.109), 30 hops max, 40 byte packets
 1  router.pluribusnetworks.com (10.11.11.1)  0.712 ms  0.636 ms  0.659 ms
2  10.23.5.2 (10.23.5.2)  0.704 ms  0.654 ms  0.613 ms
 3  xe-8-0-0-3465-sur01.santaclara.ca.sfba.comcast.net (50.203.11.17)
 1.117 ms  1.102 ms  1.093 ms
 4  te-0-10-0-2-ar01.sfsutro.ca.sfba.comcast.net (68.85.86.17)  3.343 ms
 3.859 ms  3.959 ms
 5  he-0-9-0-0-ar01.santaclara.ca.sfba.comcast.net (69.139.198.138)  4.360
ms  4.464 ms  4.379 ms
6  * * *
 7  be-10910-cr01.sanjose.ca.ibone.comcast.net (68.86.86.102)  6.956 ms
 7.639 ms  9.245 ms
8  50.242.148.34 (50.242.148.34)  6.606 ms  6.567 ms  6.728 ms
9  * * *
10  * * *
11  4.34.50.38 (4.34.50.38)  30.548 ms  135.574 ms  53.269 ms
12  ae-0.pat1.nez.yodel.com (216.115.100.8)  55.840 ms ae-
6.pat2.nez.yodel.com (216.115.104.116)  55.689 ms  55.324 ms
13  ae-1.msr2.ne1.yodel.com (216.115.100.7)  54.939 ms ae-
1.msr1.ne1.yodel.com (216.115.100.5)  58.989 ms ae-0.msr1.ne1.yodel.com
(216.115.100.1)  40.204 ms
14  ae-1.clr2-a-gdc.ne1.yodel.com (98.138.0.19)  55.725 ms unknown-98-138-
97-x.yodel.com (98.138.97.3)  55.829 ms ae-0.clr1-a-gdc.ne1.yodel.com
(98.138.144.21)  55.886 ms
15  et-18-25.fab3-1-gdc.ne1.yodel.com (98.138.0.89)  55.507 ms et-17-
1.fab1-1-gdc.ne1.yodel.com (98.138.0.79)  40.852 ms et-18-25.fab3-1-
gdc.ne1.yodel.com (98.138.0.89)  55.513 ms
16  po-17.bas1-7-prd.ne1.yodel.com (98.138.240.20)  41.726 ms po-11.bas1-7-
prd.ne1.yodel.com (98.138.240.8)  63.368 ms po-16.bas2-7-prd.ne1.yodel.com
(98.138.240.34)  56.676 ms
17  * * *
```

```
18  * * *
19  * * *
20  * * *
21  * * *
22  * * *
23  * * *
24  * * *
25  * * *
26  * * *
27  * * *
28  * * *
29  * * *
30  * * *
```

transaction-cluster-divergence-fix

This command is used to fix the cluster transaction divergence that may occur in one of the nodes of a cluster when the configurations go out-of-synch between the nodes of a cluster.

Syntax `transaction-cluster-divergence-fix`

Defaults None

Access CLI

History

Version 5.1.2	Command introduced

Usage Use this command to fix the cluster transaction divergence between the nodes of a cluster, and roll back the configuration to a common transaction ID number.

Examples To fix the cluster transaction divergence between the nodes of a cluster, use the following command:

```
CLI (network-admin@switch) > transaction-cluster-divergence-fix
```

transaction-log-file-truncate-to

This command is used to truncate the local xact log file to given tid (latest tid entries are retained)

Syntax `transaction-log-file-truncate-to`

`trunc_tid` *`trunc_tid-number`*	Specify the transaction ID.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to truncate the local xact log file.

Examples To display vLinks on a topology, use the following syntax:

CLI (network-admin@switch) > `transaction-log-file-truncate-to`

transaction-node-show

This command is used to display fabric transaction numbers. If a failure occurs on the fabric, transactions on nodes in the fabric can become out of synch. Once transactions are out of synch, no further transactions can be executed across the scope of local, fabric, or cluster. Unjoining, and rejoining the fabric causes the node to lose configuration.

As part of a single node transaction recovery, you can roll back the transaction number to a previous one.

Syntax `transaction-node-show`

`id` *`id-number`*	Displays the ID assigned to the node.
`name` *`name-string`*	Displays the node name.
`local-tid` *`local-tid-number`*	Displays the local transaction ID.
`fabric-tid` *`fabric-tid-number`*	Displays the fabric transaction ID.
`cluster-tid` *`cluster-tid-number`*	Displays the cluster transaction ID.
`fabric-changeid` *`fabric-changeid-string`*	Displays the fabric unique change ID.
`cluster-changeid` *`cluster-changeid-string`*	Displays the cluster unique change ID.

Defaults None

Access CLI

History

Version 2.3	Command introduced

Usage Use this command to roll back the fabric to a specific transaction ID number. This may be necessary to resynchronize the fabric without forcing nodes to unjoin, and rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

Examples To display transaction node information, use the following syntax:

```
CLI (network-admin@switch) > transaction-node-show
switch:           switch-2
id:               150996198
name:             ursa-colo-2
local-tid:        15
fabric-tid:       2
cluster-tid:      0
fabric-changeid:
```

32d986727bc3cbe0826b43d6f71918d68dc6cce4df0c0f6c3f28d78edad55db1

transaction-rollback-to

This command is used to roll back the fabric to a specific fabric transaction number. If a failure occurs on the fabric, transactions on nodes in the fabric can become out of synch. Once transactions are out of synch, no further transactions can be executed across the scope of local, fabric, or cluster. Unjoining, and rejoining the fabric causes the node to lose configuration.

As part of a single node transaction recovery, you can roll back the transaction number to a previous one.

Syntax `transaction-rollback-to`

`scope local|cluster|fabric`	Specify if you want to rollback the transaction number on a local, cluster, or fabric scope.
`tid` *`tid-number`*	Specify the transaction number to rollback the transaction.
`ignore-error|no-ignore-error`	Specify if you want ignore errors when this command is executed. Use with **CAUTION**.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 3.0.0	The parameter `ignore-error` added.

Usage Use this command to roll back the fabric to a specific transaction ID number. This may be necessary to resynchronize the fabric without forcing nodes to unjoin, and rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

Examples To roll back to the fabric transaction ID to 14, use the following syntax:

```
CLI (network-admin@switch) > transaction-rollback-to transaction-scope fabric tid 14
```

This command produces output only if an error has occurred during the transaction.

```
CLI (network-admin@switch) > transaction-rollback-to transaction-scope fabric tid 5
Warning: rolled back transactions are unrecoverable unless another fabric node has them. Proceed? [y/n] y
```

transaction-rollforward-to

This command is used to roll forward the fabric to a specific fabric transaction number.

Syntax `transaction-rollforward-to`

`transaction-scope local|cluster|fabric`	Specify if you want to roll forward the transaction number on a local, cluster, or fabric scope.
`tid` *`tid-number`*	Specify the transaction number to roll forward the transaction.
`remote-node` *`fabric-node-name`*	Specify the node to rollforward the transaction ID.
`ignore-error|no-ignore-error`	Specify if you want ignore errors when this command is executed. Use with **CAUTION**.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 2.4	The parameter `remote-node` added.
Version 3.0.0	The parameter `ignore-error` added.

Usage Use this command to roll forward the fabric to a specific transaction ID number. This may be necessary to resynchronize the fabric without forcing nodes to unjoin, and rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

Examples To roll forward to the fabric transaction ID to 14, use the following syntax:

```
CLI (network-admin@switch) > transaction-forward-to scope fabric
tid 14
```

This command produces output only if an error has occurred during the transaction.

transaction-settings-modify

You can modify transaction settings to automatically recover missed transactions.

Syntax `transaction-settings-modify`

Specify one or more of the following options:	
`allow-offline-cluster-nodes|no-allow-offline-cluster-nodes`	Specify if you want to allow transaction to proceed even if a cluster is offline.
`auto-recover|no-auto-recover`	Specify if you want to automatically recover missed transactions.
`auto-recovery-retry-time duration:#d#h#m#s`	Specify the retry time for transaction auto-recover.
`reserve-retry-maximum` *`reserve-retry-maximum-number`*	Maximum number of retires for transaction reservation; 0 for infinite.
`reserve-retry-interval-maximum` *`reserve-retry-interval-maximum-number`* `(s)`	Maximum number of seconds to wait between transaction reservation retries.
`max-local-xact-log-entries max-local-xact-log-entries-number`	Max no. of entries in xact_log file (addtional 100 are saved before truncation). The default is 0, that is, the feature is disabled.

Defaults None

Access CLI

History

Version 2.3	Command introduced.
Version 2.4	The parameter `allow-offline-cluster-nodes` added.
Version 6.1.0	The parameter `max-local-xact-log-entries` added.

Usage Use this command to automatically recover transactions on the fabric.

Examples To set the recovery to automatic, use the following syntax:

```
CLI (network-admin@switch) > transaction-settings-modify  auto-
recover
```

transaction-settings-show

You can display transaction settings that automatically recover missed transactions.

Syntax `transaction-settings-show`

`allow-offline-cluster-nodes|no-allow-offline-cluster-nodes`	Specify if you want to allow transaction to proceed even if a cluster is offline.
`auto-recover|no-auto-recover`	Specify if you want to automatically recover missed transactions.
`auto-recovery-retry-time duration:#d#h#m#s`	Specify the retry time for transaction auto-recover.

Defaults None

Access CLI

History

Version 2.3	Command introduced.
Version 2.4	The parameter `allow-offline-cluster-nodes` added.

Usage Use this command to display transaction settings.

Examples To display the transaction settings, use the following syntax:

```
CLI (network-admin@switch) > transaction-settings-show
```

transaction-show

This command is used to display the transaction information.

Syntax `transaction-show`

`start-time` *`high resolution time: #ns`*	The start time of transaction.
`end-time` *`high resolution time: #ns`*	The end time of transaction.
`transaction-scope local|cluster|fabric`	The scope of transaction to roll: local, cluster, or fabric.
`tid` *`tid-number`*	The transaction ID (TID).
`trunc_tid` *`trunc_tid-number`*	The transaction ID (TID).
`changeid` *`changeid-string`*	Transaction unique change ID.
`remote-node` *`fabric-node name`*	Specifies which node to roll forward from.
`start-tid` *`start-tid-number`*	The starting transaction ID (TID).
`end-tid` *`end-tid-number`*	The ending transaction ID (TID).
`state start|local-cmd|commit-request|commit-prep|commit|commit-done| abort-start|abort-done|remote-start|remote-commit-request|remote-commit-prep|remote-commit|remote-abort-start|remote-abort-done|undo-info|changeid|reserve|reserve-abort|remote-reserve|remote-reserve-abort|checkpoint-start|checkpoint-done|roll-forward|roll-back|roll-forward-result|roll-back-result|change-no-xact|failure`	The transaction state.
`command` *`command-string`*	Command issued.
`local-command` *`local-command-string`*	Command issued with local-scoped fields.

`undo-command` *`undo-command-string`*	Undo command (more than one not shown).
`failure` *`failure-string`*	Failure message if error ignored.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display the transaction settings.

Examples To display the transaction settings, use the following syntax:

```
CLI (network-admin@switch) > transaction-show
```

trunk-create

This command creates a new trunk for link aggregation on a switch.

Syntax `trunk-create`

`name` *`name-string`*	Specify the name for the trunk configuration.
`ports` *`port-list`*	Specify the port number(s) for the link(s) to aggregate into the trunk.
Specify any of the following options:	
`speed disable|100m|1g|10g|40g|50g|100g`	Specify the port speed or disable the port.
`egress-rate-limit unlimited`	Specify an egress rate limit for the configuration.
`autoneg|no-autoneg`	Specify if you want the physical port to autonegotiate port speed.
`jumbo|no-jumbo`	Specify if the port can receive jumbo frames.
`lacp-mode off|passive|active`	Specify the Link Aggregation Control Protocol (LACP) mode for the configuration.
`lacp-priority` *`number`*	Specify the LACP priority. This is a number between 1, and 65535 with a default value of 32768.
`lacp-timeout slow|fast`	Specify the LACP time out as slow (30 seconds) or fast (4 seconds). The default value is slow.
`lacp-fallback bundle|individual`	Specify the LACP fallback mode as individual or bundled.
`lacp-fallback-timeout seconds`	Specify the LACP fallback timeout in seconds. The range is between 30, and 60 seconds with a default value of 50 seconds.
`reflect|noreflect`	Specify physical port reflection

`edge-switch|no-edge-switch`	Specify if the switch is an edge switch.
`pause|no-pause`	Specify if pause frames are sent.
`description` *`description-string`*	Specify a description for the trunk configuration. This trunk description applies to all the member ports.
`loopback|no-loopback`	Specify loopback if you want to use loopback.
`vxlan-termination| no-vxlan-termination`	Specify if a VXLAN can terminate on the trunk.
`unknown-ucast-level` *`unknown-ucast-level-string`*	Specify an unknown unicast level in percent. The default value is 100%.
`unknown-mcast-level` *`unknown-mcast-level-string`*	Specify an unknown multicast level in percent. The default value is 100%.
`broadcast-level` *`broadcast-level-string`*	Specify a broadcast level in percent. The default value is 100%.
`port-mac-address` *`mac-address`*	Specify the MAC address of the port.
`loop-vlans` *`vlan-list`*	Specify a list of VLANS for looping.
`routing|no-routing`	Specify if the port participates in routing on the network.
`host-enable|host-disable`	Enable or disable host facing ports.
`defer-bringup|no-defer-bringup`	Specify to delay bringing up the host.
`dscp-map dscp-map name|none`	Specify the DSCP map name to enable on a port
`local-switching|no-local-switching`	Specify local-switching or no-local-switching. A no-local-switching port cannot bridge traffic to another no-local-switching port
`allowed-tpid q-in-q|q-in-q-old`	Specify an allowed TPID in addition to 0x8100 for VLAN headers.

`fabric-guard|no-fabric-guard`	Specify if fabric guard is enabled.
`fec|no-fec`	Specify Port Forwarding Error Correction (FEC) mode.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.6	The optional parameter `lacp-mode` added.
Version 2.1	The parameter id is deprecated. The parameters `enable` **|** `disable`, `lacp-priority`, `lacp-timeout`, `reflect`, `edge-switch`, `pause`, `description`, `loopback`, `mirror-receive`, `port-mac` and `send-port` added.
Version 2.2.5	The parameters `unknown-ucast-level`, `unknown-mcast-level`, and `broadcast-level` added.
Version 2.2.6	The parameter `egress-rate-limit` added.
Version 2.3	The parameters `auto-neg`, `eth-mode`, and `reflect` deprecated.The parameter `rem-rswitch-port`, and `routing` added.
Version 2.4	The parameter `enable|disable` deprecated. The parameters `loop-vlans`, and `host-enable` added.
Version 2.5.3	The parameters `reflect|noreflect`, `dscp-map` `dscp-map` `name|none`, and `local-switching|no-local-switching` added.
Version 2.6.2	The parameter `vxlan-termination`, `allowed-tpid`, and `fabric-guard` added. The parameter `mirror-receive-only` deprecated.

Version 3.0.0	The parameter `autoneg|no-autoneg` added.
Version 3.1.0	The parameter `fec|no-fec` added.
Version 5.1.0	The parameters `bw-bps, and rem-rswitch-port-mac` deprecated. The parameter `defer-bringup|no-defer-bringup` added.
Version 7.0.0	The parameter `description` added.

Usage Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to create a new trunk.

Examples To create a trunk with the name, trunk-12, and aggregate the links connected to ports 1, 2, and 3:

```
CLI (network-admin@switch) > trunk-create name trunk-12 port 1,2,3
```

trunk-delete

This command is used to delete an existing trunk from the configuration.

Syntax `trunk-delete`

`name` *`name-string`*	Specify the trunk name.
`trunk-id` *`trunk-id-number`*	Specify the physical interface ID.
`description` *`description-string`*	Specify the trunk description to delete the trunk configuration. When you delete a trunk configuration, the trunk description is removed from the member ports.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 2.6.2	The parameter trunk-id added.
Version 7.0.0	The parameter `description` added.

Usage Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to delete an existing trunk.

Examples To delete an existing trunk, 476, use the following command:

```
CLI (network-admin@switch) > trunk-delete name trunk-476
```

trunk-modify

This command modifies a trunk for link aggregation on a switch.

Syntax `trunk-modify`

`name` *`name-string`*	Specify the name for the trunk configuration.
`ports` *`port-list`*	Specify the port number(s) for the link(s) to aggregate into the trunk.
Specify any of the following options:	
`speed disable|100m|1g|10g|40g|50g|100g`	Specify the port speed or disable the port.
`egress-rate-limit unlimited`	Specify an egress rate limit for the configuration.
`autoneg|no-autoneg`	Specify if you want the physical port to autonegotiate port speed.
`jumbo|no-jumbo`	Specify if the port can receive jumbo frames.
`lacp-mode off|passive|active`	Specify the Link Aggregation Control Protocol (LACP) mode for the configuration.
`lacp-priority` *`number`*	Specify the LACP priority. This is a number between 1, and 65535 with a default value of 32768.
`lacp-timeout slow|fast`	Specify the LACP time out as slow (30 seconds) or fast (4 seconds). The default value is slow.
`lacp-fallback bundle|individual`	Specify the LACP fallback mode as individual or bundled.
`lacp-fallback-timeout seconds`	Specify the LACP fallback timeout in seconds. The range is between 30, and 60 seconds with a default value of 50 seconds.
`reflect|noreflect`	Specify physical port reflection

`edge-switch|no-edge-switch`	Specify if the switch is an edge switch.
`pause|no-pause`	Specify if pause frames are sent.
`description` *`description-string`*	Specify the trunk description. Note: If you add ports to the trunk, the trunk description applies to the new ports. If you remove ports from the trunk, the description is removed from the ports.
`loopback|no-loopback`	Specify loopback if you want to use loopback.
`vxlan-termination|no-vxlan-termination`	Specify if a VXLAN can terminate on the trunk.
`unknown-ucast-level` *`unknown-ucast-level-string`*	Specify an unknown unicast level in percent. The default value is 100%.
`unknown-mcast-level` *`unknown-mcast-level-string`*	Specify an unknown multicast level in percent. The default value is 100%.
`broadcast-level` *`broadcast-level-string`*	Specify a broadcast level in percent. The default value is 100%.
`port-mac-address` *`mac-address`*	Specify the MAC address of the port.
`loop-vlans` *`vlan-list`*	Specify a list of VLANS for looping.
`routing|no-routing`	Specify if the port participates in routing on the network.
`host-enable|host-disable`	Enable or disable host facing ports.
`defer-bringup|no-defer-bringup`	Specify to delay bringing up the host.
`dscp-map dscp-map name|none`	Specify the DSCP map name to enable on a port
`local-switching|no-local-switching`	Specify local-switching or no-local-switching. A no-local-switching port cannot bridge traffic to another no-local-switching port

`allowed-tpid q-in-q|q-in-q-old`	Specify an allowed TPID in addition to 0x8100 for VLAN headers.
`fabric-guard|no-fabric-guard`	Specify if fabric guard is enabled.
`fec|no-fec`	Specify Port Forwarding Error Correction (FEC) mode.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 1.2.6	The optional parameter `lacp-mode` added.
Version 2.1	The parameter `id` is deprecated. The parameters `enable` **|** `disable`, `lacp-priority`, `lacp-timeout`, `reflect`, `edge-switch`, `pause`, `description`, `loopback`, `mirror-receive`, `port-mac` and `send-port` added.
Version 2.2.5	The parameters `unknown-ucast-level`, `unknown-mcast-level`, and `broadcast-level` added.
Version 2.2.6	The parameter `egress-rate-limit` added.
Version 2.3	The parameters `auto-neg`, `eth-mode`, and `reflect` deprecated.The parameters `rem-rswitch-port`, and `routing` added.
Version 2.4	The parameter `enable|disable` deprecated. The parameters `loop-vlans`, and `host-enable` added.
Version 2.5.3	The parameters `reflect|noreflect`, `dscp-map dscp-map name|none`, and `local-switching|no-local-switching` added.
Version 2.6.2	The parameter `vxlan-termination`,

	`allowed-tpid`, and `fabric-guard` added. The parameter `mirror-receive-only` deprecated.
Version 3.0.0	The parameter `autoneg|no-autoneg` added.
Version 3.1.0	The parameter `fec|no-fec` added.
Version 5.1.0	The parameters `bw-bps`, and `rem-rswitch-port-mac` deprecated. The parameter `defer-bringup|no-defer-bringup` added.
Version 7.0.0	The parameter `description` added.

Usage Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to modify the links for a trunk.

Examples To modify a trunk with the name trunk-476, and to aggregate the links connected to ports 11, 21, and 31.

```
CLI (network-admin@switch) > trunk-modify name trunk-476 port
11,21,31
```

trunk-show

This command displays the list of links aggregated into a trunk.

Syntax `trunk-show`

`name` *`name-string`*	The name for the trunk configuration.
`ports` *`port-list`*	The port number(s) for the link(s) to aggregate into the trunk.
Specify any of the following options:	
`speed disable|100m|1g|10g|40g|50g|100g`	Specify the port speed or disable the port.
`egress-rate-limit unlimited`	Specify an egress rate limit for the configuration.
`autoneg|no-autoneg`	Specify if you want the physical port to autonegotiate port speed.
`jumbo|no-jumbo`	Specify if the port can receive jumbo frames.
`lacp-mode off|passive|active`	Specify the Link Aggregation Control Protocol (LACP) mode for the configuration.
`lacp-priority` *`number`*	Specify the LACP priority. This is a number between 1, and 65535 with a default value of 32768.
`lacp-timeout slow|fast`	Specify the LACP time out as slow (30 seconds) or fast (4 seconds). The default value is slow.
`lacp-fallback bundle|individual`	Specify the LACP fallback mode as individual or bundled.
`lacp-fallback-timeout seconds`	Specify the LACP fallback timeout in seconds. The range is between 30, and 60 seconds with a default value of 50 seconds.
`reflect|noreflect`	Specify physical port reflection

`edge-switch|no-edge-switch`	Specify if the switch is an edge switch.
`pause|no-pause`	Specify if pause frames are sent.
`description` *`description-string`*	Specify the physical port description.
`loopback|no-loopback`	Specify loopback if you want to use loopback.
`vxlan-termination| no-vxlan-termination`	Specify if a VXLAN can terminate on the trunk.
`unknown-ucast-level` *`unknown-ucast-level-string`*	Specify an unknown unicast level in percent. The default value is 100%.
`unknown-mcast-level` *`unknown-mcast-level-string`*	Specify an unknown multicast level in percent. The default value is 100%.
`broadcast-level` *`broadcast-level-string`*	Specify a broadcast level in percent. The default value is 100%.
`port-mac-address` *`mac-address`*	Specify the MAC address of the port.
`loop-vlans` *`vlan-list`*	Specify a list of VLANS for looping.
`routing|no-routing`	Specify if the port participates in routing on the network.
`host-enable|host-disable`	Enable or disable host facing ports.
`defer-bringup|no-defer-bringup`	Specify to delay bringing up the host.
`dscp-map dscp-map name|none`	Specify the DSCP map name to enable on a port
`local-switching|no-local-switching`	Specify local-switching or no-local-switching. A no-local-switching port cannot bridge traffic to another no-local-switching port
`allowed-tpid q-in-q|q-in-q-old`	Specify an allowed TPID in addition to 0x8100 for VLAN headers.

`fabric-guard|no-fabric-guard`	Specify if fabric guard is enabled.
`fec|no-fec`	Specify Port Forwarding Error Correction (FEC) mode.

Defaults

None.

Access

CLI

History

Version 1.2	Command introduced.
Version 1.2.6	The optional parameter `lacp-mode` added.
Version 2.1	The parameter `id` is deprecated. The parameters `enable | disable`, `lacp-priority`, `lacp-timeout`, `reflect`, `edge-switch`, `pause`, `description`, `loopback`, `mirror-receive`, `port-mac` and `send-port` added.
Version 2.2.5	The parameters `unknown-ucast-level`, `unknown-mcast-level`, and `broadcast-level` added.
Version 2.2.6	The parameter `egress-rate-limit` added.
Version 2.3	The parameters `auto-neg`, `eth-mode`, and `reflect` deprecated. The parameter `rem-rswitch-port`, and `routing` added.
Version 2.4	The parameter `enable|disable`, deprecated. The parameters `loop-vlans`, and `host-enable` added.
Version 2.5.3	The parameters `reflect|noreflect`, `dscp-map` `dscp-map` `name|none`, and `local-switching|no-local-switching` added.
Version 2.6.2	The parameter `vxlan-termination`, `allowed-tpid`, and `fabric-guard` added. The parameter `mirror-receive-only` deprecated.

Version 3.0.0	The parameter `autoneg|no-autoneg` added.
Version 3.1.0	The parameter `fec|no-fec` added.
Version 5.1.0	The parameters `bw-bps`, `rem-rswitch-port-mac`, deprecated. The parameter `defer-bringup|no-defer-bringup` added.
Version 7.0.0	The parameter `description` added.

Usage Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to modify the links for a trunk.

Examples To display a list of all trunks, and the aggregated links, use the following command:

```
CLI (network-admin@switch) > trunk-show
name     port speed autoneg jumbo
------- ---- ----- ------- ----
trunk-1 1,3  10g   off     off
```

trunk-stats-clear

This command is used to clear information about trunk statistics.

Syntax `trunk-stats-clear`

Specify any of the following options:

`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies a time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`start-time` *`start-time`*	Specifies a start time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`end-time` *`end-time`*	Specifies an end time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month;

	• HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`duration` *`duration`*	Specifies the duration in seconds.
`interval duration: #d#h#m#s`	Specifies the interval between statistics collection.
`since-start|` `no-since-start`	Specifies if the statistics are collected from the start of collecting statistics.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the duration in days, hours, minutes, and seconds.
`within-last duration: #d#h#m#s`	Specifies if the statistics are within the duration in days, hours, minutes, and seconds.
`port` *`port-list`*	Specifies one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).
`name name-string`	Specifies the name of the trunk.
`description` *`description-string`*	Specifies the physical port description.
`counter` *`counter-number`*	Specifies the counter number.
`ibytes ibytes-number`	Specifies the incoming number of bytes.
`ibits` *`ibits-number`*	Specifies the number of incoming bits.
`iUpkts` *`iUpkts-number`*	Specifies the number of incoming unicast packets.
`iBpkts` *`iBpkts-number`*	Specifies the number of incoming broadcast packets.

iMpkts *iMpkts-number*	Specifies the number of incoming multicast packets.
iPauseFs *iPauseFs-number*	Specifies the number of incoming pause frames.
iCongDrops *iCongDrops-number*	Specifies the number of incoming packets dropped due to congestion.
idiscards *idiscards-number*	Specifies the number of incoming packets discarded.
ierrs *ierrs-number*	Specifies the number of incoming errors.
obytes *obytes-number*	Specifies the number of outgoing bytes.
obits *obits-number*	Specifies the number of outgoing bits.
oUpkts *oUpkts-number*	Specifies the number of outgoing unicast packets.
oBpkts *oBpkts-number*	Specifies the number of outgoing broadcast packets.
oMpkts *oMpkts-number*	Specifies the number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	Specifies the number of outgoing pause frames.
oCongDrops *oCongDrops*-number	Specifies the number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	Specifies the number of outgoing discarded packets.
oerrs *oerrs-number*	Specifies the number of outgoing errors.
mtu-errs *mtu-errs-number*	Specifies the number of MTU errors.
HER-packets *HER-pts-number*	Specifies the number of Head End Replicated (HER) packets.

HER-bytes *HER-bytes-number*	Specifies the number of Head End Replicated (HER) bytes.
HER-bits *HER-bits-number*	Specifies the number of Head End Replicated (HER) bits.
port-speed disable|10m|100m|1g|2.5g|10g|25g|40g|50g|100g	Specifies the port speed.
Rx-bw-th-exceed-count *Rx-bw-th-exceed-count-number*	Specifies the count of RX bandwidth threshold exceed events.
Tx-bw-th-exceed-count *Tx-bw-th-exceed-count-number*	Specifies the count of TX bandwidth threshold exceed events.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to clear information about trunk statistics.

Examples To clear information about trunk statistics, use the following syntax:

```
CLI (network-admin@switch) > trunk-stats-clear
```

trunk-stats-show

This command is used to display information about trunk statistics.

Syntax `trunk-stats-show`

Specify any of the following options:

`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies a time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; SS specifies the 2 digit second of the minute
`start-time` *`start-time`*	Specifies a start time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`end-time` *`end-time`*	Specifies an end time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month;

	• HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`duration` *`duration`*	Specifies the duration in seconds.
`interval duration: #d#h#m#s`	Specifies the interval between statistics collection.
`since-start|` `no-since-start`	Specifies if the statistics are collected from the start of collecting statistics.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the duration in days, hours, minutes, and seconds.
`within-last duration: #d#h#m#s`	Specifies if the statistics are within the duration in days, hours, minutes, and seconds.
`port` *`port-list`*	Specifies one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).
`counter` *`counter-number`*	Specifies the counter number.
`ibytes ibytes-number`	Specifies the incoming number of bytes.
`ibits` *`ibits-number`*	Specifies the number of incoming bits.
`iUpkts` *`iUpkts-number`*	Specifies the number of incoming unicast packets.
`iBpkts` *`iBpkts-number`*	Specifies the number of incoming broadcast packets.
`iMpkts` *`iMpkts-number`*	Specifies the number of incoming multicast packets.
`iPauseFs` *`iPauseFs-number`*	Specifies the number of incoming pause

	frames.
iCongDrops *iCongDrops-number*	Specifies the number of incoming packets dropped due to congestion.
idiscards *idiscards-number*	Specifies the number of incoming packets discarded.
ierrs *ierrs-number*	Specifies the number of incoming errors.
obytes *obytes-number*	Specifies the number of outgoing bytes.
obits *obits-number*	Specifies the number of outgoing bits.
oUpkts *oUpkts-number*	Specifies the number of outgoing unicast packets.
oBpkts *oBpkts-number*	Specifies the number of outgoing broadcast packets.
oMpkts *oMpkts-number*	Specifies the number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	Specifies the number of outgoing pause frames.
oCongDrops *oCongDrops*-number	Specifies the number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	Specifies the number of outgoing discarded packets.
oerrs *oerrs-number*	Specifies the number of outgoing errors.
mtu-errs *mtu-errs-number*	Specifies the number of MTU errors.
HER-packets *HER-pts-number*	Specifies the number of Head End Replicated (HER) packets.
HER-bytes *HER-bytes-number*	Specifies the number of Head End Replicated (HER) bytes.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display statistics about a trunk configuration.

Examples To display statistics for a trunk configuration, use the following syntax:

```
CLI (network-admin@switch) > trunk-stats-show
```

tunnel-create

This command is used to create a tunnel on the switch.

Syntax `tunnel-create`

`name` *`name-string`*	Specify the name of the tunnel.
`scope local|cluster`	Specify the scope for the tunnel. Local, and cluster scopes are supported.
`local-ip` *`ip-address`*	Specify the local IP address.
`remote-ip` *`ip-address`*	Specify the IP address of the remote switch.
`vnet` *`vnet-name`*	Specify the vNET name.
`vrouter-name` *`vrouter-name`*	Specify the name of the vRouter service.
`peer-vrouter-name` *`vrouter-name`*	Specify the name of the vRouter service on the cluster peer.
`next-hop` *`ip-address`*	Specify the IP address of the next hop.
`next-hop-mac` *`mac-address`*	Specify the next hop MAC address.
`bfd|no-bfd`	Specify BFD for the tunnel.
`flood-nh-ip` *`ip-address`*	Flood next hop IP.
`flood-nh-mac mac-address`	Flood next hop MAc address.
`mac-learning|no-mac-learning`	Specify if you want to enable or disable MAC address learning.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.

Version 2.1	The parameters `type` and `remote-switch` deprecated.
Version 2.2.3	The parameter `router-if` replaced *`name-string`* with `vrouter-hw-if` name option.
Version 2.4	The option, `cluster` added to `scope`. The parameters `vrouter-name`, and `peer-vrouter-name` added.
Version 2.5	The parameter `vnet` added.
Version 3.0.0	The parameter `vrouter-if` deprecated. The parameter `bfd` added.
Version 6.0.0	The option `mac-learning|no-mac-learning` added.

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to create tunnels on a fabric.

Examples To create a tunnel with a local scope called tunnel1010 with local IP address, 192.168.13.11, and remote IP address of 209.134.65.27, use the following command:

```
CLI (network-admin@switch) > tunnel-create scope local name
tunnel010 local-ip 192.168.13.11 remote-ip 209.134.65.27
```

tunnel-delete

This command is used to delete an existing tunnel from the configuration.

Syntax `tunnel-delete`

`name` *`name-string`*	Specify the name of the tunnel to delete from the configuration.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to delete an existing tunnel on a fabric.

Examples To delete the tunnel ip-23, use the following command:

```
CLI (network-admin@switch) > tunnel-delete name ip-23
```

tunnel-modify

This command is used to modify an existing tunnel on the switch.

Syntax `tunnel-modify`

`name name-string`	specify a tunnel name.
`bfd|no-bfd`	Specify BFD for the tunnel.
`mac-learning|no-mac-learning`	Specify if you want to enable or disable MAC address learning.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `type` and `remote-switch` deprecated.
Version 2.2.3	The parameter `router-if` replaced *`name-string`* with `vrouter-hw-if` name option.
Version 3.0.0	The parameter `vrouter-if` deprecated. The parameter `bfd` added.
Version 6.0.0	The parameter `mac-learning` added.

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to modify tunnels on a fabric.

Examples To enable mac-learning for a tunnel, use the following command:

```
CLI (network-admin@switch) > tunnel-modify name tunnel010 mac-
learning
```

tunnel-show

This command is used to display the list of tunnels on the switch.

Syntax `tunnel-show`

`id`	The ID assigned to the tunnel.
`scope local`	The scope for the tunnel. Only local scopes are supported.
`name` *`name-string`*	Name of the tunnel.
`type ip-in-ip|vxlan|nvgre`	The type of tunnel.
`vnet` *`vnet-name`*	The vNET name.
`vrouter-name` *`vrouter-name`*	Name of the vRouter service.
`peer-vrouter-name` *`vrouter-name`*	Name of the vRouter service on the cluster peer.
`local-ip` *`ip-address`*	The local IP address.
`remote-ip` *`ip-address`*	The remote IP address.
`router-if` *`vrouter-hw-if-name`*	The router interface.
`tunnel-if-name` *`tunnel-if-name-string`*	The router interface VNIC name.
`next-hop` *`ip-address`*	The next hop IP address.
`next-hop-mac` *`mac-address`*	The next hop MAC address.
`next_hop_vnet` *`vlan-id`*	The next hop VLAN ID.
`nexthop-bd` *`bridge-domain`*	The next hop bridge domain.
`nexthop-vlan 0..4095`	The next hop VLAN.
`remote-switch` *`fabric-node-name`*	The remote switch for the tunnel.

vrid *vrid-number*	The vRouter hardware ID.
tunnelID *tunnelID-number*	The tunnel ID.
interface-mac *mac-address*	The MAC address of the tunnel interface.
interface-vnet *vnet name*	The vNET name.
bd *bridge-domain*	The bridge domain name.
interface-vlan *vlan-id*	The interface VLAN.
active yes|no	The status of the tunnel.
state init|ok|error	The state of the tunnel.
bfd|no-bfd	Displays if BFD is configured.
bfd-state unknown|admin-down|down|init|up|no-session|not-replicator-vtep	The state of the BFD session.
peer-bfd-state unknown|admin-down|down|init|up|no-session|not-replicator-vtep	The peer BFD session state.
error *error-string*	The tunnel errors.
route-info *route-info-string*	The route information.
ecmp-group *ecmp-group-number*	The ECMP group information.
using-vxlan-loopback yes|no	Displays using VXLAN loopback.
ports *port-list*	The port list.
nh-egress-id *nh-egress-id-number*	The nexthop port egress ID.
flood-nh-ip ip-address	Flood next hop IP address.
flood-nh-vlan 0..4095	Flood next hop VLAN ID.
flood-nh-port flood-nh-port-number	Flood next hop port number.

`flood-nh-mac mac-address`	Flood next hop MAC address.
`flood-nh-egress-id flood-nh-egress-id-number`	Flood next hop hardware egress ID.
`auto-tunnel auto|static`	Displays if the tunnel is automatic or static.
`ecmp-nexthops|no-ecmp-nexthops`	Filter single or multiple route entries per nexthops.
`flood-nexthop|no-flood-nexthop`	Displays tunnels with either `flood-nexthop` or with `no-flood-nexthop` configured.
`mac-learning|no-mac-learning`	Displays tunnels with either MAC learning enabled or MAC learning disabled.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2.2	The parameter `type` added.
Version 2.2.3	The parameter `router-if` replaced *`name-string`* with `vrouter-hw-if` `name` option.
Version 2.3.1	The parameter `active` added.
Version 2.4	The option, `cluster` added to `scope`. The parameters `vrouter-name`, and `peer-vrouter-name`, `state`, `error`, `route-info`, and `ecmp-group` added.
Version 2.5	The parameter `vnet` added.
Version 3.0.0	The parameter `vrouter-if` deprecated. The parameter `bfd` added.
Version 6.0.0	The parameter `mac-learning` added.

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to display a list of tunnels on a fabric.

Examples To display a list of all tunnels on a switch, use the following command:

```
CLI (network-admin@switch) > tunnel-show
```

tunnel-history-settings-modify

This command is used to update tunnel history settings

Syntax `tunnel-history-settings-modify`

`enable|disable`	Specify whether to enable or disable change logging.
`disk-space disk-space-number`	Specify the total disk-space allocated for all log files.
`log-file-count 1..20`	Specify the number of log files for log rotation.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced

Usage Use this command to update tunnel history settings.

Examples To enable tunnel history settings with a disk space allocated to 50M for all log files with 10 log files for log rotation, use the following command:

```
CLI (network-admin@switch) > tunnel-history-settings-modify  enable
disk-space 50M log-file-count 10
```

tunnel-history-settings-show

This command is used to display tunnel history settings.

Syntax `tunnel-history-settings-show`

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced

Usage Use this command to view tunnel history settings such as enable/disable status, disk-space, and log-file-count.

Examples To display tunnel history settings, use this command:

```
CLI (network-admin@switch) > tunnel-history-settings-show
enable:         yes
disk-space:     50M
log-file-count: 10
```

tunnel-history-show

This command is used to display historical tunnel state information.

Syntax `tunnel-history-show`

`time date/time: yyyy-mm-ddTHH:mm:ss`	The time to start statistic collection.
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	The start-time of statistic collection.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	The end time of statistic collection.
`duration duration: #d#h#m#s`	The duration of statistic collection.
`interval duration: #d#h#m#`	The interval between statistic collection.
`since-start`	The statistics collected since the start time.
`older-than duration: #d#h#m#s`	Displays statistics older than a specific time duration.
`within-last duration: #d#h#m#s`	Displays statistics within a last time period.
`caller vxlan|logger`	The feature that made the change for this entry.
`last-caller vxlan|logger`	The most recent caller for this entry.
`reason save|restart|add|modify|remove|remove-all|add-nh|remove-nh`	The reason for history entry.
`last-reason save|restart|add|modify|remove|remove-all|add-nh|remove-nh ]`	The most recent reason for this entry.
`changes id|scope|name|type|vnet|vrouter-name|peer-vrouter-name| local-ip|remote-ip|router-if|tunnel-if-name|next-hop| next-hop-mac|nexthop-vlan|remote-switch|vrid|active|`	Displays what changed in this entry.

state| error|route-info| ecmp-group|using-vxlan-loopback|ports| nh-egress-id| auto-tunne| ecmp-nexthops	
count *count-number*	The count for tunnel history.
id	The tunnel ID.
scope local	The scope as local or cluster.
name *name-string*	The tunnel name.
type ip-in-ip|vxlan|nvgr	The type of the tunnel.
vnet *vnet-name*	The tunnel network vNET.
vrouter-name *vrouter name*	The name of the vRouter service.
peer-vrouter-name *vrouter name*	The name of the vRouter service on cluster peer.
local-ip *ip-address*	The local IP address.
remote-ip *ip-address*	The remote IP address.
router-if vrouter-hw-if	Router interface.
tunnel-if-name tunnel-if-name-string	Router interface vNIC name.
next-hop *ip-address*	The nexthop IP address.
next-hop-mac *mac-address*	The nexthop MAC address.
next_hop_vnet 0..4095	Displays nexthop VLAN.
nexthop-bd *bridge-domain*	Next hop bridge domain.
nexthop-vlan 0..4095	Next hop VLAN.
remote-switch *fabric-node name*	The remote switch name.

vrid *vrid-number*	The vrouter hardware ID.
interface-mac *mac-address*	The MAC address of the tunnel interface.
interface-vlan *vlan-id*	The VLAN for the tunnel interface.
active yes|no	Displays if the tunnel is active.
state init|ok|error|update	The tunnel state.
bfd|no-bfd	Displays if BFD is configured for the tunnel.
bfd-state unknown|admin-down|down|init|up|no-session	The BFD state.
error *error-string*	Displays tunnel errors.
route-info *route-info-string*	The route information for the tunnel.
ecmp-group *ecmp-group-number*	The ECMP group number.
using-vxlan-loopback yes|no	Displays if vxlan loopback is used.
ports *port-list*	The nexthop port map.
flood-nh-ip ip-address	Flood next hop IP address.
flood-nh-vlan 0..4095	Flood next hop VLAN ID.
flood-nh-port flood-nh-port-number	Flood next hop port number.
flood-nh-mac mac-address	Flood next hop MAC address.
nh-egress-id *nh-egress-id-number*	The hardware Egress ID.
auto-tunnel auto|static	Displays if the tunnel is auto or static.
ecmp-nexthops|no-ecmp-nexthops	Use to filter, and display single or mutiple route entries (per nexthop).
flood-nexthop|no-flood-nexthop	Displays tunnels with either `flood-nexthop` or with `no-flood-nexthop` configured.

`mac-learning|no-mac-learning`	Displays tunnels with either MAC learning enabled or MAC learning disabled.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced

Usage Use this command to display historical tunnel state information.

Examples To display historical tunnel information, use the following command:

```
CLI (network-admin@switch) > tunnel-history-show
```

tunnel-stats-clear

This command is used to clear statistics for a tunnel.

Syntax `tunnel-stats-clear`

`tunnel-name` *`tunnel-name`*	Specify a tunnel to clear statistics.

Defaults None

Access CLI

History

Version 2.4.0	Command introduced

Usage Use this command to clear statistics from a tunnel.

Examples To clear statistics from a tunnel, use the following command:

```
CLI (network-admin@switch) > tunnel-stats-clear tunnel-name tunnel-vxlan1
```

tunnel-stats-show

This command is used to display the tunnel statistics on the switch.

Syntax `tunnel-stats-show`

Use any of the following options to display tunnel statistics:

`time date/time:yyyy-mm-ddTHH:mm:ss`	Display by date, and time.
`start-time date/time: yyyy-mm-ddTHH:mm:s`	Display by start date, and time.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	Display by end date, and time.
`duration duration: #d#h#m#s`	Display by duration.
`interval duration: #d#h#m#s`	Display by interval.
`since-start`	The start time for the statistics.
`older-than duration: #d#h#m#s`	Display statistics older than a specific date.
`within-last duration: #d#h#m#s`	Display statistics within a specific duration.
`tunnel-name` *`tunnel-name`*	Display by tunnel name.
`counter` *`counter-number`*	The number of counters.
`ibytes` *`ibytes-number`*	The number of incoming bytes.
`ibits` *`ibits-number`*	The number of incoming bits.
`iUpkts` *`iUpkts-number`*	The number of incoming Unicast packets.
`iBpkts` *`iBpkts-number`*	The number of incoming Broadcast packets.
`iMpkts` *`iMpkts-number`*	The number of incoming Multicast packets.
`iPauseFs` *`iPauseFs-number`*	The number of incoming Pause frames.
`iCongDrops iCongDrops-number`	The number of incoming packets dropped due to congestion.

ierrs *errs-number*	The number of incoming packets with errors.
obytes *obytes-number*	The number of outgoing bytes.
obits *obits-number*	The number of outgoing bits.
oUpkts *oUpkts-number*	The number of outgoing Unicast packets.
oBpkts *oBpkts-number*	The number of outgoing Broadcast packets.
oMpkts *oMpkts-number*	The number of outgoing Multicast packets.
oPauseFs *oPauseFs-number*	The number of outgoing Pause frames.
oCongDrops oCongDrops-number	The number of outgoing packets dropped due to congestion.
oerrs *oerrs-number*	The number of outgoing packets with errors.
mtu-errs *mtu-errs-number*	The number of MTU errors.
HER-pkts HER-pkts-number	The number of head-end replicated packets.
HER-bytes *HER-bytes-number*	The number of head-end replicated bytes.
HER-bits HER-bits-number	The number of head-end replicated bits.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.2.2	The parameter `type` added.
Version 2.2.3	The parameter `router-if` replaced *`name-string`* with `vrouter-hw-if` name option.

Version 2.3.1	The parameter `active` added.
Version 2.6.0	The parameters `HER-pkts` and `HER-bytes` added.
Version 3.0.0	The following parameters added: `ibits`, and `obits`.
Version 6.1.0	The parameter `HER-bits` added.

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to display a list of tunnels on a fabric.

Examples To display a list of all tunnels on a switch, use the following command:

```
CLI (network-admin@switch) > tunnel-stats-show
```

tunnel-stats-settings-modify

This command is used to modify tunnel settings for collecting statistics

Syntax `tunnel-history-settings-modify`

`enable|disable`	Specify whether to enable or disable change logging.
`interval duration: #d#h#m#s`	Specify the interval to collect statistics. Day hour, minute, second.
`disk-space disk-space-number`	Specify the disk-space allocated for statistics.

Defaults None

Access CLI

History

Version 2.5	Command introduced

Usage Use this command to modify tunnel settings for collecting statistics.

Examples To modify a list of all tunnels settings for stats collection, use the following command:

```
CLI (network-admin@switch) > tunnel-stats-settings-modify
```

tunnel-stats-settings-show

This command is used to display the tunnel settings for collecting statistics

Syntax `tunnel-stats-settings-show`

Defaults None

Access CLI

History

Version 2.5.0	Command introduced

Usage Tunnels are used to encapsulate unsupported protocols on a network. Use this command to display the tunnel settings for statistics collections.

Examples To display a list of all tunnels settings for stats collection, use the following command:

```
CLI (network-admin@switch) > tunnel-stats-settings-show
```

tunnel-vxlan-add

This command is used to add tunnels to VXLANs on the switch.

Syntax `tunnel-vxlan-add`

`name` *`name-string`*	Specify a name for the tunnel.
`vxlan` *`vxlan-id`*	Specify the ID of the VXLAN.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.0.1	Changed from `tunnel-vxlan` to `vxlan-tunnel`.
Version 2.1	The parameter `switch` added.
Version 2.4	The parameter `vxlan-vnid` added.
Version 2.4.1	Changed from `vxlan-tunnel` to `tunnel-vxlan`.

Usage Use this command to add tunnels to VXLANs.

Examples To add tunnel, ip-23, to VXLAN, MyVXLAN, use the following command:

```
CLI (network-admin@switch) > tunnel-vxlan-add tunnel-name ip-23
vxlan-name MyVXLAN
```

tunnel-vxlan-remove

This command is used to remove tunnels to VXLANs on the switch.

Syntax `tunnel-vxlan-remove`

`name` *`name-string`*	Specify a name for the tunnel.
`vxlan` *`vxlan-id`*	Specify the ID of the VXLAN.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.0.1	Changed from `tunnel-vxlan` to `vxlan-tunnel`.
Version 2.1	The parameter `switch` added.
Version 2.4	The parameter `vxlan-vnid` added.
Version 2.4.1	Changed from `vxlan-tunnel` to `tunnel-vxlan`.

Usage Use this command to remove tunnels from VXLANs.

Examples To add tunnel, ip-23, to VXLAN, MyVXLAN, use the following command:

```
CLI (network-admin@switch) > tunnel-remove name ip-23 vxlan-name
MyVXLAN
```

tunnel-vxlan-show

This command is used to display information about tunnels added to VXLANs on the switch.

Syntax `tunnel-vxlan-show`

`tunnel-name` *`name-string`*	Name for the tunnel.
`vxlan` *`vxlan-id`*	Displays the ID of the VXLAN.
`hw_update_pending yes|no`	Displays if a hardware update for VXLAN is pending.
`bd_deactivated yes|no`	Specify if the static tunnel is deactivated in hardware for this bridge domain.

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.0.1	Changed from `tunnel-vxlan` to `vxlan-tunnel`.
Version 2.4	The parameter `vxlan-vnid` added.
Version 2.4.1	Changed from `vxlan-tunnel` to `tunnel-vxlan`.
Version 5.0.0	The parameter `hw_update_pending` added.

Usage Use this command to display a list of tunnels added to VXLANs.

Examples To display a list of tunnels on VXLANs, use the following command:

```
CLI (network-admin@switch) > tunnel-vxlan-show
```

U Commands

udf-create

A User Defined Field (UDF) can match up to 128 bytes of a packet starting from the first byte of the packet. The relative offset can be given to the match location. The length of the match can be from 1 to 4 bytes. Hardware with a Trident chip supports the creation of 8 UDF IDs. Each ID can match a 2 byte portion of a packet. Creating a UDF with a length of 3 or 4 bytes requires 2 UDF IDs whereas a UDF with a length of 1 or 2 bytes requires 1 UDF ID. The length specified for each UDF determines the total number of UDFs supported by NetVisor OS. If you specify a length of 3 or 4 bytes, a maximum of 4 UDFs can be created. If you specify a length of 1 or 2 bytes, a maximum of 8 UDFs can be created.

Syntax `udf-create name`

`name` *`name-string`*	Create the UDF name
`scope local|fabric`	Scope for the UDF
`offset` *`number-bytes`*	The offset in bytes. This is a value between 1, and 128.
`length` *`number-bytes`*	The length in bytes. This is a value between 1, and 4 bytes.
`header packet-start|l3-outer|l3-inner|l4-outer|l4-inner`	The header used to calculate the offset.

Defaults None

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to create customized fields for vFlow configurations.

Examples To create a UDF with scope local, offset 10, length 2, and header packet-start, use the following syntax:

```
CLI (network-admin@switch) > udf-create name u1 scope local offset
10 length 2 header packet-start
```

udf-modify

A User Defined Field (UDF) can match up to 128 bytes of a packet starting from the first byte of the packet. The relative offset can be given to the match location. The length of the match can be from 1 to 4 bytes. Hardware with a Trident chip supports the creation of 8 UDF IDs. Each ID can match a 2 byte portion of a packet. Creating a UDF with a length of 3 or 4 bytes requires 2 UDF IDs whereas a UDF

with length of 1 or 2 bytes required 1 UDF id. The length specified for each UDF determines the total number of UDFs supported by NetVisor OS. If you specify a length of 3 or 4 bytes, a maximum of 4 UDFs can be created. If you specify a length of 1 or 2 bytes, a maximum of 8 UDFs can be created.

Syntax `udf-modify name`

`name` *`name-string`*	Create the UDF name
`scope local|fabric`	Scope for the UDF
`offset` *`number-bytes`*	The offset in bytes. This is a value between 1, and 128.
`length` *`number-bytes`*	The length in bytes. This is a value between 1, and 4 bytes.
`header packet-start|l3-outer|l3-inner|l4-outer|l4-inner`	The header used to calculate the offset.

Defaults None

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to modify customized fields for vFlow configurations.

Examples To modify a UDF, u1, offset 10, length 4, and header packet-start, use the following syntax:

```
CLI (network-admin@switch) > udf-modify name u1 offset 10 length 4
header packet-start
```

udf-delete

A User Defined Field (UDF) can match up to 128 bytes of a packet starting from the first byte of the packet. The relative offset can be given to the match location. The length of the match can be from 1 to 4 bytes. Hardware with a Trident chip supports the creation of 8 UDF IDs. Each ID can match a 2 byte portion of a packet. Creating a UDF with a length of 3 or 4 bytes requires 2 UDF IDs whereas a UDF

with length of 1 or 2 bytes required 1 UDF id. The length specified for each UDF determines the total number of UDFs supported by NetVisor OS. If you specify a length of 3 or 4 bytes, a maximum of 4 UDFs can be created. If you specify a length of 1 or 2 bytes, a maximum of 8 UDFs can be created.

Syntax `udf-delete`

Defaults None

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to delete customized fields for vFlow configurations.

Examples To delete the UDF, ud1, use the following syntax:

```
CLI (network-admin@switch) > udf-delete name ud1
```

udf-show

A User Defined Field (UDF) can match up to 128 bytes of a packet starting from the first byte of the packet. The relative offset can be given to the match location. The length of the match can be from 1 to 4 bytes. Hardware with a Trident chip supports the creation of 8 UDF IDs. Each ID can match a 2 byte portion of a packet. Creating a UDF with a length of 3 or 4 bytes requires 2 UDF IDs whereas a UDF with length of 1 or 2 bytes required 1 UDF id. The length specified for each UDF determines the total number of UDFs supported by NetVisor OS. If you specify a length of 3 or 4 bytes, a maximum of 4 UDFs can be created. If you specify a length of 1 or 2 bytes, a maximum of 8 UDFs can be created.

Syntax `udf-show`

`name` *`name-string`*	Create the UDF name
`scope local|fabric`	Scope for the UDF
`offset` *`number-bytes`*	The offset in bytes. This is a value between 1, and 128.
`length` *`number-bytes`*	The length in bytes. This is a value between 1, and 4 bytes.
`header packet-start|l3-outer|l3-inner|l4-outer|l4-inner`	The header used to calculate the offset.

Defaults None

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to display information about customized fields for vFlow configurations.

Examples To display a UDF with scope local, offset 10, length 2, and header packet-start, use the following syntax:

```
CLI (network-admin@switch) > udf-show
switch name  scope  offset length header
------ ----- ------ ------ ------ ------------
spine1 u1    local  20     4      packet-start
spine1 u2    local  24     4      packet-start
```

uplink-group-port-add

This command is used to add ports to uplink group.

Syntax `uplink-group-port-add`

`ports` *`port-list`*	Specifies the ports acting as uplinks.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to add ports to uplink group.

Examples To add ports to uplink group, use the following syntax:

```
CLI (network-admin@switch) > uplink-group-port-add
```

uplink-group-port-oversubscription-state-show

This command is used to display uplink oversubscription state.

Syntax `uplink-group-port-oversubscription-state-show`

Any of the following options:	
`uplink-bw` *`uplink-bw-number`*	The aggregated uplink port threshold (in mbps).
`downlink-bw` *`downlink-bw-number`*	The aggregated downlink port threshold (in mbps).
`uplink-oversubscription` *`yes|no`*	The state of uplink oversubscription.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display uplink oversubscription state.

Examples To display uplink oversubscription state, use the following syntax:

```
CLI (network-admin@switch) > uplink-group-port-oversubscription-
state-show
```

uplink-group-port-remove

This command is used to remove ports from uplink group.

Syntax `uplink-group-port-remove`

`ports` *`port-list`*	Specifies the ports acting as uplinks.

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to remove ports from uplink group.

Examples To remove ports from uplink group, use the following syntax:

```
CLI (network-admin@switch) > uplink-group-port-remove
```

uplink-group-port-show

This command is used to remove ports to uplink group.

Syntax `uplink-group-port-show`

Defaults None

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to display ports to uplink group.

Examples To add ports to uplink group, use the following syntax:

```
CLI (network-admin@switch) > uplink-group-port-show
```

user-create

This command is used to create users on the local switch or fabric.

Syntax `user-create`

`name` *`name-string`*	Specify a name for the user.
`scope local|fabric`	Specify the scope of the user.
`initial-role` *`role name`*	Specify the initial role for the user.
`login-fail-count` *`login-fail-count-number`*	Specify the number of allowed authentication failures before locking the user.
`lock-account|no-lock-account`	Specify if you want to lock the user after the stipulated number of authentication failures.
`minimum-pw-length` *`6..65`*	Specify the minimum password length for user account. The default value is 6.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `password` and `initial-role` added.
Version 7.0.0	The parameters `login-fail-count`, `lock-account|no-lock-account`, and `minimum-pw-length` added.

Usage Use this command to create users on the local switch or fabric. When you specify a role, it is a role defined using the role- commands.

Examples To create the user, **net-access**, password, **sw0rdf1ght**, on the fabric, use the following command:

```
CLI (network-admin@switch) > user-create name netaccess scope
fabric
password:
Confirm password:
```

user-delete

This command is used to delete users on the local switch or fabric.

Syntax `user-delete`

name *name-string*	Specify a name for the user.

Between 0, and 1 of the following options:

forcefully|no-forcefully	Delete an user forcefully.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use this command to delete users on the local switch or fabric.

Examples To delete the user on the fabric, use the following command:

```
CLI (network-admin@switch) > user-delete
```

user-role-show

This command is used to display a list of users, and the assigned roles.

Syntax `user-role-show`

`user-name` *`name-string`*	Specify a name for the user.
Specify the following role arguments:	
`role` *`role-name`*	Specify a role for the user.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Users must hold the proper credentials to manage a switch, cluster, or fabric. Use this command to display roles assigned to users.

Examples To display a list of users, and their roles, use the following command:

```
CLI (network-admin@switch) > user-role-show
user-name     role
------------- -------------
network-admin network-admin
```

user-modify

This command is used to modify users on the local switch or fabric.

Syntax `user-modify`

`name` *`name-string`*	Specify the name of the user.
`password` *`password-string`*	Specify a plain text password.
`login-fail-count` *`login-fail-count-number`*	Specify the numbers of allowed authentication failures before locking the user.
`lock-account|no-lock-account`	Specify if you want to lock the user after the stipulated number of authentication failures.
`minimum-pw-length` *`6..65`*	Specify the minimum password length for user account.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `password` and `initial-role` added. The parameter `scope` deprecated.
Version 2.2	The parameter `initial-role` deprecated.
Version 7.0.0	The parameters `login-fail-count`, `lock-account|no-lock-account`, and `minimum-pw-length` added.

Usage Use this command to modify users on the local switch or fabric.

Examples To change the password of the user, net-access user, use the following command:

```
CLI (network-admin@switch) > user-modify name netaccess
```

user-show

This command is used to display a list of users on the local switch or fabric.

Syntax `user-show`

`name` *`name-string`*	Name of the user.
`scope local|fabric`	The scope of the user.
`uid` *`uid-number`*	The user identifier.
`type netvisor|unix|tacacs|web-token|mfg`	The user type
`server` *`aaa-tacacs name`*	The AAA TACACS+ server name.
`login-fail-count` *`login-fail-count-number`*	The numbers of allowed authentication failures before locking the user.
`lock-account|no-lock-account`	Displays if locking of the user after the stipulated number of authentication failures is enabled or disabled.
`minimum-pw-length` *`6..65`*	The minimum password length for user account.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters password, server, and initial-role added.
Version 7.0.0	The parameters `login-fail-count`, `lock-account|no-lock-account`, and `minimum-pw-length` added.

Usage Use this command to display users on the local switch or fabric.

Examples To display the list of users, use the following command:

```
CLI (network-admin@switch) > user-show
```

```
switch name          scope  uid   type
------ ------------- ------ ----- --------
       network-admin fabric 39999 netvisor
switch vnet1-admin   local  20000 netvisor
```

user-password-set

Use this command to set a password for a user on the switch.

Syntax `user-password-set`

`name` *`name-string`*	Specify the name of the user to set the password.
Specify any of the following options:	
`scope local|fabric`	Specify if the scope is local or fabric.
`uid` *`uid-number`*	Specify the user ID.
`type netvisor|unix|tacacs|web-token|mfg`	Specify the user type.
`server` *`aaa-tacacs-name`*	Specify the name of the TACACS+ server.
`initial-role` *`role-name`*	Specify the initial role of the user.
`login-fail-count` *`login-failcount-number`*	Specify the numbers of allowed authentication failures before locking the user.
`lock-account|no-lock-account`	Specify if you want to lock the user after the stipulated number of authentication failures.
`minimum-pw-length` *`6..65`*	Specify the minimum password length for user account.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	Command changed to `user-password-set`.
Version 2.6.2	The parameter `type` added.
Version 7.0.0	The parameters `login-fail-count`, `lock-account|no-lock-account`, and `minimum-pw-length` added.

Usage You can set a password for the user.

Examples To set the password for user, admin-net, on the TACACS+ server, aaa-tacacs, with the user ID 23, with the initial role, admin, use the following command:

```
CLI (network-admin@switch) > user-password-set name admin-net scope
local uid 23 server aaa-tacacs initial-role admin

To change the current password for  user1 , and to change the
minimum password length, use the command:
CLI  (network-admin@switch) > user-password-set name user1 scope
local minimum-pw-length 7
password:
confirm password:
```

user-role-add

This command is used to create a user role on the switch.

Syntax `user-role-add`

`user-name` *`name-string`*	Specify a name for the user.
Specify the following role arguments:	
`role` *`role-name`*	Specify a role for the user.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to create user roles on the switch.

Examples To create the user, net-access, with the role, net-admin, use the following command:

```
CLI (network-admin@switch) > user-role-add user-name net-access
role net-admin
```

user-role-remove

This command is used to remove a user role from the switch.

Syntax `user-role-remove`

`user-name` *`name-string`*	Specify a name for the user.
Specify the following role arguments:	
`role` *`role-name`*	Specify a role for the user.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Use this command to remove user roles on the switch.

Examples To remove the user, net-access, with the role, net-admin, use the following command:

```
CLI (network-admin@switch) > user-role-remove user-name net-access
role net-admin
```

V Commands

vcenter-connection-create

NetVisor provides vCenter Connection Service that allows you to connect to VMware vCenter. This command allows user to create a vCenter connection.

Syntax `vcenter-connection-create`

`name` *`name-string`*	Specify a name for the vCenter connection.
`host` *`host-string`*	Specify the host name of the VMware vCenter server.
`user` *`user-string`*	Specify a valid user on the VMware vCenter server
`password` *`password-string`*	Specify a valid password for the user on the VMware vCenter server.
`enable|disable`	Specify if you want to enable or disable the connection.
`vlans` *`vlan-list`*	Specify a list of VLANs for auto-provisioning of vCenter.
`network-provisioning none|l2-underlay|l3-underlay`	Specify the type of network provisioning for the connection.

Defaults None

Access Network Administrator

History

Version 2.5.2	Command introduced.
Version 2.5.3	The parameter `vlans` added.
Version 2.6.2	The parameter `network-provisioning` added.

Usage Use this command to create a connection from a NetVisor switch to a VMware vCenter server.

Examples To create a connection called, vCenter-1, with a host name, vHost1, user, jdoe, password, p!zz@, and enable it, use the following syntax:

```
CLI (network-admin@switch) > vcenter-connection-create  name
vCenter-1 host vHost1 user jdoe password p!zz@ enable
```

vcenter-connection-delete

NetVisor provides vCenter Connection Service that allows you to connect to VMware vCenter. This command allows user to delete a vCenter connection.

Syntax `vcenter-connection-delete`

`name` *`name-string`*	Specify a name for the vCenter connection.

Defaults None

Access Network Administrator

History

Version 2.5.2	Command introduced.

Usage Use this command to delete a connection from a NetVisor switch to a VMware vCenter server.

Examples To delete a connection called, vCenter-1, use the following syntax:

```
CLI (network-admin@switch) > vcenter-connection-delete  name
vCenter-1
```

vcenter-connection-modify

NetVisor provides vCenter Connection Service that allows you to connect to VMware vCenter. This command allows user to modify a vCenter connection.

Syntax `vcenter-connection-modify`

`name` *`name-string`*	Specify the vCenter connection name that you want to modify.
Specify one or more of the following options:	
`host` *`host-string`*	Specify the host name of the VMware vCenter server.
`user` *`user-string`*	Specify a valid user on the VMware vCenter server
`password` *`password-string`*	Specify a valid password for the user on the VMware vCenter server.
`enable|disable`	Specify if you want to enable or disable the connection.
`vlans` *`vlan-list`*	Specify a list of VLANs for auto-provisioning of vCenter.
`network-provisioning none|l2-underlay|l3-underlay`	Specify the type of network provisioning for the connection.

Defaults None

Access Network Administrator

History

Version 2.5.2	Command introduced.
Version 2.5.3	The parameter `vlans` added.
Version 2.6.2	The parameter `network-provisioning` added.

Usage Use this command to modify a connection from a NetVisor switch to a VMware vCenter server.

Examples To modify a connection called, vCenter-1, and modify it to user, konni1, password, c@t3, and , use the following syntax:

```
CLI (network-admin@switch) >vcenter-connection-modify name vCenter-1 1 user konni1
password c@t3 enable
```

vcenter-connection-show

NetVisor now provides vCenter Connection Service that allows you to connect to VMware vCenter. This command allows user to display a vCenter connection.

Syntax `vcenter-connection-show`

`name` *`name-string`*	Name for the vCenter connection.
`host` *`host-string`*	The host name of the VMware vCenter server.
`user` *`user-string`*	A valid user on the VMware vCenter server
`password` *`password-string`*	A valid password for the user on the VMware vCenter server.
`enable|disable`	Specifies whether to enable or disable the connection.
`vlans` *`vlan-list`*	A list of VLANs for auto-provisioning of vCenter.
`network-provisioning none|l2-underlay|l3-underlay`	The type of network provisioning for the connection.

Defaults None

Access Network Administrator

History

Version 2.5.2	Command introduced.
Version 2.5.3	The parameter `vlans` added.
Version 2.6.2	The parameter `network-provisioning` added.

Usage Use this command to display information about a connection from a NetVisor switch to a VMware vCenter server.

Examples To display a vCenter connection, use the following syntax:

```
CLI (network-admin@switch) > vcenter-connection-show
switch   name host        user                        enable state connected-time
              vlans
-------- ---- ----------- -------------------------- ------ -----
--------------------------------  -----------
switch-1 svc2 10.9.34.204 administrator@lab.pluribus yes    ok     connected at 2017-
01-14 03:07:23 20-30,33-40
```

```
switch-2 svc2 10.9.34.204 administrator@lab.pluribus yes     ok     connected at 2017-
01-14 03:07:21 20-30,33-40
```

vflow-system-modify

This command is used to modify the precedence of a system flow.

Syntax `vflow-system-modify`

`name` *`name-string`*	Name for the vFlow.
Between 0, and 7 of the following options:	
`enable``|`*`no-enable`*	Specifies the enable or disable flows in hardware
`precedence default|0..15`	Specifies the traffic priority value between 2, and 15.
`flow-class` *`vflow-class name`*	Specifies the vFlow class name.
`src-mac` *`mac-address`*	The source MAC address for the vFlow.
`src-mac-mask` *`mac-address`*	The source MAC address to use as a wildcard mask.
`dst-mac` *`mac-address`*	Specifies the destination MAC address for the vFlow to be modified.
`dst-mac-mask` *`mac-address`*	Specifies the destination MAC address to use as a wildcard mask.

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage Use the command to modify the precedence of a system flow.

Examples To clear a vFlow, use the following command:

`CLI (network-admin@switch)` `> vflow-system-modify`

vflow-system-show

This command is used to display system flow details for vFlow.

Syntax `vflow-system-show`

Specify any of the following options:	
`name` *`name-string`*	Name for the vFlow.
`id`	ID assigned to the vFlow
`scope local|fabric`	The scope for the vFlow.
`type ofp|vflow|ofp-default|acl-ip|acl-mac|vxlan|nat|qos|nat-twice|hog-violator|pbr|iptable`	The type of the vFlow.
`hidden true|false`	Specifies whether the vFlow is hidden or not.
`vnet vnet name`	VNET assigned to the vFlow.
`bd bridge-domain name`	The bridge domain for the vFlow.
`vlan` *`0..4095`*	The VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	The inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	The ingress (input) port for the vFlow.
`out-port` *`port-list`*	The egress (output) port for the VFlow.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi|jumbo| dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old`	The EtherType for the flow.
`src-mac` *`mac-address`*	The source MAC address for the flow .
`src-mac-mask` *`mac-address`*	The source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	The destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	The destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	The source IP address for the flow.
`src-ip-mask` *`ip-address`*	The source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	The destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	The destination IP address wildcard mask for the flow.

src-port *src-port-number*	The Layer 3 protocol source port for the flow.
src-port-end *src-port-end-number*	The ending port for a range of source ports.
src-port-mask *src-port-mask-number*	The source port mask.
dst-port *dst-port-number*	The Layer 3 protocol destination port for the flow.
dst-port-end *dst-port-end-number*	The ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	The destination port mask.
dscp-start *number*	The starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	The ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	The 6-bit Differentiated Services Code Point (DSCP) for the vFlow with range 0 to 63.
dscp-map dscp-map name|none	The DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	The starting ToS number.
tos-end *tos-end-number*	The ending ToS number.
tos *tos-number*	The Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	The priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	The priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	The internal priority as a value between 0, and 7.
vrf *vrf-name*	The name of the VRF.
ttl *ttl-number*	The time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	The Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	The TCP flags to filter a vFlow.
local-subnet|no-local-subnet	Specifies whether to use local subnet or not.
flow-class *vflow-class name*	The vFlow classname.
ingress-tunnel *tunnel-name*	The name of the ingress tunnel.
egress-tunnel tunnel name	The name of the egress tunnel.

bw-min *bw-min-number*	The minimum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
bw-max *bw-max-number*	The maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
burst-size auto	The burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size number between 256B through 128MB.
vrouter-name *vrouter name*	The vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
precedence default|0..15	The traffic priority for the flow (between 0, and 15)
action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu	The forwarding action to apply to the flow.
action-value *action-value-number*	An optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
action-value1 1..4096	The second optional value argument for the forwarding action between 1, and 64.
action-set-mac-value *mac-address*	Specify a MAC address to apply the action.
action-to-next-hop-ip-value ip-address	The next-hop IP address for packet redirection.
action-to-ecmp-group-value static-ecmp-group group-name	The ECMP group for packet redirection.
action-to-ports-value *port-list*	Specify a port list to apply the action.
mirror *mirror-name*	The name of the mirror configuration.
process-mirror|no-process-mirror	Specify to process mirrored traffic for the vflow.
log-stats|no-log-stats	Specify if you want to log statistics or not.
stats-interval *seconds*	The interval to update packet statistics for the log (in seconds). This is a value between 1, and 604800.
dur *dur-number*	The minimum duration required for the flow to be

	captured (in seconds).
metadata *metadata-number*	Specify a metadata number for the flow.
metadata-mask metadata-mask-number	The metadata mask for the vFlow.
transient|no-transient	Specifies to capture transient flows.
vxlan *vxlan-name*	The name of the VXLAN.
vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old	The type of VXLAN.
from-tunnel-decap|no-from-tunnel-decap	Specify if you want to include tunnel terminated VXLAN packets.
stp-state Disabled|Discarding|Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The STP state.
packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The packet resolution in ASIC.
fwding-type vlan|vxlan|vle	The ASIC forwarding type.
set-src *ip-address*	The source IP address of IPv4 packets.
set-dst *ip-address*	The destination IP address of IPv4 packets.
set-src-port *set-src-port-number*	The source port of IPv4 packets.
set-dst-port *set-dst-port-number*	The destination port of IPv4 packets.
src-vpg vpg-name	The source vPG name for Network Packet Broker (NPB) configuration.
dst-vpg vpg-name	The destination vPG name for Network Packet Broker (NPB) configuration.
bidir-vpg-1 vpg name	The name of the first bidirectional vPG for NPB configuration.
bidir-vpg-2 vpg name	The name of the second bidirectional vPG for NPB configuration.
transparency enable|disable	Specify if you want to enable or disable protocol transparency.
udf-name1 udf name	The User-Defined Field name.

`udf-data1 udf-data1-number`	The User-Defined Field data.
`udf-data1-mask udf-data1-mask-number`	The mask for the User-Defined Field data.
`udf-name2 udf name`	The User-Defined Field name.
`udf-data2 udf-data2-number`	The User-Defined Field data.
`udf-data2-mask udf-data2-mask-number`	The mask for the User-Defined Field data.
`udf-name3 udf name`	The User-Defined Field name.
`udf-data3 udf-data3-number`	The User-Defined Field data.
`udf-data3-mask udf-data3-mask-number`	The mask for the User-Defined Field data.
`enable|no-enable`	Specify if you want to enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Specify a table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb|igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb|dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function.
`cpu-class` *`cpu-class name`*	The CPU class name.
`description description-string`	Specify a vFlow description.
`if mgmt|data`	The administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	The packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter` for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.
Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl` added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameter type, and stats deprecated. The parameters src-port-mask, and dst-port-mask added. The action `to-port-set-nat|` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields, UDF-, and enable|disable hardware flows also added.
Version 2.5.4	The parameter burst-size `auto`, has added functionality. You can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.

Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|data` added.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-port-end` added
Version 6.0.0	The parameter `vrf` added.
Version 6.0.1	The parameters `src-vpg`, and `dst-vpg` added.
Version 6.1.0	The parameters `bd`, `inner-vlan`, `inner-vlan-pri`, `internal-pri`, `dst-vpg-1`, `dst-vpg-2`, `transparency`, `flow-cb`, `phy-dst-port` added.
Version 7.0.0	The option `strip-outer-vlan` added to parameter `action`.
Version 7.0.1	The options `check`, `tunnel-pkt`, `cpu`, `set-tunnel-id`, `cpu-rx`, `cpu-rx-tx`, `decap`, `tcp-seq-offset`, `tcp-ack-offset`, and `l3-to-cpu-switch` for parameter `action` are deprecated. The parameter `vxlan-proto` is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples To display system flow details for the vFlow, use the following command:

```
CLI (network-admin@switch) > vflow-system-show name Optimize-Datapath
format all

switch  name              id         scope type   in-port src-mac           src-mac-
mask      precedence action           stats-interval hw-stats enable table-name
------- ----------------- ---------- ----- ------ ------- -----------------
----------------- ---------- ---------------- -------------- -------- ------
--------------------
switch1 Optimize-Datapath b001d67:3b local system 0        92:05:1d:3f:42:45
ff:ff:ff:ff:ff:ff 15         drop-cancel-trap 30             enabled  enable System-
```

```
L1-L4-Tun-1-0
```

vflow-class-create

This command is used to add a traffic class to a vFlow.

Syntax `vflow-class-create`

`name` *`name-string`*	Specify a name for the vflow class.
`scope local|fabric`	Specify the scope to apply the class.
`priority` *`priority-number`*	Specify the traffic priority for the vflow. Select a value between 2 (lowest), and 8 (highest).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `max-egress-bw` deprecated.

Usage NetVisor OS provides a full set of traffic class features, including the ability to view, and modify traffic classes, and assign traffic classes to flows that manage the quality of service (QoS) of the flow traffic, and shape the traffic passing through a Pluribus Networks fabric. Use the command to assign bandwidth, and priority for the traffic flow.

Examples To create a vflow named voip-phone with priority of 9, use the following command:

```
CLI (network-admin@switch) > vflow-class-create name voip-phone
scope fabric priority 9
```

vflow-class-delete

This command is used to remove an existing vFlow class from the configuration.

Syntax `vflow-class-delete`

`name` *`name-string`*	Specify a name for the vFlow class.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.

Usage NetVisor OS provides a full set of traffic class features, including the ability to view, and modify traffic classes, as well as assigning traffic classes to flows that manage the quality of service (QoS) of the flow traffic, and shape the traffic passing through a Pluribus Networks fabric. Use the command to remove the class assigned to a traffic flow.

Examples To remove a vflow named voip-phone, use the following command:

```
CLI (network-admin@switch) > vflow-class-delete name voip-phone
```

vflow-class-show

This command is used to display information about a traffic class applied to a vFlow.

Syntax `vflow-class-show`

`name` *`name-string`*	The name for the vFlow class.
`scope local|fabric`	The scope to apply the class.
`type system|user`	The type of flow class.
`priority` *`priority-number`*	The traffic priority for the vFlow. This is a value between 2 (lowest), and 8 (highest).
`cos` *`cos-number`*	The Class of Service (CoS) value for the vFlow class.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The option `reserved` is deprecated from `type`. The parameter `max-egress-bw` is deprecated.
Version 2.4	The parameter `cos` added.

Usage NetVisor OS provides a full set of traffic class features, including the ability to view, and modify traffic classes, as well as assigning traffic classes to flows that manage the quality of service (QoS) of the flow traffic, and shape the traffic passing through a Pluribus Networks fabric. Use the command to display traffic classes assigned to a traffic flow.

Examples To display all traffic classes, use the following command:

```
 CLI (network-admin@switch) > vflow-class-show
name          scope  type   priority cos
------------- ------ ------ -------- ---
meter         fabric system 0        0
class0        fabric system 0        0
class1        fabric system 1        1
class2        fabric system 2        2
class3        fabric system 3        3
class4        fabric system 4        3
class5        fabric system 5        4
class6        fabric system 6        4
class7        fabric system 7        5
guaranteed_bw fabric system 9        6
class8        fabric system 10       6
```

```
lossless      fabric system 10       6
control       fabric system 11       7
control2      fabric system 12       8
control3      fabric system 13       9
```

vflow-create

Use this command to create a flow definition for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic.

Syntax `vflow-create`

`name` *`name-string`*	Specify the flow name.
`scope local|fabric`	Specify the scope for the flow.
Specify any of the following options:	
`vnet` *`vnet-name`*	Specify the virtual network (vNET) for the flow.
`bd bridge-domain name`	Specify the bridge domain for the vFlow.
`vlan` *`0..4095`*	Specify the VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	Specify the inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	Specify the ingress (input) port for the flow.
`out-port` *`port-list`*	Specify the egress (output) port for the flow.
`ether-type ipv4|arp|wake|rarp|vlan| ipv6|lacp|mpls-uni|mpls-multi| jumbo| dot1X|aoe|qinq|lldp|macsec| ecp|ptp|fcoe|fcoe-init|qinq-old`	Specify the EtherType for the flow.
`src-mac` *`mac-address`*	Specify the source MAC address for the flow .
`src-mac-mask` *`mac-address`*	Specify the source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	Specify the destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	Specify the destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	Specify the IP address of the source for the flow.
`src-ip-mask` *`ip-address`*	Specify the source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	Specify the destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	Specify the destination IP address wildcard mask for the flow.
`src-port` *`src-port-number`*	Specify the Layer 3 protocol source port for the flow.
`src-port-end` *`src-port-end-number`*	Specify the ending port for a range of source ports.

src-port-mask *src-port-mask-number*	Specify the source port mask.
dst-port *dst-port-number*	Specify the Layer 3 protocol destination port for the flow.
dst-port-end *dst-port-end-number*	Specify the ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	Specify the destination port mask.
dscp-start *number*	Specify the starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	Specify the ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	Specify the 6-bit Differentiated Services Code Point (DSCP) of the flow.
dscp-map dscp-map name|none	Specify the DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	Specify the starting ToS number.
tos-end *tos-end-number*	Specify the ending ToS number.
tos *tos-number*	Specify the Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	Specify the priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	Specify the priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	Specify the internal priority as a value between 0, and 7.
vrf *vrf-name*	Specify the name of the VRF.
ttl *ttl-number*	Specify the time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	Specify the Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	Specify the TCP flags to filter a vFlow.
flow-class *vflow-class name*	Specify the vflow class.
ingress-tunnel *tunnel-name*	Name of the ingress tunnel.
egress-tunnel tunnel name	Specify the name of the egress tunnel.
bw-min *bw-min-number*	Specify the minimum bandwidth in Gbps for the

	vFlow. This is a range from 0 to 40Gbps.
bw-max *bw-max-number*	Specify the maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
burst-size auto	Specify the burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size number between 256B through 128MB.
vrouter-name *vrouter name*	Specify the vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
precedence default|0..15	Specify the traffic priority for the flow (between 0, and 15)
action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu	Specify the forwarding action to apply to the flow.
action-value *number*	Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
action-set-mac-value *mac-address*	Specify a MAC address to apply the action.
action-set-svp-value *svp-value*	Specify the SVP value.
action-to-next-hop-ip-value ip-address	Specify the next-hop IP address for packet redirection.
action-to-ecmp-group-value static-ecmp-group group-name	Specify the ECMP group for packet redirection.
action-to-ports-value *port-list*	Specify a port list to apply the action.
mirror *mirror-name*	Specify the name of the mirror configuration.
process-mirror|no-process-mirror	Specify to process mirrored traffic for the vflow.
packet-log-max *packet-log-max-number*	Specify the maximum packet count for log rotation in the flow.
log-stats|no-log-stats	Specify if you want to log statistics or not.
stats-interval *seconds*	Specify the interval to update packet statistics for

	the log (in seconds). This is a value between 1, and 604800.
`dur` *`dur-number`*	Specify the minimum duration required for the flow to be captured (in seconds).
`metadata` *`metadata-number`*	Specify a metadata number for the flow.
`transient|no-transient`	Specify whether to capture transient flows.
`vxlan` *`vxlan-name`*	Specify the name of the VXLAN.
`vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old`	Specify the type of VXLAN.
`from-tunnel-decap|no-from-tunnel-decap`	Specify if you want to include tunnel terminated VXLAN packets.
`stp-state Disabled|Discarding|Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast`	Specify the STP state.
`packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast`	Specify the packet resolution in ASIC.
`fwding-type vlan|vxlan|vle`	Specify the ASIC forwarding type.
`set-src` *`ip-address`*	Specify the source IP address of IPv4 packets.
`set-dst` *`ip-address`*	Specify the destination IP address of IPv4 packets.
`set-src-port` *`set-src-port-number`*	Specify the source port of IPv4 packets.
`set-dst-port` *`set-dst-port-number`*	Specify the destination port of IPv4 packets.
`src-vpg vpg-name`	Specify the source vPG name for Network Packet Broker (NPB) configuration.
`dst-vpg vpg-name`	Specify the destination vPG name for Network Packet Broker (NPB) configuration.
`bidir-vpg-1 vpg name`	Specify the name of the first bidirectional vPG for NPB configuration.
`bidir-vpg-2 vpg name`	Specify the name of the second bidirectional vPG for NPB configuration.
`transparency enable|disable`	Specify if you want to enable or disable protocol transparency.

`udf-name1 udf name`	Specify the User-Defined Field name.
`udf-data1 udf-data1-number`	Specify the User-Defined Field data.
`udf-data1-mask udf-data1-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name2 udf name`	Specify the User-Defined Field name.
`udf-data2 udf-data2-number`	Specify the User-Defined Field data.
`udf-data2-mask udf-data2-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name3 udf name`	Specify the User-Defined Field name.
`udf-data3 udf-data3-number`	Specify the User-Defined Field data.
`udf-data3-mask udf-data3-mask-number`	Specify the mask for the User-Defined Field data.
`enable|no-enable`	Specify if you want to enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Specify a table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb| igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb| dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function.
`cpu-class` *`cpu-class name`*	Specify the CPU class name.
`description description-string`	Specify a vFlow description.
`if mgmt|data`	Specify the administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	Specify the packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter` for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.
Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl` added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameter type, and stats, deprecated. The parameters src-port-mask, and dst-port-mask added. The action `to-port-set-nat|` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields, UDF-, and enable|disable hardware flows also added.
Version 2.5.4	The parameter burst-size `auto` has added functionality. User can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.

Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|data` added.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-port-end` added
Version 6.0.0	The parameter `vrf` added.
Version 6.0.1	The parameters `src-vpg`, and `dst-vpg` added.
Version 6.1.0	The parameters `bd`, `inner-vlan`, `inner-vlan-pri`, `internal-pri`, `dst-vpg-1`, `dst-vpg-2`, `transparency`, `flow-cb`, `phy-dst-port` added.
Version 7.0.0	The option `strip-outer-vlan` added to parameter `action`.
Version 7.0.1	The options `check`, `tunnel-pkt`, `cpu`, `set-tunnel-id`, `cpu-rx`, `cpu-rx-tx`, `decap`, `tcp-seq-offset`, `tcp-ack-offset`, and `l3-to-cpu-switch` for parameter `action` are deprecated. The parameter `vxlan-proto` is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples

- This example shows how to initiate statistcs for a flow named flow1 defined as the Internet Protocol (IP) traffic on VLAN 4091 within the local switch.

```
CLI (network-admin@switch) > vflow-create name flow1 scope local
vlan 4091
```

- This example shows how to initiate statistics for a flow, `flow2`, defined as the fabric-wide Internet Protocol (IP) traffic sourced by the host with IP address `172.168.18.2` classified as `dropless`.

```
CLI (network-admin@switch) > vflow-create name flow2 scope fabric
src-ip 172.168.18.2 class dropless stats enable
```

- This example shows how to initiate statistics for a flow `flow3` defined as the Internet Protocol (IP)

  traffic on `VLAN 99` destined for the host with IP address `172.168.24.1` within the local switch. An action is specified to drop all traffic matching these flow attributes.

  ```
  CLI (network-admin@switch) > vflow-create name flow3 scope local
  vlan 99 dst-ip 172.168.24.1 action drop stats enable
  ```

- This example, shows how to create a vFlow with a burst size of 12MB. This is useful because different burst-sizes can be used for different types of metered traffic. For example, if a metered application produces bursty traffic patterns, such as clicking on a Web page link redirecting you to a media-rich page, you can now configure higher burst levels than the pre-calculated default burst levels.

  ```
  CLI (network-admin@switch) > vflow-create name flow1 scope local
  in-port 12 bw-max 5G burst-size 12M
  ```

vflow-delete

This command allows you to delete an existing definition for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic.

Syntax `vflow-delete`

`name` *`name-string`*	Specify the flow name.
`id` *`flow-id`*	Specify the flow identifier.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples To delete the vflow definition called flow1, use the following command:

```
CLI (network-admin@switch) > vflow-delete name flow1
```

vflow-modify

This command is used to modify an existing vFlow configuration.

Syntax `vflow-modify`

`name` *`name-string`*	Specify the flow name.
`scope local|fabric`	Specify the scope for the flow.
Specify any of the following options:	
`vnet` *`vnet-name`*	Specify the virtual network (vNET) for the flow.
`bd bridge-domain name`	Specify the bridge domain for the vFlow.
`vlan` *`0..4095`*	Specify the VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	Specify the inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	Specify the ingress (input) port for the flow.
`out-port` *`port-list`*	Specify the egress (output) port for the flow.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi|jumbo| dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old`	Specify the EtherType for the flow.
`src-mac` *`mac-address`*	Specify the source MAC address for the flow .
`src-mac-mask` *`mac-address`*	Specify the source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	Specify the destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	Specify the destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	Specify the source IP address for the flow.
`src-ip-mask` *`ip-address`*	Specify the source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	Specify the destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	Specify the destination IP address wildcard mask for the flow.
`src-port` *`src-port-number`*	Specify the Layer 3 protocol source port for the flow.
`src-port-end` *`src-port-end-number`*	Specify the ending port for a range of source ports.

src-port-mask *src-port-mask-number*	Specify the source port mask.
dst-port *dst-port-number*	Specify the Layer 3 protocol destination port for the flow.
dst-port-end *dst-port-end-number*	Specify the ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	Specify the destination port mask.
dscp-start *number*	Specify the starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	Specify the ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	Specify the 6-bit Differentiated Services Code Point (DSCP) of the flow.
dscp-map dscp-map name|none	Specify the DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	Specify the starting ToS number.
tos-end *tos-end-number*	Specify the ending ToS number.
tos *tos-number*	Specify the Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	Specify the priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	Specify the priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	Specify the internal priority as a value between 0, and 7.
vrf *vrf-name*	Specify the name of the VRF.
ttl *ttl-number*	Specify the time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	Specify the Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	Specify the TCP flags to filter a vFlow.
flow-class *vflow-class name*	Specify the vFlow class.
ingress-tunnel *tunnel-name*	Specify the name of the ingress tunnel.
egress-tunnel tunnel name	Specify the name of the egress tunnel.
bw-min *bw-min-number*	Specify the minimum bandwidth in Gbps for the

	vFlow. This is a range from 0 to 40Gbps.
`bw-max` *`bw-max-number`*	Specify the maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
`burst-size auto`	Specify the burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size number between 256B through 128MB.
`vrouter-name` *`vrouter name`*	Specify the vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
`precedence default|0..15`	Specify the traffic priority for the flow (between 0, and 15)
`action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu`	Specify the forwarding action to apply to the flow.
`action-value` *`number`*	Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
`action-set-mac-value` *`mac-address`*	Specify a MAC address to apply the action.
`action-to-next-hop-ip-value ip-address`	Specify the next-hop IP address for packet redirection.
`action-to-ecmp-group-value static-ecmp-group group-name`	Specify the ECMP group for packet redirection.
`action-to-ports-value` *`port-list`*	Specify a port list to apply the action.
`mirror` *`mirror-name`*	Specify the name of the mirror configuration.
`process-mirror|no-process-mirror`	Specify to process mirrored traffic for the vflow.
`packet-log-max` *`packet-log-max-number`*	Specify the maximum packet count for log rotation in the flow.
`log-stats|no-log-stats`	Specify if you want to log statistics or not.
`stats-interval` *`seconds`*	Specify the interval to update packet statistics for the log (in seconds). This is a value between 1, and 604800.

dur *dur-number*	Specify the minimum duration required for the flow to be captured (in seconds).
metadata *metadata-number*	Specify a metadata number for the flow.
transient|no-transient	Specify whether to capture transient flows.
vxlan *vxlan-name*	Specify the name of the VXLAN.
vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old	Specify the type of VXLAN.
from-tunnel-decap|no-from-tunnel-decap	Specify if you want to include tunnel terminated VXLAN packets.
stp-state Disabled|Discarding|Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	Specify the STP state.
packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	Specify the packet resolution in ASIC.
fwding-type vlan|vxlan|vle	Specify the ASIC forwarding type.
set-src *ip-address*	Specify the source IP address of IPv4 packets.
set-dst *ip-address*	Specify the destination IP address of IPv4 packets.
set-src-port *set-src-port-number*	Specify the source port of IPv4 packets.
set-dst-port *set-dst-port-number*	Specify the destination port of IPv4 packets.
src-vpg vpg-name	Specify the source vPG name for Network Packet Broker (NPB) configuration.
dst-vpg vpg-name	Specify the destination vPG name for Network Packet Broker (NPB) configuration.
bidir-vpg-1 vpg name	Specify the name of the first bidirectional vPG for NPB configuration.
bidir-vpg-2 vpg name	Specify the name of the second bidirectional vPG for NPB configuration.
transparency enable|disable	Specify if you want to enable or disable protocol transparency.
udf-name1 udf name	Specify the User-Defined Field name.
udf-data1 udf-data1-number	Specify the User-Defined Field data.

`udf-data1-mask udf-data1-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name2 udf name`	Specify the User-Defined Field name.
`udf-data2 udf-data2-number`	Specify the User-Defined Field data.
`udf-data2-mask udf-data2-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name3 udf name`	Specify the User-Defined Field name.
`udf-data3 udf-data3-number`	Specify the User-Defined Field data.
`udf-data3-mask udf-data3-mask-number`	Specify the mask for the User-Defined Field data.
`enable|no-enable`	Specify if you want to enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Specify a table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb|igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb|dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function.
`cpu-class` *`cpu-class name`*	Specify the CPU class name.
`description description-string`	Specify a vFlow description.
`if mgmt|data`	Specify the administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	Specify the packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter`, for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.
Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl` added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameters type, and stats, deprecated. The parameters src-port-mask, and dst-port-mask added. The action, `to-port-set-nat,` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields, UDF-, and enable|disable hardware flows also added.
Version 2.5.4	The parameter burst-size `auto` has added functionality. You can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.

Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|dat` aadded.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-port-end` added
Version 6.0.0	The parameter `vrf` added.
Version 6.0.1	The parameters `src-vpg, and dst-vpg` added.
Version 6.1.0	The parameters `bd, inner-vlan, inner-vlan-pri, internal-pri, dst-vpg-1, dst-vpg-2, transparency, flow-cb` added.
Version 7.0.0	The option `strip-outer-vlan` added to parameter `action`.
Version 7.0.1	The options `check, tunnel-pkt, cpu, set-tunnel-id, cpu-rx, cpu-rx-tx, decap, tcp-seq-offset, tcp-ack-offset`, and `l3-to-cpu-switch` for parameter `action` are deprecated. The parameter `vxlan-proto` is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples

- This example shows how to modify the flow statistics capture for a flow named flow3 to specify that a duplicate of all matching traffic be forwarded to the switch controller for further analysis.

  CLI (network-admin@switch) > `vflow-modify name flow3 action copy-to-cpu`

- This example, shows how to create a vFlow with a burst size of 12MB. This is useful because different burst-sizes can be used for different types of metered traffic. For example, if a metered application produces bursty traffic patterns, such as clicking on a Web page link redirecting you to a media-rich page, you can now configure higher burst levels than the pre-calculated default burst levels.

```
CLI (network-admin@switch) > vflow-modify name flow1 scope local
in-port 12 bw-max 5G burst-size 12M
```

vflow-show

This command is used to display information about configured vFlows.

Syntax `vflow-show`

`name` *`name-string`*	The flow name.
`scope local|fabric`	The scope for the flow.
Specify any of the following options:	
`vnet` *`vnet-name`*	The virtual network (vNET) for the flow.
`bd bridge-domain name`	The bridge domain for the vFlow.
`vlan` *`0..4095`*	The VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	The inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	The ingress (input) port for the flow.
`out-port` *`port-list`*	The egress (output) port for the flow.
`ether-type ipv4|arp|wake|rarp|vlan| ipv6|lacp|mpls-uni|mpls-multi| jumbo| dot1X|aoe|qinq|lldp|macsec| ecp|ptp|fcoe|fcoe-init|qinq-old`	The EtherType for the flow.
`src-mac` *`mac-address`*	The source MAC address for the flow .
`src-mac-mask` *`mac-address`*	The source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	The destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	The destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	The source IP address for the flow.
`src-ip-mask` *`ip-address`*	The source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	The destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	The destination IP address wildcard mask for the flow.
`src-port` *`src-port-number`*	The Layer 3 protocol source port for the flow.
`src-port-end` *`src-port-end-number`*	The ending port for a range of source ports.
`src-port-mask` *`src-port-mask-number`*	The source port mask.
`dst-port` *`dst-port-number`*	The Layer 3 protocol destination port for the flow.

dst-port-end *dst-port-end-number*	The ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	The destination port mask.
dscp-start *number*	The starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	The ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	The 6-bit Differentiated Services Code Point (DSCP) of the flow.
dscp-map dscp-map name|none	The DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	The starting ToS number.
tos-end *tos-end-number*	The ending ToS number.
tos *tos-number*	The Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	The priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	The priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	The internal priority as a value between 0, and 7.
vrf *vrf-name*	The name of the VRF.
ttl *ttl-number*	The time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	The Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	The TCP flags to filter a vFlow.
flow-class *vflow-class name*	The vflow class.
ingress-tunnel *tunnel-name*	The name of the ingress tunnel.
egress-tunnel tunnel name	The name of the egress tunnel.
bw-min *bw-min-number*	The minimum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
bw-max *bw-max-number*	The maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
burst-size auto	The burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size

	number between 256B through 128MB.
vrouter-name *vrouter name*	The vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
precedence default|0..15	The traffic priority for the flow (between 0, and 15)
action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu	The forwarding action to apply to the flow.
action-value *number*	An optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
action-set-mac-value *mac-address*	MAC address to apply the action.
action-to-next-hop-ip-value ip-address	The next-hop IP address for packet redirection.
action-to-ecmp-group-value static-ecmp-group group-name	The ECMP group for packet redirection.
action-to-ports-value *port-list*	Port list to apply the action.
mirror *mirror-name*	The name of the mirror configuration.
process-mirror|no-process-mirror	Process mirrored traffic for the vFlow.
packet-log-max *packet-log-max-number*	The maximum packet count for log rotation in the flow.
stats-interval *seconds*	The interval to update packet statistics for the log (in seconds). This is a value between 1, and 604800.
dur *dur-number*	The minimum duration required for the flow to be captured (in seconds).
metadata *metadata-number*	Metadata number for the flow.
transient|no-transient	Capture transient flows.
vxlan *vxlan-name*	The name of the VXLAN.
vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp|	The type of VXLAN.

macsec|ecp|ptp|fcoe|fcoe-init|qinq-old	
from-tunnel-decap|no-from-tunnel-decap	Include tunnel terminated VXLAN packets.
stp-state Disabled|Discarding|Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The STP state.
packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The packet resolution in ASIC.
fwding-type vlan|vxlan|vle	The ASIC forwarding type.
set-src *ip-address*	The source IP address of IPv4 packets.
set-dst *ip-address*	The destination IP address of IPv4 packets.
set-src-port *set-src-port-number*	The source port of IPv4 packets.
set-dst-port *set-dst-port-number*	The destination port of IPv4 packets.
src-vpg vpg-name	The source vPG name for Network Packet Broker (NPB) configuration.
dst-vpg vpg-name	The destination vPG name for Network Packet Broker (NPB) configuration.
bidir-vpg-1 vpg name	The name of the first bidirectional vPG for NPB configuration.
bidir-vpg-2 vpg name	The name of the second bidirectional vPG for NPB configuration.
transparency enable|disable	Transparency for protocol packets
udf-name1 udf name	The User-Defined Field name.
udf-data1 udf-data1-number	The User-Defined Field data.
udf-data1-mask udf-data1-mask-number	The mask for the User-Defined Field data.
udf-name2 udf name	The User-Defined Field name.
udf-data2 udf-data2-number	The User-Defined Field data.
udf-data2-mask udf-data2-mask-number	The mask for the User-Defined Field data.
udf-name3 udf name	The User-Defined Field name.
udf-data3 udf-data3-number	The User-Defined Field data.

`udf-data3-mask udf-data3-mask-number`	The mask for the User-Defined Field data.
`enable|no-enable`	Enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb| igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb| dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function
`cpu-class` *`cpu-class name`*	The CPU class name.
`description description-string`	The vFlow description.
`if mgmt|data`	The administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	Specify the packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter`, for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.
Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl`

	added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameter type, and stats deprecated. The parameters src-port-mask, and dst-port-mask added. The action `to-port-set-nat|` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields UDF-, and `enable|disable` added.
Version 2.5.4	The parameter burst-size `auto` has added functionality. User can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.
Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|data` added.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-port-end` added
Version 6.0.0	The parameter `vrf` added.

Version 6.0.1	The parameters `src-vpg`, and `dst-vpg` added.
Version 6.1.0	The parameters `bd`, `inner-vlan`, `inner-vlan-pri`, `internal-pri`, `dst-vpg-1`, `dst-vpg-2`, `transparency`, `flow-cb`, `phy-dst-port` added.
Version 7.0.0	The option `strip-outer-vlan` added to parameter `action`.
Version 7.0.1	The options `check`, `tunnel-pkt`, `cpu`, `set-tunnel-id`, `cpu-rx`, `cpu-rx-tx`, `decap`, `tcp-seq-offset`, `tcp-ack-offset`, and `l3-to-cpu-switch` for parameter `action` are deprecated. The parameter `vxlan-proto` is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays information about vflows configured on the switch.

Examples To display vFlow information, use the following command:

```
CLI (network-admin@switch) > vflow-show
switch name scope type   burst-size precedence from-tunnel-decap
transparency enable table-name
------ ---- ----- ----- ---------- ---------- -----------------
------------ ------ --------------------
switch vf1  local vflow auto       default    none
disable       enable System-L1-L4-Tun-1-0
```

vflow-snoop

This command is used to display the packet headers of flows directed to the switch CPU.

Syntax `vflow-snoop`

`name` *`name-string`*	Specify the flow name.
`scope local|fabric`	Specify the scope for the flow.
Specify any of the following options:	
`vnet` *`vnet-name`*	Specify the virtual network (vNET) for the flow.
`bd bridge-domain name`	Specify the bridge domain for the vFlow.
`vlan` *`0..4095`*	Specify the VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	Specify the inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	Specify the ingress (input) port for the flow.
`out-port` *`port-list`*	Specify the egress (output) port for the flow.
`ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi|jumbo| dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old`	Specify the EtherType for the flow.
`src-mac` *`mac-address`*	Specify the source MAC address for the flow .
`src-mac-mask` *`mac-address`*	Specify the source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	Specify the destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	Specify the destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	Specify the source IP address for the flow.
`src-ip-mask` *`ip-address`*	Specify the source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	Specify the destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	Specify the destination IP address wildcard mask for the flow.
`src-port` *`src-port-number`*	Specify the Layer 3 protocol source port for the flow.
`src-port-end` *`src-port-end-number`*	Specify the ending port for a range of source ports.

src-port-mask *src-port-mask-number*	Specify the source port mask.
dst-port *dst-port-number*	Specify the Layer 3 protocol destination port for the flow.
dst-port-end *dst-port-end-number*	Specify the ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	Specify the destination port mask.
dscp-start *number*	Specify the starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	Specify the ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	Specify the 6-bit Differentiated Services Code Point (DSCP) of the flow.
dscp-map dscp-map name|none	Specify the DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	Specify the starting ToS number.
tos-end *tos-end-number*	Specify the ending ToS number.
tos *tos-number*	Specify the Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	Specify the priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	Specify the priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	Specify the internal priority as a value between 0, and 7.
vrf *vrf-name*	Specify the name of the VRF.
ttl *ttl-number*	Specify the time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	Specify the Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	Specify the TCP flags to filter a vFlow.
flow-class *vflow-class name*	Specify the vflow class.
ingress-tunnel *tunnel-name*	Specify the name of the ingress tunnel.
egress-tunnel tunnel name	Specify the name of the egress tunnel.
bw-min *bw-min-number*	Specify the minimum bandwidth in Gbps for the

	vFlow. This is a range from 0 to 40Gbps.
`bw-max` *`bw-max-number`*	Specify the maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
`burst-size auto`	Specify the burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size number between 256B through 128MB.
`vrouter-name` *`vrouter name`*	Specify the vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
`precedence default|0..15`	Specify the traffic priority for the flow (between 0, and 15)
`action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu`	Specify the forwarding action to apply to the flow.
`action-value` *`number`*	Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
`action-set-mac-value` *`mac-address`*	Specify a MAC address to apply the action.
`action-to-next-hop-ip-value ip-address`	Specify the next-hop IP address for packet redirection.
`action-to-ecmp-group-value static-ecmp-group group-name`	Specify the ECMP group for packet redirection.
`action-to-ports-value` *`port-list`*	Specify a port list to apply the action.
`mirror` *`mirror-name`*	Specify the name of the mirror configuration.
`process-mirror|no-process-mirror`	Specify to process mirrored traffic for the vflow.
`packet-log-max` *`packet-log-max-number`*	Specify the maximum packet count for log rotation in the flow.
`log-stats|no-log-stats`	Specify if you want to log statistics or not.
`stats-interval` *`seconds`*	Specify the interval to update packet statistics for the log (in seconds). This is a value between 1, and 604800.

dur *dur-number*	Specify the minimum duration required for the flow to be captured (in seconds).
metadata *metadata-number*	Specify a metadata number for the flow.
transient|no-transient	Specify whether to capture transient flows.
vxlan *vxlan-name*	Specify the name of the VXLAN.
vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp|macsec|ecp|ptp|fcoe|fcoe-init|qinq-old	Specify the type of VXLAN.
from-tunnel-decap|no-from-tunnel-decap	Specify if you want to include tunnel terminated VXLAN packets.
stp-state Disabled|Discarding|Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	Specify the STP state.
packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	Specify the packet resolution in ASIC.
fwding-type vlan|vxlan|vle	Specify the ASIC forwarding type.
set-src *ip-address*	Specify the source IP address of IPv4 packets.
set-dst *ip-address*	Specify the destination IP address of IPv4 packets.
set-src-port *set-src-port-number*	Specify the source port of IPv4 packets.
set-dst-port *set-dst-port-number*	Specify the destination port of IPv4 packets.
src-vpg vpg-name	Specify the source vPG name for Network Packet Broker (NPB) configuration.
dst-vpg vpg-name	Specify the destination vPG name for Network Packet Broker (NPB) configuration.
bidir-vpg-1 vpg name	Specify the name of the first bidirectional vPG for NPB configuration.
bidir-vpg-2 vpg name	Specify the name of the second bidirectional vPG for NPB configuration.
transparency enable|disable	Specify if you want to enable or disable protocol transparency.
udf-name1 udf name	Specify the User-Defined Field name.
udf-data1 udf-data1-number	Specify the User-Defined Field data.

`udf-data1-mask udf-data1-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name2 udf name`	Specify the User-Defined Field name.
`udf-data2 udf-data2-number`	Specify the User-Defined Field data.
`udf-data2-mask udf-data2-mask-number`	Specify the mask for the User-Defined Field data.
`udf-name3 udf name`	Specify the User-Defined Field name.
`udf-data3 udf-data3-number`	Specify the User-Defined Field data.
`udf-data3-mask udf-data3-mask-number`	Specify the mask for the User-Defined Field data.
`enable|no-enable`	Specify if you want to enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Specify a table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb|igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb|dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function
`cpu-class` *`cpu-class name`*	Specify the CPU class name.
`description description-string`	Specify a vFlow description.
`if mgmt|data`	Specify the administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	Packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter` for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.
Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl` added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameter type, and stats deprecated. The parameters src-port-mask, and dst-port-mask added. The action, `to-port-set-nat|` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields UDF-, and enable|disable hardware flows also added.
Version 2.5.4	The parameter `burst-size auto`, has added functionality. User can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.

Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|data` added.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-port-end` added
Version 6.0.0	The parameter `vrf` added.
Version 6.0.1	The parameters `src-vpg`, and `dst-vpg` added.
Version 6.1.0	The parameters `bd`, `inner-vlan`, `inner-vlan-pri`, `internal-pri`, `dst-vpg-1`, `dst-vpg-2`, `transparency`, `flow-cb`, `phy-dst-port` added.
Version 7.0.0	The option `strip-outer-vlan` added to parameter `action`.
Version 7.0.1	The options `check`, `tunnel-pkt`, `cpu`, `set-tunnel-id`, `cpu-rx`, `cpu-rx-tx`, `decap`, `tcp-seq-offset`, `tcp-ack-offset`, and `l3-to-cpu-switch` for parameter `action` are deprecated. The parameter `vxlan-proto` is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays a running output of headers as they are directed to the switch CPU based on flow definitions specified for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic. The display output is stopped by pressing Control-C in the CLI.

Examples This example displays the packet headers as they are directed to the switch CPU based on one or several flow definitions created with the command `vflow-create` and the action set to `copy-to-cpu`:

```
CLI (network-admin@switch) > vflow-snoop

switch: 471aac, flow: 40, port: 25, size: 64
smac: 02:08:20:17:26:77, dmac: 1e:1e:1e:ac:f3:62, vlan: 55, etype: arp
switch: 471aac, flow: 40, port: 13, size: 68
smac: 00:0c:fc:00:b9:6e, dmac: ff:ff:ff:ff:ff:ff, vlan: 1, etype: arp
switch: 471aac, flow: 40, port: 15, size: 68
```

```
smac: 00:0c:fc:00:b6:71, dmac: ff:ff:ff:ff:ff:ff, vlan: 1, etype: arp
```

vflow-mgmt-show

This command is used to display the management flow details for the configured vFlows.

Syntax `vflow-mgmt-show`

`name` *`name-string`*	The flow name.
`scope local|fabric`	The scope for the flow.
Specify any of the following options:	
`vnet` *`vnet-name`*	The virtual network (vNET) for the flow.
`bd bridge-domain name`	The bridge domain for the vFlow.
`vlan` *`0..4095`*	The VLAN identifier for the flow. The value ranges between 0-4095.
`inner-vlan` *`0..4095`*	The inner VLAN ID of the QinQ frame.
`in-port` *`port-list`*	The ingress (input) port for the flow.
`out-port` *`port-list`*	The egress (output) port for the flow.
`ether-type ipv4|arp|wake|rarp|vlan| ipv6|lacp|mpls-uni|mpls-multi| jumbo| dot1X|aoe|qinq|lldp|macsec| ecp|ptp|fcoe|fcoe-init|qinq-old`	The EtherType for the flow.
`src-mac` *`mac-address`*	The source MAC address for the flow .
`src-mac-mask` *`mac-address`*	The source MAC address wildcard mask for the flow.
`dst-mac` *`mac-address`*	The destination MAC address for the flow.
`dst-mac-mask` *`mac-address`*	The destination MAC address wildcard mask for the flow.
`src-ip` *`ip-address`*	The source IP address for the flow.
`src-ip-mask` *`ip-address`*	The source IP address wildcard mask for the flow.
`dst-ip` *`ip-address`*	The destination IP address for the flow.
`dst-ip-mask` *`ip-address`*	The destination IP address wildcard mask for the flow.
`src-port` *`src-port-number`*	The Layer 3 protocol source port for the flow.
`src-port-end` *`src-port-end-number`*	The ending port for a range of source ports.
`src-port-mask` *`src-port-mask-number`*	The source port mask.
`dst-port` *`dst-port-number`*	The Layer 3 protocol destination port for the flow.

dst-port-end *dst-port-end-number*	The ending port for a range of destination ports.
dst-port-mask *dst-port-mask-number*	The destination port mask.
dscp-start *number*	The starting DSCP number. This is a value between 0, and 63.
dscp-end *number*	The ending DSCP number. This is a value between 0, and 63.
dscp *dscp-number*	The 6-bit Differentiated Services Code Point (DSCP) of the flow.
dscp-map dscp-map name|none	The DSCP map to apply on the flow. Please reapply if map priorities are updated.
tos-start *tos-start-number*	The starting ToS number.
tos-end *tos-end-number*	The ending ToS number.
tos *tos-number*	The Type of Service (ToS) number for the flow.
dropped|no-dropped	Specify if the vFlow matches a dropped packet or forwards the packet.
vlan-pri *number*	The priority for the VLAN. This is a value between 0 (lowest), and 7 (highest).
inner-vlan-pri *number*	The priority for the inner VLAN. This is a value between 0 (lowest), and 7 (highest).
internal-pri *0..7*	The internal priority as a value between 0, and 7.
vrf *vrf-name*	The name of the VRF.
ttl *ttl-number*	The time to live in seconds.
proto tcp|udp|icmp|igmp|ip|icmpv6	The Layer 3 protocol for the flow.
tcp-flags fin|syn|rst|push|ack|urg|ece|cwr	The TCP flags to filter a vFlow.
flow-class *vflow-class name*	The vflow class.
ingress-tunnel *tunnel-name*	The name of the ingress tunnel.
egress-tunnel tunnel name	The name of the egress tunnel.
bw-min *bw-min-number*	The minimum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
bw-max bw-max-number	The maximum bandwidth in Gbps for the vFlow. This is a range from 0 to 40Gbps.
burst-size auto	The burst size. This parameter auto-calculates the burst size based on the maximum bandwidth settings for the vFlow. You can also configure a burst-size

	number between 256B through 128MB.
vrouter-name *vrouter name*	The vRouter name if you are configuring Policy-based Routing (PBR). You should not use this parameter unless you are configuring PBR.
precedence default|0..15	The traffic priority for the flow (between 0, and 15)
action none|drop|to-port|to-cpu|trap|copy-to-cpu|copy-to-port|setvlan|add-outer-vlan|set-tpid|to-port-set-vlan|to-span|set-metadata|set-dscp|set-dmac|to-next-hop-ip|set-dmac-to-port|to-ports-and-cpu|set-vlan-pri|set-smac|drop-cancel-trap|to-ecmp-group|redirect-to-vrouter|strip-outer-vlan|cancel-switch-to-cpu	The forwarding action to apply to the flow.
action-value *number*	An optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1, and 64.
action-set-mac-value *mac-address*	MAC address to apply the action.
action-to-next-hop-ip-value ip-address	The next-hop IP address for packet redirection.
action-to-ecmp-group-value static-ecmp-group group-name	The ECMP group for packet redirection.
action-to-ports-value *port-list*	Port list to apply the action.
mirror *mirror-name*	The name of the mirror configuration.
process-mirror|no-process-mirror	Process mirrored traffic for the vFlow.
packet-log-max *packet-log-max-number*	The maximum packet count for log rotation in the flow.
log-stats|no-log-stats	Log packet statistics for the flow
stats-interval *seconds*	The interval to update packet statistics for the log (in seconds). This is a value between 1, and 604800.
dur *dur-number*	The minimum duration required for the flow to be captured (in seconds).
metadata *metadata-number*	Metadata number for the flow.
transient|no-transient	Capture transient flows.
vxlan *vxlan-name*	The name of the VXLAN.
vxlan-ether-type ipv4|arp|wake|rarp|	The type of VXLAN.

vlan|ipv6|lacp|mpls-uni|mpls-multi| jumbo|dot1X|aoe|qinq|lldp| macsec|ecp|ptp|fcoe|fcoe-init|qinq-old	
from-tunnel-decap|no-from-tunnel-decap	Include tunnel terminated VXLAN packets.
stp-state Disabled|Discarding| Learning|Forwarding packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The STP state.
packet-res l2-unicast|l2-unknown-unicast|l2-multicast|l2-unknown-multicast|l2-broadcast	The packet resolution in ASIC.
fwding-type vlan|vxlan|vle	The ASIC forwarding type.
set-src *ip-address*	The source IP address of IPv4 packets.
set-dst *ip-address*	The destination IP address of IPv4 packets.
set-src-port *set-src-port-number*	The source port of IPv4 packets.
set-dst-port *set-dst-port-number*	The destination port of IPv4 packets.
src-vpg vpg-name	The source vPG name for Network Packet Broker (NPB) configuration.
dst-vpg vpg-name	The destination vPG name for Network Packet Broker (NPB) configuration.
bidir-vpg-1 vpg name	The name of the first bidirectional vPG for NPB configuration.
bidir-vpg-2 vpg name	The name of the second bidirectional vPG for NPB configuration.
transparency enable|disable	Transparency for protocol packets
udf-name1 udf name	The User-Defined Field name.
udf-data1 udf-data1-number	The User-Defined Field data.
udf-data1-mask udf-data1-mask-number	The mask for the User-Defined Field data.
udf-name2 udf name	The User-Defined Field name.
udf-data2 udf-data2-number	The User-Defined Field data.
udf-data2-mask udf-data2-mask-number	The mask for the User-Defined Field data.
udf-name3 udf name	The User-Defined Field name.

`udf-data3 udf-data3-number`	The User-Defined Field data.
`udf-data3-mask udf-data3-mask-number`	The mask for the User-Defined Field data.
`enable|no-enable`	Enable or disable flows in hardware.
`table-name` *`vflow-table name`*	Table name from the following list: • Egress-Table-1-0 • System-L1-L4-Tun-1-0 • System-VCAP-table-1-0 • VCAP-IPv6-table-1-0 The following actions are supported for this parameter: • InnerVlan • OuterVlan • Dscp • Vxlan • Drop • VlanPri
`flow-cb default-cb|arp-cb|bcast-cb| igmp-cb|pim-cb|dhcp-cb|dhcpv6-cb| dmac-miss-cb|l2-miss-cb|no-cb`	CPU to process, vFlow callback function.
`cpu-class` *`cpu-class name`*	The CPU class name.
`description description-string`	The vFlow description.
`if mgmt|data`	The administrative service interface.
`phy-dst-port` *`phy-dst-port-number`*	The packet destination port for the vFlow.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `type` is deprecated. The option `cluster` for `scope` is deprecated. The option `meter` for `action` is deprecated. The parameters `mirror|no mirror`, and `process-mirror|no-process-mirror` added.

Version 2.2.3	The parameters `dscp-start`, `dscp-end`, `tos-start`, `tos-end`, `vlan-pri`, and `ttl` added.
Version 2.2.5	The parameters `set-dscp|to-ports-and-cpu|set-vlan-pri| set-dmac|set-dmac-to-port, action-set-mac-value`, and `action-to-ports-value` added. The parameter `mirror` added. The parameter `mirror|no-mirror` changed to `process-mirror|no-process-mirror`.
Version 2.3	The parameters `set-src`, `set-dst`, `set-src-port`, and `set-dst-port` added.
Version 2.3.1	The parameter `table` added.
Version 2.4	The parameter type, and stats deprecated. The parameters src-port-mask, and dst-port-mask added. The action `to-port-set-nat|` is deprecated. The parameter `log-stats` added.
Version 2.5.3	The parameter `tcp-flags` added. The fields UDF-, and `enable|disable` added.
Version 2.5.4	The parameter `burst-size auto` has added functionality. User can configure a burst-size number between 256B through 128MB.
Version 2.6.0	The parameter `table-name` added.
Version 2.6.2	The parameter `dscp-map` and `cpu-class` added.
Version 3.0.0	The parameter `dropped|no-dropped` added.
Version 5.0.0	The parameter `if mgmt|data` added.
Version 5.1.0	The parameter `packet-res` added.
Version 5.2.0	The parameters `src-port-end`, and `dst-`

	port-end added
Version 6.0.0	The parameter vrf added.
Version 6.0.1	The parameters src-vpg, and dst-vpg added.
Version 6.1.0	The parameters inner-vlan, inner-vlan-pri, dst-vpg-1, dst-vpg-2, transparency, flow-cb, phy-dst-port added.
Version 7.0.0	The option strip-outer-vlan added to parameter action.
Version 7.0.1	The options check, tunnel-pkt, cpu, set-tunnel-id, cpu-rx, cpu-rx-tx, decap, tcp-seq-offset, tcp-ack-offset, and l3-to-cpu-switch for parameter action are deprecated. The parameter vxlan-proto is deprecated.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays information about vFlow configured on the switch.

Examples To display the configured vFlow rules from the IPTables, use the command:

```
CLI (network-admin@spine1) > vflow-mgmt-show

name                          scope type    src-ip      dst-port proto burst-size precedence
action from-tunnel-decap transparency enable if
----------------------------- ----- ------- ----------- -------- ----- ---------- ----------
------ ----------------- ------------ ------ ----
mgmt-access1                  local iptable 10.13.36.22 22       tcp   auto       default
drop   none              disable      enable mgmt
implicitv4_drop_tcp_22_vmgmt0 local iptable             22       tcp              18
drop                                   enable mgmt
```

vflow-mgmt-stats-clear

This command displays management flow statistics for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) traffic.

Syntax `vflow-mgmt-stats-clear`

Specify any of the following options:	
`start-time` *`yyyy-mm-ddThh:mm:ss`*	Specify the start time of the flow using the notation yyyymm-ddThh:mm:ss.
`end-time` *`yyyy-mm-ddThh:mm:ss`*	Specify the start time of the flow using the notation yyyymm-ddThh:mm:ss
`dur` *`duration-number`*	Specify the duration of the flow (in seconds).
`interval duration: #d#h#m#s`	Specify the length of time between collection intervals.
`since-start|no-since-start`	Specify if the statistics are collected from the start of the vFlow.
`older-than duration: #d#h#m#s`	Specify if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	Specify the statistics collected within the last duration.
`name vflow` *`name`*	Specify the name of the vFlow.
`Specifyvnet` *`vnet name`*	Specify the vNET.
`id`	Specify the ID assigned.
`pkts` *`pkts-number`*	Specify the total number of packets.
`bytes` *`bytes-number`*	Specify the total number of bytes.
`cpu-pkts` *`cpu-pkts-number`*	Specify the total number of CPU packets.
`cpu-bytes` *`cpu-bytes-number`*	Specify the total number of CPU bytes.

`mismatches` *`mismatches-number`*	Specify the number of mismatched packets.
`drops` *`drops-number`*	Specify the number of dropped packets.
`drops-bytes` *`drops-bytes-number`*	Specify the number of dropped bytes.
`policer-drops` *`policer-drops-number`*	Specify the number of policer dropped packets.
`policer-drop-bytes` *`policer-drop-bytes-number`*	Specify the number of policer dropped bytes.
`cpu-tx-pkts` *`cpu-tx-pkts-number`*	Specify the number of packets sent from the CPU.
`cpu-tx-bytes` *`cpu-tx-bytes-number`*	Specify the number of bytes sent from the CPU.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command clears vFlow statistics.

Examples This example shows how to clear vFlow management statistics:

```
CLI (network-admin@switch) > vflow-mgmt-stats-clear
```

vflow-mgmt-stats-show

This command displays flow statistics for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) traffic.

Syntax `vflow-mgmt-stats-show`

Specify any of the following options:	
`start-time` *`yyyy-mm-ddThh:mm:ss`*	The start time of the statistic collection using the notation yyyymm-ddThh:mm:ss.
`end-time` *`yyyy-mm-ddThh:mm:ss`*	The end time of the statistic collection using the notation yyyymm-ddThh:mm:ss
`duration` *`duration-number`*	The duration of the statistic collection (in seconds).
`interval duration: #d#h#m#s`	The length of time between collection intervals.
`since-start|no-since-start`	Specifies if the statistics are collected from the start of the vFlow.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	The statistics collected within the last duration.
`name vflow` *`name`*	The name of the vFlow.
`vnet vnet-name`	The vNET name.
`id`	The ID assigned.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays flow statistics.

Examples This example shows how to display flow statistics.

```
CLI (network-admin@switch) > vflow-mgmt-stats-show
name         pkts bytes
-----------  ---- -----
mgmt_access 0    0
```

vflow-settings-modify

You modify the settings for vFlows to enable User Defined flows, and VXLAN analytics.

Syntax `vflow-settings-modify`

`enable-user-defined-flow|no-enable-user-defined-flow`	Specifies whether to enable or disable User defined vflows.
`vxlan-analytics|no-vxlan-analytics`	Specifies whether to enable or disable collecting VXLAN statistics.
`inflight-vxlan-analytics|no-inflight-vxlan-analytics`	Specifies whether to enable or disable inflight VXLAN analytics.
`longlived-tcp-conn-stats|no-longlived-tcp-conn-stats`	Specifies whether to enable or disable long lived TCP connection stats.

Defaults Both settings are disabled by default.

Access Network Administrator

History

Version 2.5.3	Command introduced.
Version 2.6.2	The parameter `inflight-vxlan-analytics` added.
Version 5.1.0	The parameter `long-lived-tcp-conn-stats` added.

Usage Use this command to enable or disable user defined vFlows or VXLAN analytics.

Examples To enable VXLAN analytics, use the following syntax:

```
CLI (network-admin@switch) > vflow-settings-modify vxlan-analytics
```

vflow-settings-show

You can display the settings for vFlows.

Syntax `vflow-settings-show`

`enable-user-defined-flow|no-enable-user-defined-flow`	Enable or disable User defined vflows.
`vxlan-analytics|no-vxlan-analytics`	Enable or disable collecting VXLAN statistics.
`inflight-vxlan-analytics|no-inflight-vxlan-analytics`	Enable or disable inflight VXLAN analytics.
`longlived-tcp-conn-stats|no-longlived-tcp-conn-stats`	Enable or disable long lived TCP connection stats.

Defaults Both settings are disabled by default.

Access Network Administrator

History

Version 2.5.3	Command introduced.
Version 2.6.2	The parameter `inflight-vxlan-analytics` added.
Version 5.1.0	The parameter `long-lived-tcp-conn-stats` added.

Usage Use this command to display information about user defined vFlows or VXLAN analytics.

Examples To display vFlow settings, use the following syntax:

```
CLI (network-admin@switch) > vflow-settings-show
switch:                    switch1
enable-user-defined-flow:  off
vxlan-analytics:           on
inflight-vxlan-analytics:  off
longlived-tcp-conn-stats:  off
switch:                    switch2
enable-user-defined-flow:  off
vxlan-analytics:           on
```

```
inflight-vxlan-analytics:  off
longlived-tcp-conn-stats:  off
switch:                    switch3
enable-user-defined-flow:  off
vxlan-analytics:           on
inflight-vxlan-analytics:  off
longlived-tcp-conn-stats:  off
```

vflow-stats-clear

This command displays flow statistics for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) traffic.

Syntax `vflow-stats-clear`

Specify any of the following options:	
`start-time` *`yyyy-mm-ddThh:mm:ss`*	Specify the start time of the flow using the notation yyyymm- ddThh:mm:ss.
`end-time` *`yyyy-mm-ddThh:mm:ss`*	Specify the start time of the flow using the notation yyyymm- ddThh:mm:ss
`dur` *`duration-number`*	Specify the duration of the flow (in seconds).
`interval duration: #d#h#m#s`	Specify the length of time between collection intervals.
`since-start|no-since-start`	Specify if the statistics are collected from the start of the vflow.
`older-than duration: #d#h#m#s`	Specify if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	Specify the statistics collected within the last duration.
`name vflow` *`name`*	Specify the name of the vflow.
`Specifyvnet` *`vnet name`*	Specify the vNET.
`id`	Specify the ID assigned.
`pkts` *`pkts-number`*	Specify the total number of packets.
`bytes` *`bytes-number`*	Specify the total number of bytes.
`cpu-pkts` *`cpu-pkts-number`*	Specify the total number of CPU packets.

`cpu-bytes` *`cpu-bytes-number`*	Specify the total number of CPU bytes.
`mismatches` *`mismatches-number`*	Specify the number of mismatched packets.
`drops` *`drops-number`*	Specify the number of dropped packets.
`drops-bytes` *`drops-bytes-number`*	Specify the number of dropped bytes.
`policer-drops` *`policer-drops-number`*	Specify the number of policer dropped packets.
`policer-drop-bytes` *`policer-drop-bytes-number`*	Specify the number of policer dropped bytes.
`cpu-tx-pkts` *`cpu-tx-pkts-number`*	Specify the number of packets sent from the CPU.
`cpu-tx-bytes` *`cpu-tx-bytes-number`*	Specify the number of bytes sent from the CPU.

Defaults None.

Access CLI

History

Version 2.4.0	Command introduced.
Version 2.6.2	The parameters `policer-drops`, `policer-drop-bytes`, `cpu-tx-pkts`, and `cpu-tx-bytes` added.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command clears vFlow statistics.

Examples This example shows how to clear vFlow statistics:

```
CLI (network-admin@switch) > vflow-stats-clear
```

vflow-stats-show

This command displays flow statistics for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) traffic.

Syntax `vflow-stats-show`

Specify any of the following options:	
`start-time` *`yyyy-mm-ddThh:mm:ss`*	The start time of the flow using the notation yyyymm-ddThh:mm:ss.
`end-time` *`yyyy-mm-ddThh:mm:ss`*	The start time of the flow using the notation yyyymm-ddThh:mm:ss
`dur` *`duration-number`*	The duration of the flow (in seconds).
`interval duration: #d#h#m#s`	The length of time between collection intervals.
`since-start|no-since-start`	Specifies if the statistics are collected from the start of the vFlow.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	The statistics collected within the last duration.
`name vflow` *`name`*	Name of the vFlow.
`vnet vnet-name`	The vNET name.
`id`	The ID assigned.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This

command displays flow statistics.

Examples This example shows how to display flow statistics.

```
CLI (network-admin@switch) > vflow-stats-show
switch name                packets bytes cpu-packets cpu-bytes
------ ------------------  ------- ----- ----------- --------
switch IGMP-Flow           1.98M   130M  1.99M       123M
switch LLDP-Flow           218K    24.2M 218K        23.4M
switch Host-Agent-Discover 3.92K   251K  0           0
switch ECP                 0       0     0           0
switch Fabric-Discovery    282K    159M  273K       157M
switch SYSTEM-S            777K    60.2M 763K       56.0M
switch SYSTEM-F            719K    67.3M 711K       63.5M
switch SYSTEM-R            288K    18.0M 285K       16.7M
switch System-A            36.5M   2.28G 36.5M      2.14G
switch DHCP-client         83.6K   40.7M 37.9K      19.3M
switch DHCP-server         53.2K   23.0M 31.4K      10.5M
```

vflow-stats-settings-modify

This command allows you to modify the settings for collection vFlow statistics.

Syntax `vflow-stats-settings-modify`

`enable|disable`	Specify to enable or disable statistics collection.
`interval duration:`*`#d#h#m#s*	Specify the interval between statistics collection.
`disk-space` *`disk-space-number*	Specify the amount of disk space to reserve for the statistics.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to modify the setting for statistics collection.

Examples To modify the vFlow statistics disk size to 8G, use the following command:

```
CLI (network-admin@switch) > vflow-stats-settings-modify disk-space
8g
```

vflow-table-show

This command displays table vFlow statistics for all vFlows.

Syntax `vflow-table-show`

Specify any of the following options:

`name` *`Flow_Name`*	The flow name.
`id` *`Flow_ID`*	The flow identifier.
`flow-max` *`flow-max-number`*	The maximum number of entries.
`flow-used` *`flow-used-number`*	The number of vFlows used.
`flow-tbl-slices` *`flow-tbl-slices-number`*	The total number of tables for slicing.
`capability none|set-metadata|match-metadata`	The vFlow table capability.
`flow-tbl-bank` *`flow-tbl-bank-string`*	The vFlow table bank.
`flow-profile system|application|ipv6|qos|pbr|egress-v6|ipv6-vcap|MAX`	The vFlow profile type.

Defaults None.

Access CLI

History

Version 2.3.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays flow tables.

Examples This example shows how to display flow tables.

```
CLI (network-admin@switch) > vflow-table-show

name                 flow-max-per-group flow-used flow-tbl-slices capability     flow-
profile
```

```
--------------------- ------------------ --------- --------------- --------------
------------
Egress-Table-1-0      512                0         3               match-metadata system

System-L1-L4-Tun-1-0  4096               67        4               set-metadata   system

System-VCAP-table-1-0 256                1         3               none           system

VCAP-IPv6-table-1-0   256                0         1               none           ipv6-
vcap
```

vflow-table-profile-modify

This command allows you to modify vFlow IPv6 table profiles.

Syntax `vflow-table-profile-modify`

Specify any of the following options:	
`profile application|ipv6|qos|ipv6-vcap`	Specify the profile to modify.
`hw-tbl switch-main|switch-hash|npu-main|npu-hash h`	Specify the hardware table used by the vFlow.
`enable|no-enable`	Specify if you want to enable or disable the vFlow profile table.

Defaults None.

Access CLI

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameters `percentage, and min-percentage` removed.
Version 6.1.0	The option `ipv6-vcap` added to the parameter `profile`.

Usage This command allows you to modify IPv6 vFlow table profiles .

Examples This example shows how to enable the IPv6-VCAP hardware table:

```
CLI (network-admin@switch) > vflow-table-profile-modify  profile
ipv6-vcap hw-tbl switch-main enable
```

vflow-table-profile-show

Display vFlow table profiles.

Syntax `vflow-table-profile-show`

`profile system|application|ipv6|qos|pbr|egress-v6|ipv6-vcap|MAX`	Type of vFlow profile.
`hw-tbl switch-main|switch-hash|npu-main|npu-hash|max`	The hardware table used by the vFlow profile.
`capability none|set-metadata|match-metadata`	The capability assigned to the vFlow profile.
`flow-capacity` *`flow-capacity-number`*	The total capacity assigned to the vFlow profile.
`flow-slices-needed` *`flow-slices-needed-number`*	The number of vFlow slices needed for minimum tables.
`flow-slices-used` *`flow-slices-used-number`*	The number of vFlow slices used in the table.
`actual-percent-used` *`actual-percent-used-number`*	The actual percentage used by the vFlow profile.

Defaults None.

Access CLI

History

Version 2.6.0	Command introduced.
Version 3.0.0	The parameters `percentage`, `min-percentage`, removed.
Version 6.1.0	The option `ipv6-vcap` added to the parameter `profile`.

Usage Use this command to display information about vFlow tables.

Examples To display vFlow table profiles, use the following syntax:

```
CLI (network-admin@switch) > vflow-table-profile-show
profile     hw-tbl      enable  flow-capacity flow-slices-needed flow-slices-used
comment
```

```
----------- ----------- ------- ------------- ------------------ ----------------
------------------
system      switch-main enable  768           4                  7
System-L1-L4-flows
npu-app     npu-main    disable 0             0                  0                L1-L4-
flows
application switch-main disable 0             1                  0                User-
Application
qos         switch-main disable 0             1                  0                QoS

ipv6        switch-main disable 0             2                  0                IPv6

pbr         switch-main disable 0             0                  0                PBR

egress-v6   switch-main disable 0             1                  0
Egress-IPv6
ipv6-vcap   switch-main enable  256           1                  1                VCAP-
IPv6
```

vflow-stats-settings-show

This command allows to display the settings for collection vFlow statistics.

Syntax `vflow-stats-settings-show`

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display the settings for statistics collection.

Examples To display the vFlow statistics, use the following command:

```
CLI (network-admin@switch) > vflow-stats-settings-show
switch:     pleiades25
enable:     yes
interval:   1m
disk-space: 50M
```

VLAG Commands

vlag-create

To create a new virtual link aggregation group (VLAG), use this command.

Informational Note: Before you configure VLAGs, you must have two switches in a cluster configuration. One switch is the local switch used to specify the local port, and the other is a peer switch used to specify the peer port.

A switch can only participate in one cluster.

Syntax `vlag-create`

`name` *`name-string`*	Specify the name of the VLAG.
`port` *`vlag-usable-port`*	Specify the local VLAG port.
`peer-port vlag-usable-port`	Specify the VLAG peer-port.
`mode active-standby| active-active`	Specify the mode for the VLAG. Active-standby indicates one side is active, and the other is in standby mode. (Not Supported) Active-Active indicates that both sides of the VLAG are up by default.
`peer-switch` *`fabric-node-name`*	Specify the fabric name of the peer switch.
`failover-move-L2| failover-ignore-L2`	Specify the failover action as move or ignore.
`lacp-mode off|passive|active`	Specify the LACP mode.
`lacp-timeout slow|fast`	Specify the LACP timeout as slow (30 seconds) or fast (4 seconds).
`lacp-fallback bundle|individual`	Specify the LACP fallback mode as bundle or individual.
`lacp-fallback-timeout` *`seconds`*	Specify the LACP fallback timeout between 30, and 60 seconds. The default value is 50 seconds.
`lacp-port-priority` *`number`*	Specify the LACP port priority as a value

	between 1, and 65535.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters for `failover` and `LACP` added.
Version 2.2	The parameters for mode `lacp-mode`, `active-standby` and `active-active` added. `Local-port` changed to `port`.
Version 2.2.6	The parameter port deprecated. The parameters `port vlag-usable-port name`, and `peer-port vlag-usable-port name` added.
Version 2.4.0	The parameters `lacp-fallback` and `lacp-fallback-timeout` added.
Version 2.5.0	The parameter `lacp-port-priority` added.

Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes, and loadbalancing traffic where alternative paths exist. This command creates a new VLAG.

Examples This example shows how to create a VLAG with identifier 1 to aggregate the links connected to port 1 of both the local, and peer switch.

```
CLI (network-admin@switch) > vlag-create id 1 port 1 peer-switch
a1634:b peer-port 1
```

vlag-delete

This command deletes an existing VLAG from the configuration.

Syntax `vlag-delete`

name *name-string*	Specify the VLAG name.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes, and loadbalancing traffic where alternative paths exist. This command deletes a VLAG.

Examples To delete a VLAG with the identifier, 34, use the following command:

```
CLI (network-admin@switch) > vlag-delete 34
```

vlag-modify

To modify an existing virtual link aggregation group (VLAG), use this command.

Syntax `vlag-modify`

`name` *`name-string`*	Specify the name of the VLAG.
`port` *`vlag-usable-port`*	Specify the local VLAG port.
`peer-port vlag-usable-port`	Specify the peer VLAG port.
`mode active-standby| active-active`	Specify the mode for the VLAG. Active-standby indicates one side is active, and the other is in standby mode. (Not Supported) Active-Active indicates that both sides of the VLAG are up by default.
`peer-switch` *`fabric-node-name`*	Specify the fabric name of the peer switch.
`peer-port` *`port-number`*	Specify the port number on the peer switch.
`failover-move-L2|failover-ignore-L2`	Specify the failover action as move or ignore.
`lacp-mode off|passive|active`	Specify the LACP mode.
`lacp-timeout slow|fast`	Specify the LACP timeout as slow (30 seconds) or fast (4 seconds).
`lacp-fallback bundle|individual`	Specify the LACP fallback mode as bundle or individual.
`lacp-fallback-timeout` *`seconds`*	Specify the LACP fallback timeout between 30, and 60 seconds. The default value is 50 seconds.
`lacp-port-priority` *`number`*	Specify the LACP port priority as a value between 1, and 65535.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters for `failover` and `LACP` added.
Version 2.2	The parameters for mode `lacp-mode`, `active-standby` and `active-active` added. `Local-port` changed to `port`.
Version 2.2.6	The parameter port deprecated. The parameters `port vlag-usable-port name`, and `peer-port vlag-usable-port name` added.
Version 2.4.0	The parameters `lacp-fallback` and `lacp-fallback-timeout` added.
Version 2.5.0	The parameter `lacp-port-priority` added.

Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes, and loadbalancing traffic where alternative paths exist. This command modifies an existing VLAG configuration.

Examples This example shows how to modify a VLAG named spine1-vlag to lacp-timeout fast.

```
CLI (network-admin@switch) > vlag-modify name spine1-vlag lacp-
timeout fast
```

vlag-show

This command displays current VLAG configurations on the fabric.

Syntax `vlag-show`

`id` *`vlag-id`*	Specifies the VLAG identifier.
`name` *`name-string`*	Specifies the name of the VLAG.
`cluster` *`cluster-name`*	Specifies the name of the cluster.
`mode active-standby|active-active`	Specifies the mode for the VLAG. Active-standby indicates one side is active, and the other is in standby mode. Active-Active indicates that both sides of the VLAG are up by default.
`failover-move-L2|failover-ignore-L2`	Specifies the behavior in the event of a failover.
`status peer-down|normal`	Specifies the status of the VLAG.
`local-state enabled|up|coming-up`	Specifies the local state of the VLAG.
`peer-state enabled|up|coming-up`	Specifies the peer state of the VLAG.
`lacp-mode off|passive|active`	Specifies the LACP mode.
`lacp-timeout slow|fast`	Specifies the LACP timeout.
`lacp-key` *`lacp-key-number`*	Specifies the generated LACP key.
`lacp-system-id` *`lacp-system-id-number`*	Specifies the LACP system ID.
`lacp-fallback bundle|individual`	Specifies the LACP fallback mode as bundle or individual.
`lacp-fallback-timeout` *`seconds`*	Specifies the LACP fallback timeout between 30, and 60 seconds. The default value is 50 seconds.

`lacp-individual` *`port-list`*	Specifies the LACP ports operating individually.
`lacp-port-priority` *`number`*	Specify the LACP port priority as a value between 1, and 65535.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters for `failover` and `LACP` added.
Version 2.2	The parameters for mode `lacp-mode`, `active-standby` and `active-active` added. `Local-port` changed to `port`.
Version 2.2.6	The parameter port deprecated. The parameters `port vlag-usable-port name`, and `peer-port vlag-usable-port name` added.
Version 2.4.0	The parameters `lacp-fallback` and `lacp-fallback-timeout` added.
Version 2.5.0	The parameter `lacp-port-priority` added.

Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multi-pathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes, and load-balancing traffic where alternative paths exist.

Examples To display all VLAGs, use the following command:

```
CLI (network-admin@switch) > vlag-show format all layout vertical
id:              a000030:0
name:            fh2
cluster:         pubdev
mode:            active-active
switch:          pubdev01
port:            55
peer-switch:     pubdev02
```

```
peer-port:        55
failover-move-L2: no
status:           normal
local-state:      enabled
lacp-mode:        off
lacp-timeout:     slow
lacp-key:         13811
lacp-system-id:   110013777969294
```

vlag-stats-show

This command is used to display information about VLAG statistics.

Syntax `vlag-stats-show`

Specify any of the following options:	
`time date/time: yyyy-mm-ddThh:mm:ss`	The time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; SS specifies the 2 digit second of the minute
`start-time` *`start-time`*	The start time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month; • HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
`end-time` *`end-time`*	The end time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS, where: • YYYY specifies the 4 digit calendar year; • MM specifies the 2 digit month of the year; • DD specifies the 2 digit day of the month;

	• HH specifies the 2 digit time of the day (24H notation); • MM specifies the 2 digit minute of the hour; • SS specifies the 2 digit second of the minute.
duration *duration*	The duration in seconds.
interval duration: #d#h#m#s	The interval between statistics collection.
since-start|no-since-start	Specifies if the statistics are collected from the start of collecting statistics.
older-than duration: #d#h#m#s	Specifies if the statistics are older than the duration in days, hours, minutes, and seconds.
within-last duration: #d#h#m#s	Specifies if the statistics are within the duration in days, hours, minutes, and seconds.
vlag_name *name-string*	Name of the VLAG.
port *port-list*	Specifies one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).
counter *counter-number*	The counter number.
ibytes ibytes-number	The incoming number of bytes.
ibits *ibits-number*	The number of incoming bits.
iUpkts *iUpkts-number*	The number of incoming unicast packets.
iBpkts *iBpkts-number*	The number of incoming broadcast packets.
iMpkts *iMpkts-number*	The number of incoming multicast packets.
iPauseFs *iPauseFs-number*	The number of incoming pause frames.

iCongDrops *iCongDrops-number*	The number of incoming packets dropped due to congestion.
idiscards *idiscards-number*	The number of incoming packets discarded.
ierrs *ierrs-number*	The number of incoming errors.
obytes *obytes-number*	The number of outgoing bytes.
obits *obits-number*	The number of outgoing bits.
oUpkts *oUpkts-number*	The number of outgoing unicast packets.
oBpkts *oBpkts-number*	The number of outgoing broadcast packets.
oMpkts *oMpkts-number*	The number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	The number of outgoing pause frames.
oCongDrops *oCongDrops*-number	The number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	The number of outgoing discarded packets.
oerrs *oerrs-number*	The number of outgoing errors.
mtu-errs *mtu-errs-number*	The number of MTU errors.
HER-packets *HER-pts-number*	The number of Head End Replicated (HER) packets.
HER-bytes *HER-bytes-number*	The number of Head End Replicated (HER) bytes.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to display statistics about a VLAG configuration.

Examples To display statistics for a VLAG configuration, use the following syntax:

```
CLI (network-admin@switch) > vlag-stats-show
```

vlag-stats-clear

This command is used to clear collected statistics from a VLAG configuration.

Syntax `vlag-stats-clear`

`time date/time: yyyy-mm-ddTHH:mm:ss`	Display by date, and time.
`start-time date/time: yyyy-mm-ddTHH:mm:s`	Display by start date, and time.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	Display by end date, and time.
`duration duration: #d#h#m#s`	Display by duration.
`interval duration: #d#h#m#s`	Display by interval.
`since-start`	Specify a start time for the statistics.
`older-than duration: #d#h#m#s`	Display statistics older than a specific date.
`within-last duration: #d#h#m#s`	Display statistics within a specific duration.
`tunnel-name` *`tunnel-name`*	Display by tunnel name.
`counter` *`counter-number`*	Displays the number of counters.
`ibytes` *`ibytes-number`*	Displays the number of incoming bytes.
`ibits` *`ibits-number`*	Displays the number of incoming bits.
`iUpkts` *`iUpkts-number`*	Displays the number of incoming Unicast packets.
`iBpkts` *`iBpkts-number`*	Displays the number of incoming Broadcast packets.
`iMpkts` *`iMpkts-number`*	Displays the number of incoming Multicast packets.
`iPauseFs` *`iPauseFs-number`*	Displays the number of incoming Pause frames.
`iCongDrops` *`iCongDrops-number`*	Displays the number of incoming packets dropped due to congestion.
`ierrs` *`errs-number`*	Displays the number of incoming packets with errors.
`obytes` *`obytes-number`*	Displays the number of outgoing bytes.
`obits` *`obits-number`*	Displays the number of outgoing bits.
`oUpkts` *`oUpkts-number`*	Displays the number of outgoing Unicast packets.
`oBpkts` *`oBpkts-number`*	Displays the number of outgoing Broadcast packets.

oMpkts *oMpkts-number*	Displays the number of outgoing Multicast packets.
oPauseFs *oPauseFs-number*	Displays the number of outgoing Pause frames.
oCongDrops oCongDrops-number	Displays the number of outgoing packets dropped due to congestion.
oerrs *oerrs-number*	Displays the number of outgoing packets with errors.
mtu-errs *mtu-errs-number*	Displays the number of MTU errors.
HER-pkts HER-pkts-number	Displays the number of head-end replicated packets.
HER-bytes *HER-bytes-number*	Displays the number of head-end replicated bytes.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to clear statistics about a VLAG configuration.

Examples To clear statistics for a VLAG configuration, use the following syntax:

```
CLI (network-admin@switch) > vlag-stats-clear
```

VLAN Commands

vlan-create

This command is used to create a new VLAN on the network. You can create a VLAN by specifying a VLAN ID or a range of VLAN IDs.

Syntax `vlan-create`

`id` *`vlan-id`*	Enter an identifier for VLAN. The range is from 0 through 4095.
OR	
`range` *`vlan-list`*	Enter a range or list of VLAN IDs.
`scope local|cluster|fabric`	Enter the scope for the VLAN.
Specify any of the following options:	
`vnet` *`vnet-name`*	Specify the vNET assigned to this VLAN.
`vxlan` *`vxlan-id`*	Specify the VXLAN mapped to the VLAN for the tunnel.
`auto-vxlan|no-auto-vxlan`	Specify if you want to enable or disable `auto-vxlan.` Enabling this option automatically assigns a user-defined VLAN/VNI mapping to all VTEP connections in the fabric. If the `vxlan` option is not specified, the software assigns a VNI automatically.
`vxlan-mode standard|transparent`	Specify the VXLAN mode as standard or transparent.
`vxlan-hybrid-mode standard| transparent`	
`replicators vtep-group name|none`	Specify the replicator group.
`public-vlan` *`vlan-id`*	Specify the ID of the public VLAN.
`description` *`description-string`*	Specify the VLAN description.
`stats|no-stats`	Enter if you want to collect statistics for a VLAN. By default, the statistic collection is enabled.
`ports` *`port-list`*	Specifies the switch network data port number, list of ports, or range of ports. The range is from 1 to 64.
`port-desc` *`port-desc-string`*	Specify a port description to be assigned to the VLAN.
`untagged-ports` *`untagged-port-list`*	Enter the ports or list of ports having untagged packets mapped to the VLAN.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	The parameter `stats` added. The scope option `cluster` deprecated.
Version 2.3	The parameter `name` changed to `description`.
Version 2.4.1	The parameters: `vxlan`, `vxlan-mode`, and `public-vlan` are added. The option `cluster` in the `scope` parameter added.
Version 2.5.2	The parameter `vxlan-mode standard| transparent` added.
Version 2.6.2	The parameter `range` added.
Version 3.0.0	The parameter `range` deprecated. The parameter `replicators` added.
Version 6.0.0	The parameter `auto-vxlan` added.
Version 7.0.0	The parameter `port-desc` added.

Usage Use this command to create a new VLAN. While creating the VLAN, you can specify a VLAN ID or a range of VLAN IDs.

Informational Note:

The VLAN identifiers 0, and 4095 are reserved, and cannot be used per the IEEE 802.1Q standard.

Range for configurable VLAN identifiers is 0 through 4095.

Examples To create a new fabric-wide VLAN with the description, finance VLAN, and an identifier of 7, use the following command:

```
CLI (network-admin@switch) > vlan-create id 7 description finance-
VLAN scope fabric
```

vlan-delete

This command deletes an existing VLAN.

Syntax `vlan-delete`

`id` *`vlan-id`*	Specify the VLAN identifier of a value between 2 and 4092.
`range` *`vlan-list`*	Specify a range of VLAN IDs.
`vnet` *`vnet-name`*	Specify the vNET assigned to this VLAN.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 2.6.2	The parameter `range` added.

Usage Use this command to delete an existing VLAN.

Examples To delete a VLAN with the identifier 7, use the following command:

```
CLI (network-admin@switch) > vlan-delete id 7
```

vlan-modify

This command is used to modify a VLAN or VXLAN on the network.

Syntax `vlan-modify`

`id` *`vlan-id`*	Enter an identifier for VLAN. The range is from 0 through 4095.
`range` *`vlan-list`*	Specify a range of VLAN IDs.
Specify any of the following options:	
`description` *`description-string`*	Specify a description for the VLAN.
`vxlan` *`vxlan-id`*	Specify the VXLAN mapped to the VLAN for the tunnel.
`replicators vtep-group name|none`	Specify the replicator group.
`vnet` *`vnet-name`*	Specify the vNET assigned to this VLAN.
`public-vlan` *`vlan-id`*	Specify the public VLAN for the vNET VLAN.

Defaults None.

Access CLI

History

Version 2.2.4	Command introduced.
Version 2.4.1	The parameter `vxlan` and `vnet` added.
Version 2.6.2	The parameter `range` added.
Version 3.0.0	The parameter `range` deprecated. The parameter `replicators` added.

Usage VLANs are used to isolate network traffic at Layer 2. Use this command to modify a VLAN.

Examples To create a modify a VLAN named finance to the name finance-2, use the following command:

```
CLI (network-admin@switch) > vlan-modify id 7 name finance-2
```

vlan-show

This command displays a list of existing VLANs or VXLANs on the switch.

Syntax `vlan-show`

`id` *`vlan-id`*	The VLAN ID as a value from 0 to 4095.
`vnet` *`vnet-name`*	The vNET assigned to this VLAN.
`type public|private`	The VLAN type
`vxlan` *`vxlan-id`*	The VXLAN ID as a value from 0 to 16777215.
`auto-vxlan|no-auto-vxlan`	Displays if `auto-vxlan` is enabled or disabled.
`vxlan-mode standard|transparent`	The VXLAN mode as standard or transparent.
`vxlan-hybrid-mode standard| transparent`	VXLAN encapsulation mapping to tunnel in hybrid mode.
`hw-vpn` *`hw-vpn-number`*	The hardware VPN.
`hw-mcast-group` *`hw-mcast-group-number`*	The hardware multicast group.
`replicators vtep-group name|none`	The replicator group.
`repl-vtep` *`ip-address`*	The replicator VTEP.
`public-vlan` *`vlan-id`*	The ID of the public VLAN as a value from 0 to 4095.
`scope local|fabric`	The scope of the VLAN.
`description` *`description-string`*	The VLAN description.
`active yes|no`	Displays if the VLAN is active on the network.

`stats|no-stats`	Displays if stats collection is enabled.
`vrg` *`vrg-name`*	The name of the VRG assigned to the VLAN.
`ports` *`port-list`*	The list of ports assigned to the VLAN.
`port-desc` *`port-desc-string`*	Specify the port description.
`untagged-ports` *`port-list`*	The list of untagged ports assigned to the VLAN.
`untagged-port-desc untagged-port-desc-string`	The untagged-port assigned to VLAN.
`active-edge-ports` *`port-list`*	Displays any active edge ports for the VLAN.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameters `vnet`, `type`, `vxlan`, `vxlan-mode`, and `public-vlan` added. The option `cluster` added.
Version 2.6.2	The parameter `range` added.
Version 3.0.0	The parameter `range` deprecated.
Version 6.0.0	The parameter `auto-vxlan` added.
Version 7.0.0	The parameter `port-desc` added.

Usage VLANs are used to isolate network traffic at Layer 2. Use this command to modify a VLAN.

Examples To display a list of VLANs, use the following command:

```
CLI (network-admin@switch) > vlan-show layout vertical
switch:            leaf1
id:                1
type:              public
auto-vxlan:        no
replicators:       none
```

```
scope:              local
description:        default-1
active:             yes
stats:              yes
ports:              2-72
untagged-ports:     2-69
active-edge-ports:  69-70
```

vlan-port-add

Use this command to add ports to an existing VLAN.

Syntax `vlan-port-add`

`vlan-id` *`vlan-id`*	Specifies the VLAN identifier. Range is from 2 to 4092.
`vlan-range` *`vlan-list`*	Enter the range or list of VLAN IDs.
`vlan-vnet` *`vnet-name`*	Specify the name of the vNET assigned to the VLAN.
Specify the following port arguments:	
`switch` *`switch-name`*	Specify the switch name with the port.
`ports` *`port-list`*	Specifies the switch network data port number, list of ports, or range of ports. Range for port numbers is from 1 to 64.
`port-desc` *`port-desc-string`*	Specify the port description of the port that you want to add to the VLAN.
`untagged yes|no`	Specifies if the ports tag packets with the IEEE 802.1Q VLAN header or untagged packets should automatically be mapped to the VLAN. This means that both ingress, and egress packets do not contain the 802.1Q VLAN header.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `vlan-range` added.
Version 7.0.0	The parameter `port-desc` added.

Usage VLANs can be used to isolate network traffic at Layer 2. Use this command to add new port to an existing VLAN.

Examples To add ports 17, and 18, and set them to transmit, and receive untagged Ethernet packets on VLAN 7 on vNET finance-1, use the following command:

```
CLI (network-admin@switch) > vlan-port-add vlan-id 7 vlan-vnet
finance-1 ports 17,18 untagged yes
```

vlan-port-remove

Use this command to remove existing ports from the VLAN.

Syntax `vlan-port-remove`

`vlan-id` *`vlan-id`*	Specifies the identifier of the VLAN in the range from 2 to 4092.
`vlan-range` *`vlan-list`*	Specify the range of VLAN IDs.
`vlan-vnet` *`vnet-name`*	Specify the name of the vNET assigned to the VLAN.
Specify the following port arguments:	
`switch` *`switch-name`*	Specify the name of the switch with the port.
`ports` *`port-list`*	Specifies the switch network data port number, list of ports, or range of ports. Range for port numbers is from 1 to 64.
`port-desc` *`port-desc-string`*	Specify the port description of the port that you want to remove from the VLAN.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 3.0.0	The parameter `vlan-range` added.
Version 7.0.0	The parameter `port-desc` added.

Usage VLANs can be used to isolate network traffic at Layer 2. This command is used to remove a VLAN port.

Examples To remove ports 17, and 18 from VLAN 7, and vNET, finance-1, use the following command:

```
CLI (network-admin@switch) > vlan-port-remove vlan-id 7 vnet
finance-1 ports 17,18
```

vlan-stats-show

This command displays traffic statistics per VLAN.

Syntax `vlan-stats-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	Specifies the time for the statistics.
`start-time` *`start-time`*	Specifies the start time for the statistics display using the notation *yyyy-mm-ddThh:mm:ss*.
`end-time` *`end-time`*	Specifies the end time for the statistics display using the notation *yyyy-mm-ddThh:mm:ss.*
`duration duration: #d#h#m#s`	Specify the duration for the traffic statistics.
`interval duration: #d#h#m#s`	Specifies the time interval for the statistics display.
`since-start|no-since-start`	Specifies if the statistics are collected from the start of the VLAN.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	Specifies the statistics collected within the last duration.
`vlan` *`vlan-id`*	Specify a specific VLAN to display statistics.
`vnet` *`vnet-name`*	Specify a vNET name.
`public-vlan` *`vlan-id`*	Specify a public VLAN ID.
`vxlan` *`vxlan-id`*	Specify a VXLAN ID.
`ibits` *`ibits-number`*	Displays the number of incoming bits for the VLAN.

`obits` *`obits-number`*	Displays the number of outgoing bits for the VLAN.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2.3	The parameter `id`, and `name` deprecated. The parameters `duration`, and `interval` added.
Version 2.4.1	The parameters `vnet`, `public-vlan`, and `VXLAN` added.
Version 3.0.0	The parameters `ibits` and `obits` added.

Usage VLANs can be used to isolate network traffic at Layer 2. This command displays traffic statistics per VLAN.

Examples This example shows how to display traffic statistics logs between the times of 8:00 am, and 8:01 am on January 31, 2019.

```
CLI (network-admin@switch) > vlan-stats-show format all layout
vertical
switch:        Leaf2
time:          10:51:02
vlan:          1
vnet:
ibytes:        36.2T
ipkts:         89.0G
idrops-bytes:  119M
idrops-pkts:   313K
obytes:        0
opkts:         0
odrops-bytes:  0
odrops-pkts:   0
switch:        Leaf2
time:          10:51:02
vlan:          35
vnet:
ibytes:        10.8K
ipkts:         154
idrops-bytes:  0
idrops-pkts:   0
```

```
obytes:        0
opkts:         0
odrops-bytes:  0
odrops-pkts:  0
switch:        Leaf1
time:          10:51:02
vlan:          1
vnet:
ibytes:        34.9T
ipkts:         84.6G
idrops-bytes:  3.03M
idrops-pkts:   5.69K
obytes:        0
opkts:         0
odrops-bytes:  0
odrops-pkts:   0
```

vlan-stats-settings-modify

This command allows you to modify the settings for collection of VLAN statistics.

Syntax `vlan-stats-settings-modify`

Specify one or more of the following options:

`enable|disable`	Specify to enable or disable statistics collection.
`interval duration:`*`#d#h#m#s`*	Specify the interval between statistics collection.
`disk-space` *`disk-space-number`*	Specify the amount of disk space to reserve for the statistics.

Defaults None.

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to modify the setting for statistics collection.

Examples To modify the VLAN statistics disk size to 8G, use the following command:

```
CLI (network-admin@switch) > vlan-stats-settings-modify disk-space
8g
```

vlan-stats-settings-show

This command allows to display the settings for collecting VLAN statistics.

Syntax `vlan-stats-settings-show`

Defaults None.

Access CLI

History

Version 2.1	Command introduced.

Usage Use this command to display the settings for statistics collection.

Examples To display the VLAN statistics settings, use the following command:

```
CLI (network-admin@switch) > vlan-stats-settings-show
switch:     switch
enable:     yes
interval:   1m
disk-space: 50M
```

Virtual Link Extension Commands

vle-create

This command creates virtual link extension tracking. You can execute this command from any fabric node to create a virtual link extension between any two switches in the fabric, and ports on the same switch.

Syntax `vle-create`

`name` *`name-string`*	Specify the name of the vLE.
`vnet` *`vnet-name`*	Specify the vNET name.
`node-1` *`fabric-node name`*	Specify the name of vLE node 1.
`node-2` *`fabric-node name`*	Specify the name of vLE node 2.
`node-1-port` *`node-1-port-number`*	Specify the name of the node-1 port that is part of vLE.
`node-2-port` *`node-2-port-number`*	Specify the name of the node-2 port that is part of vLE.
`node-1-port-desc` *`node-1-port-desc-string`*	Specify a description for the vLE node-1 port.
`node-2-port-desc` *`node-2-port-desc-string`*	Specify a description for the vLE node-2 port.
`[tracking|no-tracking]`	Enable or disable tracking between vLE ports.
`ports-state override|enable|disable`	Specify the port state. Use this option to enable or disable vLE ports at the same time. `override` is the default setting which means that each individual port state configuration takes precedence. `disable` means that both vLE ports get disabled together, and this option takes precedence over each individual port state.

	`enable` means that both vLE ports get enabled, and this option takes precedence over each individual port state.
`tunnel-name` *`tunnel name`*	Specifies the tunnel name to transport to other vLE EP.
`vxlan vlan` *`vxlan`*	Specifies the VNI to transport the vLE.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.
Version 6.0.0	The parameter `ports-state` added.
Version 6.1.0	The parameter `vnet` added.
Version 7.0.0	The parameters `node-1-port-desc`, and `node-2-port-desc` added.
Version 7.0.1	The parameters `tunnel-name` and `vxlan` added.

Usage Provides a mechanism for link state tracking between two ports of two switches in the same fabric for Virtual Link Extension (vLE). When a vLE is created between two physical ports of two switches, the vLE remains up as long as both physical ports are in the state link up.

When vLE tracking is created on a trunk port, the vLE stays up as long as at least one port in the trunk is link up, and the remote port is also up. When the last trunk member goes link down, the vLE is brought down. When you configure vLE tracking on a trunk port, you cannot configure tracking on individual trunk members.

vLE tracking helps achieve vLE high availability on NetVisor OS nodes, and avoid the need on the client side to run LACP for link up/down detection.

Examples This example shows how create virtual link extension tracking between two ports of two switches with tracking enabled.

```
CLI (network-admin@switch) > vle-create name myvle node-1 myfabric
node-1-port 56 node-2 yourfabric node-2-port 66 tracking
```

vle-delete

This command deletes virtual link extension tracking. You can execute this command from any fabric node to delete a virtual link extension between any two switches in the fabric.

Syntax `vle-delete`

`name` *`name-string`*	Specify the name of the vLE to delete.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.

Usage

Provides a mechanism for link state tracking between two ports of two switches in the same fabric for Virtual Link Extension (vLE). When a vLE is created between two physical ports of two switches, the vLE remains up as long as both physical ports are in the state link up.

When vLE tracking is created on a trunk port, the vLE stays up as long as at least one port in the trunk is link up, and the remote port is also up. When the last trunk member goes link down, the vLE is brought down. When you configure vLE tracking on a trunk port, you cannot configure tracking on individual trunk members.

vLE tracking helps achieve vLE high availability on NetVisor nodes, and avoid the need on the client side to run LACP for link up/down detection.

Examples This example shows how to delete the vLE named myvle.

```
CLI (network-admin@switch) > vle-delete name myvle
```

vle-modify

This command enables or disables tracking between existing vLE ports.

Syntax `vle-modify`

`name` *`name-string`*	Specify the name of the vLE you want to modify.
`vnet` *`vnet-name`*	Specify the vNET name.
`tracking|no-tracking`	Enable or disable tracking between vLE ports.
`ports-state override|enable|disable`	Specify the port state. Use this option to enable or disable vLE ports at the same time. `override` is the default setting which means that each individual port state configuration takes precedence. `disable` means that both vLE ports get disabled together, and this option takes precedence over each individual port state. `enable` means that both vLE ports get enabled, and this option takes precedence over each individual port state.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.
Version 6.0.0	The parameter `ports-state` added.
Version 6.1.0	the parameter `vnet` added.

Usage

Provides a mechanism for link state tracking between two ports of two switches in the same fabric for Virtual Link Extension (vLE). When a vLE is created between two physical ports of two switches, the vLE remains up as long as both physical ports are in the state link up.

When vLE tracking is created on a trunk port, the vLE stays up as long as at least one port in the trunk is link up, and the remote port is also up. When the last trunk member goes link down, the vLE is brought down. When you configure vLE tracking on a trunk port, you cannot configure tracking on individual trunk members.

vLE tracking helps achieve vLE high availability on NetVisor nodes, and avoid the need on the client side to run LACP for link up/down detection.

Examples This example shows how enable tracking on an existing vLE port myvle.

```
CLI (network-admin@switch) > vle-modify name myvle tracking
```

vle-show

This command displays a virtual link extension status.

Syntax `vle-show`

`vle-name` *`name-string`*	The virtual link extension
`id`	The ID assigned to the vLE.
`vnet` *`vnet-name`*	Specify the vNET name.
`node-1` *`fabric-node name`*	Name of the vLE node 1.
`node-2` *`fabric-node name`*	Name of the vLE node 2.
`node1-port` *`node-1-port-number`*	The node-1 port that is part of vLE.
`node2-port` *`node-2-port-number`*	The node-2 port that is part of vLE.
`node-1-port-desc` *`node-1-port-desc-string`*	Description for the vLE node1 port.
`node-2-port-desc` *`node-2-port-desc-string`*	Description for the vLE node2 port.
`status unknown|remote-down|local-down|up|down`	The vLE status.
`tracking|no-tracking`	The tracking status as enabled or disabled.
`ports-state enable|disable`	The ports-state. `override` is the default setting which means that each individual port state configuration takes precedence. `disable` means that both vLE ports get disabled together, and this option takes precedence over each individual port state. `enable` means that both vLE ports get enabled, and this option takes precedence over each individual port state.
`create-time date/time:` *`yyyy-mm-ddTHH:mm:ss`*	The time at which the vLE is created.

`elapsed-time duration: #d#h#m#s`	The time elapsed since the vLE was created.
`up-time duration: #d#h#m#s`	Time since the last instance at which the vLE came online.
`topology topology-string`	The topology the vLE belongs to.
`tunnel-name tunnel name`	The tunnel name to transport to other vLE EP.
`vxlan vlan vxlan`	The VNI to transport this vLE.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.
Version 6.0.0	The parameter `ports-state` added.
Version 6.1.0	The parameters `vnet`, `create-time`, `elapsed-time, and up-time` added.
Version 7.0.0	The parameters `node-1-port-desc`, and `node-2-port-desc` added.
Version 7.0.1	The parameters `tunnel-name` and `vxlan` added.

Usage

Provides a mechanism for link state tracking between two ports of two switches in the same fabric for Virtual Link Extension (vLE). When a vLE is created between two physical ports of two switches, the vLE remains up as long as both physical ports are in the state link up.

When vLE tracking is created on a trunk port, the vLE stays up as long as at least one port in the trunk is link up, and the remote port is also up. When the last trunk member goes link down, the vLE is brought down. When you configure vLE tracking on a trunk port, you cannot configure tracking on individual trunk members.

vLE tracking helps achieve vLE high availability on NetVisor nodes, and avoid the need on the client side to run LACP for link up/down detection.

Examples To display virtual link extension status, use this command:

```
CLI (network-admin@leaf-1) > vle-show format all layout vertical
 name:             vle1
 id:               900ad7:0
 vnet:             vnet1
 node-1:           leaf-1
 node-2:           leaf-2
 node-1-port:      10
 node-2-port:      17
 node-1-port-desc:
 node-2-port-desc:
 status:           up
 tracking:         enabled
 ports-state:      override
 create-time:      09:44:56
 elapsed-time:     11m37s
 up-time:          0s
```

vle-stats-show

This command is used to display vLE statistics.

Syntax `vle-stats-show`

`vle-stats-show`	Displays port statistics.
`time date/time: yyyy-mm-ddThh:mm:ss`	Specify a time for the packet count statistics using the timestamp format yyyy-mm-ddThh:mm:ss.
`start-time` *`start-time`*	Specify a start time for the packet count statistics using the timestamp format yyyy-mm-ddThh:mm:ss.
`end-time` *`end-time`*	Specify an end time for the packet count statistics using the timestamp format YYYY-MM-DDTHH:MM:SS
`duration` *`duration`*	Specify the duration in seconds.
`interval duration: #d#h#m#s`	Specify the interval between statistics collection.
`since-start|no-since-start`	Specify if the statistics are collected from the start of collecting statistics.
`older-than duration: #d#h#m#s`	Specify if the statistics are older than the duration in days, hours, minutes, and seconds.
`within-last duration: #d#h#m#s`	Specify if the statistics are within the duration in days, hours, minutes, and seconds.
`vle-name` *`vle-name-string`*	Specify the vLE name.
`description` *`description`*	Displays the vLE description.
`counter` *`counter-number`*	Displays the counter number.
`ibytes ibytes-number`	Displays the incoming number of bytes.
`ibits` *`ibits-number`*	Displays the number of incoming bits.
`iUpkts` *`iUpkts-number`*	Displays the number of incoming unicast packets.
`iBpkts` *`iBpkts-number`*	Displays the number of incoming broadcast packets.
`iMpkts` *`iMpkts-number`*	Displays the number of incoming multicast packets.
`iPauseFs` *`iPauseFs-number`*	Displays the number of incoming pause frames.
`iCongDrops` *`iCongDrops-number`*	Displays the number of incoming packets dropped due to congestion.

idiscards *idiscards-number*	Displays the number of incoming packets discarded.
ierrs *ierrs-number*	Displays the number of incoming packets with errors.
obytes *obytes-number*	Displays the number of outgoing bytes.
oUpkts *oUpkts-number*	Displays the number of outgoing unicast packets.
oBpkts *oBpkts-number*	Displays the number of outgoing broadcast packets.
oMpkts *oMpkts-number*	Displays the number of outgoing multicast packets.
oPauseFs *oPauseFs-number*	Displays the number of outgoing pause frames.
oCongDrops *oCongDrops*-number	Displays the number of outgoing packets dropped due to congestion.
odiscards *odiscards-number*	Displays the number of outgoing discarded packets.
oerrs *oerrs-number*	Displays the number of outgoing packets with errors.
mtu-errs *mtu-errs-number*	Displays the number of MTU errors.
HER-packets *HER-pts-number*	Displays the number of Head End Replicated (HER) packets.
HER-bytes *HER-bytes-number*	Displays the number of Head End Replicated (HER) bytes.

Defaults None

Access Network Administrator

History

Version 6.1.0	Command introduced.

Usage Use this command to display vLE statistics.

Examples To display statistics for a vLE configuration, use the following syntax:

```
CLI (network-admin@switch1) > vle-stats-show layout vertical
switch:       switch1
time:         06:14:49
vle-name:     vle1
port:         12
description:
ibits:        349M
iUpkts:       184K
iBpkts:       0
```

```
iMpkts:       0
iCongDrops:   0
ierrs:        0
obits:        63.3M
oUpkts:       56.2K
oBpkts:       0
oMpkts:       0
oCongDrops:   0
oerrs:        0
mtu-errs:     0
switch:       switch2
time:         06:14:49
vle-name:     vle1
port:         23
description:
ibits:        108M
iUpkts:       0
iBpkts:       0
iMpkts:       141K
iCongDrops:   0
ierrs:        0
obits:        63.3M
oUpkts:       0
oBpkts:       0
oMpkts:       56.3K
oCongDrops:   0
oerrs:        0
mtu-errs:     0
```

vle-stats-clear

This command is used to clear collected statistics from a vLE configuration.

Syntax `vle-stats-clear`

Defaults None

Access Network Administrator

History

Version 6.1.0	Command introduced.

Usage Use this command to clear statistics about a vLE configuration.

Examples To clear statistics for a vLE configuration, use the following syntax:

```
CLI (network-admin@switch) > vle-stats-clear
```

vle-transparent-modify

This command modifies the vLE error transparent mode.

Syntax `vle-transparent-modify`

`mode enable|disable`	Enable or disable vLE error transparent mode across the fabric.

Defaults None.

Access CLI

History

Version 5.2.0	Command introduced.

Usage

Enabling error transparency allows the vLE tunnel to transparently pass frames with CRC errors, and runt traffic with size of 50 bytes.

Examples This example shows how to enable vLE error transparent mode on the fabric.

```
CLI (network-admin@switch) > vle-transparent-modify  enable
```

vle-transparent-show

This command displays the fabric vLE error transparent mode.

Syntax `vle-transparent-show`

Defaults None.

Access CLI

History

Version 5.2.0	Command introduced.

Usage

Enabling error transparency allows the vLE tunnel to transparently pass frames with CRC errors, and runt traffic with size of 50 bytes. This command displays the mode of the vLE tunnel transparent mode, i.e., it show if the functionality is enabled or disabled.

Examples This example command shows that the vLE error transparent mode is currently enabled on the fabric.

```
CLI (network-admin@switch) > vle-transparent-show
fabric: Transparent vLE mode is enabled
```

vle-transparent-port-add

This command adds local ports to vLE error transparent mode.

Syntax `vle-transparent-port-add`

`port` *`port-list`*	Specify the ports to be added to vLE error transparent mode.

Defaults None.

Access CLI

History

Version 5.2.0	Command introduced.

Usage

Enabling error transparency allows the vLE tunnel to transparently pass frames with CRC errors, and runt traffic with size of 50 bytes. This command adds local ports to the vLE error transparent mode.

Examples This example adds local ports 17, and 18 vLE error transparent mode.

```
CLI (network-admin@switch) > vle-transparent-port-add port 17,18
```

vle-transparent-port-remove

This command remove local ports from vLE error transparent mode.

Syntax `vle-transparent-port-remove`

`port` *`port-list`*	Specify the ports to be removed from vLE error transparent mode.

Defaults None.

Access CLI

History

Version 5.2.0	Command introduced.

Usage Enabling error transparency allows the vLE tunnel to transparently pass frames with CRC errors, and runt traffic with size of 50 bytes. This command removes local ports from vLE error transparent mode.

Examples This command removes local ports 20, and 21 from vLE error transparent mode.

```
CLI (network-admin@switch) > vle-transparent-port-remove port 20,21
```

vle-transparent-port-show

This command is used to display local ports removed from transparent vLE mode.

Syntax `vle-transparent-port-show`

Defaults None.

Access CLI

History

Version 7.0.0	Command introduced.

Usage This command displays local ports removed from transparent vLE mode.

Examples This example displays local ports 18, and 45 removed from transparent vLE mode.

```
CLI (network-admin@switch) > vle-transparent-port-show  switch:
leaf-1
leaf-1: ports removed from VLE transparent mode: 18,45
```

Virtual Network (vNET) Commands

vnet-cli-alias-add

Use this command to add an alias for a group of commands.

Syntax `vnet-cli-alias-add`

`vnet-name` *`name-string`*	Specify the vNET name.
`name name-string`	Specify a name for the alias.
`command` *`command-string`*	Specify command to add to the alias.
`description` *`description-string`*	Specify a description of the alias.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to add an alias in the CLI.

Examples To display an alias, use the following syntax:

```
CLI (network-admin@switch) > vnet-cli-alias-add
```

vnet-cli-alias-remove

You use this command to remove an alias for a group of commands.

Syntax `vnet-cli-alias-remove`

`vnet-name` *`name-string`*	Specify the vNET name.
`name name-string`	Specify a name for the alias.
`command` *`command-string`*	Specify command to add to the alias.
`description` *`description-string`*	Specify a description of the alias.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to remove an alias from the CLI.

Examples To remove an alias, use the following syntax:

```
CLI (network-admin@switch) > vnet-cli-alias-remove
```

vnet-cli-alias-modify

You use this command to add an alias for a group of commands.

Syntax `vnet-cli-alias-modify`

`vnet-name` *`name-string`*	Specify the vNET name.
`name name-string`	Specify a name for the alias.
`command` *`command-string`*	Specify command to add to the alias.
`description` *`description-string`*	Specify a description of the alias.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to modify an alias in the CLI.

Examples To modify an alias, use the following syntax:

```
CLI (network-admin@switch) > vnet-cli-alias-modify
```

vnet-cli-alias-show

You use this command to display an alias for a group of commands.

Syntax `vnet-cli-alias-show`

`vnet-name` *`name-string`*	The vNET name.
`name name-string`	Name for the alias.
`command` *`command-string`*	The command to be added to the alias.
`description` *`description-string`*	Description of the alias.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to display an alias in the CLI.

Examples To display an alias, use the following syntax:

```
CLI (network-admin@switch) > vnet-cli-alias-show
```

vnet-create

This command creates a new virtual network (vNET) for a fabric, cluster, or standalone switch.

Syntax `vnet-create`

`name` *`name-string`*	Specify the name of the virtual network (vNET).
`scope local|fabric`	Specify the scope of the virtual network (vNET)
Specify one or more of the following options:	
`vrg` *`vrg-name`*	Specify the name of the virtual resource group (VRG).
`vlan-type public|private`	Specify the type of VLAN used by the vNET.
`num-vlans` *`number`*	Specify the number of VLANs to assign to the vNET. Using this parameter allows you to assign a group of VLANs rather than specific VLANs.
`vlans` *`vlan-list`*	Specify the list of VLANs to assign to the vNET. You can specify a list or range of VLANs that the vNET assigns to vNET interfaces.
`public-vlans` *`vlan-list`*	Specify the public VLANs assigned to private VLAN vNET.
`num-private-vlans` *`number`*	Specify the number of private VLANs that the vNET administrator can create for the vNET. This is a number between 1, and 4094.
`num-bridge-domains` *`number`*	Specify the number of bridge domains that the vNET administrator can create for the vNET. This is a number between 0, and 4094.
`vxlans` *`vxlan-id`*	Specify the VXLAN ID assigned to the vNET.
`vxlan-end` *`vxlan-id`*	Specify the last VXLAN ID assigned to the vNET.
`managed-ports` *`port-list`*	Specify the list of managed ports on the vNET.
`shared-ports` *`port-list`*	Specify the shared ports for the vNET.
`shared-port-vlans` *`vlan-list`*	Specify the shared port VLANs.
`config-admin|no-config-admin`	Specify an administrator for the vNET. This is optional.
`admin` *`user-name`*	Specify the user name for the admin role.
`create-vnet-mgr|no-create-vnet-mgr`	Specify if you want to create or not create a vNET manager.
`vnet-mgr-name` *`name-string`*	Specify the name of the vNET manager. If you don't specify a name, one is automatically

	configured.
`vnet-mgr-storage-pool` *`storage-pool-name`*	Specify the storage pool for the vNET.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `config-admin` added.
Version 2.4.1	The parameters `num-private-vlans`, `vxlans`, and `vxlan-end` added.
Version 2.5.4	The parameter `create-vnet-mgr|no-create-vnet-mg` added.
Version 3.1.0	The parameter `shared-port-vlans` added.
Version 6.1.0	The parameter `num-bridge-domains` added.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command creates a new vNET.

Examples This example shows how to create a fabric-wide virtual network (vNET) named MyVMotionvNET.

```
CLI (network-admin@switch) > vnet-create name MyVMotionvNET scope
fabric vlan 777 ports 35-37
```

vnet-delete

This command is used to delete an existing vNET from the configuration on the switch.

Syntax `vnet-delete`

`name` *`name-string`*	Specify the name of the vNET to delete.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command deletes a vNET.

Examples To delete a fabric-wide virtual network (vNET) named `MyVMotionvNET`, use the following command:

```
CLI (network-admin@switch) > vnet-delete name MyVMotionvNET
```

vnet-modify

This command is used to modify an existing vNET on the configuration on the switch.

Syntax `vnet-modify`

`name` *`name-string`*	Specify the name of the virtual network (vNET).
Specify one or more of the following options:	
`vlans` *`vlan-list`*	Specify the list of VLANs to assign to the vNET. You can specify a list or range of VLANs that the vNET assigns to vNET interfaces.
`managed-ports` *`port-list`*	Specify the list of managed ports on the vNET.
`num-private-vlans` *`number`*	Specify the number of private VLANs that the vNET administrator can create for the vNET. This is a number between 1, and 4094.
`public-vlans` *`vlan-list`*	Specify the public VLANs assigned to private VLAN vNET.
`shared-ports` *`port-list`*	Specify the shared ports for the vNET.
`vxlans` *`vxlan-id`*	Specify the VLXN ID assigned to the vNET.
`vxlan-end` *`vxlan-id`*	Specify the last VXLAN ID assigned to the vNET.
`shared-port-vlans` *`vlan-list`*	Displays VLANs on the shared ports.
`num-bridge-domains` *`number`*	Specify the number of bridge domains that the vNET administrator can create for the vNET. This is a number between 0, and 4094.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `vrg` deprecated.
Version 2.4.1	The parameters `num-private-vlans`, `vxlans`, and `vxlan-end` added.
Version 2.5	The parameter `public-vlans` added.
Version 3.1.0	The parameter `shared-port-vlans` added.
Version 6.1.0	The parameter `num-bridge-domains` added.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command deletes a vNET.

Examples To modify a fabric-wide virtual network (vNET) named `MyVMotionvNET`, and modify the VLANs to the range, `11-15`, use the following command:

```
CLI (network-admin@switch) > vnet-modify name MyVMotionvNET vlans
11-15
```

vnet-show

This command is used to display information about vNETs configured on the switch.

Syntax `vnet-show`

`id` *`id-num`*	The identifier of the vNET.
`name` *`name-string`*	Name of the virtual network (vNET).
`scope local|fabric`	The scope of the virtual network (vNET)
`vrg` *`vrg-name`*	Name of the virtual resource group (VRG).
`vlan-type public|private`	The type of VLAN for the vNET.
`num-vlans` *`number`*	The number of VLANs assigned to the vNET.
`vlans` *`vlan-list`*	The list of VLANs assigned to the vNET.
`num-private-vlans` *`number`*	The number of private VLANs that the vNET administrator can create for the vNET. This is a number between 1, and 4094.
`num-bridge-domains` *`0..4094`*	The number of Bridge-Domains allowed to create in the vNET.
`public-vlans` *`vlan-list`*	The public VLANs assigned to the private VLAN vNET.
`vxlans` *`vxlan-id`*	The VLXN ID assigned to the vNET.
`vxlan-end` *`vxlan-id`*	The last VXLAN ID assigned to the vNET.
`managed-ports` *`port-list`*	The list of managed ports on the vNET.
`shared-ports` *`port-list`*	The shared ports for the vNET.
`shared-port-vlans` *`vlan-list`*	The VLANs on the shared ports.
`admin` *`user-name`*	The user name for the admin role.
`vrg-created-by-vnet true|false`	Displays if the VRG was created by the vNET.
`global true|false`	Displays if the vNET is global or not.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `global`added.

Version 2.5	The parameters `public-vlans`, `vlan-type`, and `shared-ports` added.
Version 3.1.0	The parameter `shared-port-vlans` added.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command displays information about a vNET.

Examples To display information about all vNETs, use the following command:

```
CLI (network-admin@switch) > vnet-show layout vertical format all
switch:                 switch
id:                     9000c25:0
name:                   btfab-global
scope:                  fabric
vlan-type:              public
vlans:                  none
public-vlans:           none
num-private-vlans:      0
num-bridge-domains:     0
vxlans:                 0
managed-ports:          none
shared-ports:           none
shared-port-vlans:      none
global:                 true
```

vnet-manager-create

This command creates additional vNET manager zones.

Syntax `vnet-manager-create`

`name` *`name-string`*	Specify the name of service configuration.
`vnet` *`vnet name`*	Specify the vNET assigned to the service.
Specify one or more of the following options:	
`disable|enable`	Specify the state of the service.
`location` *`fabric-node name`*	Specify the location of the service.
`storage-pool storage-pool name`	Specify the storage pool assigned to the service.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.

Usage vNET HA provides high availability for switch access through a vNET manager. The vNET manager is a zone, typically with one IP interface, allows a vNET administrator to log into, and administer a vNET using the CLI or a REST API. HA functionality is provided by allowing you to create multiple vNET managers. Access to the vNET managers is enabled when you add either standard or VRRP VIP interfaces to the vNET managers.

`CLI (network-admin@switch) >` `vnet-manager-create`

vnet-manager-delete

This command deletes a vNET Manager zone.

Syntax `vnet-manager-delete`

`name` *`name-string`*	Specify the name of vNET you want to delete.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.

Usage vNET HA provides high availability for switch access through a vNET manager. The vNET manager is a zone, typically with one IP interface, allows a vNET administrator to log into, and administer a vNET using the CLI or a REST API. HA functionality is provided by allowing you to create multiple vNET managers. Access to the vNET managers is enabled when you add either standard or VRRP VIP interfaces to the vNET managers.

vnet-manager-migrate

This command is used to migrate a vitrual network (vNET) manager from one location to another.

Syntax `vnet-manager-migrate`

`name` *`name-string`*	Specify the name of the vNET manager.
Specify one or both of the following options:	
`location` *`fabric-node-name`*	Specify the location name.
`storage-pool` *`storage-pool-name`*	Specify the storage pool name.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A virtual network manager (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command migrates a vNET managers in a fabric to a storage pool.

Examples To migrate the vNET manager, MyvNET, to storage pool, keep-all, use the following command:

```
CLI (network-admin@switch) > vnet-manager-migrate MyvNET location
net-fabric storage-pool keep-all
```

vnet-manager-modify

This command is used to modify an existing virtual network (vNET) manager configuration.

Syntax `vnet-manager-modify`

`name` *`name-string`*	Specify the name of the vNET manager.
Specify one or more of the following options:	
`disable|enable`	Specify if you want to disable or enable the vNET manager.
`location` *`fabric-node name`*	Specify the location of the service.
`storage-pool storage-pool name`	Specify the storage pool assigned to the service.
`gateway` *`ip-address`*	Specify the gateway IP address.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A virtual network manager (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command modifies a vNET manager configuration.

Examples To disable the vNET manager, MyvNET, use the following option:

```
CLI (network-admin@switch) > vnet-manager-modify MyvNET disable
```

vnet-manager-show

This command is used to display information about an existing virtual network (vNET) manager configuration.

Syntax `vnet-manager-show`

`name` *`name-string`*	Name of the vNET manager.
`type vnet-mgr|vrouter|netzone|orphaned|netvm|nat|ovs`	The type of vNET manager service.
`scope loca|fabric`	The scope of the vNET manager.
`vnet` *`vnet-name`*	Name of the vNET.
`is-global true|false`	Specifies if the service is global or not.
`location fabric-node` *`name`*	The location of the vNET manager.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The options `openstack` and `netvmm` added to the parameter type. The parameter `location` added.
Version 6.0.0	The options, `vlb, dhcp,dns, openstack` removed from the parameter `type`.

Usage A virtual network manager (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command displays information about a vNET manager configuration.

Examples To display the vNET manager, MyvNET, with the `layout` option `vertical`, use the following option:

```
CLI (network-admin@switch) > vnet-manager-show MyvNET layout
vertical
name:                   myvNET
type:                   vnet-mgr
scope:                  fabric
vnet:                   ops-mgmt
vnet-service:           shared
state:                  enabled
gateway:                10.1.1.1
switch:                 pleiades34
```

vnet-manager-interface-add

To create a new virtual network manager interface (vNET manager) for a fabric, cluster, standalone switch, or virtual network, use the `vnet-manager-create` command.

Syntax `vnet-manager-interface-add`

`vnet-manager-name` *`name-string`*	Specify the name for the vNET manager interface.
Specify the following parameter:	
`vlan` *`vlan-id`*	Specify the VLAN identifier. This is a value between 1, and 4094.
Specify any of the following options:	
`ip` *`ip-address`*	Specify the interface IP address.
`netmask` *`netmask`*	Specify the netmask.
`assignment none|dhcp|dhcpv6`	Specify the DHCP method to assign the IP address.
`vnet` *`vnet-name`*	Specify the vNET for the interface.
`vlan-type public|private`	Specify the VLAN type as public or private.
`vxlan` *`vxlan-id`*	Specify the VXLAN identifier. This is a value between 0, and 16777215.
`if mgmt|data|span`	Specify if the interface is a management, data or span interface.
`alias-on` *`alias-on-string`*	Specify an alias for the interface.
`exclusive|no-exclusive`	Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`vrrp-primary` *`vrrp-primary-string`*	Specify the VRRP primary interface.
`vrrp-priority` *`number`*	Specify the VRRP priority for the interface. Range is 0 - 254.
`vrrp-adv-int` *`ms`*	Specify the VRRP Advertisement Interval. In ms, min 10, max 40950, default 1000.
`vrrp-primary` *`vrrp-primary-string`*	Specify the VRRP primary interface.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address.
`sriov-vf|no-sriov-vf`	Specify a VNIC.
`mirror-traffic true|false`	Specify to mirror a physical NIC traffic to VNIC.

`if-nat-realm internal|external`	Specify a NAT realm interface as internal or external.
`priority-tag| no-priority-tag`	Specify if you want to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive` and `nic` added.
Version 2.2.5	The parameters `l3-port`, and `secondary-macs` added.
Version 2.3.1	The option `autov6` added.
Version 2.4	The parameter `l3-port` deprecated.
Version 2.4.1	The parameter `vlan-type` added.
Version 2.5	The parameters `vnet` and `sriov-vf` added.
Version 2.5.4	The parameters `vrrp-id`, `vrrp primary`, `vrrp priority`, and `vrrp-adv-int` added.
Version 2.6.2	The parameter `if-nat-realm` added.
Version 3.1.0	The parameter `priority-tag` added.

Usage A virtual network manager interface (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command creates a new vNET manager interface.

Examples To add a vNET manager interface named, MyvNETmgr, with the IP address, 192.168.11.21 netmask 32, use this command:

```
CLI (network-admin@switch) > vnet-manager-interface MyvNETmgr ip
192.168.11.21 netmask 32
```

To create VRRP interfaces on vNET manager zones, use this command:

```
CLI (network-admin@switch) > vnet-manager-interface-add vnet-
manager-name name-string [vrrp-id 0,,255][vrrp-primary vrrp-
primary-string][vrrp-priorty 0..254][vrrp-ad-int 10..40950]
```

vnet-manager-interface-modify

To modify a virtual network manager interface (vNET manager) for a fabric, cluster, standalone switch, or virtual network, use the `vnet-manager-create` command.

Syntax `vnet-manager-interface-modify`

`vnet-manager-name` *`name-string`*	Specify the name for the vNET manager interface.
Specify the following interface arguments:	
`nic` *`nic-string`*	Specify the NIC to modify.
Specify any of the following options:	
`ip` *`ip-address`*	Specify the IP address of the interface.
`netmask` *`netmask`*	Specify the netmask.
`assignment none|dhcp|dhcpv6|autov6`	Specify the DHCP method.
`vnet` *`vnet-name`*	Specify the vNET for the interface.
`vlan-type public|private`	Specify the VLAN type as public or private.
`vlan` *`vlan-id`*	Specify the VLAN identifier. This is a value between 1, and 4094.
`vxlan` *`vxlan-id`*	Specify the VXLAN identifier. This is a value between 0, and 16777215.
`if mgmt|data|span`	Specify if the interface is a management, data or span interface.
`alias-on` *`alias-on-string`*	Specify an alias for the interface.
`exclusive|no-exclusive`	Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`vrrp-primary` *`vrrp-primary-string`*	Specify the VRRP primary interface.
`vrrp-priority` *`number`*	Specify the VRRP priority for the interface. Range is 0 - 254.
`vrrp-adv-int` *`ms`*	Specify the VRRP Advertisement Interval. In ms, min 10, max 40950, default 1000.
`vrrp-primary` *`vrrp-primary-string`*	Specify the VRRP primary interface.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address.
`sriov-vf|no-sriov-vf`	Specify a VNIC.

`mirror-traffic true|false`	Specify to mirror a physical NIC traffic to VNIC.
`if-nat-realm internal|external`	Specify a NAT realm interface as internal or external.
`priority-tag|` `no-priority-tag`	Specify if you want to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive` and `nic` added.
Version 2.2.5	The parameters `l3-port`, and `secondary-macs` added.
Version 2.3.1	The option, `autov6` added.
Version 2.4	The parameter `l3-port`, deprecated.
Version 2.4.1	The parameter `vlan-type` added.
Version 2.5	The parameters `vnet` and `sriov-vf` added.
Version 2.5.4	The parameters `vrrp-id`, `vrrp primary`, `vrrp priority`, and `vrrp-adv-int` added.
Version 2.6.2	The parameter `if-nat-realm` added.
Version 3.1.0	The parameter `priority-tag` added.

Usage A virtual network manager interface (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command modifies a vNET manager interface.

Examples To modify a vNET manager interface named, MyvNETmgr, with the IP address, 192.168.11.21 netmask 32 to VLAN 16, use the following command:

```
CLI (network-admin@switch) > vnet-manager-interface MyvNETmgr ip
192.168.11.21 netmask 32 vlan 16
```

To create VRRP interfaces on vNET manager zones, use this command:

```
CLI (network-admin@switch) > vnet-manager-interface-add vnet-manager-
name name-string [vrrp-id 0,,255][vrrp-primary vrrp-primary-string]
[vrrp-priorty 0..254][vrrp-ad-int 10..40950]
```

vnet-manager-interface-show

This command is used to display information about configured virtual network (vNET) manager interfaces.

Syntax `vnet-manager-interface-show`

`vnet-manager-name` *`name-string`*	Name for the vNET manager interface.
Specify the following interface arguments:	
`nic` *`nic-string`*	The NIC of the interface.
`ip` *`ip-address`*	The interface IP address.
`netmask` *`netmask`*	The netmask.
`assignment none|dhcp|dhcpv6|autov6`	The DHCP method.
`mac` *`mac-address`*	The interface MAC address.
`vnet` *`vnet-name`*	The vNET name.
`vlan` *`vlan-id`*	The VLAN identifier. This is a value between 1, and 4094.
`vlan-type public|private`	The VLAN type as public or private.
`if mgmt|data|span`	Specifies if the interface is a management, data or span interface.
`alias-on` *`alias-on-string`*	An alias for the interface.
`vm-nic-type e1000|virtio`	The type of virtual NIC.
`exclusive|no-exclusive`	Specifies if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface.
`nic-enable|nic-disable`	Specifies if the NIC is enabled or disabled.
`nic-state down|up`	Specifies if the NIC state is up or down. If the NIC is disabled, then the state is down.
`vrrp-id` *`id`*	The ID assigned to VRRP. Range is 0 - 255.
`vrrp-primary` *`vrrp-primary-string`*	The VRRP primary interface.
`vrrp-priority` *`number`*	The VRRP priority for the interface. Range is 0 - 254.
`vrrp-adv-int` *`ms`*	The VRRP Advertisement Interval. In ms, min 10, max 40950, default 1000.

secondary-macs *secondary-macs-string*	The secondary MAC address.
if-nat-realm internal|external	The NAT realm interface as internal or external.
priority-tag|no-priority-tag	Specify if you want to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters exclusive, nic, and nic-state added.
Version 2.2.5	The parameters l3-port, and secondary-macs added.
Version 2.3.1	The option, autov6 added.
Version 2.4	The parameter l3-port, deprecated.
Version 2.4.1	The parameter vlan-type, vnet, and public-vlan added.
Version 2.5	The parameters vnet and sriov-vf added.
Version 2.5.4	The parameters vrrp-id, vrrp primary, vrrp priority, and vrrp-adv-int added.
Version 2.6.2	The parameter if-nat-realm added.
Version 3.1.0	The parameter priority-tag added.

Usage A virtual network manager interface (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command removes a vNET manager interface.

Examples To display information about all vNET manager interfaces, use the following command:

```
CLI (network-admin@switch) > vnet-manager-interface-show
```

vnet-manager-service-modify

This command is used to modify virtual network (vNET) manager services.

Syntax `vnet-manager-service-modify`

`vnet-manager-name` *`name-string`*	Specify the name of the vNET manager.
Specify the following service arguments:	
`if` *`if-string`*	Specify the interface to modify.
Specify any of the following options:	
`ssh|no-ssh`	Specify if you want to use SSH or not.
`netconf|no-netconf`	Specifies if the NETCONF is enabled or disabled.
`icmp|no-icmp`	Specify if you want to use Internet Control Message Protocol (ICMP) for diagnostic purposes.
`ntp|no-ntp`	Specify if you want to enable Network Time Protocol (NTP).

Defaults None

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `web-ssl` and `web-ssl-port` added.
Version 2.2.6	The parameter `ntp` added.
Version 2.4	The parameter `net-api` added.
Version 7.0.2	The parameter `netconf|no-netconf` added.

Usage Use the command to allow specific services on the vNET manager interface. In some use cases, you may want to allow Web services or use SSL.

Examples Modify the vNET manager, MyvNET, to use ICMP using the following command:

```
CLI (network-admin@switch) > vnet-manager-service-modify name
MyvNET icmp
```

vnet-manager-service-show

This command is used to display the available services on a vNET manager.

Syntax `vnet-manager-service-show`

`vnet-manager-name` *`name-string`*	Name of the vNET manager.
Specify the following service arguments:	
`ssh|no-ssh`	Specifies if you want to use SSH or not.
`netconf|no-netconf`	Specifies if the NETCONF is enabled or disabled.
`icmp|no-icmp`	Specifies if you want to use Internet Control Message Protocol (ICMP) for diagnostic purposes.
`ntp|no-ntp`	Specify if you want to enable Network Time Protocol (NTP).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `web-ssl`, `web-ssl-port`, `snmp`, and `net-api` added.
Version 2.2.6	The parameter `ntp` added.
Version 2.4	The parameter `net-api` added.
Version 7.0.2	The parameter `netconf|no-netconf` added.

Usage Use this command to display services on the vNET manager interface.

Examples To display services on all vNET managers, use the following command:

```
CLI (network-admin@switch) > vnet-manager-service-show
switch   vnet-manager-name if     ssh web web-ssl web-ssl-port web-port icmp
-------- ----------------- ------ --- --- ------- ------------ -------- ----
pubdev02 joedoe-mgr        eth1.5 on  on  off     443          80       on   off
```

vnet-manager-ssh-host-key-show

This command is used to display the vNET Manager host keys in order to copy-and-paste to ~/.ssh/

Syntax `vnet-manager-ssh-host-key-show`

Specify between 0, and 2 of the following options:	
`vnet` *`vnet name`*	The vNET assigned service.
`scope local|cluster|fabric`	The scope of service: fabric or local.

Defaults None.

Access CLI

History

Version 2.5.4	Command introduced.

Usage Use this command to copy, and paste vNET Manager host keys to ~/.ssh/known_hosts.

Examples To display the vNET Manager host keys, use the following command:

```
CLI (network-admin@switch) > vnet-manager-ssh-host-key-show
```

vnet-manager-interface-remove

This command is used to remove a virtual network (vNET) manager interface from the configuration.

Syntax

`vnet-manager-interface-remove`

`vnet-manager-name` *`name-string`*	Specify the name of the vNET manager interface to remove.
Specify the following interface arguments:	
`nic` *`nic-string`*	Specify the NIC to remove.

Defaults

None.

Access

CLI

History

Version 1.2.1	Command introduced.

Usage

A virtual network manager interface (vNET manager) can administer a virtual network (vNET) but the same management abstraction can also be used to administer a fabric, cluster, or standalone switch. This command removes a vNET manager interface.

Examples

To remove the vNET manager interface, MyvNETmgr, use the following command:

```
CLI (network-admin@switch) > vnet-manager-interface-remove name
MyvNETmgr nic eth0.3
```

vnet-tunnel-network-add

vNET managers can add, modify, and delete VXLAN tunnels from a vNET. A software VTEP server is connected to a port not part of the vNET. The port for the software VTEP server is configured (tagged or untagged) for a VLAN configured by the fabric administrator that routes into the Layer 3 network used by the hardware VTEPs. The vNET administrator accesses the VTEP server using either an out of band management port or a dedicated in-band VLAN.

Syntax `vnet-tunnel-network-add`

`name` *`name-string`*	Specify the name for the vNET tunnel.
`network` *`ip-address`*	Specify the IP address for the tunnel.
`netmask` *`netmask`*	Specify the netmask of the IP address.
`description` *`description-string`*	Specify a description for the vNET tunnel.

Defaults None

Access vNET Administrator

History

Version 2.5.0	Command introduced.

Usage The fabric administrator enables the vNET administrator to create tunnels from software VTEPs to hardware VTEPs by provisioning a route on each switch from a VLAN or subnet associated with the vNET to the Layer 3 network where hardware VTEP tunnels are configured. In addition, ACLs are configured to constrain software VTEPs to only exchange packets with software VTEPs in the same vNET, and hardware VTEPs.

Examples To add a vNET tunnel, **t1**, with IP address, 10.100.100.224, and netmask 155.255.255.248

```
CLI (network-admin@switch) > vnet-tunnel-network-add vnet-name t1
network 10.100.100.224 netmask 255.255.255.248
```

vnet-tunnel-network-modify

vNET managers can add, modify, and delete VXLAN tunnels from a vNET. The port for the software VTEP server is configured (tagged or untagged) for a VLAN configured by the fabric administrator that routes into the Layer 3 network used by the hardware VTEPs. The vNET administrator accesses the VTEP server using either an out of band management port or a dedicated in-band VLAN.

Syntax `vnet-tunnel-network-modify`

`name` *`name-string`*	Specify the name for the vNET tunnel.
`network` *`ip-address`*	Specify the IP address for the tunnel.
`netmask` *`netmask`*	Specify the netmask of the IP address.
`description` *`description-string`*	Specify a description for the vNET tunnel.

Defaults None

Access vNET Administrator

History

Version 2.5.0	Command introduced.

Usage The fabric administrator enables the vNET administrator to create tunnels from software VTEPs to hardware VTEPs by provisioning a route on each switch from a VLAN or subnet associated with the vNET to the Layer 3 network where hardware VTEP tunnels are configured. In addition, ACLs are configured to constrain software VTEPs to only exchange packets with software VTEPs in the same vNET, and hardware VTEPs.

Examples To modify vNET tunnel, t1, to IP address, 172.16.21.131, and netmask 255.255.255.0, use the following syntax

```
CLI (network-admin@switch) > vnet-tunnel-network-modify vnet-name
t1 network 172.16.21.131 netmask 255.255.255.248
```

vnet-tunnel-network-remove

vNET managers can add, modify, and delete VXLAN tunnels from a vNET. A software VTEP server is connected to a port that is not part of the vNET. The port for the software VTEP server is configured (tagged or untagged) for a VLAN configured by the fabric administrator that routes into the Layer 3 network used by the hardware VTEPs. The vNET administrator accesses the VTEP server using either an out of band management port or a dedicated in-band vlan.

Syntax `vnet-tunnel-network-remove`

`name` *`name-string`*	Specify the name for the vNET tunnel.
`network` *`ip-address`*	Specify the IP address for the tunnel.
`netmask` *`netmask`*	Specify the netmask of the IP address.

Defaults None

Access vNET Administrator

History

Version 2.5.0	Command introduced.

Usage The fabric administrator enables the vnet administrator to create tunnels from software VTEPs to hardware VTEPs by provisioning a route on each switch from a VLAN or subnet associated with the vNET to the Layer 3 network where hardware VTEP tunnels are configured. In addition, ACLs are configured to constrain software VTEPs to only exchange packets with software VTEPs in the same vNET, and hardware VTEPs.

Examples To remove vNET tunnel, t1, use the following syntax:

```
CLI (network-admin@switch) > vnet-tunnel-network-remove  vnet-name
t1
```

vnet-tunnel-network-show

vNET managers can add, modify, and delete VXLAN tunnels from a vNET. A software VTEP server is connected to a port that is not part of the vNET. The port for the software VTEP server is configured (tagged or untagged) for a VLAN configured by the fabric administrator that routes into the Layer 3 network used by the hardware VTEPs. The vNET administrator accesses the VTEP server using either an out of band management port or a dedicated in-band vlan.

Syntax `vnet-tunnel-network-show`

`name` *`name-string`*	Name for the vNET tunnel.
`network` *`ip-address`*	Specify the IP address for the tunnel.
`netmask` *`netmask`*	The netmask of the IP address.
`description` *`description-string`*	Specify a description for the vNET tunnel.

Defaults None

Access vNET Administrator

History

Version 2.5.0	Command introduced.

Usage The fabric administrator enables the vnet administrator to create tunnels from software VTEPs to hardware VTEPs by provisioning a route on each switch from a VLAN or subnet associated with the vNET to the Layer 3 network where hardware VTEP tunnels are configured. In addition, ACLs are configured to constrain software VTEPs to only exchange packets with software VTEPs in the same vNET, and hardware VTEPs.

Examples To display a vNET tunnel, t1, with IP address, 10.100.100.224, and netmask 255.255.255.248, use the following syntax:

```
CLI (network-admin@switch) > vnet-tunnel-network-add vnet-name t1
network 10.100.100.224 netmask 255.255.255.248
```

vnet-port-add

This command is used to add a port to an existing virtual network (vNET).

Syntax `vnet-port-add`

`vnet-name` *`name-string`*	Specify the name of the vNET.
Specify the following port arguments:	
`switch` *`switch-name`*	Specify the switch name.
`ports` *`port-list`*	Specify the ports to add to the vNET.
`vlans` *`vlan-list`*	Specify the VLANS for the ports.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2.6	The parameter `VLANs` added.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). Use this command to add a port to an existing vNET.

Examples To add port `4` to switch, `aquila24`, and vNET, `v-network`, use the following command:

```
CLI (network-admin@switch) > vnet-port-add vnet-name v-network
switch aquila24 ports 4
```

vnet-port-remove

This command is used to remove a port from an existing virtual network (vNET).

Syntax `vnet-port-remove`

`vnet-name` *`name-string`*	Specify the name of the vNET.
`switch switch-name`	Specify the switch name.
`ports` *`port-list`*	Specify the ports to add to the vNET.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command removes a port from a vNET.

Examples To remove port `26` from switch, `aquila24`, and vNET, `v-network`, use the following command:

```
CLI (network-admin@switch) > vnet-port-remove vnet-name v-network
switch aquila24 ports 26
```

vnet-public-vlans-modify

This command modifies public VLANs assigned to a vNET.

Syntax `vnet-public-vlans-modify`

`vlans` *`vlan-list`*	Public VLANs reserved for VNETs.

Defaults None.

Access CLI

History

Version 2.5.1	Command introduced.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command modifies the list of public VLANs assigned to a vNET.

Examples This example shows how to modify the VLAN list to

```
CLI (network-admin@switch) > vnet-public-vlans-modify vlans 33-35
```

vnet-public-vlans-show

This command displays public VLANs assigned to a vNET.

Syntax `vnet-public-vlans-show`

`vlans` *`vlan-list`*	The list of public VLANs reserved for VNETs.

Defaults None.

Access CLI

History

Version 2.5.1	Command introduced.

Usage A fabric, cluster, or standalone switch can be virtualized into tenant networks called virtual networks (vNETs). This command displays the list of public VLANs assigned to a vNET.

Examples This example shows how to display the VLAN list 33-35:

```
CLI (network-admin@switch) > vnet-public-vlans-show vlans 33-35
```

vpg-create

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. This command creates vPGs.

Syntax `vpg-create`

`vnet` *`vnet-name`*	Specify the vNET for this vPG.
`name` *`name-string`*	Specify the name of the vPG.
`type source|destination|bidirectional`	Specify the type of the vPG as source, destination or bidirectional.
`ports` *`port-list`*	Specify the ports assigned to the vPG.
`port-desc` *`port-desc-string`*	Specify a previously configured port description to add the port with that description to the vPG.
`monitor-ports` *`port-list`*	Specify the monitoring ports assigned to the vPG.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.
Version 6.1.0	Parameter `vnet` added.
Version 7.0.0	The parameters `monitor-ports`, and `port-desc` added.

Usage Use this command to configure a vPG.

Examples To configure the vPG, TAP-GROUP-1 with source type, use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-create name TAP-GROUP-1 type source
```

vpg-delete

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. This command deletes configured vPGs.

Syntax `vpg-delete`

`name` *`name-string`*	Specify the name of the vPG.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.

Usage Use this command to delete a vPG.

Examples To delete the vPG, TAP-GROUP-1 use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-delete name TAP-GROUP-1
```

vpg-show

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. This command displays the vPG configuration.

Syntax `vpg-show`

`scope fabric`	The scope of the vPG.
`vnet` *`vnet-name`*	The vNET for this vPG.
`name` *`name-string`*	Name of the vPG.
`type source|destination| bidirectional`	The type of the vPG as source, destination or bidirectional.
`ports` *`port-list`*	The ports assigned to the vPG.
`port-desc` *`port-desc-string`*	The port description.
`vni` *`0..16777215`*	The VNI for VXLAN.
`vlan` *`0..4095`*	The VLAN ID.
`monitor-ports` *`port-list`*	The monitor ports assigned to the vPG.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.
Version 6.1.0	The parameter `vnet` added.
Version 7.0.0	The parameters `monitor-ports`, and `port-desc` added.

Usage Use this command to display a vPG configuration.

Examples To display the vPGs of type `source`, use the following syntax:

```
CLI (network-admin@leaf1) > vpg-show
switch scope  vnet  name        type   ports vni vlan
------ ------ ----- ----------- ------ ----- --- ---
```

```
Leaf1  fabric vnet1 TAP-GROUP-3 source none  0   0
Leaf2  fabric vnet1 TAP-GROUP-3 source 25    0   0
Leaf3  fabric vnet1 TAP-GROUP-3 source 275   0   0
Leaf4  fabric vnet1 TAP-GROUP-3 source none  0   0
Leaf5  fabric vnet1 TAP-GROUP-3 source none  0   0
Leaf6  fabric vnet1 TAP-GROUP-3 source none  0   0
Spine1 fabric vnet1 TAP-GROUP-3 source none  0   0
Spine2 fabric vnet1 TAP-GROUP-3 source none  0   0
Leaf1  fabric vnet1 TAP-GROUP-2 source none  0   0
Leaf2  fabric vnet1 TAP-GROUP-2 source 274   0   0
Leaf3  fabric vnet1 TAP-GROUP-2 source 22    0   0
Leaf4  fabric vnet1 TAP-GROUP-2 source none  0   0
Leaf5  fabric vnet1 TAP-GROUP-2 source none  0   0
Leaf6  fabric vnet1 TAP-GROUP-2 source none  0   0
Spine1 fabric vnet1 TAP-GROUP-2 source none  0   0
Spine2 fabric vnet1 TAP-GROUP-2 source none  0   0
Leaf1  fabric vnet1 TAP-GROUP-1 source 273   0   0
Leaf2  fabric vnet1 TAP-GROUP-1 source none  0   0
Leaf3  fabric vnet1 TAP-GROUP-1 source none  0   0
Leaf4  fabric vnet1 TAP-GROUP-1 source none  0   0
Leaf5  fabric vnet1 TAP-GROUP-1 source none  0   0
Leaf6  fabric vnet1 TAP-GROUP-1 source none  0   0
Spine1 fabric vnet1 TAP-GROUP-1 source none  0   0
Spine2 fabric vnet1 TAP-GROUP-1 source none  0   0
```

vpg-monitor-port-add

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. From NetVisor version 7.0.0 onward, you can configure monitoring ports to analyze the traffic that hits a destination VPG or bidirectional VPG. This command adds a new monitoring port to a pre-configured vPG.

Syntax `vpg-monitor-port-add`

`vpg-name` *`name-string`*	Specify the name of the vPG.
`switch` *`switch-name`*	Specify the name of the switch.
`monitor-ports` *`port-list`*	Specify the monitoring ports assigned to the vPG.

Defaults None

Access Network Administrator

History

Version 7.0.0	Command introduced.

Usage Use this command to add monitoring ports to a vPG.

Examples To add monitoring ports to a vPG, use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-monitor-port-add vpg-name VPG1 monitor-
     ports 30
```

vpg-monitor-port-remove

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. From NetVisor version 7.0.0 onward, you can configure monitoring ports to analyze the traffic that hits a destination VPG or bidirectional VPG. This command removes monitoring ports from a vPG.

Syntax `vpg-monitor-port-remove`

`vpg-name` *`name-string`*	Specify the name of the vPG.
`switch` *`switch-name`*	Specify the name of the switch.
`monitor-ports` *`port-list`*	Specify the monitoring ports to be removed from the vPG.

Defaults None

Access Network Administrator

History

Version 7.0.0	Command introduced.

Usage Use this command to remove monitoring ports from a vPG.

Examples To remove monitoring ports from a vPG, use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-monitor-port-remove vpg-name VPG1
     monitor-ports 30
```

vpg-port-add

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. This command adds ports to vPGs.

Syntax `vpg-port-add`

`name` *`name-string`*	Specify the name of the vPG.
`switch` *`switch-name`*	Specify the name of the switch.
`ports` *`port-list`*	Specify the ports assigned to the vPG.
`port-desc` *`port-desc-string`*	Specify a previously configured port description to add the port with that description to the vPG.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.
Version 7.0.0	The parameter `port-desc` added.

Usage Use this command to add ports to a vPG.

Examples To add ports to a vPG, use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-port-add name TAP-GROUP-1 switch Leaf1
     ports 12, 13
```

vpg-port-remove

NetVisor OS allows you to club the ingress or source ports, and the destination ports into Virtual Port Groups (vPGs). The vPG construct permits you to flood the traffic that arrives at select source ports to multiple desired destination ports. You must create vPGs to configure the Pluribus Network Packet Broker solution. This command removes ports from vPGs.

Syntax `vpg-port-remove`

`name` *`name-string`*	Specify the name of the vPG.
`ports` *`port-list`*	Specify the ports assigned to the vPG.
`port-desc` *`port-desc-string`*	Specify the port description to remove the port with that description from the vPG.

Defaults None

Access Network Administrator

History

Version 6.0.0	Command introduced.
Version 7.0.0	The parameter `port-desc` added.

Usage Use this command to remove ports from a vPG.

Examples To remove ports from a vPG, use the following syntax:

```
CLI (network-admin@Leaf1) > vpg-port-remove name TAP-GROUP-1 ports 12,
    13
```

vport-create

This command is used to create a virtual port on a switch. Virtual ports track information across nodes on the fabric.

Syntax `vport-create`

`mac` *`mac-address`*	Specify the MAC address of the vPort.
Specify up to two of the following options:	
`vlan` *`vlan-id`*	Specify a VLAN from 0 to 4095.
`vxlan` *`vxlan-id`*	Specify a VXLAN from 0 to 16777215.
`vnet` *`vnet-name`*	Specify a vNET assigned to the vPort.
Specify at least one of the following options:	
`ip` *`ip-address`*	Specify an IP address.
`owner` *`node-name`*	Specify the switch ID.
`intf` *`intf-number`*	Specify the interface number.
Specify any of the following options:	
`bd` *`bridge-domain-name`*	Specify the Bridge Domain assigned to vPort.
`inner-vlan` *`0..4095`*	Specify the Q-in-Q inner VLAN assigned to vPort.
`public-vlan` *`vlan-id`*	Specify the ID of the public VLAN.
`num-ips` *`num-ips-number`*	Specify the number of IP addresses for the vPort.
`config-intf` *`config-intf-number`*	Specify the configuration interface number.
`svc-name` *`svc-name-string`*	Specify the vCenter connection service name.
`hostname` *`hostname-string`*	Specify the host name of the switch.
`entity` *`entity-string`*	Specify the VM or VM Kernel device name.
`power none|powered-off|powered-on|standby|suspended|unknown`	Specify the vPort entry power status.
`cpus` *`cpus-number`*	Specify the number of CPUs assigned to the VM.
`os` *`os-string`*	Specify an operating system, such as CentOS or Ubuntu, on the VM.
`portgroup` *`portgroup-string`*	Specify the Port Group name associated with VM MAC address.

`pg-vlans` *`vlan-list`*	Specify the valid VLANs for the port group.
`vswitch` *`vswitch-string`*	Specify the vitual switch name associated with the NIC.
`vs-type none|host-vs|distributed-vs|unknown`	Specify the virtual switch type.
`vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL|rep|p-NFC|r-NFC|mgmt|unknown`	Specify the type of vNIC attached to the VM or VM Kernel.
`rem-switch` *`node-name`*	Specify the remote switch for the vPort.
`hw-index` *`hw-index-number`*	Specify the hardware index number.
`rt-if` *`rt-if-string`*	Specify the router interface.
`hw-flags invalid-vlan|invalid-port`	Specify the vPort hardware flags.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.3	The parameters `num-ips`, and `vm-status` added.
Version 2.3.1	The parameter `switch-id`, changed to `owner`.
Version 2.4	The parameters `hw-index` and `rt-if` added.
Version 2.4.1	The parameters `vnet`, `hw-flags`, and `public-vlan`added. The parameter `blocked-ports` deprecated.
Version 2.6.2	The parameter `svc-name`, `power`, `entity`, `portgroup`, `pg-vlans`, `vswitch`, `vs-type`, and `vnic-type` added. The parameters `hypervisor` `vm-id`, `vm-name`, `vm-flavor`, `vm-status`, `memory`, deprecated.

Usage Use this command to create a vPort on the switch. vPorts are mirrored across the fabric so that every switch knows about all the L2 entries on the fabric. This is useful for troubleshooting connections across the fabric.

Examples To configure a vPort with the MAC address of 06:60:00:02:10:38, IP address of 192.168.11.11, on VLAN 107, use the following syntax:

```
CLI (network-admin@switch) > vport-create mac 06:60:00:02:10:38
vlan 107 ip 192.168.11.11
```

vport-delete

This command is used to delete a virtual port on a switch. Virtual ports track information across nodes on the fabric.

Syntax `vport-delete`

`mac` *`mac-address`*	Specify the MAC address of the vPort to delete from the configuration.
`vnet` *`vnet-name`*	Specify a vNET assigned to the vPort.
`bd` *`bridge-domain-name`*	Specify the Bridge Domain assigned to vPort
`vlan` *`vlan-id`*	Specify the VLAN ID of the vPort to delete from the configuration.
`vxlan` *`vxlan-id`*	Specify the VXLAN ID of the vPort to delete from the configuration.
`ip` *`ip-address`*	Specify the IP address of the vPort to delete from the configuration.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage Use this command to remove a vPort from the configuration.

Examples To remove the vPort with the IP address, 192.168.11.9, use the following command:

```
CLI (network-admin@switch) > vport-delete ip 192.168.11.9
```

vport-modify

This command is used to modify a virtual port on a switch. Virtual ports track information across nodes on the fabric.

Syntax `vport-modify`

`mac` *`mac-address`*	Specify the MAC address of the vPort.
Specify the following options:	
`vnet` *`vnet-name`*	Specify a vNET assigned to the vPort.
`bd` *`bridge-domain-name`*	Specify the Bridge Domain assigned to vPort.
`vlan` *`vlan-id`*	Specify a VLAN from 0 to 4095.
`vxlan` *`0..16777215`*	VXLAN assigned to vPort.
`ip` *`ip-address`*	Specify an IP address.
`owner` *`node-name`*	Specify the switch ID.
`intf` *`intf-number`*	Specify the interface number.
`inner-vlan` *`0..4095`*	Specify the Q-in-Q inner VLAN assigned to vPort.
`public-vlan` *`vlan-id`*	Specify the ID of the public VLAN.
`num-ips` *`num-ips-number`*	Specify the number of IP addresses for the vPort.
`config-intf` *`config-intf-number`*	Specify the configuration interface number.
`svc-name` *`svc-name-string`*	Specify the vCenter connection service name.
`hostname` *`hostname-string`*	Specify the host name of the switch.
`entity` *`entity-string`*	Specify the VM or VM Kernel device name.
`power none|powered-off|powered-on|standby|suspended|unknown`	Specify the vPort entry power status.
`cpus` *`cpus-number`*	Specify the number of CPUs assigned to the VM.
`os` *`os-string`*	Specify an operating system, such as CentOS or Ubuntu, on the VM.
`portgroup` *`portgroup-string`*	Specify the Port Group name associated with VM MAC address.
`pg-vlans` *`vlan-list`*	Specify the valid VLANs for the port group.

vswitch *vswitch-string*	Specify the vitual switch name associated with the NIC.
vs-type none|host-vs|distributed-vs|unknown	Specify the virtual switch type.
vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL|rep|p-NFC|r-NFC|mgmt|unknown	Specify the type of vNIC attached to the VM or VM Kernel.
config none|owner|ip|port|hostname|entity|cpus|os	VM configuration.
rem-switch *node-name*	Specify the remote switch for the vPort.
hw-index *hw-index-number*	Specify the hardware index number.
rt-if *rt-if-string*	Specify the router interface.
hw-flags invalid-vlan|invalid-port	Specify the vPort hardware flags.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.3	The parameters num-ips, and vm-status added.
Version 2.4	The parameters hw-index and rt-if added.
Version 2.4.1	The parameters vnet, hw-flags, and public-vlan added. The parameter blocked-ports, deprecated.
Version 2.6.2	The parameter svc-name, power, entity, portgroup, pg-vlans, vswitch, vs-type, and vnic-typeadded. The parameters hypervisor, vm-id, vm-name, vm-flavor, vm-status, memory, deprecated.

Usage Use this command to modify a vPort configuration on the switch. vPorts are mirrored across the fabric so that every switch knows about all the L2 entries on the fabric. This is useful for troubleshooting connections across the fabric.

Examples To modify a vPort with the MAC address of 06:60:00:02:10:38, IP address of 192.168.11.11, and change the VLAN to 107, use the following syntax:

```
CLI (network-admin@switch) > vport-modify mac 06:60:00:02:10:38
vlan 107 ip 192.168.11.11
```

vport-show

This command is used to display information about virtual ports on a fabric. Virtual ports track switch information across nodes on the fabric.

> **Informational Note**: NetVisor OS does not automatically populate the output fields for hypervisor, and VM. In future releases, NetVisor gathers this information using a multicast communication across the fabric.

Syntax `vport-show`

`owner node` *`name`*	The owner name.
`mac` *`mac-address`*	The MAC address of the vPort.
`vnet vnet-name`	The vNET name.
`bd bridge-domain name`	Bridge Domain assigned to vPort.
`vlan` *`vlan-id`*	Displays a VLAN from 0 to 4095.
`inner-vlan` *`0..4095`*	Q-in-Q inner VLAN assigned to vPort.
`public-vlan` *`0..4095`*	The ID of the public VLAN.
`vxlan` *`vxlan-id`*	Displays a VXLAN from 0 to 16777215.
`ip` *`ip-address`*	DisplaysDisplays an IP address.
`num-ips` *`num-ips-number`*	The number of IP addresses for the vPort.
`config-intf` *`config-intf-number`*	The configuration interface number.
`intf intf-number`	Port that owns the vPort
`ports` *`port-list`*	The list of ports.
`state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete|evpn-mac-move`	The vPort state.

svc-name *svc-name-string*	Name of the vCenter connection service.
hostname *hostname-string*	The hypervisor or switch host name.
entity *entity-string*	The VM or KVM device name.
power none|powered-off|powered-on|standby|suspended|unknown	The vPort entry status.
cpus *cpus-number*	The number of CPUs assigned to the VM.
os *os-string*	Displays an operating system, such as CentOS or Ubuntu, on the VM.
portgroup *portgroup-string*	The port group name associated with the VM MAC address.
pg-vlans *vlan-list*	The VLANs assigned to a port group.
vswitch vswitch-string	Name of the virtual switch associated with a NIC.
vs-type none|host-vs|distributed-vs|unknown	The type of virtual switch.
vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL|rep|p-NFC|r-NFC|mgmt|unknown	The type of vNIC associated with the VM or VM-Kernel.
config none|owner|ip|port|hostname|entity|cpus|os	The configuration type for the virtual switch.
rem-switch node *name*	Name of the remote switch.
rem-intf *rem-intf-number*	The remote interface number.
rem-ports *port-list*	The remote switch ports.
peer-intf *peer-intf-number*	The peer interface number.
peer-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw| evpn-delete|evpn-mac-move	The state of the peer vPorts.

peer-owner-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete|evpn-mac-move	The state of the peer owner vPorts.
status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to|PN-switch|PN-fabric|PN-other|PN-cluster|PN-internal|host| uplink|STP-BPDUs|LLDP|trunk|l3-port|remote-l3-port|dhcp|dhcpsvr|blocked|no-BPDU|LACP-PDUs|vlag-active|vlag-blocked|stp-edge-port|LACP-wait|LACP-fallback|adjacency-wait|adjacency-check|vlag-wait|multicast-router|host-disabled|loop|congested|vxlan-loopback|vlan-up|vle|vle-wait|phy-down|down|enabled|err-disabled|err-bpdu-guard|mac-violation|stp-bpdu-guard|stp-root-guard|defer-bringup-wait|rx-bw-threshold-exceeded|tx-bw-threshold-exceeded	The vPort status.
vtep-ip *ip-address*	The VTEP IP address.
tunnel *tunnel-string*	The vPort tunnel.
create-time date/time: yyyy-mm-ddTHH:mm:ss	The vPort create time.
last-seen date/time: yyyy-mm-ddTHH:mm:ss	The last time the vPorts was seen.
last-seen-since date/time: yyyy-mm-ddTHH:mm:ss	The last time the vPorts was seen since a specified time.
vxlan-lru date/time: yyyy-mm-ddTHH:mm:ss	The time, and date of the VXLAN LRU.
hit *hit-number*	The number of hits.
migrate *migrate-number*	The number of times the entry migrated.

drops *drops-number*	The number of dropped packets.
hw-index *hw-index-number*	The hardware index number.
rt-if *rt-if-string*	The router interface.
hw-flags invalid-vlan|invalid-port	The hardware flags.
mc-index *mc-index-number*	L2 multicast group index in hardware.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.2.6	The parameters stp-edge-port|LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router added.
Version 2.3	The parameters num-ips, and vm-status added.
Version 2.4.1	The parameter public-vlan added.
Version 2.6.2	The parameter svc-name, power, entity, portgroup, pg-vlans, vswitch, vs-type, and vnic-type added. The parameters hypervisor, vm-id, vm-name, vm-flavor, vm-status, memory, deprecated.
Version 3.0.0	The options, anycast, invalid-vlan, and owner-lost added to state, peer-state, and peer-owner-state.
Version 3.1.0	The parameters vtep-ip, and ND added.
Version 6.1.0	The options evpn, evpn-wo-bgp, evpn-def-gw, evpn-delete added to state, peer-state, and peer-owner-state.

Usage Use this command to display vPort information on the switch. NetVisor mirrors vPorts across the fabric so every switch knows about all the L2 entries on the fabric. You may find this useful for troubleshooting connections across the fabric.

Examples To display vPorts, use the following syntax:

CLI (network-admin@switch) > vport-show status format all

```
owner  vlan public-vlan ip                        num-ips intf ports state    rem-switch rem-intf
rem-ports status              create-time     last-seen       hit migrate
------ ---- ----------- ----------------------- ------- ---- ----- -------- ---------- --------
--------- ----------------- -------------- -------------- --- -------
switch 1    1                                          274  45,49 active             0
```

```
                                07-05,13:32:29 07-07,14:50:27 2   36
switch 1    1                                                 274  45,49
                                07-05,14:10:24 07-07,23:33:13 63
switch 1    1                                                          port-mac leo-ext-21 18
 18         PN-switch,PN-other 07-05,13:32:29 00:11:19        1
switch 1    1                                                          port-mac leo-ext-21 45
 45         PN-switch,PN-other 07-05,13:32:29 00:11:19        1
switch 1    1           192.22.1.240                          12   12    active
            host                07-05,13:46:03 07-07,14:54:21 1
switch 1    1                                                 69   69    active
            PN-internal         07-05,13:40:32 00:10:20       54
switch 1    1                                                          port-mac leo-ext-23 22
 22         PN-switch,PN-other 07-05,13:32:29 00:11:11        1
switch 1    1           fe80::660e:94ff:fec0:53b 2            274  45,49 active
            host                07-05,13:32:29 00:10:32       1   22
switch 1    1                                                          port-mac leo-ext-21 17
 17         PN-switch,PN-other 07-05,13:32:29 00:11:19        1
switch 1    1                                                          port-mac leo-ext-21 49
 49         PN-switch,PN-other 07-05,13:32:29 00:11:19        1
switch 1    1           192.22.1.230                          274  45,49 active              0
            host                07-05,13:44:54 07-07,14:54:34 1
switch 1    1                                                 274  45,49 active              0
                                07-05,13:32:29 07-07,14:50:23 1   20
switch 1    1                                                          port-mac leo-ext-23 21
 21         PN-switch,PN-other 07-05,13:32:29 00:11:11        1
switch 1    1                                                          port-mac leo-ext-23 65
 65         PN-switch,PN-other 07-05,13:32:30 00:11:11        1
switch 1    1                                                          port-mac leo-ext-23 61
 61         PN-switch,PN-other 07-05,13:32:29 00:11:11        1
switch 1    1                                                          igmp-mac
            PN-internal         07-05,13:32:24 00:11:03
switch 1    1                                                 69   69    active               0
            PN-internal         07-05,13:32:29 07-07,14:49:23 1   4
switch 1    1           202.22.1.240                          274  45,49 active
            host                07-05,13:44:27 07-07,14:54:01 1
switch 1    1                                                          port-mac leo-ext-21 27
 27         PN-switch,PN-other 07-05,13:32:29 00:11:19        1
switch 1    1                                                 274  45,49 active              0
                                07-05,13:32:29 07-07,14:50:03 1   34
switch 1    1           172.22.1.230                          274  45,49 active              0
            host                07-05,13:44:54 07-07,14:54:34 1
switch 1    1
             PN-internal         07-05,13:32:38 07-05,13:32:38 1
```

vport-settings-modify

vPort information is collected, and stored on a disk on the switch at specific intervals. This command is used to modify the settings of vPort.

Syntax `vport-settings-modify`

Specify one or more of the following options:	
`vport-disk-space` *`vport-disk-space-number`*	Specify the amount of disk space for vPorts. The default is 500M.
`stats-max-memory` *`stats-max-memory-number`*	Specify the maximum memory for collecting vPort information. The default memory is 50M.
`stats-log-enable|stats-log-disable`	Specify if you want to enable or disable logs for vPort statistics. Enabled by default.
`stats-log-interval duration:` *`#d#h#m#s`*	Specify the interval between logging events. The default is one minute.
`stats-log-disk-space` *`disk-space-number`*	Specify the amount of disk space for vPort logs. The default is 50M.
`system-stats-max-memory` *`system-stats-max-memory-number`*	Specify the maximum memory for system statistics
`system-stats-log-enable|system-stats-log-disable`	Specify if you want to enable or disable logging for the system. Enabled by default.
`system-stats-log-interval duration:` *`#d#h#m#s`*	Specify the interval between logging events. The default is one minute.
`system-stats-log-disk-space` *`disk-space-number`*	Specify the disk space for system statistics. The default is 50M.
`loop-prevent|no-loop-prevent`	Enable or disable loop prevent.
`retry-interval` *`15..3600`*	Specify the number of seconds before next update for entries with error.
`excess-mac-move-protection-enable|no-excess-mac-move-protection-enable`	Enable or disable excess MAC move protection.
`excess-mac-move-queue-protect|no-excess-mac-move-queue-protect`	Enable or disable excess MAC move queue protection.
`excess-ip-move-protection-enable|no-excess-ip-move-protection-enable`	Enable or disable excess IP move protection.
`excess-ip-move-queue-protect|no-excess-ip-move-queue-protect`	Enable or disable excess IP move queue protection.

Defaults See individual parameters.

Access CLI

History

Version 2.2	Command introduced.
Version 6.0.0	The parameters `excess-mac-move-protection-enable|no-excess-mac-move-protection-enable`, `excess-mac-move-queue-protect|no-excess-mac-move-queue-protect`,`excess-ip-move-protection-enable|no-excess-ip-move-protection-enable`, and `excess-ip-move-queue-protect|no-excess-ip-move-queue-protect` added.

Usage Use the command to modify vPort settings to collect vPort information.

Examples To modify the vPort disk space from 500M to 1G, use the following syntax:

```
CLI (network-admin@switch) > vport-settings-modify  vport-disk-space
1G
```

vport-settings-show

NetVisor OS collects, and stores vPort information on a disk on the switch at specific intervals. This command is used to display the vPort settings.

Syntax `vport-settings-show`

Defaults See individual parameters.

Access CLI

History

Version 2.2	Command introduced.
Version 6.0.0	The parameters `excess-mac-move-protection-enable`, `excess-mac-move-queue-protect`,`excess-mac-move-queue-state`, `excess-ip-move-protection-enable`, `excess-ip-move-queue-protect`, and `excess-ip-move-queue-state` added.

Usage Use the command to display vPort settings for collecting vPort information.

Examples To display vPort settings, use the following syntax:

```
CLI (network-admin@switch1) > vport-settings-show format all
switch:                              switch1
vport-disk-space:                    500M
stats-max-memory:                    50M
stats-log-enable:                    yes
stats-log-interval:                  1m
stats-log-disk-space:                50M
system-stats-max-memory:             50M
system-stats-log-enable:             yes
system-stats-log-interval:           1m
system-stats-log-disk-space:         50M
loop-prevent:                        enabled
excess-mac-move-protection-enable:   yes
excess-mac-move-queue-protect:       yes
excess-mac-move-queue-state:         active
excess-ip-move-protection-enable:    yes
excess-ip-move-queue-protect:        yes
excess-ip-move-queue-state:          active
```

vport-stats-show

This command is used to display vPort statistics including the number of incoming, and outgoing packets.

Syntax `vport-stats-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The a point in tjme for displaying historical information.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for vPort history collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for vPort history collection.
`duration duration: #d#h#m#s`	The duration to collect the vPort history.
`interval duration: #d#h#m#s`	The intervals to collect vPort history.
`since-start`	Specifies to display all of the vPort history since collection began on the fabric.
`older-than duration: #d#h#m#s`	Specifies to display vPort information older than a specific duration.
`within-last duration: #d#h#m#s`	Specifies to display vPort information with a specific duration.
`switch-id node name`	The switch ID for collecting vPort statistics.
`hostname hostname-string`	The host name statistics.
`ip ip-address`	The IP address statistics.
`mac mac-address`	The MAC address assigned to the vPort.
`vnet vnet name`	The vNET statistics.
`bd bridge-domain-name`	Bridge Domain connections.
`vlan vlan-id`	The VLAN statistics. Range is 0..4095.
`vxlan vxlan-id`	The VXLAN statistics. Range is 0..16777215.
`entity entity-string`	The VM or VM Kernel device name.
`vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL| rep| p-NFC|r-NFC|mgmt|unknown`	The vNic attached to VM traffic type.
`vs-type none|host-vs|distributed-vs| unknown`	The Virtual Switch type.

ibytes *ibytes-number*	The number of incoming bytes.
ipkts *ipkts-number*	The number of incoming packets.
idiscards *idiscards-number*	The number of incoming packets discarded.
ierrs *ierrs-number*	The number of incoming packets with errors..
obytes *obytes-number*	The number of outoing bytes.
opkts *opkts-number*	The number of outoing packets.
odiscards *odiscards-number*	The number of outgoing packets discarded.
oerrs *oerrs-number*	The number of outgoing packets with errors.
count *count-number*	The statistics count.

Defaults None

Access CLI

History

Version 2.3	Command introduced.
Version 2.4.1	The parameter `count` added.
Version 2.5.4	The parameters `entity`, `vnic-type`, and `vs-type` added.

Usage Use this command to display vPort statistics.

Examples To generate a report, use the following syntax:

```
CLI (network-admin@switch) > vport-stats-show format
time,ip,entity,type,vnic-type
 time           ip            entity     status    vnic-type    ibytes ipkts obytes
opkts
 -------------- ------------- --------  ---------  ----------    ------ ----- ------
-----
 08-26,13:52:16 10.9.8.13     MyTestVM  vm         tagged       31.7K  507   112K
1.86K
 08-28,10:20:54 192.168.30.1  vmk1      vm-kernel  vMotion,VSAN
 08-25,23:16:27 10.7.17.8     vmk2      vm-kernel  VSAN
```

vport-history-show

This command is used to display historical information about virtual ports on a fabric. Virtual ports track information about servers, virtual machines, and switches in a fabric.

> **Informational Note**: NetVisor OS does not automatically populate the output fields for hypervisor, and VM. In future releases, NetVisor gathers this information using a multicast communication across the fabric.

Syntax `vport-history-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The point in tjme for displaying historical information.
`start-time date/time: yyyy-mm-ddThh:mm:ss`	The start time for vPort history collection.
`end-time date/time: yyyy-mm-ddThh:mm:ss`	The end time for vPort history collection.
`duration duration: #d#h#m#s`	The duration to collect the vPort history.
`interval duration: #d#h#m#s`	The intervals to collects vPort history.
`since-start`	Specifies to display all of the vPort history since collection began on the fabric.
`older-than duration: #d#h#m#s`	Specifies to display vPort information older than a specific duration.
`within-last duration: #d#h#m#s`	Specifies to display vPort information with a specific duration.
`log-type l2-save|l3-save|restart|l2-modify|l2-delete|l3-modify|l3-delete`	Filter output by the log type of each entry. The log-type column displays when a vPort is created, modified, saved, or deleted.
`caller init|config|status|switch-cb|cluster|gre|ARP|router|flow-cb|vdp|vlag|port|inject|evict|vxlan|stats|vnm-vnic|adjacency|stp|trunk|intsw|ttl1|flood|flush|retire|loop|dhcp|fabric|table|l3-age-out|vlan|l2-checker|igmp|l2-age-out|port-mirror|mac-move|cluster-status|cluster-status-delete|vxlan-routing|subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up|evpnsnoop-browse`	The feature that made the change for this entry.
`last-caller init|config|status|switch-cb|cluster|gre|ARP|router|flow-cb|vdp|vlag|port|inject|evict|`	The most recent caller for this entry.

vxlan|stats|vnm-vnic| adjacency|stp| trunk|intsw|ttl1|flood|flush|retire| loop|dhcp| fabric|table|l3-age-out| vlan|l2-checker|igmp|l2-age-out|port-mirror|mac-move|cluster-status| cluster-status-delete|vxlan-routing| subnet|br-dom|vrf|ND|VSG|excess-move-protection|retire-tunnel-up| evpnsnoop-browse	
reason activate|deactivate|port-move| ip-move|ip-remove|batch-move|retire| break-loop|break-loop-timeout|create| modify|delete|policy|owner-status| remove-node|port-flags|check-owner| trunk-port-add|trunk-port-remove| move-router-if|age-out|hw-remove| restart|undo|flush|update-vxlan-vlan| needs-peer-status|owner-lost|owner-change|update-peer-only| user-delete|done|vm-metadata|excess-move-state-change	The reason for history entry.
last-reason activate|deactivate|port-move|ip-move|ip-remove|batch-move| retire|break-loop|break-loop-timeout| create|modify|delete|policy|owner-status|remove-node|port-flags|check-owner|trunk-port-add|trunk-port-remove|move-router-if|age-out|hw-remove|restart|undo|flush|update-vxlan-vlan|needs-peer-status|owner-lost|owner-change|update-peer-only| user-delete|done|vm-metadata|excess-move-state-change	The most recent reason for this entry.
changes owner|mac|vnet|bd|inner-vlan| public-vlan|vxlan|num-ips|config-intf|intf|ports|state|local-intf| local-ports|local-state|alt-owner| alt-owner-port|alt-owner-ports|alt-owner-state|svc-name|hostname|entity| power|cpus|os|portgroup|pg-vlans| vswitch|vs-type|vnic-type|config|rem-switch|rem-intf|rem-ports|peer-intf| peer-state|peer-owner-state|status| vtep-ip|tunnel|create-time|last-seen| last-seen-since|vxlan-lru|hit| migrate|drops|hw-index|rt-if|hw-flags|mc-index	The changes in this entry.
count *count-number*	Filter output by the number of entries summed

	using the sum-by argument.
owner *node-name*	The switch-id of the vPort.
mac *mac-address*	Filter output by the Filter output by MAC address.
vnet *vnet-name*	vNET assigned to the vPort.
bd *bridge-domain-name*	Bridge Domain assigned to vPort.
vlan *vlan-id*	Filter output by the VLAN ID.
inner-vlan 0..4095	Q-in-Q inner VLAN assigned to vPort.
vxlan *vxlan-id*	Filter output by the VXLAN ID.
public-vlan *vlan-id*	Specify the ID of the public VLAN.
ip *ip-address*	Filter output by the IP address.
num-ips *num-ips-number*	The number of IP addresses for the vPort.
intf *intf-number*	Filter output by the interface number. This is the port or trunk number of the vPort.
config-intf *config-intf-number*	Filter output by the configured interface of the vPort.
ports port-list	Filter output by the list of ports.
state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete	Filter output by the state of the vPort.
svc-name *svc-name-string*	The vCenter connection service name.
hostname *hostname-string*	The host name of the switch.
entity *entity-string*	The VM or VM Kernel device name.
power none|powered-off|powered-on|standby|suspended|unknown	The vPort entry power status.
cpus *cpus-number*	Filter output by the number of CPUs assigned to

	the VM.
os *os-string*	Filter output by the OS installed on the VM.
portgroup *portgroup-string*	The Port Group name associated with VM MAC address.
pg-vlans *vlan-list*	The valid VLANs for the port group.
vswitch *vswitch-string*	The virtual switch name associated with the NIC.
vs-type none|host-vs|distributed-vs|unknown	The virtual switch type.
vnic-type untagged|tagged|trunked|vm-mgmt|vm-kernel|vMotion|vSAN|FTL|rep|p-NFC|r-NFC|mgmt|unknown	The type of vNIC attached to the VM or VM Kernel.
config none|owner|ip|port|hostname|entity|cpus|os	The VM configuration.
rem-switch *node-name*	Filter output by the remote switch name.
rem-intf *rem-intf-number*	Filter output by the remote interface number.
rem-ports *port-list*	Filter output by the remote ports.
peer-intf *peer-intf-number*	Filter output by the peer interface.
peer-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected|retry|evpn|evpn-wo-bgp|evpn-def-gw|evpn-delete	Filter output by peer-state.
peer-owner-state active|static|vrrp|tunnel|software|needs-peer-status|port-mac|hit|ageout-check|moving|loop-probe|local-tunnel|igmp-mac|user-flush|vxlan-loopback|router|update-peer-only|active-state-mismatch|peer-port-missing|peer-port-not-vlag|peer-port-not-orphaned|peer-port-not-cluster-link|sw-active|anycast|hsrp|invalid-vlan|owner-lost|	Filter output by owner state.

cluster-link-down|vxlan-router|peer-force-resync|excess-mac-move-detected|excess-ip-move-detected| retry|evpn| evpn-wo-bgp|evpn-def-gw|evpn-delete	
status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to|PN-switch| PN-fabric|PN-other|PN-cluster|PN-internal|host| uplink|STP-BPDUs| LLDP|trunk|l3-port|remote-l3-port| dhcp| dhcpsvr|blocked|no-BPDU|LACP-PDUs|vlag-active|vlag-blocked|stp-edge-port|LACP-wait|LACP-fallback| adjacency-wait| adjacency-check|vlag-wait|multicast-router|host-disabled| loop|congested|vxlan-loopback|vlan-up|vle|vle-wait|phy-down|down| enabled|err-disabled|err-bpdu-guard| mac-violation|stp-bpdu-guard|stp-root-guard|defer-bringup-wait	Filter output by the status of the vPort.
vtep-ip *ip-address*	The VTEP IP address.
tunnel *tunnel-string*	The vPort tunnel.
create-time date/time: yyyy-mm-ddThh:mm:ss	Filter output by the time that the vPort was created.
last-seen date/time: yyyy-mm-ddThh:mm:s	Filter output by the time that the vPort was last seen on the fabric.
vxlan-lru date/time: yyyy-mm-ddTHH:mm:ss	Filter output by the VXLAN LRU.
hit *hit-number*	Filter output by the number of received hits.
migrate *migrate-number*	Filter output by the number of times that the vPort migrated on the fabric.
drops *drops-number*	Filter output by the number of drops on the fabric.
hw-index *hw-index-number*	Filter by the hardware index.
rt-if *rt-if-string*	Filter by the router interface.
hw-flags invalid-vlan|invalid-port	Filter by hardware flags.
mc-index mc-index-number	L2 multicast group index in hardware.

Defaults None

Access CLI

History

Version 2.2	Command introduced.
Version 2.2.6	The parameters `stp-edge-port|LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router` added.
Version 2.3	The parameters `num-ips`, and `vm-status` added.
Version 2.3.1	The parameters `caller`, `last-call`, `reason`, `last-reason`, and `changes` added.
Version 2.4	The options, `l3-modify`, `l3-save`, and `l3-delete` added to `log-type`. The parameters `peer-intf`, `peer-state`, and `peer-owner-state` added.
Version 2.4.1	The parameters `vnet` and `public-vlan` added. The options, `retire|break-loop|break-loop-timeout` added to the parameter `reason`. The options `vxlan-loopback|router` added to the parameter, `state`. The parameters `hw-index`, `rt-if`, and `hw-flags` added.
Version 2.6.2	The parameter `svc-name`, `power`, `entity`, `portgroup`, `pg-vlans`, `vswitch`, `vs-type`, and `vnic-type` added. The parameters `hypervisor`, `vm-id`, `vm-name`, `vm-flavor`, `vm-status`, `memory`, deprecated.
Version 3.1.0	The parameters `vtep-ip`, and `ND` added.

Usage Use this command to display vPort history on the switch. vPorts are mirrored across the fabric so that every switch knows about all the L2 entries on the fabric. This is useful for troubleshooting connections across the fabric.

Examples To display vPort history, with the parameter `since-start`, use the following syntax:

```
CLI (network-admin@switch) > vport-history-show since-start format all layout vertical

  time:         09-10,15:17:03
  log-type:     l2-modify
  switch-id:    pleaides24
  mac:          64:0e:94:28:03:3e
  vlan:         1
  intf:         65
  ports:        65
  local-intf:   65
  local-ports:  65
  create-time:  09-10,15:17:06
  time:         09-10,15:17:06
  log-type:     l2-modify
  switch-id:    pleaides24
```

```
mac:          64:0e:94:28:03:3e
vlan:         1
intf:         65
ports:        65
state:        active
local-intf:   65
local-ports:  65
local-state:  active
create-time:  09-10,15:17:06
last-seen:    09-10,15:17:06
hit:          1
time:         09-10,15:17:07
log-type:     l2-modify
```

vrf-create

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command creates a VRF.

Syntax `vrf-create name`

`name` *`name-string`*	Specify a name for the VRF.
`vnet` *`name-string`*	Specify the name of the vNET.
`scope local|cluster|fabric`	Specify the scope of the VRF.
`vrf-gw` *`ip-address`*	Specify an IPv4 address for the gateway.
`vrf-gw2` *`ip-address`*	Specify a second IPv4 address for the gateway.
`vrf-gw-ip6` *`ip-address`*	Specify an IPv6 address for the gateway.
`vrf-gw2-ip6` *`ip-address`*	Specify a second IPv6 address for the gateway.
`l3-vni` *`0..16777215`*	Specify the L3 VNI.
`enable|disable`	Enable or disable VRF.
`description` *`description-string`*	Specify a VRF description.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.
Version 6.0.0	The parameter `description` added.
Version 6.1.0	The parameter `l3-vni` added.

Usage Use this command to configure VRF.

Examples To configure VRF, blue, on vNET red, scope local, and a gateway address, 192.168.11.5, use the following syntax:

```
CLI (network-admin@switch) > vrf-create name blue vnet red scope
local vrf-gw 192.168.11.5
```

vrf-delete

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command deletes a VRF configuration.

Syntax `vrf-delete`

`name` *`name-string`*	Specify a name for the VRF.
`vnet` *`name-string`*	Specify the name of the vNET.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to delete a VRF.

Examples To delete VRF, blue, and vNet, red, , use the following syntax:

```
CLI (network-admin@switch) > vrf-delete name blue vnet red
```

vrf-modify

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command modifies a VRF configuration.

Syntax `vrf-modify`

`name` *`name-string`*	Specify a name for the VRF.
`vnet` *`name-string`*	Specify the name of the vNET.
`scope local|cluster|fabric`	Specify the scope of the VRF.
`vrf-gw` *`ip-address`*	Specify an IPv4 address for the gateway.
`vrf-gw2` *`ip-address`*	Specify a second IPv4 address for the gateway.
`vrf-gw-ip6` *`ip-address`*	Specify an IPv6 address for the gateway.
`vrf-gw2-ip6` *`ip-address`*	Specify a second IPv6 address for the gateway.
`l3-vni` *`0..16777215`*	specify an L3 VNI.
`enable|disable`	Enable or disable VRF.
`description` *`description-string`*	Specify a VRF description.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.
Version 6.0.0	The parameter `description` added.
Version 6.1.0	The parameter `l3-vni` added.

Usage Use this command to modify a VRF.

Examples To modify VRF, blue, and a gateway address, 192.168.13.7, use the following syntax:

```
CLI (network-admin@switch) > vrf-modify name blue vnet red vrf-gw
192.168.13.7
```

vrf-show

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command displays a VRF configuration.

Syntax `vrf-show`

`name` *`name-string`*	The VRF name.
`vnet` *`name-string`*	The name of the vNET.
`scope local|cluster|fabric`	The scope of the VRF.
`vrf-gw` *`ip-address`*	An IPv4 address for the gateway.
`vrf-gw2` *`ip-address`*	The second IPv4 address for the gateway.
`vrf-gw-ip6` *`ip-address`*	An IPv6 address for the gateway.
`vrf-gw2-ip6` *`ip-address`*	The second IPv6 address for the gateway.
`l3-vni` *`0..16777215`*	The L3 VNI.
`active yes|no`	The status of the VRF.
`hw-router-mac` *`mac-address`*	The MAC address of the vRouter.
`hw-vrid` *`number`*	The vRouter ID as a number from 1 to 15.
`enable|disable`	Specifies to enable or disable the VRF.
`description` *`description-string`*	The VRF description.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.
Version 6.0.0	The parameter `description` added.
Version 6.1.0	The parameter `l3-vni` added.

Usage Use this command to display information about a VRF configuration.

Examples To display information about a VRF configuration, use the following syntax:

```
CLI (network-admin@switch) > vrf-show format name,vnet,anycast-mac,l3-
vni,active,hwrouter-mac,hw-vrid,flags,enable
name vnet anycast-mac       l3-vni active hw-router-mac     hw-vrid flags  enable
---- ---- ----------------- ------ ------ ----------------- ------- ------ ------
VRF1 0:0  64:0e:94:40:00:02 101000 yes 66:0e:94:48:68:a7    1       subnet yes
```

vrf-mroute-show

This command displays information about distrbuted multicast forwarding in a L3/VXLAN network.

Syntax `vrf-mroute-show`

`type <*,G>|<*,G,V>|`	The hardware router type.
`srcip` *`ip-address`*	The source IP address.
`srcip-mask` *`srcip-mask-number`*	The source netmask.
`group` *`ip-address`*	The group IP address.
`group-mask` *`group-mask-number`*	The netmask.
`vnet` *`vnet name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The VLAN ID.
`vrid` *`vrid-number`*	The vRouter ID.
`hw-group-id` *`hw-group-id-number`*	The hardware group ID.
`send_vnet` *`vnet name`*	The sending vNET name.
`send-vlan` *`vlan-id`*	The sending VLAN ID.
`send-bd` *`send-bd-string`*	The sending bridge domain.
`ports` *`port-list`*	The port list.
`encap-id` *`encap-id-number`*	The encapsulation ID.
`flags Trunk|Active`	The hardware flags.

Defaults None

Access Network Administrator

History

Version 5.1.0	Command introduced.

Usage Use this command to display multicast information on virtual routing, and fowarding.

Examples To display multicast routing, use the following syntax:

```
CLI (network-admin@switch) > vrf-mroute-show
type    srcip   group     vnet bd vlan vrid hw-group-id send_vnet send-vlan  send-bd ports encap-id
     flags
------- ------- --------- ---- -- ---- ---- ----------- --------- ---------  ------- ----- --------
     ------
<*,G,V> 0.0.0.0 225.1.1.1 10 0 0x2000009 10                                                 none  -1
```

```
          Active
<*,G,V> 0.0.0.0 225.1.1.1 10 0 0x2000009 0                                                    19    4
          Active
```

vrf-multicast-modify

This commands allows to modify multicast routing for VRF on a switch.

Syntax `vrf-multicast-modify`

`scope local|fabric`	Specify the scope for multicast routing.
`enable|disable`	Specify to enable or disable multicast routing. Enabled by default.

Defaults None

Access Network Administrator

History

Version 5.1.0	Command introduced.

Usage Use this command to modify multicast routing for VRF on a switch.

> **Warning!** You must reboot the switch after changing the settings. Rebooting may cause a disruption on the network.

Examples To disable multicast routing use the following syntax:

```
CLI (network-admin@switch) > vrf-multicast-modify  disable
```

vrf-multicast-show

This commands displays multicast routing for VRF on a switch.

Syntax `vrf-multicast-show`

`scope local|fabric`	Specify the scope for multicast routing.
`enable|disable`	Specify to enable or disable multicast routing. Enabled by default.

Defaults None

Access Network Administrator

History

Version 5.1.0	Command introduced.

Usage Use this command to display multicast routing for VRF on a switch.

Examples To display multicast routing, use the following syntax:

```
CLI (network-admin@switch) > vrf-multicast-show
```

vrf-multicast-igmp-modify

This commands allows to modify IGMP's use of IPMC table in DMF forwarding.

Syntax `vrf-multicast-igmp-modify`

`scope local|fabric`	Specify the scope as `fabric` or `local`.
`use-table|no-use-table`	enable/disable IGMP's use of the IPMC Table in DMF Forwarding

Defaults None

Access Network Administrator

History

Usage Use this command to modify IGMP's use of IPMC table in DMF Forwarding.

Examples To enable IGMP's use of the IPMC Table in DMF forwarding, use the following syntax:

```
CLI (network-admin@switch) > vrf-multicast-igmp-modify  enable
```

vrf-multicast-igmp-show

This commands displays information about IGMP's use of IPMC table in DMF forwarding.

Syntax `vrf-multicast-igmp-show`

Defaults None

Access Network Administrator

History

Usage Use this command to display information on IGMP's use of IPMC table in DMF Forwarding.

Examples To display information on IGMP's use of the IPMC Table in DMF forwarding, use the following syntax:

```
CLI (network-admin@switch) > vrf-multicast-igmp-show
```

vrf-route-add

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command adds a static route to a VRF configuration.

Syntax `vrf-route-add`

`vrf-name` *`name-string`*	Specify the name of the VRF configuration.
`vnet vnet` *`name-string`*	Specify the vNET of the VRF.
Specify the following route arguments:	
`network` *`ip-address`*	Specify an IP address.
`netmask` *`netmask`*	Specify the netmask.
`gateway-ip` *`ip-address`*	Specify the VRF gateway IP address.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to configure a static route for a VRF configuration.

Examples To add the static route 172.21.16.25 with the netmask 255.255.255.0 for the VRF configuration, **blue**, use the following syntax:

```
CLI (network-admin@switch) > vrf-route-add vrf-name blue vnet red
network 172.21.16.25 netmask 255.255.255.0 gateway-ip 192.168.13.7
```

vrf-route-remove

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command removes a static route from a VRF configuration.

Syntax `vrf-route-remove`

`vrf-name` *`name-string`*	Specify the name of the VRF configuration.
`vnet vnet` *`name-string`*	Specify the vNET of the VRF.
Specify the following route arguments:	
`network` *`ip-address`*	Specify an IP address.
`netmask` *`netmask`*	Specify the netmask.
`gateway-ip` *`ip-address`*	Specify the VRF gateway IP address.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to remove a static route from a VRF configuration.

Examples To remove the static route 172.21.16.25 with the netmask 255.255.255.0 for the VRF configuration, blue, use the following syntax:

```
CLI (network-admin@switch) > vrf-route-remove vrf-name blue vnet
red network 172.21.16.25 netmask 255.255.255.0 gateway-ip
192.168.13.7
```

vrf-route-show

Virtual Routing, and Forwarding (VRF) is a technology that virtualizes the hardware routing capabilities of a vRouter or a Layer 3 switch, and offers per logical instance dedicated control, and data planes. This command displays a static route on a VRF configuration.

Syntax `vrf-route-show`

`vrf-name` *`name-string`*	Displays the name of the VRF configuration.
`vrf-vnet vnet` *`name-string`*	Displays the vNET of the VRF.
`scope local|cluster|fabric`	Displays the scope of the VRF.
`network` *`ip-address`*	Displays the IP address.
`netmask` *`netmask`*	Displays the netmask.
`gateway-ip` *`ip-address`*	Displays the VRF gateway IP address.
`active in-rib|not-in-rib`	Displays the status of the static route.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use this command to display a static route for a VRF configuration.

Examples To display the static route for the VRF configuration, blue, use the following syntax:

```
CLI (network-admin@switch) > vrf-route-show vrf-name vrf-vnet red
```

vrouter-bfd-flapcount-clear

Bidirectional Forwarding Detection (BFD) provides fast BFD peer failure detection times independently of all media types, encapsulations, topologies, and routing protocols BGP, EIGRP, IS-IS, and OSPF. By sending rapid failure detection notices to the routing protocols in the local router to initiate the routing table recalculation process, BFD contributes to greatly reduced overall network convergence time. This command clears the BFD neighbor flap count.

Syntax `vrouter-bfd-flapcount-clear`

`vrouter-name` *`name-string`*	Specifies a name for the vRouter service.
Specify the following BFD arguments:	
`all`	Specify `all` to clear BFD neighbor flapcount for all neighbors.
`vrf` *`vrouter-vrf`*	Specify a VRF name.

Defaults None.

Access CLI

History

Usage This command is used to clear BFD flap count.

Examples To clear BFD neighbor flap count, use the following command:

```
CLI (network-admin@switch) > vrouter-bfd-flapcount-clear
```

vrouter-bfd-neighbor-flapcount-clear

Bidirectional Forwarding Detection (BFD) provides fast BFD peer failure detection times independently of all media types, encapsulations, topologies, and routing protocols BGP, EIGRP, IS-IS, and OSPF. By sending rapid failure detection notices to the routing protocols in the local router to initiate the routing table recalculation process, BFD contributes to greatly reduced overall network convergence time. This command clears the BFD neighbor flap count on a per neighbor or per VRF basis.

Syntax `vrouter-bfd-neighbor-flapcount-clear`

`vrouter-name` *`name-string`*	Specifies a name for the vRouter service.
Specify the following BFD arguments:	
`neighbor` *`ip-address`*	Specify the neighbor IP address.
`vrf` *`vrouter-vrf`*	Specify a VRF name.

Defaults None.

Access CLI

History

Usage This command is used to clear BFD neighbor flap count.

Examples To clear BFD neighbor flap count, use the following command:

```
CLI (network-admin@switch) > vrouter-bfd-neighbor-flapcount-clear
```

vrouter-bfd-neighbor-show

Bidirectional Forwarding Detection (BFD) provides fast BFD peer failure detection times independently of all media types, encapsulations, topologies, and routing protocols BGP, EIGRP, IS-IS, and OSPF. By sending rapid failure detection notices to the routing protocols in the local router to initiate the routing table recalculation process, BFD contributes to greatly reduced overall network convergence time.

Syntax `vrouter-bfd-neighbor-show`

`vrouter-name` *`name-string`*	Name for the vRouter service.
Specify the following BFD arguments:	
`out-addr` *`ip-address`*	The outgoing IP address.
`neighbor` *`ip-address`*	The neighbor IP address.
`local-discr` *`local-discr-number`*	The local discriminator.
`remote-discr` *`remote-discr-number`*	The remote discriminator.
`holdown holdown-number(ms)`	The detection time if the BFD session is established.
`multiplier` *`multiplier-number`*	The detection time multiplier.
`state unknown|admin-down|down|init|upno-session|not-replicator-vtep`	The state of the BFD session.
`interface` *`interface-string`*	The interface of the connection.
`flap-count` *`flap-count-number`*	The flap count on the router.
`remote-router` *`remote-router-string`*	The remote router name derived from the IP address.
`tx-int` *`tx-int-number`*	The minimum transmit interval in milliseconds.
`rx-int` *`rx-int-number`*	The minimum receive interval in milliseconds.

Defaults None.

Access CLI

History

Version 2.2.6	Command introduced.
Version 2.4.1	The parameters `flap-count` and `remote-router` added.

Usage Displays information about Bidirectional Forwarding Direction neighbors.

Examples To display information about BFD, use the following command:

```
CLI (network-admin@switch) > vrouter-bfd-neighbor-show
```

vrouter-bgp-add

This command adds Border Gateway Protocol (BGP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax `vrouter-bgp-add`

`vrouter-name` *`name-string`*	Specify a name for the vRouter service.
Specify the following BGP arguments:	
`neighbor` *`ip-address`*	Specify a neighbor IP address to use for BGP filtering.
`l3-port` *`l3port-usable-port name`*	Specify the L3 port name for the BGP session.
`remote-as` *`external|internal|-2..4294967295`*	Specify the remote Autonomous System (AS) number. This is a value between 1, and 4294967295.
`local-as` *`external|internal|-2..4294967295`*	Specify the locally configured AS number. This is a value between 1, and 4294967295.
`vrf` *`vrouter-vrf`*	Specify the name of the VRF.
`next-hop-self|no-next-hop-self`	Specify if the next-hop is the same router or not.
`prepend|no-prepend`	Specify if you want routers to prepend the local AS to AS_PATH advertisements.
`replace-as|no-replace-as`	Specify if you want to prevent routers from appending the globally configured ASN in outbound BGP UPDATEs toward customer networks that are using the "Local AS" mechanism. This option will append the old ASN instead.
`password` *`password-string`*	Specify a password, if desired.
`ebgp-multihop` *`number`*	Specify a value for external BGP to accept or attempt BGP connections to external peers, not directly connected, on the network. This is a value between 1, and 255.
`update-source vrouter` *`loopback-interface ip`*	Specify the source IP address of BGP packets sent by the router.
`update-source-interface` *`update-source-interface-string`*	Specify the source interface of BGP packets sent by the router. This parameter is required for peering over any interface.
`prefix-list-in vrouter` *`prefix-list name`*	Specify the prefix list to filter traffic inbound.
`prefix-list-out vrouter` *`prefix-list name`*	Specify the prefix list to filter traffic outbound.

`route-reflector-client|no-route-reflector-client`	Specify if a route reflector client is used.
`override-capability|no-override-capability`	Specify if you want to override capability.
`soft-reconfig-inbound|no-soft-reconfig-inbound`	Specify if you want a soft reconfiguration of inbound routes.
`max-prefix` *`max-prefix-number`*	Specify the maximum number of prefixes.
`max-prefix-warn-only|no-max-prefix-warn-only`	Specify if you want a warning message when the maximum number of prefixes is exceeded.
`bfd|no-bfd`	Specify if you want BFD protocol support for fault detection.
`bfd-multihop|no-bfd-multihop`	Specify if you want to always use BFD multihop port for fault detection.
`multi-protocol ipv4-unicast|ipv6-unicast|l2vpn-evpn`	Specify a multi-protocol for BGP.
`weight none|`*`weight`*	Specify a default weight value between 0, and 65535 for the neighbor routes.
`default-originate| no-default-originate`	Specify if you want to announce default routes to the neighbor or not.
`neighbor-keepalive-interval` *`seconds`*	Specify the BGP keepalive interval in seconds. This is a value between 0, and 65535 seconds.
`neighbor-holdtime` *`seconds`*	Specify the BGP neighbor hold time in seconds. This is a value between 0, and 65535 seconds.
`connect-retry-interval` *`seconds`*	Specify the interval between retrying a connection. The interval can be from 0 to 65535 seconds.
`unnumbered-interop|no-unnumbered-interop`	Specify to enable interoperability between different NetVisor versions for unnumbered BGP neighbors. This option sends both link local address, and the global next hop address even if they are the same.
`route-map-in vrouter` *`route-map name`*	Specify the name of the route map for incoming routes.
`route-map-out vrouter` *`route-map name`*	Specify the name of the route map for outgoing routes.
`allowas-in|no-allowas-in`	Specify if you want to reject routes with local AS in AS_PATH. Normally, when you do not set this option, nodes reject routes containing their own AS which helps prevent routing loops. However, in some cases nodes that belong to

	the same AS have no direct connectivity; for example when you form clusters, and choose not to use the cluster link for iBGP communication. In this case the only way to direct routes through connected eBGP neighbors is to set this option so that routes are not rejected from the cluster peer.
`interface` *`vrouter interface nic`*	Specify the interface to reach the neighbor.
`advertisement-interval` *`seconds`*	Specify the minimal time between sending out BGP routing updates. This is a value between 0, and 600 seconds. The default value is zero (0) seconds.
`description` *`description-string`*	Specify a BGP neighbor description.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	Parameters `next-hop-self` and `password` added.
Version 2.2.2	The parameters `ebgp-multihop`, and `update-source vrouter` added.
Version 2.2.3	The parameters `prefix-list-in`, and `prefix-list-out` added. The parameters `override-capability`, `soft-reconfig-inbound`, `max-prefix`, and `max-prefix-warn` added.
Version 2.2.6	The parameter `bfd|no-bfd` added.
Version 2.3.1	The parameter `multi-protocol` added.
Version 2.4	The parameters `weight` and `default-originate` added. The parameters `neighbor-keepalive-interval`, `neighbor-holdtime`, `route-map-in vrouter`, and `route-map-out vrouter` added. The options, `ipv4-multicast|ipv6-multicast| vpnv4-unicast`, are deprecated for `multi-protocol`.
Version 2.4.1	The options, `ipv4-multicast|ipv6-multicast| vpnv4-unicast`, are deprecated for `multi-protocol`.
Version 2.5.2	The parameter `allowas-in|no-allowas-in`

	added.
Version 2.6.2	The parameters `bfd-multihop` and `interface` added.
Version 3.0.2	The parameter `connection-retry-interval` added.
Version 3.1.0	The parameter `advertisement-interval` added.
Version 5.1.3	The parameter `l3-port` added.
Version 6.0.0	The parameter `description` added.
Version 6.0.0	The parameter `update-source-interface` added.
Version 6.1.0	The parameters `local-as`, `no-prepend`, `replace-as` added. The option `l2vpn-evpn` added under `multi-protocol` parameter.
Version 6.1.1	The parameter `unnumbered-interop|no-unnumbered-interop` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide tenants with a vRouter service that forwards traffic between networks, and implements Layer 4 protocols. Use this command to add BGP to the vRouter service.

Examples To add BGP to the vRouter service, BGP-vService, the neighbor IP address of 209.75.183.3, remote AS 45, and network address of 172.26.21.7/32, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-add vrouter-name BGP-
vService neighbor 209.75.183.3 remote-as 45 network 172.26.21.7/32
```

vrouter-bgp-aggregate-address-add

This command adds a BGP aggregate address to a vRouter.

Syntax `vrouter-bgp-aggregate-address-add`

`vrouter-name` *`name-string`*	Specify the name of the service configuration.
Specify the following bgp-aggregate-address arguments:	
`network` *`ip-address`*	Specify an IP address for BGP aggregate address.
`netmask` *`netmask`*	Specify the netmask for BGP aggregate address.
`[ vrf vrouter vrf vrf | default ]`	Specify the name of the VRF.
`[ as-set true|false ]`	Specifies to generate AS set path information.
`[ summary-only true|false ]`	Specifies to filter more specific routes from updates.
`[ matching-MED-only true|false ]`	Specifies the only aggregate routes with matching MED.
`[ origin none|egp|igp|incomplete ]`	Specifies the origin code of BGP prefix.
`[ route-map` *`vrouter route-map name ]`*	Specifies the route map to aggregate network.
`[ suppress-map` *`vrouter route-map name ]`*	Specifies to suppress the selected more specific routes.

Defaults None

Access Network Administrator

History

Version 7.0.2	Command introduced.

Usage Use this command to add a BGP aggregate address.

Examples To add a BGP aggregate address, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-aggregate-address-add
```

vrouter-bgp-aggregate-address-modify

This command modifies a BGP aggregate address on a vRouter.

Syntax `vrouter-bgp-aggregate-address-modify`

`vrouter-name` *`name-string`*	Specify the name of the service configuration to be modified.
Specify the following bgp-aggregate-address arguments:	
`network` *`ip-address`*	Specify an IP address for BGP aggregate address.
`netmask` *`netmask`*	Specify the netmask for BGP aggregate address.
Specify one or more of the following options:	
`[ vrf vrouter vrf vrf | default ]`	Specify the name of the VRF.
`[ as-set true|false ]`	Specifies to generate AS set path information.
`[ summary-only true|false ]`	Specifies to filter more specific routes from updates.
`[ matching-MED-only true|false ]`	Specifies the only aggregate routes with matching MED.
`[ origin none|egp|igp|incomplete ]`	Specifies the origin code of BGP prefix.
`[ route-map` *`vrouter route-map name ]`*	Specifies the route map to aggregate network.
`[ suppress-map` *`vrouter route-map name ]`*	Specifies to suppress the selected more specific routes.

Defaults None

Access Network Administrator

History

Version 7.0.2	Command introduced.

Usage Use this command to modify a BGP aggregate address.

Examples To modify a BGP aggregate address, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-aggregate-address-modify
```

vrouter-bgp-aggregate-address-remove

This command removes a BGP aggregate address from a vRouter.

Syntax `vrouter-bgp-aggregate-address-remove`

`vrouter-name` *`name-string`*	Specify the name of the service configuration.
Specify the following bgp-aggregate-address arguments:	
`network` *`ip-address`*	Specify an IP address for BGP aggregate address.
`netmask` *`netmask`*	Specify the netmask for BGP aggregate address.
`[ vrf vrouter vrf vrf | default ]`	Specify the name of the VRF.
`[ as-set true|false ]`	Specifies to generate AS set path information.
`[ summary-only true|false ]`	Specifies to filter more specific routes from updates.
`[ matching-MED-only true|false ]`	Specifies the only aggregate routes with matching MED.
`[ origin none|egp|igp|incomplete ]`	Specifies the origin code of BGP prefix.
`[ route-map` *`vrouter route-map name ]`*	Specifies the route map to aggregate network.
`[ suppress-map` *`vrouter route-map name ]`*	Specifies to suppress the selected more specific routes.

Defaults None

Access Network Administrator

History

Version 7.0.2	Command introduced.

Usage Use this command to remove a BGP aggregate address.

Examples To remove a BGP aggregate address from a vRouter, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-aggregate-address-remove
```

vrouter-bgp-aggregate-address-show

This command is used to display a BGP aggregate address on a vRouter.

Syntax `vrouter-bgp-aggregate-address-show`

`vrouter-name` *`name-string`*	Specify the name of the service configuration.
Specify the following bgp-aggregate-address arguments:	
`network` *`ip-address`*	Specify an IP address for BGP aggregate address.
`netmask` *`netmask`*	Specify the netmask for BGP aggregate address.
`[ vrf vrouter vrf vrf | default ]`	Specify the name of the VRF.
`[ as-set true|false ]`	Specifies to generate AS set path information.
`[ summary-only true|false ]`	Specifies to filter more specific routes from updates.
`[ matching-MED-only true|false ]`	Specifies the only aggregate routes with matching MED.
`[ origin none|egp|igp|incomplete ]`	Specifies the origin code of BGP prefix.
`[ route-map` *`vrouter route-map name ]`*	Specifies the route map to aggregate network.
`[ suppress-map` *`vrouter route-map name ]`*	Specifies to suppress the selected more specific routes.

Defaults None

Access Network Administrator

History

Version 7.0.2	Command introduced.

Usage Use this command to display a BGP aggregate address.

Examples To display a BGP aggregate address, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-aggregate-address-show
vrouter-name network       vrf      as-set summary-only matching-MED-only origin
route-map  suppress-map
------------ ------------ ------- ------ ------------ ----------------- ------
--------- ------------
vr3          10.0.48.0/21 default false  true         false             none
vr3          10.0.56.0/21 default false  true         false             none
```

vrouter-bgp-modify

This command modifies Border Gateway Protocol (BGP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax `vrouter-bgp-modify`

`vrouter-name` *`name-string`*	Specify a name for the vRouter service.
Specify the following BGP arguments:	
`neighbor` *`ip-address`*	Specify a neighbor IP address to use for BGP filtering.
`l3-port` *`l3port-usable-port name`*	Specify the L3 port name for the BGP session.
`vrf vrouter-vrf`	Specify the name of the VRF.
Specify any of the following BGP options:	
`remote-as` *`external|internal|-2..4294967295`*	Specify the remote Autonomous System (AS) number. This is a value between 1, and 4294967295.
`local-as` *`external|internal|-2..4294967295`*	Specify the locally configured AS number. This is a value between 1, and 4294967295.
`next-hop-self|no-next-hop-self`	Specify if the next-hop is the same router or not.
`prepend|no-prepend`	Specify if you want routers to prepend the local AS to AS_PATH advertisements.
`replace-as|no-replace-as`	Specify if you want to prevent routers from appending the globally configured ASN in outbound BGP UPDATEs toward customer networks that are using the "Local AS" mechanism. This option will append the old ASN instead.
`password` *`password-string`*	Specify a password, if desired.
`ebgp-multihop` *`number`*	Specify a value for external BGP to accept or attempt BGP connections to external peers, not directly connected, on the network. This is a value between 1, and 255.
`update-source vrouter` *`loopback-interface ip`*	Specify the source IP address of BGP packets sent by the router. This parameter is required if you want BGP to perform peering over a loopback interface.
`update-source-interface update-source-interface-string`	Specify the interface name of BGP packets. This parameter is required for peering over any interface.

`prefix-list-in vrouter` *`prefix-list name`*	Specify the prefix list to filter traffic inbound.
`prefix-list-out vrouter` *`prefix-list name`*	Specify the prefix list to filter traffic outbound.
`route-reflector-client|no-route-reflector-client`	Specify if a route reflector client is used.
`override-capability|no-override-capability`	Specify if you want to override capability.
`soft-reconfig-inbound|no-soft-reconfig-inbound`	Specify if you want a soft reconfiguration of inbound routes.
`max-prefix` *`max-prefix-number`*	Specify the maximum number of prefixes.
`max-prefix-warn-only|no-max-prefix-warn-only`	Specify if you want a warning message when the maximum number of prefixes is exceeded.
`bfd|no-bfd`	Specify if you want BFD protocol support for fault detection.
`bfd-multihop|no-bfd-multihop`	Specify if you want to always use BFD multihop port for fault detection.
`multi-protocol ipv4-unicast|ipv6-unicast|l2vpn-evpn`	Specify a multi-protocol for BGP.
`weight none`	Specify a default weight value between 0, and 65535 for the neighbor routes.
`default-originate| no-default-originate`	Specify if you want to announce default routes to the neighbor or not.
`neighbor-keepalive-interval` *`seconds`*	Specify the BGP keepalive interval in seconds. This is a value between 0, and 65535 seconds.
`neighbor-holdtime` *`seconds`*	Specify the BGP neighbor hold time in seconds. This is a value between 0, and 65535 seconds.
`connect-retry-interval` *`seconds`*	Specify the interval between retrying a connection. The interval can be from 0 to 65535 seconds.
`unnumbered-interop|no-unnumbered-interop`	Specify to enable interoperability between different NetVisor versions for unnumbered BGP neighbors. This option sends both link local address, and the global next hop address even if they are the same.
`route-map-in vrouter` *`route-map name`*	Specify the name of the route map for incoming routes.
`route-map-out vrouter` *`route-map name`*	Specify the name of the route map for outgoing routes.

`interface` *`vrouter interface nic`*	Specify the interface to reach the neighbor.
`no-route-map-in`	Specify if you want to remove an ingress route-map from a BGP neighbor
`no-route-map-out`	Specify if you want to remove an egress route-map from a BGP neighbor
`advertisement-interval` *`seconds`*	Specify the minimal time between sending out BGP routing updates. This is a value between 0, and 600 seconds. The default value is zero (0) seconds.
`description` *`description-string`*	Specify a BGP neighbor description.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	Parameters `next-hop-self` and `password` added.
Version 2.2.2	The parameters `ebgp-multihop`, and `update-source vrouter` added.
Version 2.2.3	The parameters `prefix-list-in`, and `prefix-list-out` added. The parameters `override-capability`, `soft-reconfig-inbound`, `max-prefix`, and `max-prefix-warn` added.
Version 2.2.6	The parameter `bfd|no-bfd` added.
Version 2.3.1	The parameter `multi-protocol` added.
Version 2.4	The parameters `weight` and `default-originate` added. The parameters `neighbor-keepalive-interval`, `neighbor-holdtime`, `route-map-in vrouter`, and `route-map-out vrouter` added. The options `ipv4-multicast|ipv6-multicast| vpnv4-unicast` are deprecated for `multi-protocol`.
Version 2.4.1	The options `ipv4-multicast|ipv6-multicast| vpnv4-unicast` are deprecated for `multi-protocol`.
Version 2.6.2	The parameters `bfd-multihop` and `interface` added.
Version 3.0.2	The parameter `connection-retry-interval` added.

Version 3.1.0	The parameters `advertisement-interval`, `no-route-map-in`, and `no-route-map-out` added.
Version 5.1.3	The parameter `l3-port` added.
Version 6.0.0	The parameter `description` added.
Version 6.0.1	The parameter `update-source-interface` added.
Version 6.1.0	The parameters `local-as`, `no-prepend`, and `replace-as` added. The option `l2vpn-evpn` added to the `multi-protocol` parameter.
Version 6.1.1	The parameter `unnumbered-interop|no-unnumbered-interop` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements Layer 4 protocols. Use this command to modify BGP configurations on the vRouter service.

Examples To modify BGP to the vRouter service, BGP-vService, the neighbor IP address of 209.75.183.3, remote AS 45, and network address of 172.26.21.7/32, password, st@rsh1p, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-modify vrouter-name BGP-
vService neighbor 209.75.183.3 remote-as 45 password
password:********
```

vrouter-bgp-neighbor-show

This command displays information about Border Gateway Protocol (BGP) neighbors.

Syntax `vrouter-bgp-neighbor-show`

`vrouter-name` *`name-string`*	Specifies the name of the vRouter.
Specifies the following BGP neighbor arguments:	
`neighbor` *`ip-address`*	Specifies the IP address of the neighbor.
`l3-port l3-port-number`	Specifies the Layer 3 port used for BGP.
`ver` *`ver-number`*	Specifies the BGP version.
`remote-as` *`remote-as-number`*	Specifies the AS number of the remote connection.
`msg_rcvd` *`msg_rcvd-number`*	Specifies the number of messages received from the receive socket buffer.
`msg_sent` *`msg_sent-number`*	Specifies the number of messages written to the transmit socket buffer.
`tblver` *`tblver-number`*	Specifies the version of the routing table.
`inQ` *`inQ-number`*	Specifies the number of BGP packets queued for a neighbor.
`outQ` *`outQnumber`*	Specifies the number of BGP packets queued for transmission to a neighbor.
`up/down` *`up/down-string`*	Specifies the current state of BGP neighbor. It indicates duration of time for which the BGP session has been in the Established state.
`state/pfxrcd` *`state/pfxrcd-string`*	Specifies the current state of the BGP session and the number of prefixes received from a neighbor. The state can be any of the following types: • 1 — Idle • 2 — Connect • 3 — Active • 4 — OpenSent • 5 — OpenConfirm • 6 — Established
`remote-router` *`remote-router-string`*	Specifies the neighbor router name.
`multi-protocol ipv4-unicast|ipv6-unicast|l2vpn-evpn`	Specify a multi-protocol for BGP.
`description` *`description-string`*	Specify a BGP neighbor description.
`vrf` *`vrf`*	Specify the name of VRF.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.4.1	The parameter, `remote-router`, added.
Version 5.1.3	The parameter, `l3-port`, added.
Version 6.0.0	The parameter, `description`, added.
Version 6.1.0	The option, `l2vpn-evpn`, added to the `multi-protocol` parameter.

Usage Use this command to display information about BGP neighbors configured on a vRouter.

Examples To display all information about BGP neighbors, use the following command:

CLI network-admin@switch > vrouter-bgp-neighbor-show

```
vrouter-name  neighbor       ver  remote-as  msg_rcvd  msg_sent  up/down   state/pfxrcd  remote-router
description  vrf
------------  ------------  ---  ---------  --------  --------  --------  ------------  ---------------
-----------  ---
switch        172.16.0.33  4   64512     171      176      02:36:36 13           vrouter-spine-1
```

Additional Information As indicated in the above output, refer below details:

- The **up/down** value displays the time duration **02:36:36** (hh:mm:ss format) for which the neighbor has stayed *UP*. The time duration implies that the session is *UP* and if the session is *DOWN* it, the value displayed is **never**.

- Once the BGP neighbor is up, by default, the state is set to Established mode & **state/pfxrcd** displays the number of prefixes (in the output above, 13) received by the switch from its neighbor. When the maximum prefix number set by the neighbor is reached, the string "**PfxRcd**" appears in the entry and the neighbor is shut *DOWN*. This will set the connection to **Idle** state.

vrouter-bgp-neighbor-failed-show

This command displays BGP neighbor failed summary.

Syntax `vrouter-bgp-neighbor-failed-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specifies the following BGP neighbor arguments:	
`neighbor` *`bgp-neighbor`*	The IP address of the BGP neighbor.
`l3-port` *`l3-port-number`*	The Layer 3 port used for BGP.
`nic` *`nic-string`*	The NIC name.
`remote-router` *`remote-router-string`*	The remote router name.
`vrf` *`vrf-vrouter`*	Name of the VRF.

Defaults None

Access CLI

History

Usage Use this command to display information about failed BGP neighbors.

Examples To display information about failed BGP neighbors, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-neighbor-failed-show
```

vrouter-bgp-remove

This command removes Border Gateway Protocol (BGP) from a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax `vrouter-bgp-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
Specify the following BGP arguments:	
`ip` *`ip-address`*	Specify the IP address of the route to remove from the vRouter. This is either the neighbor IP address or network IP address.
`l3-port` *`l3port-usable-port-name`*	Specify the Layer 3 port to remove from the vrouter.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 5.1.3	Parameter `l3-port` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements Layer 4 protocols. Use this command to remove BGP to the vRouter service.

Examples To remove the neighbor BGP route from the vRouter service, BGP-vService, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-remove vrouter-name BGP-
vService name 209.75.183.3
```

vrouter-bgp-neighbor-detail-show

This command displays detailed information about Border Gateway Protocol (BGP) neighbors.

Syntax `vrouter-bgp-neighbor-detail-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
The following BGP neighbor arguments:	
`neighbor vrouter` *`bgp-neighbor neighbor`*	The IP address of the neighbor.
`l3-port` *`l3-port-number`*	The Layer 3 port number.
`remote-as` *`remote-as-number`*	The AS number of the remote connection.
`local-as local-as-number`	The number local AS .
`remote-id ip-address`	The neighbor router ID.
`state idle|connect|active|open-sent| open-confirm|established|clearing`	The current state of the BGP session. The state can be any of the following types: • 1 — Idle • 2 — Connect • 3 — Active • 4 — OpenSent • 5 — OpenConfirm • 6 — Established
`up-for up-for-string`	The time of an active connection.
`last-read` *`last-read-string`*	The time of the last message received.
`holdtime` *`holdtime-number (s)`*	The holdtime in seconds.
`keepalive` *`keepalive-number (s)`*	The keepalive interval in seconds.
`min-adv` *`min-adv-number (s)`*	The minimum advertisement level in seconds.
`open-sent` *`open-sent-number`*	The number of open messages sent.
`open-rcvd` *`open-rcvd-number`*	The number of open messages received.
`notif-sent` *`notif-sent-number`*	The number of notification messages sent.
`notif-rcvd` *`notif-rcvd-number`*	The number of notification messages received.
`update-sent` *`update-sent-number`*	The number of update messages sent.
`update-rcvd` *`update-rcvd-number`*	The number of update messages received.
`keepalive-sent` *`keepalive-sent-number`*	The number of keepalive messages sent.
`keepalive-rcvd` *`keepalive-rcvd-number`*	The number of keepalive messages received.

`comm-attr-send-ipv4 both|standard|extended`	The type of community attribute send to this neighbor for IPv4.
`prefix-accepted-ipv4` *`prefix-accepted-ipv4-number`*	The number of prefixes accepted for IPv4 unicast.
`comm-attr-send-ipv6 both|standard|extended`	Specifies the type of community attribute send to this neighbor for IPv6 unicast.
`prefix-accepted-ipv6` *`prefix-accepted-ipv6-number`*	Specifies number of prefixes accepted for IPv6 unicast.
`conn-established` *`conn-established-number`*	The number of times a session has been successfully established.
`conn-dropped` *`conn-dropped-number`*	The number of times a session has failed or taken down.
`last-reset` *`last-reset-string`*	The time since the session was last reset.
`start-due` *`start-due-number (s)`*	The next start timer due in seconds.
`connect-due` *`connect-due-number (s)`*	The next connect timer due in seconds.

Defaults None

Access CLI

History

Version 3.0.0	Command introduced.
Version 5.1.3	The parameter `l3-port` added.

Usage Use this command to display detailed information about BGP neighbors configured on a vRouter.

Examples To display all information about BGP neighbors, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-neighbor-detail-show
```

vrouter-bgp-show

This command displays Border Gateway Protocol (BGP) information for a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax `vrouter-bgp-show`

`vrouter-name` *`name-string`*	Name for the vRouter service.
The following BGP arguments:	
`neighbor` *`ip-address`*	The neighbor IP address to use for BGP filtering.
`l3-port` *`l3port-usable-port name`*	The L3 port name for the BGP session.
`remote-as` *`external|internal|-2..4294967295`*	The remote Autonomous System (AS) number. This is a value between 1, and 4294967295.
`local-as` *`external|internal|-2..4294967295`*	The locally configured AS number. This is a value between 1, and 4294967295.
`vrf` *`vrouter-vrf`*	Name of the VRF.
`next-hop-self|no-next-hop-self`	Specify if the next-hop is the same router or not.
`prepend|no-prepend`	Specify if you want routers to prepend the local AS to AS_PATH advertisements.
`replace-as|no-replace-as`	Specify if you want to prevent routers from appending the globally configured ASN in outbound BGP UPDATEs toward customer networks that are using the "Local AS" mechanism. This option will append the old ASN instead.
`password` *`password-string`*	The password.
`ebgp-multihop` *`number`*	Specify a value for external BGP to accept or attempt BGP connections to external peers, not directly connected, on the network. This is a value between 1, and 255.
`update-source vrouter` *`loopback-interface ip`*	The source IP address of BGP packets sent by the router. This parameter is required if you want BGP to perform peering over a loopback interface.
`update-source-interface` *`update-source-interface-string`*	The source interface of BGP packets sent by the router. This parameter is required for peering over any interface.
`prefix-list-in vrouter` *`prefix-list name`*	The prefix list to filter traffic inbound.
`prefix-list-out vrouter` *`prefix-list name`*	The prefix list to filter traffic outbound.

`route-reflector-client|no-route-reflector-client`	Specify if a route reflector client is used.
`override-capability|no-override-capability`	Specify if you want to override capability.
`soft-reconfig-inbound| no-soft-reconfig-inbound`	Specify if you want a soft reconfiguration of inbound routes.
`max-prefix` *`max-prefix-number`*	The maximum number of prefixes.
`max-prefix-warn-only| no-max-prefix-warn-only`	Specify if you want a warning message when the maximum number of prefixes is exceeded.
`bfd|no-bfd`	Specify if you want BFD protocol support for fault detection.
`bfd-multihop|no-bfd-multihop`	Specify if you want to always use BFD multihop port for fault detection.
`multi-protocol ipv4-unicast|ipv6-unicast|l2vpn-evpn`	Specify a multi-protocol for BGP.
`weight none|`*`weight`*	Specify a default weight value between 0, and 65535 for the neighbor routes.
`default-originate| no-default-originate`	Specify if you want to announce default routes to the neighbor or not.
`neighbor-keepalive-interval` *`seconds`*	The BGP keepalive interval in seconds. This is a value between 0, and 65535 seconds.
`neighbor-holdtime` *`seconds`*	The BGP neighbor hold time in seconds. This is a value between 0, and 65535 seconds.
`connect-retry-interval` *`seconds`*	The interval between retrying a connection. The interval can be from 0 to 65535 seconds.
`unnumbered-interop|no-unnumbered-interop`	Specify to enable interoperability between different NetVisor versions for unnumbered BGP neighbors. This option sends both link local address, and the global next hop address even if they are the same.
`route-map-in vrouter` *`route-map name`*	Name of the route map for incoming routes.
`route-map-out vrouter` *`route-map name`*	Name of the route map for outgoing routes.
`allowas-in|no-allowas-in`	Specify if you want to reject routes with local AS in AS_PATH. Normally, when you do not set this option, nodes reject routes containing their own AS which helps prevent routing loops. However, in some cases nodes that belong to the same AS have no direct connectivity; for example when you form clusters, and choose not to use the cluster link for iBGP communication. In

	this case the only way to direct routes through connected eBGP neighbors is to set this option so that routes are not rejected from the cluster peer.
`interface` *`vrouter interface nic`*	The interface to reach the neighbor.
`advertisement-interval` *`seconds`*	The minimal time between sending out BGP routing updates. This is a value between 0, and 600 seconds. The default value is zero (0) seconds.
`description` *`description-string`*	The BGP neighbor description.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.2	Parameters `next-hop-self` and `password` added.
Version 2.2.2	The parameters `ebgp-multihop`, and `update-source vrouter` added.
Version 2.2.3	The parameters `prefix-list-in` and `prefix-list-out` added. The parameters `override-capability`, `soft-reconfig-inbound`, `max-prefix`, and `max-prefix-warn` added.
Version 2.2.6	The parameters `bfd|no-bfd` added.
Version 2.3.1	The parameter `multi-protocol` added.
Version 2.4	The parameters `weight` and `default-originate` added. The parameters `neighbor-keepalive-interval`, `neighbor-holdtime`, `route-map-in vrouter`, and `route-map-out vrouter` added.
Version 2.4.1	The options `ipv4-multicast|ipv6-multicast| vpnv4-unicast` are deprecated for `multi-protocol`.
Version 2.5.2	The parameter `allowas-in|no-allowas-in` added.
Version 2.6.2	The parameters `bfd-multihop` and `interface` added.
Version 3.0.2	The parameter `connection-retry-interval`

	added.
Version 3.1.0	The parameter `advertisement-interval` added.
Version 5.1.2	The parameter `l3-port` added.
Version 6.0.0	The parameter `description` added.
Version 6.0.1	The parameter `update-source-interface` added.
Version 6.1.0	The parameters `local-as`, `no-prepend`, `replace-as` added. The option `l2vpn-evpn` to the `multi-protocol` parameter.
Version 6.1.1	The parameter `unnumbered-interop|no-unnumbered-interop` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements Layer 4 protocols. Use this command to display information about BGP on the vRouter service.

Examples To display abridged BGP vRouter service information, use the following command:

```
CLI (network-admin@switch) > vrouter-bgp-show format neighbor,remote-as,update-
       source,multi-protocol
vrouter-name   neighbor     remote-as update-source multi-protocol
-------------- ------------ --------- ------------- --------------
vrouter-bgw-11 172.16.0.161 64311     ipv4-unicast
vrouter-bgw-11 172.16.2.161 64312     ipv4-unicast
vrouter-bgw-11 172.16.4.161 64313     ipv4-unicast
vrouter-bgw-11 172.16.6.161 64314     ipv4-unicast
vrouter-bgw-11 172.16.133.2 64518     ipv4-unicast
vrouter-bgw-11 101.1.1.1    60000     ipv4-unicast
vrouter-bgw-11 172.16.134.1 66611     172.16.133.1  l2vpn-evpn
vrouter-bgw-11 172.16.134.2 66611     172.16.133.1  l2vpn-evpn
```

vrouter-bgp-neighbor-reset

This command is used to reset a BGP neighbor in the configuration.

Syntax `vrouter-bgp-neighbor-reset`

`vrouter-name` *`name-string`*	Specify the name of the vRouter to reset.
`neighbor` *`ip-address`*	Specify the IP address of the BGP neighbor.
`l3-port`	Specify the Layer 3 port.
`vrf` *`vrf-name`*	Specify the name of the VRF.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 5.2.0	The parameter `l3-port` added.

Usage Use this command to reset a BGP neighbor on the network.

Examples To reset the BGP neighbor with the IP address, 10.9.31.234, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-neighbor-reset  neighbor
10.9.31.234
```

vrouter-bgp-neighbor-shutdown

This command is used to send BGP an admin-down notification message to a BGP peer.

Syntax `vrouter-bgp-neighbor-shutdown`

`vrouter-name name-string`	Specify the name of the vRouter to reset.
`neighbor` *`ip-address`*	Specify the IP address of the BGP neighbor.
`l3-port` *`l3-port-number`*	Specify the Layer 3 port.

Defaults None

Access CLI

History

Version 2.6.2	Command introduced.
Version 5.2.0	The parameter `l3-port` added.

Usage Use this command to end BGP admin-down notification message to a BGP peer.

Examples To end BGP admin-down notification message to a BGP peer with the IP address, 10.9.31.234, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-neighbor-shutdown  vrouter
bgp-2 neighbor 10.9.31.234
```

vrouter-bgp-neighbor-no-shutdown

This command is used to send BGP an admin-down notification message to a BGP peer.

Syntax `vrouter-bgp-neighbor-shutdown`

`vrouter-name name-string`	Specify the name of the vRouter to reset.
`neighbor` *`ip-address`*	Specify the IP address of the BGP neighbor.

Defaults None

Access CLI

History

`Version 2.6.2`	Command introduced.
`Version 5.2.0`	The parameter `l3-port` added.

Usage Use this command to send BGP admin-down notification message to a BGP peer.

Examples To send BGP admin-down notification message to a BGP peer with the IP address, 10.9.31.234, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-neighbor-no-shutdown
vrouter bgp-2 neighbor 10.9.31.234
```

vrouter-bgp-network-remove

This command remove a BGP network for a vRouter service.

Syntax `vrouter-bgp-network-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter to add the BGP network.
`network` *`ip-address`*	Specify the IP address to add to the vRouter.
`netmask` *`netmask`*	Specify the netmask for the IP address.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to remove a BGP network for a vRouter service.

Examples To remove the vRouter, BGP-net, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-network-remove  vrouter-
name  BGP-net
```

vrouter-bgp-network-show

This command displays a BGP network for a vRouter service.

Syntax `vrouter-bgp-network-show`

`vrouter-name` *`name-string`*	Specify the name of the vRouter to add the BGP network.
`network` *`ip-address`*	Specify the IP address to add to the vRouter.
`netmask` *`netmask`*	Specify the netmask for the IP address.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to display a BGP network for a vRouter service.

Examples To display the vRouter, BGP-net, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-network-show  vrouter-name
BGP-net
```

vrouter-bgp-neighbor-reset-all

This command is used to reset the up/down counters for all BGP neighbors in a configuration.

Syntax `vrouter-bgp-neighbor-reset-all`

`vrouter-name` *`name-string`*	Specify the name of the vRouter to reset.
`vrf` *`vrf-name`*	Specify the name of the VRF.

Defaults None

Access CLI

History

Version 6.0.1	Command introduced.

Usage Use this command to reset the up/down counters for all BGP neighbors in a network.

Examples To reset the up/down counters of BGP neighbors for the vRouter `vr1` in VRF `vrf1`, use the following syntax:

```
CLI (network-admin@switch)1 > vrouter-bgp-neighbor-reset-all
vrouter-name vr1 vrf vrf1
```

vrouter-bgp-network-add

This command adds a BGP network to a vRouter service.

Syntax `vrouter-bgp-network-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter to add the BGP network.
`network` *`ip-address`*	Specify the IP address to add to the vRouter.
`netmask` *`netmask`*	Specify the netmask for the IP address.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to add a BGP network to a vRouter service.

Examples To add the IP address 172.16.21.35/32 to vRouter, BGP-net, use the following syntax:

```
CLI (network-admin@switch) > vrouter-bgp-network-add  vrouter-name
BGP-net network 172.16.21.35 netmask 32
```

vrouter-cached-routes-show

This command is used to display the cached routes for a vRouter.

Syntax `vrouter-cached-routes-show`

`vrid` *`vrid-number`*	Specifies the vRouter ID.
`ip` *`ip-address`*	Enter the IP address.
`prelen` *`prelen-number`*	Specifies the length of the prefix.
`vnet` *`vnet-name`*	Specifies the vNET of the router.
`vlan` *`vlan-number`*	Specifies the VLAN number.
`vxlan` *`vxlan-number`*	Specifies the VXLAN number.
`nexthop` *`ip-address`*	Specifies the IP address for the next hop on the route.
`age-in-seconds` *`age-in-seconds-number`*	Specifies the age of the cached route.
`index` *`index-number`*	Specifies the interface index number in the zone or container.

Defaults None

Access CLI

History

Version 2.1	Command introduced.
Version 2.2.3	The parameter `ecmp-group` deprecated.
Version 2.2.5	The parameter `age-in-seconds` added.
Version 2.4.1	The parameter `vnet` added.
Version 2.6.2	The parameter `index` added.

Usage Use this command to display cached routes which can be helpful when troubleshooting a connection.

Examples To display cached routes, use the following command:

```
CLI (network-admin@switch) > vrouter-cached-routes-show
```

vrouter-community-list-remove

A community is a group of prefixes that share some common property, and can be configured with the BGP community attribute. The BGP Community attribute is an optional transitive attribute of variable length. The attribute consists of a set of four octet values that specify a community.

This command is used to remove BGR community lists.

Syntax `vrouter-community-list-remove`

`vrouter-name` *`name-string`*	Specify a vRouter to add the community list.
Add the following community list parameters:	
`style standard|expanded`	Specify the style of the community list.
`name` *`name-string`*	Specify a name for the community list.
`action permit|deny`	Specify the action for the community list.
`community-attribute` *`community-attribute-string`*	Specify the community attribute.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove BGP community lists.

Examples To add a community list, use the following syntax:

```
CLI (network-admin@switch) > vrouter-community-list-remove vrouter
VR1 style standard BGP-Comm permit
```

vrouter-community-list-show

A community is a group of prefixes that share some common property, and can be configured with the BGP community attribute. The BGP Community attribute is an optional transitive attribute of variable length. The attribute consists of a set of four octet values that specify a community.

This command is used to display BGR community lists.

Syntax `vrouter-community-list-show`

`vrouter-name` *`name-string`*	The vRouter to be added to the community list.
Add the following community list parameters:	
`style standard|expanded`	The style of the community list.
`name` *`name-string`*	Name for the community list.
`action permit|deny`	The action for the community list.
`community-attribute` *`community-attribute-string`*	The community attribute.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display BGP community lists.

Examples To add a community list, use the following syntax:

```
CLI (network-admin@switch) > vrouter-community-list-show
```

vrouter-community-list-add

A community is a group of prefixes that share some common property, and can be configured with the BGP community attribute. The BGP Community attribute is an optional transitive attribute of variable length. The attribute consists of a set of four octet values that specify a community.

This command is used to add BGR community lists.

Syntax `vrouter-community-list-add`

`vrouter-name` *`name-string`*	Specify a vRouter to add the community list.
Add the following community list parameters:	
`style standard|expanded`	Specify the style of the community list.
`name` *`name-string`*	Specify a name for the community list.
`action permit|deny`	Specify the action for the community list.
`community-attribute` *`community-attribute-string`*	Specify the community attribute.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add BGP community lists.

Examples To add a community list, use the following syntax:

```
CLI (network-admin@switch) > vrouter-community-list-add vrouter VR1
style standard BGP-Comm permit
```

vrouter-create

This command creates a new virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax `vrouter-create`

`name` *`name-string`*	Specify the name of the vRouter.
`vnet` *`vnet-name`*	Specify the name of the VNET.
`router-typehardware|software`	Specify if the vrouter uses hardware or software. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
Any of the following options:	
`shared-vnet-mgr` *`vnet-manager name`*	Specifies the VNET manager to share with if this is a shared service
`disable|enable`	Specify to enable or disable the vRouter service.
`location` *`fabric-node name`*	Specify the location of the service.
`storage-pool` *`storage-pool-name`*	Specify the storage pool.
`router-ipstack quagga|frr`	Specify the vRouter IP stack.
`evpn-border|no-evpn-border`	Specify to enable or disable EVPN border gateway.
`evpn-dup-addr-max-moves` *`2..1000`*	Specify the maximum number of EVPN duplicate address moves. The default value is 5.
`evpn-dup-addr-moves-duration` *`2..1800`*	Specify the EVPN duplicate address move time duration. The default vale is 180s.
`evpn-dup-addr-freeze none| permanent|`*`-1..3600`*	EVPN duplicate address freeze duration (seconds). The default value is 180s. By default, if 5 MAC moves are detected in a 180s time window, the duplicate MAC address entry is frozen for 180s.
`cluster-active-active-routing|no-cluster-active-active-routing`	Specify active-active routing with or without VRRP.
`hw-vrrp-id` *`hw-vrrp-id-number`*	Specifies the VRRP ID for a hardware router.
`bgp-as` *`bgp-as-number`*	Specify the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).
`router-id` *`ip-address`*	Specify the vRouter IP address
`proto-multi none|pim-ssm`	Specify the optional multicast protocol for the vRouter service. Select none, Vector Multicast Routing Protocol (VMRP), or Protocol Independent Multicast-source specific mode (PIM-SIM).

`bgp-redistribute static|connected|rip|ospf`	Specify how BGP routes are redistributed.
`bgp-redist-static-metric none`	Specify a static metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.
`bgp-redist-connected-metric none`	Specify a connected metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.
`bgp-redist-rip-metric none`	Specify a RIP metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.
`bgp-redist-ospf-metric none`	Specify a OSPF metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.
`bgp-cluster-id` *`ip-address`*	Specify an IP address for a BGP cluster.
`bgp-max-paths` *`bgp-max-paths-number`*	Specify the maximum number of paths for BGP. This is a number between 1 and 255 or 0 to unset.
`bgp-ibgp-multipath` *`bgp-ibgp-multipath-number`*	Specify the number of multipaths for BGP. This is a number between 1 and 255 or 0 to unset.
`bgp-bestpath-as-path none|ignore`	Specify a parameter for a best path as path.
`bgp-dampening|no-bgp-dampening`	Specify dampening for BGP routes.
`bgp-delayed-startup` *`0..36000`*	Specify if you want to delay forming peer adjacency during bootup. BGP neighbors are not brought up until the timer's expiry. You can specify a value from the range 0 to 36000 seconds. The default value is 0.
`bgp-network-import-check|no-bgp-network-import-check`	Specifies whether BGP network route exists in IGP.
`bgp-update-delay-strict` *`0..3600`*	Specify if you want to to put BGP read-only mode during bootup. BGP neighbors are brought up and receives the peer routes but local routes are not advertised until the timer's expiry. You can specify a value from the range 0 to 3600 seconds. The default value is 0. **Note:** Configuring a non-default value is recommended for L3 spines having more than 10 L3 interfaces.
`bgp-keepalive-interval` *`seconds`*	Specify a BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.

bgp-holdtime *seconds*	Specify a BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
bgp-distance-external *integer*	Specify the BGP distance for routes external to the AS.
bgp-distance-internal *integer*	Specify the BGP distance for routes internal to the AS.
bgp-distance-local *integer*	Specify the BGP distance for routes local to the AS.
bgp-ipv4-unicast|no-bgp-ipv4-unicast	Specify a MP-BGP Control default IPv4 Unicast AFI/SAFI.
rip-redistribute static|connected|ospf|bgp	Specify how RIP routes are redistributed.
vrrp-track-port *port-list*	Specify a port to track a VRRP configuration.
ospf-redistribute static|connected|rip|bgp	Specify how OSPF routes are redistributed.
ospf-redist-static-metric-type 1|2	Specify a static metric type for OSPF route redistribution. This is a number between 0 and 16777214 or 'none' to unset.
ospf-redist-connected-metric none	Specify a connected metric for OSPF route redistribution.
ospf-redist-connected-metric-type 1|2	Specify a connected metric type for OSPF route redistribution.
ospf-stub-router-on-startup|no-ospf-stub-router-on-startup	Specify if you want advertise self as stub router temporary on startup.
ospf-stub-router-on-startup-period *integer*	Specify the time period to advertise self as stub router on startup. This s a value between 5 and 86400 seconds.
ospf-redist-rip-metric none	Specify a RIP metric type for OSPF route redistribution. This is a number between 0 and 16777214 or 'none' to unset.
ospf-redist-rip-metric-type 1|2	Specify a RIP metric type for OSPF route redistribution.
ospf-redist-bgp-metric none	Specify a BGP metric type for OSPF route redistribution. This is a number between 0 and 16777214 or 'none' to unset.
ospf-redist-bgp-metric-type 1|2	Specify a BGP metric type for OSPF route redistribution.
ospf6-redistribute static|connected|bgp4	Specify if you want to redistribute OSPF6 routes.

`ospf-distance-external` *`integer`*	Specify the OSPF distance for routes external to the AS.
`ospf-distance-internal` *`integer`*	Specify the OSPF distance for routes internal to the AS.
`ospf-distance-local` *`integer`*	Specify the OSPF distance for routes local to the AS.
`ospf-stub-router-on-startup|no-ospf-stub-router-on-startup`	Specify if you want the OSPF router to act as a stub router at startup.
`ospf-stub-router-on-startup-period` *`seconds`*	Specify the time period for the OSPF stub router in seconds. You can configure from 5 to 86400 seconds.
`ospf-bfd-all-if|no-ospf-bfd-all-if`	Specify if you want to use BFD protocol for fault detection on all OSPF interfaces.
`ospf-default-information none| originate|always`	Specify if you want to control origination of default route.
`ospf-default-info-originate-metric none`	Specify the metric for OSPF origination of default route.
`ospf-default-info-originate-metric-type 1|2`	Specify the metric type for OSPF origination of default route.
`ospf6-redist-static-metric none`	Specify a metric for OSPF6 redistribute of static routes.
`ospf6-redist-static-metric-type 1|2`	Specify a metric type for OSPF6 redistribution of static routes.
`ospf6-redist-connected-metric none`	Specify a metric for OSPF6 redistribution of connected routes.
`ospf6-redist-connected-metric-type 1|2`	Specify a metric type for OSPF6 redistribution.
`ospf-default-information none| originate|always`	Specify how to control the origination of default route.
`ospf-default-info-originate-metric none`	Specify the metric for OSPF origination of default route.
`ospf-default-info-originate-metric-type 1|2`	Specify the metric type for OSPF origination of default route.
`ospf-default-info-originate-route-map vrouter route-map` *`name`*	Specify the route map for OSPF origination of default route.
`vrrp-track-port` *`port-list`*`S`	Specify the ports for VRRP tracking.
`bgp-snmp|no-bgp-snmp`	Enable or disable BGP SNMP MIB.

`bgp-snmp-notification|no-bgp-snmp-notification`	Enable or disable SNMP notifications for BGP MIBs.
`ospf-snmp|no-ospf-snmp`	Enable or disable OSPF SNMP MIB.
`ospf-snmp-notification|no-ospf-snmp-notification`	Enable or disable SNMP notifications for OSPF MIBs.
`ospf6-snmp|no-ospf6-snmp`	Enable or disable OSPFv3 SNMP MIB.
`ospf6-snmp-notification|no-bgp-snmp-notification`	Enable or disable SNMP notifications for OSPFv3 MIBs.
`ip-snmp|no-ip-snmp`	Enable or disable ipForward SNMP MIBs.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify BGP graceful shutdown according to RFE 8326.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.0	Parameter `router-type` added.
Version 2.2	The parameter, `hw-vrrp-id`, added. The parameters, `bgp-redistribute`, `rip-redistribute`, and `ospf-redistribute`, added.
Version 2.2.3	The parameters `bgp-redist` and `ospf-dist` added. The parameter `vrrp-track-port` added. The parameters `bgp-cluster`, `bgp-max-paths`, `bgp-multipath`, `bgp-best-path`, `bgp-dampening`, `bgp-graceful-restart`, and `bgp-stalepath-time` added.
Version 2.3.1	The parameters, `ospf6-`, added.
Version 2.4	The parameters, `ospf-stub-router-on-startup` and `vrrp-track-port` added. The parameters `bgp-scantime`, `bgp-keepalive-interval`, and `bgp-holdtime` added.
Version 2.4.1	The parameter, `bgp-distance-`, and `ospf-distance`, added.

Version 2.5.4	The parameter, `shared-vnet-mgr`, added.
Version 2.6.0	SNMP MIBs for BGP, OSPF, OSPFv3, and ipForward added.
Version 3.0.0	The parameters, `ospf-bfd-all-if`, `ospf-default-information`, `ospf-default-info-originate`, and `ospf-default-info-originate-metric-type` added.
Version 3.1.0	The parameters for route maps added.
Version 5.1.1	The parameter `bgp-graceful-shutdown|no-bgp-graceful-shutdown` is added.
Version 5.1.1	The parameter `bgp-graceful-restart|no-bgp-graceful-restart` is removed.
Version 6.1.0	The parameter `evpn-border|no-evpn-border` added.
Version 6.1.1	The parameters `evpn-dup-addr-max-moves`, `evpn-dup-addr-moves-duration`, `bgp-update-delay-strict` and `evpn-dup-addr-freeze` added.

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command creates a new vRouter service.

Examples To create a vRouter, `MyvService`, for the VNET, `net-ops`, as a shared service, with the IP address of `208.74.182.1`, use the following command:

```
CLI network-admin@switch > vrouter-create name MyvService vnet net-ops shared-vnet-services router-id 208.74.182.1
```

vrouter-delete

This command deletes a virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax `vrouter-delete`

`name` *`name-string`*	Specify the name of the vRouter service.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command deletes a vRouter service.

Examples To delete the vRouter service, `MyvService`, use the following command:

```
CLI (network-admin@switch) > vrouter-delete name MyvService
```

vrouter-modify

This command modifies a virtual router (vRouter) services for a fabric, cluster, or standalone switch.

Syntax `vrouter-modify`

`name` *`name-string`*	Specify the name of the vRouter.
Any of the following options:	
`disable|enable`	Specify to enable or disable the vRouter service.
`gateway` *`ip-address`*	Specify the IP address of the gateway.
`storage-pool` *`storage-pool-name`*	Specify the storage pool.
`evpn-border|no-evpn-border`	Specify to enable or disable EVPN border gateway.
`evpn-dup-addr-max-moves` *`2..1000`*	Specify the maximum number of EVPN duplicate address moves. The default value is 5.
`evpn-dup-addr-moves-duration` *`2..1800`*	Specify the EVPN duplicate address move time duration. The default vale is 180s.
`evpn-dup-addr-freeze none| permanent|`*`-1..3600`*	EVPN duplicate address freeze duration (seconds). The default value is 180s. By default, if 5 MAC moves are detected in a 180s time window, the duplicate MAC address entry is frozen for 180s.
`cluster-active-active-routing|no-cluster-active-active-routing`	Specify if you want active-active routing with or without VRRP.
`hw-vrrp-id` *`hw-vrrp-id-number`*	Specify the VRRP ID assigned to the hardware vRouter.
`bgp-as` *`bgp-as-number`*	Specify the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).
`router-id` *`ip-address`*	Specify the vRouter IP address
`proto-multi none|pim-ssm`	Specify the optional multicast protocol for the vRouter service. Select none or Protocol Independent Multicast-source specific mode (PIM-SSM).
`bgp-redistribute static|connected| rip|ospf`	Specify how BGP routes are redistributed.
`bgp-redist-static-metric none`	Specify a static metric for BGP route redistribution.
`bgp-redist-static-route-map vrouter route-map` *`name`*	Specify the route map for BGP redistribution of static routes.
`bgp-redist-connected-metric none`	Specify a connected metric for BGP route redistribution

`bgp-redist-connected-route-map vrouter route-map name`	Specify the route map for BGP redistribution of connected routes.
`bgp-redist-rip-metric none`	Specify a RIP metric for BGP route redistribution.
`bgp-redist-ospf-metric none`	Specify a OSPF metric for BGP route redistribution.
`bgp-redist-ospf-route-map vrouter route-map` *`name`*	Specify the route map for BGP redistribution of OSPF routes.
`bgp-cluster-id` *`ip-address`*	Specify an IP address for a BGP cluster.
`bgp-max-paths` *`bgp-max-paths-number`*	Specify the maximum number of paths for BGP.
`bgp-ibgp-multipath` *`bgp-ibgp-multipath-number`*	Specify the number of multipaths for BGP.
`bgp-bestpath-as-path none|ignore`	Specify a parameter for a best path as path.
`bgp-dampening|no-bgp-dampening`	Specify dampening for BGP routes.
`bgp-delayed-startup` *`0..36000`*	Specify if you want to delay forming peer adjacency during bootup. BGP neighbors are not brought up until the timer's expiry. You can specify a value from the range 0 to 36000 seconds. The default value is 0.
`bgp-network-import-check|no-bgp-network-import-check`	Specifies whether BGP network route exists in IGP.
`bgp-update-delay-strict` *`0..3600`*	Specify if you want to to put BGP read-only mode during bootup. BGP neighbors are brought up and receives the peer routes but local routes are not advertised until the timer's expiry. You can specify a value from the range 0 to 3600 seconds. The default value is 0. **Note:** Configuring a non-default value is recommended for L3 spines having more than 10 L3 interfaces.
`bgp-keepalive-interval` *`seconds`*	Specify a BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.
`bgp-holdtime` *`seconds`*	Specify a BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
`bgp-distance-external` *`integer`*	Specify the BGP distance for routes external to the AS.
`bgp-distance-internal` *`integer`*	Specify the BGP distance for routes internal to the AS.
`bgp-distance-local` *`integer`*	Specify the BGP distance for routes local to the AS.

`rip-redistribute static|connected| ospf|bgp`	Specify how RIP routes are redistributed.
`ospf-redistribute static|connected| rip|bgp`	Specify how OSPF routes are redistributed.
`vrrp-track-port` *`port-list`*	Specify a port to track a VRRP configuration.
`ospf-redist-static-metric none`	Specify a static route metric type for OSPF route redistribution.
`ospf-redist-static-metric-type 1|2`	Specify a static route metric type for OSPF route redistribution.
`ospf-redist-static-route-map vrouter route-map` *`name`*	Specify the route map for OSPF redistribution of static routes.
`ospf-redist-connected-metric none`	Specify a connected metric type for OSPF route redistribution.
`ospf-redist-connected-metric-type 1|2`	Specify a connected metric type for OSPF route redistribution.
`ospf-redist-connected-route-map vrouter route-map` *`name`*	Specify the route map for OSPF redistribution of connected routes.
`ospf-redist-rip-metric none`	Specify a RIP metric type for OSPF route redistribution.
`ospf-redist-rip-metric-type 1|2`	Specify a RIP metric type for OSPF route redistribution.
`ospf-redist-bgp-metric none`	Specify a BGP metric type for OSPF route redistribution.
`ospf-redist-bgp-metric-type 1|2`	Specify a BGP metric type for OSPF route redistribution.
`ospf-redist-bgp-route-map vrouter route-map` *`name`*	Specify the route map for OSPF redistribution of BGP routes.
`ospf6-redistribute static|connected| bgp4`	Specify if you want to redistribute OSPF6 routes.
`ospf6-redist-static-metric none`	Specify a metric for OSPF6 redistribute of static routes.
`ospf6-redist-static-metric-type 1|2`	Specify a metric type for OSPF6 redistribution of static routes.
`ospf-distance-external` *`integer`*	Specify the OSPF distance for routes external to the AS.
`ospf-distance-internal` *`integer`*	Specify the OSPF distance for routes internal to the AS.

ospf-distance-local *integer*	Specify the OSPF distance for routes local to the AS.
ospf-stub-router-on-startup|no-ospf-stub-router-on-startup	Specify if you want advertise self as stub router temporary on startup.
ospf-stub-router-on-startup-period *integer*	Specify the time period to advertise self as stub router on startup. This s a value between 5 and 86400 seconds.
ospf-bfd-all-if|no-ospf-bfd-all-if	Specify if you want to use BFD protocol for fault detection on all OSPF interfaces.
ospf-default-information none| originate|always	Specify if you want to control origination of default route.
ospf-default-info-originate-metric none	Specify the metric for OSPF origination of default route.
ospf-default-info-originate-metric-type 1|2	Specify the metric type for OSPF origination of default route.
ospf6-redist-connected-metric none	Specify a metric for OSPF6 redistribution of connected routes.
ospf6-redist-connected-metric-type 1| 2	Specify a metric type for OSPF6 redistribution.
ospf-bfd-all-if|no-ospf-bfd-all-if	Enables or disables BFD protocol for fault detection on all (global) OSPF interfaces. Default is disabled.
ospf-default-information none| originate|always	Specify how to control the origination of default route.
ospf-default-info-originate-metric none	Specify the metric for OSPF origination of default route.
ospf-default-info-originate-metric-type 1|2	Specify the metric type for OSPF origination of default route.
ospf-default-info-originate-route-map vrouter route-map *name*	Specify the route map for OSPF origination of default route.
vrrp-track-port *port-list*	Specify the ports to track for VRRP.
bgp-snmp|no-bgp-snmp	Enable or disable BGP SNMP MIB.
bgp-snmp-notification|no-bgp-snmp-notification	Enable or disable SNMP notifications for BGP MIBs.
ospf-snmp|no-ospf-snmp	Enable or disable OSPF SNMP MIB.
ospf-snmp-notification|no-ospf-snmp-notification	Enable or disable SNMP notifications for OSPF MIBs.
ospf6-snmp|no-ospf6-snmp	Enable or disable OSPFv3 SNMP MIB.

`ospf6-snmp-notification|no-bgp-snmp-notification`	Enable or disable SNMP notifications for OSPFv3 MIBs.
`ip-snmp|no-ip-snmp`	Enable or disable ipForward SNMP MIBs.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify to enable or disable BGP graceful shutdown (RFC 8326).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.0	Parameter `router-type` added.
Version 2.1	The parameter, `storage-pool`, deprecated. The parameter, `gateway`, added.
Version 2.2	The parameter, `router-type`, is deprecated.
Version 2.2	The parameters, `bgp-redistribute`, `rip-redistribute`, and `ospf-redistribute`, added.
Version 2.2.3	The parameters `bgp-redist` and `ospf-dist` added. The parameter `vrrp-track-port` added. The parameters `bgp-cluster`, `bgp-max-paths`, `bgp-multipath`, `bgp-best-path`, `bgp-dampening`, `bgp-graceful-restart`, and `bgp-stalepath-time` added.
Version 2.3.1	The parameters, `ospf6-`, added.
Version 2.4	The parameters, `ospf-stub-router-on-startup` and `vrrp-track-port` added. The parameters `bgp-scantime`, `bgp-keepalive-interval`, and `bgp-holdtime` added.
Version 2.4.1	The parameter, `bgp-distance-`, and `ospf-distance`, added.
Version 2.5.3	The parameter `ospf-bfd-all-if|no-ospf-bfd-all-if` added.
Version 2.6	SNMP MIBs for BGP, OSPF, OSPFv3, and ipForward

	added.
Version 2.6.2	The parameter, `cluster-active-active-routing` and `bgp-delayed-startup`, added.
Version 3.0.0	The parameters, `ospf-bfd-all-if`, `ospf-default-information`, `ospf-default-info-originate`, and `ospf-default-info-originate-metric-type` added.
Version 3.1.0	The parameters for route maps added.
Version 6.1.0	The parameter, `evpn-border|no-evpn-border`, added.
Version 6.1.1	The parameters `evpn-dup-addr-max-moves`, `evpn-dup-addr-moves-duration`, `bgp-update-delay-strict` and `evpn-dup-addr-freeze` added.

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command modifies a vRouter service.

Examples To modify a vRouter, `MyvService`, for the VNET, `net-ops`, as a shared service, and disable it, use the following command:

```
CLI network-admin@switch > vrouter-modify name MyvService vnet net-ops shared-vnet-services disable
```

vrouter-migrate

The command migrates a vRouter service.

Syntax `vrouter-migrate`

`name` *`name-string`*	Specify the name of the vRouter.
Between one or two of the following options:	
`location` *`fabric-node-name`*	Specify the location name.
`storage-pool` *`storage-pool-name`*	Specify the storage pool name.

Defaults None.

Access CLI.

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command migrates a vRouter service.

Examples To migrate the vRouter service, `MyvService`, on fabric, `pn-fabric`, to the storage pool, `keep-all`, use the following command:

```
CLI (network-admin@switch) > vrouter-migrate name MyvService
location pn-fabric storage-pool keep-all
```

vrouter-show

This command displays a virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax `vrouter-show`

`id`	The ID number assigned to the configuration.
`name` *`name-string`*	Specifies the name of the vRouter.
`type vnet-mgr|vrouter|netzone|orphaned|netvm|nat|ovs`	Specifies the type of vRouter.
`scope local|fabric`	Specifies the scope of the vRouter.
`vnet` *`vnet-name`*	Specifies the name of the VNET.
`location` *`fabric-node-name`*	Specifies the location of the vRouter on the fabric.
`router-type hardware|software`	Specifies the router type as hardware or software.
`hw-router-mac` *`mac-address`*	Specifies the MAC address of the hardware router.
`fabric-comm`	Specifies if NetVisor uses the vRouter as a fabric communication interface.
`router-ipstack quagga|frr`	Specifies the type of vRouter IP stack.
`evpn-border|no-evpn-border`	Enable or disable EVPN border gateway.
`evpn-dup-addr-max-moves` *`2..1000`*	Specify the maximum number of EVPN duplicate address moves. The default value is 5.
`evpn-dup-addr-moves-duration` *`2..1800`*	Specify the EVPN duplicate address move time duration. The default vale is 180s.
`evpn-dup-addr-freeze none|permanent|-` *`1..3600`*	EVPN duplicate address freeze duration (seconds). The default value is 180s. By default, if 5 MAC moves are detected in a 180s time window, the duplicate MAC address entry is frozen for 180s.
`hw-vrid` *`hw-vrid-number`*	Specifies the virtual router ID of the hardware router.
`hw-vrrp-id` *`hw-vrrp-id-number`*	Specifies the VRRP ID for a hardware router.
`bgp-as` *`bgp-as-number`*	Specifies the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).
`router-id` *`ip-address`*	Specifies the vRouter IP address
`proto-multi none|vmrp|pim-ssm`	Specifies the optional multicast protocol for the vRouter service. Select none, Vector Multicast Routing Protocol (VMRP), or Protocol Independent

	Multicast-source specific mode (PIM-SIM).
`bgp-redistribute static|connected|rip|ospf`	Specify how BGP routes are redistributed.
`bgp-redist-static-metric none`	Specify a static metric for BGP route redistribution.
`bgp-redist-connected-metric none`	Specify a connected metric for BGP route redistribution
`bgp-redist-rip-metric none`	Specify a RIP metric for BGP route redistribution.
`bgp-redist-ospf-metric none`	Specify a OSPF metric for BGP route redistribution.
`bgp-cluster-id` *`ip-address`*	Specify an IP address for a BGP cluster.
`bgp-max-paths` *`bgp-max-paths-number`*	Specify the maximum number of paths for BGP.
`bgp-ibgp-multipath` *`bgp-ibgp-multipath-number`*	Specify the number of multipaths for BGP.
`bgp-bestpath-as-path none|ignore`	Specify a parameter for a best path as path.
`bgp-dampening|no-bgp-dampening`	Specify dampening for BGP routes.
`bgp-delayed-startup` *`0..36000`*	Displays the delayed time interval in forming peer adjacency during bootup. BGP neighbors are not brought up until the timer's expiry. The default value is 0.
`bgp-network-import-check|no-bgp-network-import-check`	Specifies whether BGP network route exists in IGP.
`bgp-update-delay-strict` *`0..3600`*	Displays the time interval to put BGP read-only mode during bootup. BGP neighbors are brought up and receives the peer routes but local routes are not advertised until the timer's expiry. The default value is 0.
`bgp-keepalive-interval` *`seconds`*	Specify a BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.
`bgp-holdtime` *`seconds`*	Specify a BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
`bgp-distance-external` *`integer`*	Specify the BGP distance for routes external to the AS.
`bgp-distance-internal` *`integer`*	Specify the BGP distance for routes internal to the AS.
`bgp-distance-local` *`integer`*	Specify the BGP distance for routes local to the AS.
`bgp-ipv4-unicast|no-bgp-ipv4-unicast`	Specify a MP-BGP Control default IPv4 Unicast

	AFI/SAFI.
`rip-redistribute static|connected|ospf|bgp`	Specify how RIP routes are redistributed.
`ospf-redistribute static|connected|rip|bgp`	Specify how OSPF routes are redistributed.
`vrrp-track-port` *`port-list`*	Specify a port to track a VRRP configuration.
`ospf-redist-static-metric-type 1|2`	Specify a static metric type for OSPF route redistribution.
`ospf-distance-external` *`integer`*	Specify the OSPF distance for routes external to the AS.
`ospf-distance-internal` *`integer`*	Specify the OSPF distance for routes internal to the AS.
`ospf-distance-local` *`integer`*	Specify the OSPF distance for routes local to the AS.
`ospf-stub-router-on-startup|no-ospf-stub-router-on-startup`	Specify if you want advertise self as stub router temporarily on startup.
`ospf-stub-router-on-startup-period` *`integer`*	Specify the time period to advertise self as stub router on startup. This s a value between 5 and 86400 seconds.
`ospf-bfd-all-if|no-ospf-bfd-all-if`	Specify if you want to use BFD protocol for fault detection on all OSPF interfaces.
`ospf-default-information none|originate|always`	Specify if you want to control origination of default route.
`ospf-default-info-originate-metric none`	Specify the metric for OSPF origination of default route.
`ospf-default-info-originate-metric-type 1|2`	Specify the metric type for OSPF origination of default route.
`ospf-redist-connected-metric none`	Specify a connected metric type for OSPF route redistribution.
`ospf-redist-connected-metric-type 1|2`	Specify a connected metric type for OSPF route redistribution.
`ospf-redist-rip-metric none`	Specify a RIP metric type for OSPF route redistribution.
`ospf-redist-rip-metric-type 1|2`	Specify a RIP metric type for OSPF route redistribution.
`ospf-redist-bgp-metric none`	Specify a BGP metric type for OSPF route redistribution.
`ospf-redist-bgp-metric-type 1|2`	Specify a BGP metric type for OSPF route

	redistribution.
`ospf6-redistribute static|connected|bgp4`	Specify if you want to redistribute OSPF6 routes.
`ospf6-redist-static-metric none`	Specify a metric for OSPF6 redistribute of static routes.
`ospf6-redist-static-metric-type 1|2`	Specify a metric type for OSPF6 redistribution of static routes.
`ospf6-redist-connected-metric none`	Specify a metric for OSPF6 redistribution of connected routes.
`ospf6-redist-connected-metric-type 1|2`	Specify a metric type for OSPF6 redistribution.
`ospf-default-information none|originate|always`	Specify how to control the origination of default route.
`ospf-default-info-originate-metric none`	Specify the metric for OSPF origination of default route.
`ospf-default-info-originate-metric-type 1|2`	Specify the metric type for OSPF origination of default route.
`ospf-default-info-originate-route-map vrouter route-map` *`name`*	Specify the route map for OSPF origination of default route.
`bgp-snmp|no-bgp-snmp`	Enable or disable BGP SNMP MIB.
`bgp-snmp-notification|no-bgp-snmp-notification`	Enable or disable SNMP notifications for BGP MIBs.
`ospf-snmp|no-ospf-snmp`	Enable or disable OSPF SNMP MIB.
`ospf-snmp-notification|no-ospf-snmp-notification`	Enable or disable SNMP notifications for OSPF MIBs.
`ospf6-snmp|no-ospf6-snmp`	Enable or disable OSPFv3 SNMP MIB.
`ospf6-snmp-notification|no-bgp-snmp-notification`	Enable or disable SNMP notifications for OSPFv3 MIBs.
`ip-snmp|no-ip-snmp`	Enable or disable ipForward SNMP MIBs.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify to enable or disable BGP graceful shutdown (RFC 8326).

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.0	Parameter `type` added.
Version 2.2	The parameter, `location`, `hw-router-mac`, and `hw-vrrp-id`, added. The parameters, `bgp-redistribute`, `rip-redistribute`, and `ospf-redistribute`, added.
Version 2.2.3	The parameters `bgp-redist` and `ospf-dist` added. The parameter `vrrp-track-port` added. The parameters `bgp-cluster`, `bgp-max-paths`, `bgp-multipath`, `bgp-best-path`, `bgp-dampening`, `bgp-graceful-restart`, and `bgp-stalepath-time` added
Version 2.3.1	The parameters, `ospf6-`, added.
Version 2.4	The parameters, `ospf-stub-router-on-startup` and `vrrp-track-port` added. The parameters `bgp-scantime`, `bgp-keepalive-interval`, and `bgp-holdtime` added.
Version 2.4.1	The parameter, `bgp-distance-`, and `ospf-distance-`, added.
Version 2.5.4	The parameter, `shared-vnet-mgr`, added.
Version 2.6	SNMP MIBs for BGP, OSPF, OSPFv3, and ipForward added.
Version 3.0.0	The parameters, `ospf-bfd-all-if`, `ospf-default-information`, `ospf-default-info-originate`, and `ospf-default-info-originate-metric-type` added.
Version 3.1.0	The parameters for route maps added.
Version 6.1.0	The parameter `evpn-border|no-evpn-border` added
Version 6.1.1	The parameters `evpn-dup-addr-max-moves`, `evpn-dup-addr-moves-duration`, `bgp-update-delay-strict` and `evpn-dup-addr-freeze` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays vRouter service.

Examples To display the configuration for xyz, use the following command:

```
CLI (network-admin@switch) > vrouter-show name xyz format all layout vertical
id:                                     c0002ad:0
name:                                   xyz
type:                                   vrouter
scope:                                  fabric
vnet:                                   leo-ext-22-global
vnet-service:                           dedicated
state:                                  enabled
location:                               leo-ext-22
zone-id:                                c0002ad:1
template:                               no
failover-action:                        stop-old
router-type:                            hardware
fabric-comm:                            false
router-ipstack:                         frr
evpn-border:                            disable
evpn-export-all-leaked-networks:        permit
evpn-dup-addr-freeze:                   180
hw-router-mac:                          66:0e:94:ad:c2:f8
cluster-active-active-routing:          enable
hw-vrid:                                0
hw-vrrp-id:                             -1
proto-routing:                          static,routesnoop
bgp-redist-static-metric:               none
bgp-redist-connected-metric:            none
bgp-redist-rip-metric:                  none
bgp-redist-ospf-metric:                 none
bgp-max-paths:                          1
bgp-dampening:                          false
bgp-network-import-check:               false
bgp-update-delay-strict(s):             1
bgp-keepalive-interval(s):              60
bgp-holdtime(s):                        180
ospf-spf-consec-delay:                  50
ospf-spf-max-delay:                     5000
ospf6-spf-consecu-delay:                50
ospf6-spf-max-delay:                    5000
bgp-global-nh-preference:               none
ospf-redist-static-metric:              none
ospf-redist-static-metric-type:         2
ospf-redist-connected-metric:           none
ospf-redist-connected-metric-type:      2
ospf-redist-rip-metric:                 none
ospf-redist-rip-metric-type:            2
ospf-redist-bgp-metric:                 none
ospf-redist-bgp-metric-type:            2
ospf-stub-router-on-startup:            false
ospf-bfd-all-if:                        no
ospf-default-information:               none
ospf-default-info-originate-metric:     none
ospf-default-info-originate-metric-type: 2
bgp-default-shutdown:                   false
```

```
bgp-snmp:                                   false
bgp-snmp-notification:                      false
ospf-snmp:                                  false
ospf-snmp-notification:                     false
ospf6-snmp:                                 false
ospf6-snmp-notification:                    false
ip-snmp:                                    false
bgp-graceful-shutdown:                      off
```

vrouter-ecmp-group-show

This command is used to display the Equal Cost Multipath (ECMP) routing group for a vRouter.

Syntax `vrouter-ecmp-group-show`

`vrid` *`vrid-number`*	The vRouter ID.
`ecmp-group ecmp-group-number`	The ECMP group.
`nexthop` *`ip-address`*	The next hop IP address on the route.
`ecmp-ref-count` *`ecmp-ref-count-number`*	The ECMP group reference count.
`hash-type static-fixed|resilient`	The type of ECMP hash for the group. Resilient hashing helps minimize the flow remapping across ECMP groups, and LAGs in a load-balanced.

Defaults None

Access CLI

History

Version 2.4	Command introduced.

Usage Use this command to display ECMP routes which can be helpful when troubleshooting a connection.

Examples To display an ECMP group, use the following command:

CLI (network-admin@switch) > `vrouter-ecmp-group-show`

```
vrid ecmp-group nexthop_ip   nexthop_count ecmp-ref-count
---- ---------- ------------ ------------- --------------
4    200261     10.60.26.34  2             155
```

vrouter-ecmp-cached-routes-show

This command is used to display the ECMP cached routes for a vRouter.

Syntax `vrouter-cached-routes-show`

`vrid` *`vrid-number`*	The vRouter ID.
`ip` *`ip-address`*	The IP address.
`prelen` *`prelen-number`*	The prefix length.
`vlan` *`vlan-number`*	The VLAN number.
`nexthop` *`ip-address`*	The next hop IP address on the route.
`age-in-seconds` *`age-in-seconds-number`*	The age of the cached route.

Defaults None

Access CLI

History

Version 2.3.3	Command introduced.
Version 2.4.1	The parameter `vnet` added.

Usage Use this command to display cached routes which can be helpful when troubleshooting a connection.

Examples To display cached routes, use the following command:

```
CLI (network-admin@switch) > vrouter-ecmp-cached-routes-show
```

vrouter-evpn-arp-cache-show

This command displays the ARP cache as populated by EVPN.

Syntax `vrouter-evpn-arp-cache-show`

`name` *`name-string`*	The vRouter name.
Specify the following evpn-arp-cache arguments:	
`vni 0..16777215`	The VXLAN identifier for tunnel. The value 0 indicates unconfigure VXLAN.
`ip` *`ip-string`*	The IP address.
`mac` *`mac-string`*	The MAC address.
`remote-vtep` *`remote-vtep-string`*	The remote VTEP.
`type` *`type-string`*	The type.
`state` *`state-string`*	The state.
`remote-seq` *`remote-seq-number`*	The remote sequence number.
`local-seq` *`local-seq-number`*	The local sequence number.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display the ARP cache entries populated by EVPN.

Examples To display the ARP cache for EVPN with VNI 10211, use the following command:

```
CLI  (network-admin@bgw21*)  >  vrouter-evpn-arp-cache-show  vni  10211
name     vni   ip                mac               remote-vtep type   state  remote-seq local-seq
-------- ----- ----------------- ----------------- ----------- ------ ------ ---------- ---------
bgw21-vr 10211 2000::100:0:211:8 00:11:01:00:00:08 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.7       00:11:01:00:00:07 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.6       00:11:01:00:00:06 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:9 00:11:01:00:00:09 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:a 00:11:01:00:00:0a 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.3       00:11:01:00:00:03 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:6 00:11:01:00:00:06 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.2       00:11:01:00:00:02 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:7 00:11:01:00:00:07 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:4 00:11:01:00:00:04 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.10      00:11:01:00:00:0a 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.8       00:11:01:00:00:08 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:2 00:11:01:00:00:02 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.4       00:11:01:00:00:04 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.5       00:11:01:00:00:05 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.1       00:11:01:00:00:01 7.1.1.1     remote active 0          0
bgw21-vr 10211 100.0.211.9       00:11:01:00:00:09 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:3 00:11:01:00:00:03 7.1.1.1     remote active 0          0
bgw21-vr 10211 2000::100:0:211:1 00:11:01:00:00:01 7.1.1.1     remote active 0          0
```

```
bgw21-vr 10211 2000::100:0:211:5 00:11:01:00:00:05 7.1.1.1     remote active 0          0
```

vrouter-evpn-bgp-neighbor-summary-show

This command displays BGP neighbors associated with EVPN.

Syntax `vrouter-evpn-bgp-neighbor-summary-show`

`vrouter-name` *`name-string`*	Name of the vRouter name.
Specify the following arguments:	
`neighbor` *`neighbor-string`*	The BGP neighbor.
`ver` *`ver-number`*	The version number.
`as` *`as-number`*	The remote AS number.
`msg-rcvd` *`msg-rcvd-number`*	Message received number.
`msg-sent` *`msg-sent-number`*	Message sent number.
`Tb/Ver` *`Tb/Ver-number`*	Tb/Ver number.
`InQ` *`InQ-number`*	InQ number.
`OutQ` *`OutQ-number`*	OutQ number.
`up/down` *`up/down-string`*	Up/down.
`state` *`state-string`*	State.
`pfxrcd` *`pfxrcd-number`*	pfxrcd number.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display the BGP neighbors associated with EVPN.

Examples To display the BGP neighbors associated with EVPN, use the following command:

```
CLI  (network-admin@bgw11*)  >  vrouter-evpn-bgp-neighbor-summary-show  format  all
vrouter-name   neighbor     ver as    msg-rcvd msg-sent Tb/Ver InQ OutQ up/down  state       pfxrcd
-------------- ------------ --- ----- -------- -------- ------ --- ---- -------- ----------- ------
vrouter-bgw-11 172.16.134.1 4   65011 122      226      0      0   0    00:00:39 Connect     0
vrouter-bgw-11 172.16.134.2 4   65011 83       190      0      0   0    00:07:36 Established 4
```

vrouter-evpn-bgp-routes-show

This command is used to display the supported EVPN routes received by a border gateway node.

Syntax `vrouter-evpn-bgp-routes-show`

`vrouter-name` *`name-string`*	Name of the vRouter name.
Specify the following arguments:	
`rd rd-string`	EVPN route distinguisher.
`vni` *`vni-string`*	The VNI.
`valid-route` *`yes|no`*	Valid EVPN route.
`best-route` *`yes|no`*	Best EVPN route.
`network` *`network-string`*	Network - displays EVPN route contents.
`route-type` *`route-type-string`*	Route type.
`next-hop` *`next-hop-string`*	Next hop address.
`metric` *`metric-number`*	Metric.
`locprf` *`locprf-number`*	locprf number.
`weight` *`weight-number`*	Weight.
`path` *`path-string`*	Path.
`extended-community` *`extended-community-string`*	Extended community.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display the EVPN BGP routes.

Examples To display the EVPN BGP routes, use the following command:

```
CLI (network-admin@bgw11*) > vrouter-evpn-bgp-routes-show format vrouter-
name,rd,vni,network,route-type,next-hop,path,extended-community

vrouter-name   rd             vni    network                  route-type next-hop     path extended-community
-------------- -------------- ------ ------------------------ ---------- ------------ ---- ----------------------------------------
vrouter-bgw-11 0.0.0.0:2      103501 [24]:[10.2.3.0]          5          172.16.133.3      ET:8 RT:64518:103501 Rmac:00:00:5e:00:01:06
vrouter-bgw-11 0.0.0.0:2      103501 [24]:[10.2.4.0]          5          172.16.134.3      RT:1075:103501 ET:8 Rmac:00:00:5e:00:01:01
vrouter-bgw-11 0.0.0.0:2      103501 [24]:[10.2.4.0]          5          172.16.134.3      RT:1075:103501 ET:8 Rmac:00:00:5e:00:01:01
vrouter-bgw-11 192.168.0.11:3 10201  [48]:[00:3b:01:00:00:01] 2          172.16.133.3      ET:8 RT:64518:10201
vrouter-bgw-11 192.168.0.11:3 10201  [32]:[172.16.133.3]      3          172.16.133.3      ET:8 RT:64518:10201
vrouter-bgw-11 192.168.0.11:4 10403  [32]:[172.16.133.3]        3              172.16.133.3        ET:8
```

```
RT:64518:10403
vrouter-bgw-11 192.168.0.13:3 10404   [32]:[172.16.134.3]        3             172.16.134.3
RT:1075:10404  ET:8
vrouter-bgw-11 192.168.0.13:4 10201   [48]:[00:3d:01:00:00:01] 2             172.16.134.3
RT:1075:10201  ET:8
vrouter-bgw-11 192.168.0.13:4 10201   [32]:[172.16.134.3]        3             172.16.134.3
RT:1075:10201  ET:8
vrouter-bgw-11 192.168.0.14:3 10404   [32]:[172.16.134.3]        3             172.16.134.3
RT:1075:10404  ET:8
vrouter-bgw-11 192.168.0.14:4 10201   [48]:[00:3d:01:00:00:01] 2             172.16.134.3
RT:1075:10201  ET:8
vrouter-bgw-11 192.168.0.14:4 10201   [32]:[172.16.134.3]        3             172.16.134.3
RT:1075:10201  ET:8
```

vrouter-evpn-bgp-vni-show

This command is used to display the VNI information for BGP EVPN.

Syntax `vrouter-evpn-bgp-vni-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify the following arguments:	
`vni` *`vni-string`*	VXLAN identifier for tunnel.
`type` *`type-string`*	Type 2 or type 3.
`rd` *`rd-string`*	The Route distinguisher.
`import-rt` *`import-rt-string`*	The Import route target.
`export-rt` *`export-rt-string`*	The Export route target.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display VNI information for BGP EVPN.

Examples To display VNI information for BGP EVPN, use the following command:

```
CLI (network-admin@bgw21*) > vrouter-evpn-bgp-vni-show sort-asc vni

switch vrouter-name vni    type rd         import-rt    export-rt
------ ------------ ------ ---- ---------- ------------ ------------
bgw21  bgw21-vr     10110  2    2.4.0.1:15 65012:10110  65012:10110
bgw21  bgw21-vr     10112  2    2.4.0.1:27 65012:10112  65012:10112
bgw21  bgw21-vr     10120  2    2.4.0.1:30 65012:10120  65012:10120
bgw21  bgw21-vr     10121  2    2.4.0.1:35 65012:10121  65012:10121
bgw21  bgw21-vr     10122  2    2.4.0.1:39 65012:10122  65012:10122
bgw21  bgw21-vr     10130  2    2.4.0.1:16 65012:10130  65012:10130
bgw21  bgw21-vr     10131  2    2.4.0.1:17 65012:10131  65012:10131
bgw21  bgw21-vr     10140  2    2.4.0.1:20 65012:10140  65012:10140
bgw21  bgw21-vr     10145  2    2.4.0.1:33 65012:10145  65012:10145
bgw21  bgw21-vr     10146  2    2.4.0.1:13 65012:10146  65012:10146
bgw21  bgw21-vr     10147  2    2.4.0.1:19 65012:10147  65012:10147
bgw21  bgw21-vr     10148  2    2.4.0.1:32 65012:10148  65012:10148
bgw21  bgw21-vr     10149  2    2.4.0.1:12 65012:10149  65012:10149
bgw21  bgw21-vr     10150  2    2.4.0.1:28 65012:10150  65012:10150
```

vrouter-evpn-duplicate-mac-show

This command is used to display duplicate MAC address information for BGP EVPN.

Syntax `vrouter-evpn-duplicate-mac-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify the following arguments:	
`host-mac` *`mac-address`*	Host MAC address.
`seq` *`1..4294967295`*	Sequence number assigned to the MAC which denotes the number of moves.

Defaults None

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use this command to display duplicate MAC address information for BGP EVPN.

Examples To display duplicate MAC information, use the following command:

```
CLI (network-admin@switch) > vrouter-evpn-duplicate-mac-show
switch vrouter-name    host-mac          seq
------ --------------- ----------------- ---
switch vRouter1        00:12:c0:80:33:6a 7
```

vrouter-evpn-vni-mac-show

This command is used to display VNI, and MAC address information for EVPN.

Syntax `vrouter-evpn-vni-mac-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify the following arguments:	
`vni` *`0..16777215`*	VXLAN identifier for tunnel.
`mac` *`mac-string`*	MAC address.
`type` *`type-string`*	`local` or `remote` type.
`intf/remote-vtep` *`intf/remote-vtep-string`*	local interface or remote VTEP IP address.
`vlan` *`vlan-number`*	VLAN ID.
`local-seq` *`local-seq-number`*	Local sequence number
`remote-seq` *`remote-seq-number`*	Remote sequence number.

Defaults None

Access CLI

History

Version 6.1.0	Command introduced.

Usage Use this command to display VNI, and MAC address information for BGP EVPN.

Examples To display VNI, and MAC address information for EVPN with VNI 10211, use the following command:

```
CLI (network-admin@bgw21*) > vrouter-evpn-vni-mac-show vni 10211

vrouter-name vni   mac               type   intf/remote-vtep vlan local-seq remote-seq
------------ ----- ----------------- ------ ---------------- ---- --------- ----------
bgw21-vr     10211 00:12:01:00:00:02 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:12:01:00:00:0a local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:05 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:11:01:00:00:0a remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:07 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:02 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:09 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:07 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:11:01:00:00:04 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:03 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:08 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:08 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:01 remote 7.1.1.1          0    0         0
```

```
bgw21-vr     10211 00:11:01:00:00:03 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:06 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:12:01:00:00:01 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:09 remote 7.1.1.1          0    0         0
bgw21-vr     10211 00:12:01:00:00:05 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:12:01:00:00:04 local  9000becvni10211  0    0         0
bgw21-vr     10211 00:11:01:00:00:06 remote 7.1.1.1          0    0         0
```

vrouter-fib-arps-show

This command is used to display information about Address Resolution Protocol (ARP) in the forwarding information database. Before using this command, the switch must be part of a fabric.

Syntax `vrouter-fib-arps-show`

`vrid` *`vrid-number`*	The virtual router identifier.
`ip` *`ip-address`*	The IP address.
`if-id` *`if-id-number`*	The interface identifier.
`port` *`port-number`*	The port number.
`vnet` *`vnet-name`*	The vNET of the router.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The VLAN identifier.
`mac` *`mac-address`*	The MAC address.
`egress-id` *`egress-id-number`*	The egress identifier.
`flags ECMP|Trunk|route-to-if|local-subnet|hit| KEEP-SMAC|KEEP-TTL|drop`	Displays hardware flags.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 2.6.2	Additional options added to flags, `KEEP-SMAC` and `KEEP-TTL`.
Version 3.1.0	The parameter `drop` added.

Usage Use this command to display ARP information in the forwarding information database.

Examples To display ARP information, use the following syntax:

```
CLI (network-admin@switch) > vrouter-fib-arps-show format all
layout vertical
switch:     switch
ip:           10.16.113.1
if-id:      0
vlan:        113
mac:            66:0e:94:9f:30:aa
```

```
flags:
switch:      switch
ip:            10.16.113.2
if-id:       0
vlan:         113
mac:             66:0e:94:f8:74:66
flags:
switch:      switch
ip:            10.16.115.1
if-id:       1
vlan:         115
mac:             66:0e:94:f8:74:66
flags:
```

vrouter-fib-routes-show

This command displays information about routes in the forwarding information database.

Syntax `vrouter-fib-routes-show`

`vrid` *`vrid-number`*	The virtual router identifier.
`ip` *`ip-address`*	The IP address of the route.
`prelen` *`prelen-number`*	The prefix length.
`nexthop` *`ip-address`*	The next hop IP address in the network.
`if-ip` *`ip-address`*	The IP address of the interface.
`intf-id` *`intf-id-number`*	The interface identifier.
`vnet` *`vnet-name`*	The vNET of the router.
`vlan` *`vlan-id`*	The VLAN identifier.
`port` *`port-number`*	The port number.
`nexthop-mac` *`mac-address`*	The next hop MAC address on the network.
`flags ECMP|Trunk|route-to-if|local-subnet|hit|KEEP-SMAC|KEEP-TTL| KEEP-VLAN|drop`	The hardware router flags.
`egress-id` *`egress-id-number`*	The egress identifier.
`ecmp-group` *`ecmp-group-number`*	The ECMP group.
`state up|admin-down|if-admin-down|if-vlan-down|nexthop-up|nexthop-down`	The route state.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 2.6.2	Additional options added to flags, `KEEP-SMAC`, and `KEEP-TTL`.

Usage Use this command to display routes in the forwarding information database.

Examples To display routes in the forwarding information database, use the following syntax:

```
CLI (network-admin@switch) > vrouter-fib-routes-show format all
```

```
 layout  vertical
switch:      pleiades-24
vrid:        0
ip:          10.17.123.1
prelen:      32
nexthop:     10.17.123.1
if-ip:       10.17.123.2
vlan:        123
port:        0
flags:
ecmp-group:  -1
state:       up
switch:      pleiades-24
vrid:        0
ip:          10.17.125.1
prelen:      32
nexthop:     10.17.125.1
if-ip:       10.17.125.1
vlan:        125
port:        0
flags:
ecmp-group:  -1
state:       up
```

vrouter-igmp-static-join-add

This command adds Internet Group Management Protocol (IGMP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

> **Informational Note:** IGMPv1 is not supported by NetVisor OS or ONVL. If you are using IGMPv1, you must disable IGMP snooping on the switch.

Syntax `vrouter-igmp-static-join-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
Specify the following IGMP static join arguments:	
`name` *`name-string`*	Specify the name of the IGMP configuration.
`group-ip` *`ip-address`*	Specify the group IP address used to statically bind to the interface.
`source-ip` *`ip-address`*	Specify the source IP address for the IGMP query.
`interface` *`nic`*	Specify the interface for IGMP.

Defaults None.

Access CLI.

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements IPv4 protocols.

Examples To add this parameter to a vRouter service, `MyvService`, with group IP address `232.0.0.1`, and source IP address `192.0.2.3`, on a `vrouter` interface, use the following command:

```
CLI (network-admin@switch) > vrouter-igmp-static-join-add  vrouter-name MyvService name IGMP-vrouter group-ip 232.0.0.1 source-ip 192.0.2.3 interface vrouter
```

vrouter-igmp-static-join-remove

This command adds Internet Group Management Protocol (IGMP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch..

Syntax `vrouter-igmp-static-join-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
Specify the following IBMP static join arguments:	
`name` *`name-string`*	Specify the name of the IGMP configuration.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements IPv4 protocols.

Examples To remove the IGMP-vRouter configuration from the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-igmp-static-join-remove
vrouter-name MyvService name IGMP-vRouter
```

vrouter-igmp-static-join-show

This command displays the Internet Group Management Protocol (IGMP) on a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax `vrouter-igmp-static-join-show`

`vrouter-name` *`name-string`*	Name of the vRouter service.
Specify the following IGMP static join arguments:	
`name` *`name-string`*	Name of the IGMP configuration.
`group-ip` *`ip-address`*	The group IP address used to statically bind to the interface.
`source-ip` *`ip-address`*	The source IP address for the IGMP query.
`interface vrouter` *`interface nic`*	The interface for IGMP.

Defaults None.

Access CLI.

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a vRouter service that forwards traffic between networks, and implements IPv4 protocols. This command displays information about IGMP on a vRouter.

Examples To display all IGMP information on all vRouter services, use the following command:

```
CLI (network-admin@switch) > vrouter-igmp-static-join-show  layout
vertical
```

vrouter-interface-add

This command is used to add interfaces to virtual router (vRouter) services on a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-interface-add`

`vrouter-name` *`name-string`*	Specify the name for the vRouter interface.
Specify any of the following options:	
`vlan` *`vlan-id`*	Specify the VLAN identifier. This is a value between 1, and 4094.
`ip` *`ip-address`*	Specify the IP address of the interface.
`netmask` *`netmask`*	Specify the netmask.
`assignment none|dhcp|dhcpv6`	Specify the DHCP method for IP address assignment. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
`ip2` *`ip-address`*	Specify the second IP address of the interface.
`netmask2` *`netmask`*	Specify the netmask.
`assignment2 none|dhcp|dhcpv6`	Specify the DHCP method for IP address assignment. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
`linklocal` *`ip-address`*	Specify an IPv6 linklocal address.
`ipv6-unnumbered|no-ipv6-unnumbered`	Specify either of the options to enable or disable IPv6 unnumbered on the interface.
`vnet` *`vnet-name`*	Specify the vNET assigned to the vRouter.
`vlan-type public|private`	Specify the type of VLAN for the interface.
`if mgmt|data|span`	Specify if the interface is a management, data or span interface.
`alias-on` *`alias-on-string`*	Specify an alias for the interface.
`exclusive|no-exclusive`	Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface. Exclusive is specified when you configure the interface as a span interface, and allows higher throughput through the interface.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`pim|no-pim`	Specify if the vRouter interface is a PIM interface.

`pim-dr-priority` *`integer`*	Specify the direct router (DR) priority as an integer between 1, and 4294967295. NetVisor selects the vRouter interface with higher DR priority as the designated router. By default, all interfaces are priority 1. In case of same priority, NetVisor selects the vRouter interface with highest network address as DR.
`pim-cluster|no-pim-cluster`	Specify if you want to provide alternative routing for Layer 3 attached sources for leaf cluster routing configuration. It allows traffic to failover not black-hole when the unicast path to the Spine fails.
`fabric-nic|no-fabric-nic`	Specify if VNIC is on a VLAN used for fabric setup.
`vrrp-id` *`id-number`*	Specify the ID for the VRRP interface. The IDs on both vRouters must be the same ID number.
`vrrp-primary` *`string`*	Specifies the primary interface for VRRP failover.
`vrrp-priority` *`number`*	Speicfies the priority for the VRRP interface. This is a value between 1 (lowest), and 255 (highest).
`vrrp-adv-int` *`mseconds`*	Specify a VRRP advertisement interval in milliseconds. The range is from 30 to 40950 with a default value of 1000.
`vrrp-preempt-mode disable|enable`	Specify one of the options to allow or prevent a high priority backup router from becoming master router. `vrrp-preempt-mode` is enabled by default.
`l3-port` *`l3port-usable-port name`*	Specify a Layer 3 port for the interface.
`secondary-macs` *`secondary-macs-string`*	Specify a secondary MAC address for the interface.
`mtu` *`bytes`*	Specify a MTU value in bytes between 68, and 9216.
`if-nat-realm internal|external`	Specify a NAT realm for the interface.
`priority-tag|` `no-priority-tag`	Specify if you want to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive` and `nic` added.

Version 2.2	The parameters `vrrp-id`, `vrrp-priority`, and `vrrp-primary` added.
Version 2.2.5	The parameters `l3-port`, and `secondary-macs` added.
Version 2.3	The parameter `vrrp-adv-int` added.
Version 2.4.1	The parameter `vlan-type` added.
Version 2.5	The parameter `mtu` added.
Version 2.6.0	The parameter `if-nat-realm internal|external`, and `vnet` added.
Version 2.6.2	The parameter `vxlan` deprecated.
Version 3.0.0	The parameter `ip2` and `netmask2` added. The parameters `pim`, `pim-dr-priority`, and `pim-cluster` added. The parameter `linklocal` added. The option `autov6` deprecated for the parameter `assignment`.
Version 3.1.0	The parameter `fabric-nic` and `priority-tag` added.
Version 5.1.3	The parameter `ipv6-unnumbered|no-ipv6-unnumbered` added
Version 6.0.0	The parameter `vrrp-preempt-mode` added.

Usage You can add interfaces to the vRouter services on a fabric, cluster, standalone switch, or virtual network (vNET). This command adds an interface to a vRouter service.

Examples To add an interface with the IP address, 192.168.10.11/32, VLAN 25, and data to vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-add  vrouter-name
MyvService ip 192.168.10.11/32 assigment none vlan 25 if data
```

vrouter-interface-modify

This command is used to modify interfaces on the virtual router (vRouter) service on a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-interface-modify`

`vrouter-name` *`name-string`*	Specify the name for the vRouter interface.
Specify any of the following options:	
`nic nic-string`	Specify the virtual NIC assigned to interface.
`pim|no-pim`	Specify if the vRouter interface is a PIM interface.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`pim-dr-priority` *`integer`*	Specify the direct router (DR) priority as an integer between 1, and 4294967295. NetVisor selects the vRouter interface with higher DR priority as the designated router. By default, all interfaces are priority 1. In case of same priority, NetVisor selects the vRouter interface with highest network address as DR.
`vrrp-priority` *`number`*	Speicfies the priority for the VRRP interface. This is a value between 1 (lowest), and 255 (highest).
`vrrp-adv-int` *`mseconds`*	Specify a VRRP advertisement interval in milliseconds. The range is from 30 to 40950 with a default value of 1000.
`vrrp-preempt-mode disable|enable`	Specify one of the options to allow or prevent a high priority backup router from becoming master router. `vrrp-preempt-mode` is enabled by default.
`mtu` *`bytes`*	Specify a MTU value in bytes between 68, and 9398.
`priority-tag|no-priority-tag`	Specify if you want to add a VLAN 0 priority tag on forwarded traffic.
`pim-cluster|no-pim-cluster`	Specify if VNIC is on an exclusive transit VLAN.
`fabric-nic|no-fabric-nic`	Specify if VNIC is on a VLAN used for fabric setup.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.

Version 2.1	The parameter nic added.
Version 2.2	The parameters `vrrp-priority` added.
Version 2.3	The parameter `vrrp-adv-int` added.
Version 2.5.0	The parameter `mtu` added.
Version 3.1.0	The parameter `fabric-nic` and `priority-tag` added.
Version 6.0.0	The parameter `vrrp-preempt-mode` added.

Usage You can modify the interfaces on the vRouter service on a fabric, cluster, standalone switch, or virtual network (vNET). This command modifies an interface to a vRouter service.

Examples To modify a vrouter interface, and to add VLAN 0 priority tag, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-modify  vrouter-name
MyvService  priority-tag
```

vrouter-interface-remove

This command is used to remove interfaces on the virtual router (vRouter) service in a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-interface-remove`

`vrouter-name` *`name-string`*	Specify the name for the vRouter interface.
Specify one of the following interface arguments:	
`nic` *`nic-string`*	Specify the name of the NIC.
`l3-port` *`l3port-usable-port name`*	Specify the name of the Layer 3 port.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.
Version 5.1.3	The argument `l3-port` introduced.

Usage You can remove the interfaces on the vRouter service from a fabric, cluster, standalone switch, or virtual network (vNET). This command removes an interface to a vRouter service.

Examples To remove eth1 NIC from the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-remove  vrouter-name
MyvService nic eth1
```

vrouter-interface-show

This command is used to display the interfaces on the virtual router (vRouter) service on a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-interface-show`

`vrouter-name` *`name-string`*	Name for the vRouter interface.
Specify any of the following options:	
`vlan` *`vlan-id`*	The VLAN identifier. This is a value between 0, and 4095.
`ip` *`ip-address`*	The IP address of the interface.
`netmask` *`netmask`*	The netmask.
`assignment none|dhcp|dhcpv6`	The DHCP method for IP address assignment. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
`ip2` *`ip-address`*	The IP address of the interface.
`netmask2` *`netmask`*	The netmask.
`assignment2 none|dhcp|dhcpv6`	The DHCP method for IP address assignment. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
`linklocal` *`ip-address`*	An IPv6 linklocal address.
`ipv6-unnumbered|no-ipv6-unnumbered`	Specify if IPv6 unnumbered has been enabled or not.
`vnet` *`vnet-name`*	The vNET assigned to the vRouter.
`vlan-type public|private`	The type of VLAN for the interface.
`if mgmt|data|span`	Specify if the interface is a management, data or span interface.
`alias-on` *`alias-on-string`*	An alias for the interface.
`exclusive|no-exclusive`	Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface. Exclusive is specified when you configure the interface as a span interface, and allows higher throughput through the interface.
`nic-enable|nic-disable`	Specify if the NIC is enabled or disabled.
`pim|no-pim`	Specify if the vRouter interface is a PIM interface.

`nic-state down|up`	The NIC state.
`pim-dr-priority` *`integer`*	The direct router (DR) priority as an integer between 1, and 4294967295. NetVisor selects the vRouter interface with higher DR priority as the designated router. By default, all interfaces are priority 1. In case of same priority, NetVisor selects the vRouter interface with highest network address as DR.
`pim-cluster|no-pim-cluster`	Specify if the user wants to provide alternative routing for Layer 3 attached sources for leaf cluster routing configuration. It allows traffic to failover not black-hole when the unicast path to the Spine fails.
`fabric-nic|no-fabric-nic`	Specify if VNIC is on a VLAN used for fabric setup.
`vrrp-id` *`id-number`*	The ID for the VRRP interface. The IDs on both vRouters must be the same ID number.
`vrrp-primary` *`string`*	The primary interface for VRRP failover.
`vrrp-priority` *`number`*	The priority for the VRRP interface. This is a value between 1 (lowest), and 255 (highest).
`vrrp-adv-int` *`mseconds`*	A VRRP advertisement interval in milliseconds. The range is from 30 to 40950 with a default value of 1000.
`vrrp-preempt-mode disable|enable`	Specify one of the options to allow or prevent a high priority backup router from becoming master router. `vrrp-preempt-mode` is enabled by default.
`l3-port` *`l3port-usable-port name`*	A Layer 3 port for the interface.
`secondary-macs` *`secondary-macs-string`*	A secondary MAC address for the interface.
`mtu` *`bytes`*	An MTU value in bytes between 68, and 9216.
`if-nat-realm internal|external`	A NAT realm for the interface.
`priority-tag|no-priority-tag`	Specify if user wants to add a VLAN 0 priority tag on forwarded traffic.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `exclusive` and `nic` added.

Version 2.2	The parameters `vrrp-id`, `vrrp-priority`, and `vrrp-primary` added.
Version 2.2.5	The parameters `l3-port`, and `secondary-macs` added.
Version 2.3	The parameter `vrrp-adv-int` added.
Version 2.4.1	The parameter `vlan-type` added.
Version 2.5.0	The parameter `mtu` added.
Version 2.6.0	The parameter `if-nat-realm internal|external` added.
Version 2.6.2	The parameter `vxlan` deprecated.
Version 3.0.0	The parameter `ip2` and `netmask2` added. The parameters `pim`, `pim-dr-priority`, and `pim-cluster` added. The parameter `linklocal` added. The option `autov6` deprecated for the parameter `assignment`.
Version 3.1.0	The parameter `fabric-nic` and `priority-tag` added.
Version 5.1.3	The parameter `ipv6-unnumbered|no-ipv6-unnumbered` added.
Version 6.0.0	The parameter `vrrp-preempt-mode` added.

Usage You can display information about the interfaces on the vRouter service on a fabric, cluster, standalone switch, or virtual network (vNET).

Examples To display information about all interfaces on vRouter services, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-show format all layout
vertical
vrouter-name: vrouter1
nic: eth1.33
ip: 10.9.100.100/16
assignment: static
mac: 66:0e:94:30:c6:92
vlan: 33
vxlan: 0
if: data
alias-on:
exclusive: no
nic-config: enable
nic-state: up
secondary-macs:
vrouter-name: vrouter1
nic: eth2.33
ip: 192.168.42.11/24
assignment: static
mac: 66:0e:94:30:25:5e
```

```
vlan: 33
vxlan: 0
if: data
alias-on:
exclusive: no
nic-config: enable
nic-state: up
secondary-macs:
```

vrouter-interface-ip-add

This command is used to migrate a vRouter interface from a single stack (IPv4) to dual stack (IPv4, and IPv6) back to a single stack (IPv4).

Syntax `vrouter-interface-ip-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
`nic` *`nic-string`*	Specify the virtual NIC assigned to the interface.
`ip` *`ip-address`*	Specify the IP address assigned to the interface.
`netmask` *`netmask`*	Specify the netmask of the IP address.
Specify any of the following options	
`vnet` *`vnet-name`*	Specify the vNET assigned to the vRouter.
`l2-net` *`l2-net name`*	Specify the Layer 2 interface.
`type primary|secondary`	Specify the IP address as primary or secondary.

Defaults None

Access Network administrator

History

Version 3.0.0	Command introduced.
Version 3.0.4	The parameter `type` added.

Usage Use this command to migrate a vRouter interf ace from a single stack (IPv4) to dual stack (IPv4, and IPv6) back to a single stack (IPv4).

Examples To migrate an interface to dual stack with the IPv6 address, 1000::4/92, use the following syntax:

```
CLI (network-admin@switch) > vrouter-interface-ip-add  vrouter-name
vr1 nic eth0.10 ip 1000::4/92 vnet 0:0 l2-net 10
```

vrouter-interface-ip-remove

This command is used to migrate a vRouter interface from a single stack (IPv4) to dual stack (IPv4, and IPv6) back to a single stack (IPv4).

Syntax `vrouter-interface-ip-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
`nic` *`nic-string`*	Specify the virtual NIC assigned to the interface.
`ip` *`ip-address`*	Specify the IP address assigned to the interface.

Defaults None

Access Network administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to migrate a vRouter interface from a dual stack (IPv4, and IPv6) to single stack (IPv4, and IPv6) back to a single stack (IPv4).

Examples To migrate an interface to single stack and remove the IPv6 address, 1000::4/92, use the following syntax:

```
CLI (network-admin@switch) > vrouter-interface-ip-remove vrouter-name vr1 nic eth0.10 ip 1000::4/92
```

vrouter-interface-ip-show

This command is used to migrate a vRouter interface from a single stack (IPv4) to dual stack (IPv4, and IPv6) back to a single stack (IPv4).

Syntax `vrouter-interface-ip-remove`

`vrouter-name` *`name-string`*	Name of the vRouter.
`nic` *`nic-string`*	The virtual NIC assigned to the interface.
`ip` *`ip-address`*	The IP address assigned to the interface.
`netmask` *`netmask`*	The netmask of the IP address.
Specify any of the following options	
`vnet` *`vnet-name`*	The vNET assigned to the vRouter.
`l2-net` *`l2-net name`*	The Layer 2 interface.
`type primary|secondary`	The IP address as primary or secondary.

Defaults None

Access Network administrator

History

Version 3.0.0	Command introduced.
Version 3.0.4	The parameter `type` added.

Usage Use this command to display a vRouter interface with dual stack (IPv4, and IPv6) IP addresses.

Examples To display an interface with dual stack (IPv4, and IPv6) IP addresses, use the following syntax:

```
 CLI (network-admin@switch) > vrouter-interface-ip-show
vrouter-name nic     vnet vlan vlan-type ip                            assignment nic-state
------------ ------- ---- ---- --------- ------------------------------ ---------- ---------
vr1          eth0.10 0:0  10   public    10.2.3.4/24                    static     up
vr1          eth0.10 0:0  10   public    1000::4/92                     static     up
vr1          eth0.10 0:0  10   public    fe80::640e:94ff:fe17:4f99/64   static     up
```

vrouter-interface-config-add

This command is used to add additional routing protocol configuration to a vRouter.

Syntax `vrouter-interface-config-add`

`vrouter-name` *`name-string`*	Specify the vRouter name to add the interface.
Specify the following interface configuration arguments:	
`nic` *`vrouter-interface-nic`*	Specify the NIC to add to the interface.
`l3-port` *`l3port-usable-port name`*	Specify a Layer 3 port to add to the interface.
`ospf-hello-interval` *`seconds`*	Specify the OSPF hello interval with a number between 1, and 65535. This configures the interval between sending OSPF hello messages on an interface. The default value is 10.
`ospf-dead-interval` *`seconds`*	Specify the OSPF dead interval with a number between 2, and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down. The default interval is 5.
`ospf-retransmit-interval` *`seconds`*	Specify the OSPF retransmit interval from 3 to 65535 seconds. The default is 5 seconds. (IPv4 orIPv6)
`ospf-priority` *`number`*	Specify the OSPF priority with a number between 0, and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1.
`ospf-auth-key` *`ospf-auth-key-string`*	Specify an authorization key string for the vRouter interface.
`ospf-cost` *`number`*	Specify the OSPF cost with a value between 0, and 655365.
`ospf-msg-digest-id` *`id`*	Specify a value between 0and 255. If you specify 0, then OSPF MD5 authentication is not set.
`ospf-msg-digest-key` *`ospf-msg-digest-key-string`*	Specify a string for the OSPF message digest key.
`ospf-passive-if|no-ospf-passive-if`	Specify if the OSPF interface is passive or not.
`ospf-network-type default|point-to-point`	Specify the type of OSPF network.
`ospf-bfd default|enable|disable`	Specify if BFD protocol support for OSPF fault detection is enabled. The default is Disable.
`bfd-interval` *`interval`*	Specify the desired Bidirectional Forwarding Detection (BFD) transmit interval from 200 ms to

	3000 ms. The default value is 750 ms.
`bfd-min-rx` *`interval`*	Specify the required BFD receive interval from 200 milliseconds to 3000 milliseconds. The default value is 500 ms.
`bfd-multiplier` *`integer`*	Specify the BFD detection multiplier from 2 to 20. The default value is 3.
`nd-suppress-ra|no-nd-suppress-ra`	Specify if you want to suppress the transmit of IPv6 router advertisements.
`v6-ra-prefix` *`ip-address`*	Specify the IPv6 prefix to include in router advertisements.
`prefix-netmask` *`netmask`*	Specify the IPv6 prefix netmask.
`autoconf|no-autoconf`	Specify if you want the prefix used for IPv6 autoconfiguration.
`ra-interval` *`seconds`*	Specify the interval between router advertisements in seconds with a range of 1 to 1800 seconds.
`ra-lifetime` *`seconds`*	Specify the time that the vRouter is considered as the default router in seconds with a range of 0 to 9000.

Defaults None

Access CLI

History

Version 2.1	Command introduced.
Version 2.2	The parameter `ospf-cost` added.
Version 2.2.2	The parameters `ospf-msg-digest-key`, and `ospf-msg-digest-id` added.
Version 2.2.3	The parameters `ospf-passive-if`, and `no-ospf-passive-if` added.
Version 2.2.6	The parameters `bfd-interval`, `bfd-min-rx`, and `bfd-multiplier` added.
Version 2.4.1	The parameter `ospf-network-type` added.
Version 2.5	The parameters `nd-suppress-ra`, `v6-ra-prefix`, `prefix-netmask`, `autoconf|no-autoconf`, `ra-interval`, and `ra-lifetime` added.
Version 2.5.3	The parameter `ospf-bfd default|enable|disable` added.

Version 3.0.0	The parameters `ospf-retransmit-interval`,`ra-prefix`, `ra-interval` added.
Version 5.1.3	The parameter l3-port added.

Usage This command is used to add additional routing protocol configuration to a vRouter.

Examples To add an interface to vRouter, vroute-int, interface eth0.11, hello interval 10, dead interval 20, with priority 5, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-config-add  vrouter-name vroute-int nic eth0.11 ospf-hello-interval 10 ospf-dead-interval 20 ospf-priority 5
```

vrouter-interface-config-remove

This command is used to remove additional routing protocol information in a vRouter configuration.

Syntax `vrouter-interface-config-remove`

`vrouter-name` *`name-string`*	Specifies the vRouter name on the interface.
Specify the following interface configuration arguments:	
`nic` *`vrouter-interface-nic`*	Specifies the NIC to add to the interface.
`l3-port` *`l3port-usable-port name`*	Specifies the Layer 3 port to remove.

Defaults None

Access CLI

History

Version 2.1	Command introduced.
Version 5.1.3	The parameter `l3-port` added.

Usage You can use vRouter interfaces to separate traffic on the vRouter.

Examples To remove an interface on vRouter, vroute-int, with interface eth0.11, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-config-remove
vrouter-name vroute-int nic eth0.11
```

vrouter-interface-config-modify

This command is used to modify routing protocol configuration to a vRouter.

Syntax `vrouter-interface-config-modify`

`vrouter-name` *`name-string`*	Specify the vRouter name to add the interface.
Specify the following interface configuration arguments:	
`nic` *`vrouter-interface-nic`*	Specify the NIC to modify.
`l3-port` *`l3port-usable-port name`*	Specify the Layer 3 port to modify.
`ospf-hello-interval` *`seconds`*	Specify the OSPF hello interval with a number between 1, and 65535. This configures the interval between sending OSPF hello messages on an interface. The default value is 10.
`ospf-dead-interval` *`seconds`*	Specify the OSPF dead interval with a number between 2, and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down. The default interval is 5.
`ospf-retransmit-interval` *`seconds`*	Specify the OSPF retransmit interval from 3 to 65535 seconds. The default is 5 seconds. (IPv4 orIPv6)
`ospf-priority` *`number`*	Specify the OSPF priority with a number between 0, and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1.
`ospf-auth-key` *`ospf-auth-key-string`*	Specify an authorization key string for the vRouter interface.
`ospf-cost` *`number`*	Specify the OSPF cost with a value between 0, and 655365.
`ospf-msg-digest-id` *`id`*	Specify a value between 0and 255. If you specify 0, then OSPF MD5 authentication is not set.
`ospf-msg-digest-key` *`ospf-msg-digest-key-string`*	Specify a string for the OSPF message digest key.
`ospf-passive-if|no-ospf-passive-if`	Specify if the OSPF interface is passive or not.
`ospf-network-type default|point-to-point`	Specify the type of OSPF network.
`ospf-bfd default|enable|disable`	Specify if BFD protocol support for OSPF fault detection is enabled. The default is Disable.
`bfd-interval` *`interval`*	Specify the desired Bidirectional Forwarding Detection (BFD) transmit interval from 200 ms to

	3000 ms. The default value is 750 ms.
`bfd-min-rx` *`interval`*	Specify the required BFD receive interval from 200 milliseconds to 3000 milliseconds. The default value is 500 milliseconds.
`bfd-multiplier` *`integer`*	Specify the BFD detection multiplier from 2 to 20. The default value is 3.
`nd-suppress-ra|no-nd-suppress-ra`	Specify if you want to suppress the transmit of IPv6 router advertisements.
`v6-ra-prefix` *`ip-address`*	Specify the IPv6 prefix to include in router advertisements.
`prefix-netmask` *`netmask`*	Specify the IPv6 prefix netmask.
`autoconf|no-autoconf`	Specify if you want the prefix used for IPv6 autoconfiguration.
`ra-interval` *`seconds`*	Specify the interval between router advertisements in seconds with a range of 1 to 1800 seconds.
`ra-lifetime` *`seconds`*	Specify the time that the vRouter is considered as the default router in seconds with a range of 0 to 9000.

Defaults None

Access CLI

History

Version 2.1	Command introduced.
Version 2.2	The parameter `ospf-cost` added.
Version 2.2.2	The parameters `ospf-msg-digest-key`, and `ospf-msg-digest-id` added.
Version 2.2.3	The parameters `ospf-passive-if`, and `no-ospf-passive-if` added.
Version 2.2.6	The parameters `bfd-interval`, `bfd-min-rx`, and `bfd-multiplier` added.
Version 2.4.1	The parameter `ospf-network-type` added.
Version 2.5	The parameters `nd-suppress-ra`, `v6-ra-prefix`, `prefix-netmask`, `autoconf|no-autoconf`, `ra-interval`, and `ra-lifetime` added.
Version 2.5.3	The parameter `ospf-bfd default|enable|disable` added.

Version 3.0.0	The parameters `ospf-retransmit-interval`,`ra-prefix`, `ra-interval` added.
Version 5.1.3	The parameter `l3-port` added.

Usage This command is used to modify a routing protocol configuration to a vRouter.

Examples

- To modify an interface to vRouter, vroute-int, interface eth0.11, hello interval 10, dead interval 20, with priority 5, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-config-modify
vrouter-name vroute-int nic eth0.11 ospf-hello-interval 10 ospf-
dead-interval 20 ospf-priority 5
```

- To remove OSPF authentication key from a configuration, use empty double quotes as shown below:

```
CLI (network-admin@switch) > vrouter-interface-config-modify  ospf-
auth-key ""
```

vrouter-interface-config-show

This command is used to display routing protocol information on a vRouter.

Syntax `vrouter-interface-config-show`

`vrouter-name` *`name-string`*	The vRouter name to add the interface.
The following interface configuration arguments:	
`nic` *`vrouter-interface-nic`*	The NIC.
`l3-port` *`l3port-usable-port name`*	The Layer 3 port.
`ospf-hello-interval` *`seconds`*	The OSPF hello interval with a number between 1, and 65535. This configures the interval between sending OSPF hello messages on an interface. The default value is 10. (IPv4 or v6)
`ospf-dead-interval` *`seconds`*	The OSPF dead interval with a number between 2, and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down. The default interval is 5. (IPv4 or v6)
`ospf-retransmit-interval` *`seconds`*	The OSPF retransmit interval from 3 to 65535 seconds. The default is 5 seconds. (IPv4 or v6)
`ospf-priority` *`number`*	The OSPF priority with a number between 0, and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1. (IPv4 or v6)
`ospf-auth-key` *`ospf-auth-key-string`*	Specify an authorization key string for the vRouter interface. (IPv4 only)
`ospf-cost` *`number`*	The OSPF cost with a value between 0, and 655365. (IPv4 or v6)
`ospf-msg-digest-id` *`id`*	Specify a value between 0, and 255. If you specify 0, then OSPF MD5 authentication is not set. (IPv4 only)
`ospf-msg-digest-key` *`ospf-msg-digest-key-string`*	Specify a string for the OSPF message digest key. (IPv4 only)
`ospf-passive-if|no-ospf-passive-if`	Specify if the OSPF interface is passive or not. (IPv4 or v6)
`ospf-network-type default|point-to-point`	The type of OSPF network. (IPv4 or v6)
`ospf-bfd default|enable|disable`	Specify if BFD protocol support for OSPF fault detection is enabled. The default is Disable.
`bfd-interval` *`interval`*	The desired Bidirectional Forwarding Detection

	(BFD) transmit interval from 200 ms to 3000 ms. The default value is 750 ms.
`bfd-min-rx` *`interval`*	The required BFD receive interval from 200 milliseconds to 3000 milliseconds. The default value is 500 ms.
`bfd-multiplier` *`integer`*	The BFD detection multiplier from 2 to 20. The default value is 3.
`nd-suppress-ra|no-nd-suppress-ra`	Specify if you want to suppress the transmit of IPv6 router advertisements.
`ra-interval` *`seconds`*	The interval between router advertisements in seconds with a range of 1 to 1800 seconds.
`ra-lifetime` *`seconds`*	The time that the vRouter is considered as the default router in seconds with a range of 0 to 9000.
`vrf` *`vrf-string`*	Name of the VRF router.

Defaults None

Access CLI

History

Version 2.1	Command introduced.
Version 2.2	The parameter `ospf-cost` added.
Version 2.2.2	The parameters `ospf-msg-digest-key`, and `ospf-msg-digest-id` added.
Version 2.2.3	The parameters `ospf-passive-if`, and `no-ospf-passive-if` added.
Version 2.2.6	The parameters `bfd-interval`, `bfd-min-rx`, and `bfd-multiplier` added.
Version 2.4.1	The parameter `ospf-network-type` added.
Version 2.5	The parameters `nd-suppress-ra`, `v6-ra-prefix`, `prefix-netmask`, `autoconf|no-autoconf`, `ra-interval`, and `ra-lifetime` added.
Version 2.5.3	The parameter `ospf-bfd default|enable|disable` added.
Version 3.0.0	The parameters `ospf-retransmit-interval`,`ra-prefix`, and `ra-interval` added.
Version 5.1.3	The parameter `l3-port` added.

Usage You can display additional routing information for a vRouter configuration.

Examples To display the interface, use the following command:

```
CLI (network-admin@switch) > vrouter-interface-config-show
vrouter-name nic     ospf-hello-interval(s) ospf-dead-interval(s) ospf-priority ospf-auth-key
ospf-passive-if bfd-interval(ms) bfd-min-rx(ms) bfd-multiplier
------------ ------- ---------------------- --------------------- ------------- -------------
--------------- ---------------- -------------- --------------
vr0          eth0.10 10                     40                    1             Test_key
false           750              500            3
```

vrouter-interface-config-raprefix-add

This command is used to add Router Advertisement (RA) prefixes to a vRouter interface.

Syntax `vrouter-interface-config-raprefix-add`

`vrouter-name` *`name-string`*	Specify the vRouter name.
`nic` *`vrouter interface nic`*	Specify the vRouter interface NIC.
`v6-ra-prefix` *`ip-address`*	Specify the IPv6 RA prefix address to include in the Router Advertisement.
`prefix-netmask` *`netmask`*	Specify the netmask for the prefix.
`autoconf|no-autoconf`	Specify if the RA prefix can be used for IPv6 autoconfiguration.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to add a RA prefix to a vRouter interface.

Examples To add a RA prefix, use the following syntax:

```
CLI (network-admin@switch) > vrouter-interface-config-raprefix-add
```

vrouter-interface-config-raprefix-remove

This command is used to remove Router Advertisement (RA) prefixes from a vRouter interface.

Syntax `vrouter-interface-config-raprefix-remove`

`vrouter-name` *`name-string`*	Specify the vRouter name.
`nic` *`vrouter interface nic`*	Specify the vRouter interface NIC.
`v6-ra-prefix` *`ip-address`*	Specify the IPv6 RA prefix address to include in the Router Advertisement.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to remove a RA prefix to a vRouter interface.

Examples To remove a RA prefix, use the following syntax:

```
CLI (network-admin@switch) > vrouter-interface-config-raprefix-
remove
```

vrouter-interface-config-raprefix-show

This command is used to add Router Advertisement (RA) prefixes to a vRouter interface.

Syntax `vrouter-interface-config-raprefix-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
`nic` *`vrouter interface nic`*	The vRouter interface NIC.
`v6-ra-prefix` *`ip-address`*	The IPv6 RA prefix address to include in the Router Advertisement.
`prefix-netmask` *`netmask`*	The netmask for the prefix.
`autoconf|no-autoconf`	Specify if the RA prefix can be used for IPv6 auto configuration.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about a RA prefix configuration.

Examples To display RA information, use the following syntax:

```
CLI (network-admin@switch) > vrouter-interface-config-raprefix-show
```

vrouter-log-clear

This command clears vRouter protocol logs such as FRR log files.

Syntax `vrouter-log-clear`

`vrouter-log-clear`	Clears vRouter log protocols from a protocol log file
Specify the following interface arguments:	
`vrouter-name` *`vrouter name`*	Specify the name of the vRouter service.
`protocol zebra|ospf|ospf6|bgp|bfd|rip`	Specify the protocol of the log file to clear from the switch.

Defaults None.

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to clear FRR files from a specific protocol log file. Because FRR log files accumulate on the switch, you may want to clear a particular log file so they do not create space issues.

Examples To clear OSPF protocol log files, use the following command:

```
CLI (network-admin@switch) > vrouter-log-clear protocol ospf
```

vrouter-log-show

This command displays FRR logs files, such as Zebra, OSPF, OSPF6, BGP, BFD, and RIP can be viewed directly from the console using the NetVisor CLI.

Syntax `vrouter-log-show`

`vrouter-name` *`vrouter name`*	Name of the vRouter service.
Specify any of the following options:	
`protocol zebra|ospf|ospf6|bgp| bfd|rip|routesnoop|evpnsnoop`	Specify the protocol of the log file to clear from the switch.

Defaults None.

Access CLI

History

Version 2.5.3	Command introduced.

Usage FRR logs files, such as Zebra, OSPF, OSPF6, BGP, BFD, and RIP can be viewed directly from the console using the NetVisor.

Examples To display OSPF protocol logs from the vRouter, use this command:

```
CLI (network-admin@switch) > vrouter-log-show vrouter-name vr2
protocol evpnsnoop
log-message
-----------------------------------------------------------------
-----------------------------------------------------------------
---------
<snip>
2021-05-21,05:24:26.075.:rs_msg.c:624:rs_msg_vport_update_event_cb
 L2_UPDATE mac: 2e:d7:27:b9:11:6d,  log_type l2-modify caller
cluster-status: vxlan 100100, vlan 100 reason:modify,evpn-mac-move
owner_flags 0x0, over_ tunnel 1791,  2e:d7:27:b9:11:6d action
MAC_MOVE ip 10.0.100.30
<snip>
```

vrouter-loopback-interface-add

This command adds a loopback address to a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch. The maximum number of loopback interfaces is 255. NetVisor OS supports IPv4, and IPv6 addresses.

Syntax `vrouter-loopback-interface-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following loopback interface arguments:	
`index` *`number`*	Specify the interface index from 1 to 255.
`ip-address`	Specify the network IP address.

Defaults None.

Access CLI

History

Version 2.2	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds a loopback address for an existing vRouter service.

Examples To add the loopback interface of 192.168.11.13 to vRouter, MyvService, , use the following command:

```
CLI (network-admin@switch) > vrouter-loopback-interface-add
vrouter-name MyvService index 1 ip-address 192.168.11.13
```

vrouter-loopback-interface-remove

This command removes a loopback address to a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-loopback-interface-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following loopback interface arguments:	
`index` *`number`*	Specify the interface index from 1 to 255.

Defaults None.

Access CLI.

History

Version 2.2	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command removes a loopback interface from an existing Router service.

Examples To remove the loopback interface of 192.168.11.13 to vRouter, MyvService, , use the following command:

```
CLI (network-admin@switch) > vrouter-loopback-interface-remove
vrouter-name MyvService index 1
```

vrouter-loopback-interface-show

This command displays information about a loopback address added to a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-loopback-interface-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify the following loopback interface arguments:	
`index` *`number`*	The interface index from 1 to 255.
`ip` *`ip-address`*	The network IP address.
`router-if` *`vrouter-hw-if name`*	The internal loopback IP bound to this router interface.

Defaults None.

Access CLI.

History

Version 2.2	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds a loopback address for an existing vRouter service.

Examples To add the loopback interface of 192.168.11.13 to vRouter, MyvService, , use the following command:

```
CLI (network-admin@switch) > vrouter-loopback-interface-show
vrouter-name             index ip                   router-if
------------------------ ----- -------------------- ---------
hmplabpsq-we60100-vrouter 1     104.255.61.1         eth0.4092
hmplabpsq-we60100-vrouter 2     2620:0:167f:b000::10 eth0.4092
hmplabpsq-we60200-vrouter 1     104.255.61.2
hmplabpsq-we60200-vrouter 2     2620:0:167f:b000::11
hmplabpsq-we50100-vrouter 1     104.255.61.5
hmplabpsq-we50100-vrouter 2     2620:0:167f:b000::14
hmplabpsq-we50200-vrouter 1     104.255.61.6
hmplabpsq-we50200-vrouter 2     2620:0:167f:b000::15
hmplabpsq-we50300-vrouter 1     104.255.61.7
hmplabpsq-we50300-vrouter 2     2620:0:167f:b000::16
hmplabpsq-we50400-vrouter 1     104.255.61.8
hmplabpsq-we50400-vrouter 2     2620:0:167f:b000::17
hmplabpsq-we50500-vrouter 1     104.255.61.9
hmplabpsq-we50500-vrouter 2     2620:0:167f:b000::18
hmplabpsq-we50600-vrouter 1     104.255.61.10
hmplabpsq-we50600-vrouter 2     2620:0:167f:b000::19
```

vrouter-mfib-routes-show

This command is used to display information about multicast routes in forwarding information database.

Syntax `vrouter-mfib-routes-show`

`type <*,G>|<*,G,V>||`	The type of hardware router.
`srcip` *`ip-address`*	The source IP address.
`srcip-mask` *`srcip-mask-number`*	The source netmask.
`group` *`ip-address`*	The group IP address.
`group-mask` *`group-mask-number`*	The group netmask.
`vnet` *`vnet-name`*	The vNET for the VLAN.
`bd bridge-domain` *`name`*	The bridge domain.
`vlan` *`vlan-id`*	The VLAN identifier.
`vrid` *`vrouter-id`*	The virtual router identifier.
`hw-group-id` *`hw-group-id`*	The hardware group identifier.
`send-vnet` *`vnet-name`*	The vNET of the sending VLAN.
`send-vlan` *`vlan-id`*	The sending VLAN identifier.
`send-bd send-bd-string`	The sending bridge domain.
`ports` *`port-list`*	The port list.
`encap-id` *`encap-id-number`*	The encapsulation identifier.
`flags Trunk|Active`	The hardware flags for the route.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.
Version 2.4.1	The parameter `vnet` added.
Version 2.6.2	The parameter `send-vnet` added.

Usage Use this command to display multicast routes in the forwarding information database (FIB).

Examples To display multicast routes in the FIB, use the following syntax:

```
CLI (network-admin@switch) > vrouter-mfib-routes-show
switch type    srcip         group      vnet vlan vrid hw-group-id send_vnet send-vlan
```

```
ports         encap-id flags
------ ------- ------------- ---------- ---- ---- ---- ----------- --------- ---------
------------- -------- ------
switch <S,G,V> 10.16.100.210 232.1.1.20      100  0    0x2000002            100
1,20-23,40-41 -1       Active
switch <S,G,V> 10.16.100.210 232.1.1.20      100  0    0x2000002            101
20-21         1        Active
switch <S,G,V> 10.16.100.210 232.1.1.20      100  0    0x2000002            100
1,10-13,40-41 -1       Active
```

vrouter-mrib-routes-show

This command is used to display multicast routes in Routing Information Base (RIB).

Syntax `vrouter-mrib-routes-show`

`type <*,G>|<*,G,V>`	The RIB route type.
`srcip` *`ip-address`*	The source IP address.
`group` *`ip-address`*	The group IP address.
`vlan` *`0..4095`*	The VLAN ID.
`vrid` *`vrid-number`*	The virtual router ID.
`hw-group-id` *`hw-group-id-number`*	The hardware group ID.
`vnic` *`vnic-string`*	The VNIC name.
`vnic-vlan` *`vnic-vlan-number`*	The VLAN assigned to the VNIC.
`ports` *`port-list`*	The port list.
`flags` *`in-hw`*	The hardware flags for the route.

Defaults None

Access CLI

History

Usage Use this command to display information about multicast routes in the Routing Information Base (RIB).

Examples To display multicast routes in the RIB, use the following syntax:

```
CLI (network-admin@switch) > vrouter-mrib-routes-show
switch type    srcip         group      vlan vrid hw-group-id vnic     vnic-vlan
ports                 flags
------ ------- ------------- ---------- ---- ---- ----------- -------- ---------
---------------------  -----
switch <S,G,V> 10.16.100.210 232.1.1.20 100  0    0x2000002   eth2.100 100
1,20-23,40-41,128-130
switch <S,G,V> 10.16.100.210 232.1.1.20 100  0    0x2000002   eth2.101 101       20-
21,129
switch <S,G,V> 10.16.100.210 232.1.1.20 100  0    0x2000002   eth0.100 100
1,10-13,40-41,128-130
switch <S,G,V> 10.16.100.210 232.1.1.20 100  0    0x2000002   eth0.100 100
1,10-13,40-41,128-130
```

vrouter-multicast-igmp-group-show

This command displays the Internet Group Management Protocol (IGMP) group state for each multicast router.

Syntax `vrouter-multicast-igmp-group-show`

`vrouter-name` *`name-string`*	Displays the vRouter name.
`if-name` *`if-name-string`*	Displays the physical name of the virtual interface.
`address` *`ip-address`*	Displays the local IP address.
`vif` *`vif-number`*	Displays the virtual interface identifier.
`reporter` *`ip-address`*	Displays the reporter IP address.
`timer` *`timer-number`*	Displays the timer number.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.

Usage Use this command to display information about IGMP group state for each multicast router.

Examples To display information about IGMP group state, use the following syntax:

```
CLI (network-admin@switch) > vrouter-multicast-igmp-group-show
  vrouter-name if-name  address    reporter
  ------------ -------- ---------- -------------
  vr0          eth0.110 224.0.0.13 10.16.110.1
  vr0          eth0.110 224.0.0.2  10.16.110.1
  vr0          eth0.110 224.0.0.22 10.16.110.1
  vr0          eth0.111 224.0.0.13 10.16.111.1
  vr0          eth0.111 224.0.0.2  10.16.111.1
  vr0          eth0.111 224.0.0.22 10.16.111.1
  vr0          eth0.112 224.0.0.2  10.16.112.1
  vr0          eth0.112 224.0.0.22 10.16.112.1
  vr0          eth0.110 224.0.0.5  10.16.110.1
  vr0          eth0.111 224.0.0.5  10.16.111.1
  vr0          eth0.112 224.0.0.5  10.16.112.1
  vr0          eth0.112 224.0.0.13 10.16.112.2
  vr0          eth0.110 224.0.0.6  10.16.110.1
  vr0          eth0.111 224.0.0.6  10.16.111.1
  vr0          eth0.112 224.0.0.6  10.16.112.2
  vr0          eth0.113 224.0.0.5  10.16.113.1
  vr0          eth0.113 224.0.0.13 10.16.113.2
  vr0          eth0.113 224.0.0.2  10.16.113.2
  vr0          eth0.113 224.0.0.22 10.16.113.1
```

```
vr0          eth0.113 224.0.0.6  10.16.113.2
vr1          eth1.112 224.0.0.13 10.16.112.2
vr1          eth1.112 224.0.0.2  10.16.112.2
vr1          eth1.112 224.0.0.22 10.16.112.2
vr1          eth0.114 224.0.0.13 10.16.114.1
vr1          eth0.114 224.0.0.2  10.16.114.1
vr1          eth0.114 224.0.0.22 10.16.114.1
vr1          eth1.112 224.0.0.5  10.16.112.1
vr1          eth0.114 224.0.0.5  10.16.114.1
vr1          eth0.114 224.0.0.6  10.16.114.1
vr1          eth1.112 224.0.0.6  10.16.112.2
vr2          eth1.114 224.0.0.13 10.16.114.2
vr2          eth1.114 224.0.0.2  10.16.114.2
vr2          eth1.114 224.0.0.22 10.16.114.2
vr2          eth0.115 224.0.0.13 10.16.115.1
vr2          eth0.115 224.0.0.2  10.16.115.1
vr2          eth0.115 224.0.0.22 10.16.115.1
vr2          eth1.114 224.0.0.5  10.16.114.2
vr2          eth0.115 224.0.0.5  10.16.115.1
vr2          eth1.114 224.0.0.6  10.16.114.1
vr2          eth0.115 224.0.0.6  10.16.115.1
vr2          eth0.115 224.1.1.1  10.16.115.100
vr2          eth1.113 224.0.0.5  10.16.113.1
vr2          eth1.113 224.0.0.13 10.16.113.2
vr2          eth1.113 224.0.0.2  10.16.113.2
```

vrouter-multicast-route-show

This command displays the multicast forwarding state for one more multicast routers or one or more multicast groups.

Syntax `vrouter-multicast-route-show`

`vrouter-name` *`name-string`*	Name of the vRouter name.
`source` *`ip-address`*	The source IP address.
`group` *`ip-address`*	The group IP address.
`parent` *`parent-number`*	The parent number.
`oif_bitmap` *`oif_bitmap-number`*	The bitmap of virtual interfaces to forward packets.
`incoming-if` *`if-string`*	The name of the incoming interface.
`outgoing-ifs` *`ifs-string`*	The name of the outgoing interface.
`remote-source true|false`	The source is remote.
`transit-vlan transit-vlan-number`	Transit VLAN.

Defaults None

Access CLI

History

Version 2.2.5	Command introduced.

Usage Use this command to display information about muticast routes.

Examples To display multicast route information use the following syntax:

```
CLI (network-admin@switch) > vrouter-multicast-route-show
vrouter-name      source         group         incoming-if outgoing-ifs remote-source transit-vlan
----------------  ------------   -----------   -----------  ------------  -------------  ------------
tucana-colo-6-vr 10.17.82.100 232.20.1.5   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.3   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.4   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.2   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.7   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.8   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.1   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.6   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.9   eth0.802     eth0.803,     false           4080
tucana-colo-6-vr 10.17.82.100 232.20.1.10 eth0.802     eth0.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.5   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.3   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.4   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.2   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.7   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.8   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.1   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.6   eth2.802     eth2.803,     false           4080
tucana-colo-7-vr 10.17.82.100 232.20.1.9   eth2.802     eth2.803,     false           4080
```

```
tucana-colo-7-vr 10.17.82.100 232.20.1.10 eth2.802     eth2.803,     false           4080
```

vrouter-ospf6-add

This command adds Open Shortest Path First (OSPF6) routing protocol to a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf6-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF arguments:	
`nic` *`vrouter- interface-nic`*	Specify the OSPF6 control for this interface.
`ospf6-area` *`ospf-area-number`*	Specify the OSPF6 area number in dotted decimal format.

Defaults None.

Access CLI.

History

Version 2.3.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds OSPF for an existing Router service.

Examples To add OSPF6 to vRouter, MyvService, with the NIC eth1.0, and OSPF6 area 1.0.0.0, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-add  vrouter-name
MyvService nic eth1.0 ospf6-area 1.0.0.0
```

vrouter-ospf6-remove

This command removes an Open Shortest Path First (OSPF6) routing protocol from a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf6-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF arguments:	
`nic` *`vrouter- interface-nic`*	Specify the OSPF6 control for this interface.

Defaults None.

Access CLI.

History

Version 2.3.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds OSPF for an existing Router service.

Examples To remove OSPF6 from vRouter, MyvService, with the NIC eth1.0, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-remove  vrouter-name
MyvService nic eth1.0
```

vrouter-ospf6-show

This command displays information about OSPF6 on a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf6-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
The following OSPF arguments:	
`nic` *`vrouter- interface-nic`*	The OSPF6 control for this interface.
`ospf6-area` *`ospf-area-number`*	The OSPF6 area number in dotted decimal format.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI

History

Version 2.3.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays OSPF6 for an existing Router service.

Examples To display information about all OSPF6 instances configured on vRouters, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf6-show
vrouter-name nic       ospf6-area
------------ --------- ----------
spine1       eth1.4092 1.1.1.1
spine1       eth0.4091 2.2.2.2
spine1       eth0.4090 3.3.3.3
spine1       eth0.4089 4.4.4.4
spine1       eth0.1000 0.0.0.0
spine2       eth5.4092 1.1.1.1
spine2       eth1.4091 2.2.2.2
spine2       eth1.4090 3.3.3.3
spine2       eth1.4089 4.4.4.4
spine2       eth1.1000 0.0.0.0
leaf1        eth0.4092 1.1.1.1
leaf1        eth2.4091 1.1.1.1
leaf2        eth2.4092 2.2.2.2
leaf2        eth3.4091 2.2.2.2
leaf3        eth3.4092 3.3.3.3
leaf3        eth4.4091 3.3.3.3
```

```
leaf4         eth4.4092 4.4.4.4
leaf4         eth5.4091 4.4.4.4
```

vrouter-ospf6-interface-show

This command is used to display specific OSPFv6 configuration information

Syntax `vrouter-ospf6-interface-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify any of the following optional OSPF parameters:	
`nic vrouter interface` *`nic`*	Name of the vNIC.
`nic-state down|up`	The vNIC state.
`l3-port` *`l3-port-number`*	The Layer 3 port numbers.
`link-local-ip` *`ip-address`*	The IPv6 link-local IP address.
`ip6` *`ip-address`*	The IP address of the interface.
`netmask-ip6` *`netmask`*	The netmask of the IP address.
`area ip-address`	The area ID for the interface in IPv4 format.
`mtu` *`mtu-number`*	Displays MTU for the interface.
`mtu-mismatch-detection|no-mtu-mismatch-detection`	Displays if MTU mismatch detection is configured.
`network-type point-to-point|broadcast|loopback`	The OSPF network type.
`state down|loopback|waiting|point-to-point|dr-other|backup|dr`	Displays OSPF interface state.
`dr-id` *`ip-address`*	The designated router ID.
`dr-ip` *`ip-address`*	The designated router IP address.
`bdr-id` *`ip-address`*	The backup designated router ID.
`bdr-ip ip-address`	The designated router IP address.
`priority` *`priority-number`*	The priority.
`cost` *`cost-number`*	The cost.
`hello` *`hello-number(s)`*	The hello-interval in seconds.
`dead` *`dead-number(s)`*	The dead time in seconds.
`retransmit` *`retransmit-number(s)`*	The retransmit interval time in seconds.
`if-scoped-lsa` *`if-scoped-lsa-number`*	The number of interface LSAs scoped for the area.

`ls-update` *`ls-update-number`*	The number of pending LSAs for LSUpdate.
`ls-ack` *`ls-ack-number`*	The number of pending LSAs for LSAck.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display information about an OSPFv6 interface.

Examples To display information about an OSPF interface, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ospf6-interface-show
```

vrouter-ospf6-neighbor-show

This command is used to display OSPF6 neighbors for a vRouter configured for OSPF6.

Syntax `vrouter-ospf6-neighbor-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
`neighbor-rid` *`ip-address`*	The router ID IP address of the OSPF neighbor
`pri` *`pri-number`*	The priority number.
`state` *`state-string`*	The current state of the OSPF neighbor.
`dead-time` *`dead-time`*	The dead-time. Dead-time is the interval of time that the vRouter waits before declaring a neighbor is down.
`duration` *`duration-string`*	The duration in hh:mm:ss.
`interface` *`interface-string`*	The interface on the vRouter.

Defaults None.

Access CLI

History

Version 2.3.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays OSPF6 information for an existing Router service.

Examples To display information about all OSPF6 neighbors on the network, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf6-neighbor-show
vrouter-name neighbor-rid pri state    dead-time duration address       interface
  vlan l3-port vrf
------------ ------------ --- -------- --------- -------- -------------
------------- ---- ------- ---
sw55         10.255.56.56 1   Full/BDR 00:00:33  01:51:54 2555:5657::1
eth0.4000[DR]  4000
sw55         10.255.54.54 1   Full/BDR 00:00:32  01:44:58 2595:0:55::54
eth0.4092[DR]      11
```

vrouter-ospf-area-add

This command is used to add areas, and stubs as well as prefixes to an OSPF configuration.

Syntax `vrouter-ospf-area-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF area arguments:	
`area` *`area-number`*	Specify the stub area number for the configuration. Stub areas are shielded from external routes but receive information about networks that belong to other areas of the same OSPF domain
`stub-type none|stub|stub-no-summary|nssa|nssa-no-summary`	Specify the stub type as stubby or not-so-stubby areas (NSSA). You can define totally stubby areas. Routers in totally stubby areas keep their Link State Database (LSDB)-only information about routing within their area, plus the default route. Not-so-stubby areas (NSSAs) are an extension of OSPF stub areas. Like stub areas, they prevent the flooding of AS-external link-state advertisements (LSAs) into NSSAs, relying instead on default routing to external destinations. As a result, NSSAs (like stub areas) must be placed at the edge of an OSPF routing domain. NSSAs are more flexible than stub areas in that an NSSA can import external routes into the OSPF routing domain, thereby providing transit service to small routing domains that are not part of the OSPF routing domain
`prefix-list-in vrouter` *`prefix-list name`*	Specify an inbound prefix list name to filter incoming packets.
`prefix-list-out vrouter` *`prefix-list name`*	Specify an outbound prefix list name to filter outgoing packets.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage An OSPF network can be divided into sub-domains called areas. An area is a logical collection of OSPF networks, routers, and links that have the same area identification.. A router within an area must maintain a topological database for the area to which it belongs. The router doesn't have detailed information about network topology outside of its area, thereby reducing the size of its database.

Areas limit the scope of route information distribution. It is not possible to do route update filtering within an area. The link-state database (LSDB) of routers within the same area must be synchronized, and be exactly the same. However, route summarization, and filtering is possible between different areas. The main benefit of creating areas is a reduction in the number of routes to propagate through the filtering, and the summarization of routes.

Examples To add an OSPF area, 0, with the stub type, stub, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ospf-area-add vrouter-name vrouter-ospf
area 0 stub-type stub
```

vrouter-ospf-area-modify

This command is used to modify areas, and stubs as well as prefixes to an OSPF configuration.

Syntax `vrouter-ospf-area-modify`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF area arguments:	
`area` *`area-number`*	Specify the stub area number for the configuration. Stub areas are shielded from external routes but receive information about networks that belong to other areas of the same OSPF domain
`stub-type none|stub|stub-no-summary|nssa|nssa-no-summary`	Specify the stub type as stubby or not-so-stubby areas (NSSA). You can define totally stubby areas. Routers in totally stubby areas keep their Link State Database (LSDB)-only information about routing within their area, plus the default route. Not-so-stubby areas (NSSAs) are an extension of OSPF stub areas. Like stub areas, they prevent the flooding of AS-external link-state advertisements (LSAs) into NSSAs, relying instead on default routing to external destinations. As a result, NSSAs (like stub areas) must be placed at the edge of an OSPF routing domain. NSSAs are more flexible than stub areas in that an NSSA can import external routes into the OSPF routing domain, thereby providing transit service to small routing domains that are not part of the OSPF routing domain
`prefix-list-in vrouter` *`prefix-list name`*	Specify an inbound prefix list name to filter incoming packets.
`prefix-list-out vrouter` *`prefix-list name`*	Specify an outbound prefix list name to filter outgoing packets.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage An OSPF network can be divided into sub-domains called areas. An area is a logical collection of OSPF networks, routers, and links that have the same area identification. A router within an area must maintain a topological database for the area to which it belongs. The router doesn't have detailed information about network topology outside of its area, thereby reducing the size of its database.

Areas limit the scope of route information distribution. It is not possible to do route update filtering within an area. The link-state database (LSDB) of routers within the same area must be synchronized, and be exactly the same. However, route summarization, and filtering is possible between different areas. The main benefit of creating areas is a reduction in the number of routes to propagate through the filtering, and the summarization of routes.

Examples To modify an OSPF area, 0, and change the stub type to nssa, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ospf-area-modify vrouter-name vrouter-
ospf area 0 stub-type nssa
```

vrouter-ospf-area-remove

This command is used to remove an areas from an OSPF configuration.

Syntax `vrouter-ospf-area-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF area arguments:	
`area` *`area-number`*	Specify the area number.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage An OSPF network can be divided into sub-domains called areas. An area is a logical collection of OSPF networks, routers, and links that have the same area identification.. A router within an area must maintain a topological database for the area to which it belongs. The router doesn't have detailed information about network topology outside of its area, thereby reducing the size of its database.

Areas limit the scope of route information distribution. It is not possible to perform route update filtering within an area. The link-state database (LSDB) of routers within the same area must be synchronized, and be exactly the same. However, route summarization, and filtering is possible between different areas. The main benefit of creating areas is a reduction in the number of routes to propagate through the filtering, and the summarization of routes.

Examples To remove an OSPF area, 0, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ospf-area-remove vrouter-name vrouter-
ospf area 0
```

vrouter-ospf-add

This command adds Open Shortest Path First (OSPF) routing protocol to a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF arguments:	
`network` *`ip-address`*	Specify the network IP address.
`netmask` *`netmask`*	Specify the netmask of the IP address.
`ospf-area` *`ospf-area-number`*	Specify the OSPF area number in dotted decimal format.

Defaults None.

Access CLI.

History

Version 1.2	Command introduced.
Version 2.1	The parameters `stub-area` and `stub-type` added.
Version 2.2.3	The parameters `stub-area` and `stub-type` moved to the command `vrouter-ospf-area`.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds OSPF for an existing Router service.

Examples To add OSPF to vRouter, MyvService, with the IP address of 192.168.11.3, netmask 32, and OSPF area 1.0.0.0, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-add  vrouter-name
MyvService  network  192.168.11.3/32  ospf-area  1.0.0.0
```

vrouter-ospf-remove

This command is used to remove an OSPF configuration from a vRouter service on a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following OSPF arguments:	
`network` *`ip-address`*	Specify the network IP address.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command removes OSPF for an existing Router service.

Examples To remove ospf-route from the vRouter, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-remove  vrouter-name
MyvService name ospf-route
```

vrouter-ospf-show

This command displays information about OSPF on a virtual router (vRouter) service for a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-ospf-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
The following OSPF arguments:	
`network` *`ip-address`*	The network IP address.
`netmask` *`netmask`*	The netmask of the IP address.
`ospf-area` *`ospf-area-number`*	The OSPF area number in dotted decimal format.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `stub-area` and `stub-type` added.
Version 2.2.3	The parameters `stub-area` and `stub-type` moved to the command `vrouter-ospf-area`.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays OSPF for an existing Router service.

Examples To display information about all OSPF instances configured on vRouters, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-show  layout  vertical
vrouter-name:         vrouter1
network:              10.0.3.0
netmask:              24
ospf-area:            0
vrouter-name:         vrouter1
network:              172.37.0.0
netmask:              16
ospf-area:            0
stub-area:            11
stub-type:            stub
ospf-hello-interval:  30
metric:               34
```

vrouter-ospf-interface-show

This command is used to display specific OSPF configuration information

Syntax `vrouter-ospf-interface-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify any of the following optional OSPF parameters:	
`nic vrouter interface` *`nic`*	Name of the vNIC.
`nic-state down|up`	The vNIC state.
`l3-port` *`l3-port-number`*	The Layer 3 port numbers.
`ip` *`ip-address`*	The IP address of the interface.
`netmask` *`netmask`*	The netmask of the IP address.
`broadcast` *`ip-address`*	The broadcast IP address.
`area ip-address`	The area ID for the interface in IPv4 format.
`mtu` *`mtu-number`*	Displays MTU for the interface.
`mtu-mismatch-detection|no-mtu-mismatch-detection`	Displays if MTU mismatch detection is configured.
`router-id` *`ip-address`*	The router ID as an IP address.
`network-type point-to-point| broadcast|loopback`	The OSPF network type.
`state down|loopback|waiting|point-to-point|dr-other|backup|dr`	Displays OSPF interface state.
`dr-id` *`ip-address`*	The designated router ID.
`dr-ip` *`ip-address`*	The designated router IP address.
`bdr-id` *`ip-address`*	The backup designated router ID.
`bdr-ip ip-address`	The designated router IP address.
`priority` *`priority-number`*	The priority.
`cost` *`cost-number`*	The cost.
`hello` *`hello-number(s)`*	The hello-interval in seconds.
`dead` *`dead-number(s)`*	The dead time in seconds.
`retransmit` *`retransmit-number(s)`*	The retransmit interval time in seconds.

`hello-due` *`hello-due-string`*	The hello due in.
`neighbor` *`neighbor-number`*	The neighbor count.
`adjacent` *`adjacent-number`*	The adjacent number count.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None

Access Network Administrator

History

Version 3.0.0	Command introduced.

Usage Use this command to display statistics about a NAT configuration.

Examples To display information about an OSPF interface, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ospf-interface-show
```

vrouter-ospf-neighbor-show

This command is used to display OSPF neighbors for a vRouter configured for OSPF.

Syntax `vrouter-ospf-neighbor-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
`neighbor` *`ip-address`*	The IP address of the OSPF neighbor
`pri` *`pri-number`*	The OSPF priority number.
`state` *`state-string`*	The current state of the OSPF neighbor.
`dead-time` *`dead-time`*	The dead-time. Dead-time is the interval of time that the vRouter waits before declaring a neighbor is down.
`address` *`ip-address`*	The IP address of the vRouter.
`interface` *`interface-string`*	The interface on the vRouter.
`vlan` *`vlan-id`*	The VLAN ID. This value is between 0, and 4095.
`l3-port` *`l3-port-number`*	The Layer 3 port number.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays OSPF information for an existing Router service.

Examples To display information about all OSPF neighbors on the network, use the following command:

```
CLI (network-admin@switch) > vrouter-ospf-neighbor-show  layout
vertical
```

vrouter-packet-relay-add

This command is used to forward packets to a DHCP server.

Syntax `vrouter-packet-relay-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following packet relay arguments:	
`forward-proto dhcp`	Specify the forwarding protocol.
`forward-ip` *`ip-address`*	Specify the IP address to forward packets.
`nic` *`vrouter interface nic`*	Specify the interface of the vRouter.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage Using the `vrouter-packet-relay` command configures the Layer3 interface which receives the client's DHCP broadcast. You can change the broadcast request into a unicast, and send it to a centralized DHCP server that is located to a different subnet in your network. The unicast DHCP request is normally routed to the destination DHCP Server within the network, even if the server is far away from the DHCP client.

Examples To forward DHCP packets to a DHCP server with the IP address, 10.30.21.11, and vRouter interface `eth0`, use the following syntax:

```
CLI (network-admin@switch) > vrouter-packet-relay-add vrouter-name
vrouter-dhcp forward-proto dhcp forward-ip 10.30.21.11 nic eth0
```

vrouter-packet-relay-remove

This command is used to remove a packet forwarding configuration.

Syntax `vrouter-packet-relay-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following packet relay arguments:	
`forward-proto dhcp`	Specify the forwarding protocol.
`forward-ip` *`ip-address`*	Specify the IP address to forward packets.
`nic` *`vrouter interface nic`*	Specify the interface of the vRouter.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage Using the `vrouter-packet-relay` command configures the Layer3 interface which receives the client's DHCP broadcast. You can change the broadcast request into a unicast, and send it to a centralized DHCP server located in a different subnet in your network. The unicast DHCP request is normally routed to the destination DHCP Server within the network, even if the server is far away from the DHCP client.

Examples To remove the configuration with a DHCP server with the IP address, 10.30.21.11, and vRouter interface `eth0`, use the following syntax:

```
CLI (network-admin@switch) > vrouter-packet-relay-remove vrouter-
name vrouter-dhcp forward-proto dhcp forward-ip 10.30.21.11 nic
eth0
```

vrouter-packet-relay-show

This command is used to display information about DHCP packet relay configuration.

Syntax `vrouter-packet-relay-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
The following packet relay arguments:	
`forward-proto dhcp`	The forwarding protocol.
`forward-ip` *`ip-address`*	The IP address to forward packets.
`nic` *`vrouter interface nic`*	The interface of the vRouter.
`vrf` *`vrouter vrf|default`*	Name of the VRF.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage Use this command to view DHCP packet relay configuration.

Examples To view the DHCP packet relay configuration, use the following command:

```
CLI (network-admin@switch) > vrouter-packet-relay-show

vrouter-name forward-proto forward-ip   nic      vrf
------------ ------------- ------------ -------- ----
vr1          dhcp          192.168.1.10 eth2.102 vrf1
vr1          dhcp          192.168.2.10 eth2.102 vrf1
```

vrouter-ping

This command is used to ping from a vRouter to a host IP address on the network.

Syntax `vrouter-ping`

`vrouter-name` *`name-string`*	Specify the name of the vRouter used to ping the host.
`host-ip` *`ip-address`*	Specify the host IP address.
Specify between 0, and 3 of the following options:	
`count` *`count-number`*	Specify the number of packets to transmit to the host.
`fragment|no-fragment`	Specify if you want to toggle fragments.
`interval` *`interval-number`*	Specify the interval between successive transmissions.
`outgoing-interface` *`outgoing-interface-string`*	Specify the outgoing interface to ping.

Defaults None

Access CLI

History

Version 2.3.1	Command introduced.
Version 2.6.2	The parameter `outgoing-interface` added.

Usage Use this command to ping a host on the network from a vRouter.

Examples To ping the host, `192.168.11.134`, from vRouter, `myvrouter`, use the following syntax:

```
CLI (network-admin@switch) > vrouter-ping vrouter-name myvrouter
host-ip 192.168.11.134
```

vrouter-prefix-list-add

Prefix lists are used by BGP, and OSPF to filter route advertisements.

Syntax `vrouter-prefix-list-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following prefix-list arguments:	
`name` *`name-string`*	Specify a name for the prefix list.
`action permit|deny`	Specify the type of action, permit or deny.
`prefix` *`ip-address`*	Specify the IP address used as the prefix.
`netmask` *`netmask`*	Specify the netmask of the IP address.
Specify any of the following options:	
`seq` *`number`*	Specify a sequence number. This is a number between 1, and 4294967295.
`min-prefix-len` *`number`*	Specify the minimum prefix length. This is a value between 0, and 32.
`max-prefix-len` *`number`*	Specify the maximum prefix length. This is a value between 0, and 32.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 2.2.4	The parameter `any` added.
Version 2.5	The parameter `anyv6` added.
Version 5.1.0	The parameters `any` and `anyv6` deprecated.

Usage Use this command to specify prefix lists used with BGP, and OSPF.

Examples To configure a prefix list, no-ads, with the action, deny, prefix, 10.9.11.13/32, and minimum prefix length 15, use the following syntax:

```
CLI (network-admin@switch) > vrouter-prefix-list-add  vrouter-name
vrouter-ospf name no-ads action deny prefix 10.9.11.13 netmask
255.255.255.0 min-prefix-len 15
```

vrouter-prefix-list-modify

Prefix lists are used by BGP, and OSPF to filter route advertisements.

Syntax `vrouter-prefix-list-modify`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following prefix-list arguments:	
`name` *`name-string`*	Specify a name for the prefix list.
`action permit|deny`	Specify the type of action, permit or deny.
`prefix` *`ip-address`*	Specify the IP address used as the prefix.
`netmask` *`netmask`*	Specify the netmask of the IP address.
Specify any of the following options:	
`seq` *`number`*	Specify a sequence number. This is a number between 1, and 4294967295.
`min-prefix-len` *`number`*	Specify the minimum prefix length. This is a value between 0, and 32.
`max-prefix-len` *`number`*	Specify the maximum prefix length. This is a value between 0, and 32.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 2.2.4	The parameter `any` added.
Version 2.5	The parameter `anyv6` added.
Version 5.1.0	The parameters `any` and `anyv6` deprecated.

Usage Use this command to modify prefix lists used with BGP, and OSPF.

Examples To modify a prefix list, no-ads, and change the action to permit, use the following syntax:

```
CLI (network-admin@switch) > vrouter-prefix-list-modify  vrouter-
name vrouter-ospf name no-ads action permit
```

vrouter-prefix-list-remove

Prefix lists are used by BGP, and OSPF to filter route advertisements.

Syntax `vrouter-prefix-list-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following prefix-list arguments:	
`name` *`name-string`*	Specify a name for the prefix list.
Specify any of the following options:	
`seq` *`number`*	Specify a sequence number. This is a number between 1, and 4294967295.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.

Usage Use this command to remove prefix lists used with BGP, and OSPF.

Examples To remove a prefix list, no-ads, use the following syntax:

```
CLI (network-admin@switch) > vrouter-prefix-list-remove  vrouter-
name vrouter-ospf name no-ads
```

vrouter-prefix-list-show

Prefix lists are used by BGP, and OSPF to filter route advertisements.

Syntax `vrouter-prefix-list-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
Specify the following prefix-list arguments:	
`name` *`name-string`*	Name for the prefix list.
`seq` *`number`*	A sequence number. This is a number between 1, and 4294967295.
`action permit|deny`	The type of action, permit or deny.
`prefix` *`ip-address`*	The IP address used as the prefix.
`netmask` *`netmask`*	The netmask of the IP address.
`min-prefix-len` *`number`*	The minimum prefix length. This is a value between 0, and 128.
`max-prefix-len` *`number`*	The maximum prefix length. This is a value between 0, and 32.
`any`	Apply to any prefix list.
`anyv6`	Apply to any ipv6 prefix list.

Defaults None

Access CLI

History

Version 2.2.3	Command introduced.
Version 2.2.4	The parameter `any` added.
Version 2.5	The parameter `anyv6` added.
Version 5.1.0	The parameters `any` and `anyv6` deprecated.

Usage Use this command to display prefix lists used with BGP, and OSPF.

Examples To display a prefix list, no-ads, use the following syntax:

```
CLI (network-admin@switch) > vrouter-prefix-list-show
router-name name          seq action prefix
----------- ------------- --- ------ ------------
vr7         permit_prefix 1   permit 10.0.70.0/24
vr7         permit_prefix 2   permit 2001:70::/64
```

vrouter-rib-history-show

This command displays past changes to the RIB routing table. It was added to assist with troubleshooting, and add time-machine-like capability for packet paths.

Syntax `vrouter-rib-history-show`

`time date/time: yyyy-mm-ddThh:mm:ss`	The time for the statistics.
`start-time` *`start-time`*	The start time for the statistics display using the notation *yyyy-mm-ddThh:mm:ss*.
`end-time` *`end-time`*	The end time for the statistics display using the notation *yyyy-mm-ddThh:mm:ss.*
`duration duration: #d#h#m#s`	Specify the duration for the traffic statistics.
`interval duration: #d#h#m#s`	The time interval for the statistics display.
`since-start`	Specifies if the statistics are collected from the start of the VLAN.
`older-than duration: #d#h#m#s`	Specifies if the statistics are older than the stated duration.
`within-last duration: #d#h#m#s`	The statistics collected within the last duration.
`caller init|control|logger|gre-tunnel| flush|user|static-route-init| fabric-tunnel|router-if|vnet-service|l3-check| vrf|vxlan-routing|vsg`	The feature that made the change for this entry.
`last-caller init|control|logger|gre-tunnel|flush|user| static-route-init| fabric-tunnel|router-if|vnet-service|l3-check|vrf|vxlan-routing|vsg`	The most recent caller for this entry.
`reason save|restart|add|modify|remove| remove-all|inject|evict|router-delete`	The reason for the history entry.
`last-reason save|restart|add|modify| remove|remove-all|inject|evict|router-delete`	The most recent reason for the entry.
`changes vrid|ip|prelen|number-of-nexthops| nexthops-in-hw|ecmp-group| nexthop|egress-id|flags|vlan|intf_ip|intf_id|number-of-tunnels|address-type`	The change in the entry.
`count` *`count-number`*	The count for RIB history.

`vrid` *`id`*	The virtual router ID as a value from 0 to 1024.
`ip` *`ip-address`*	The IP address.
`prelen` *`number`*	The prefix length as a value from 0 to 128.
`number-of-nexthops` *`number-of-nexthops-number`*	The number of next hops in the route.
`nexthops-in-hw` *`nexthops-in-hw-number`*	The number next hops in hardware.
`ecmp-group` *`ecmp-group-number`*	The ECMP group number.
`nexthop` *`ip-address`*	The next hop IP address.
`egress-id` *`egress-id-number`*	The egress ID.
`flags ECMP|in-hw|in-cache|in-ecmp-cache|local-subnet|drop`	The flags for the routes. ECMP `in-hw` - stored in hardware `cache` - stored in the RIB. l `local-subnet` - stored in the local subnet.
`vnet` *`vnet name`*	The vNET name.
`bd` *`bridge-domain name`*	The bridge domain name.
`vlan` *`vlan-id`*	The VLAN ID.
`intf_ip ip-address`	The interface IP address.
`intf_id` *`vrouter-hw-if hw-id`*	The router interface.
`ecmp-nexthops|no-ecmp-nexthops`	The filter to display single/mutiple route entries (per nexthop).
`number-of-tunnels` *`number-of-tunnels-number`*	The number of tunnels dependent on the route.
`address-type IPv4|IPv6`	The address type IPv4/IPv6.

Defaults None

Access Network-admin

History

Version 2.4.1	Command introduced.

Usage Use this command to display the RIB history.

Examples To display RIB history, use the following syntax:

```
CLI (network-admin@switch) > vrouter-rib-history-show  time15:30
time     caller   reason  ip        prelen nexthop    flags           vlanintf_ip
 intf_id
--------- --------- ------- ----------- ------- ----------- -----------------
--------------- -------
 15:29:41  router-if  add    10.16.111.0 24      10.16.111.1 in-hw,local-subnet 111
10.16.111.1
 15:29:43  router-if  add    10.16.100.0 24      10.16.100.1 in-hw,local-subnet 100
10.16.100.1  1
```

vrouter-rib-history-settings-modify

This command allows you to modify the RIB history log settings on the switch.

Syntax `vrouter-rib-history-settings-modify`

`enable|disable`	Specify if you want to enable RIB history logging on the switch.
`disk-space` *`disk-space-number`*	Specify if the amount of disk space allocated for the log files.
`log-file-count` *`number`*	Specify the number of log files for rotation. This is a value between 1, and 20.

Defaults None

Access Network-admin

History

Version 2.4.1	Command introduced.

Usage Use this command to modify the RIB history log settings.

Examples To enable RIB history logging, use the following syntax:

```
CLI (network-admin@switch) > vrouter-rib-history-settings-modify
enable
```

vrouter-rib-history-settings-show

This command displays RIB history information.

Syntax `vrouter-rib-history-settings-show`

Defaults None

Access Network-admin

History

Version 2.4.1	Command introduced.

Usage Use this command to view the RIB history settings

Examples To view the RIB history settings, use the following syntax:

```
 CLI (network-admin@switch) > vrouter-rib-history-settings-show
switch:         switch
enable:         yes
disk-space:     50M
log-file-count: 10
```

vrouter-rib-routes-lookup

NetVisor OS allows you to display information about routes in the Routing Information database using this command.

Syntax `vrouter-rib-routes-lookup`

`vrid` *`vr-id`*	Specifies the virtual router ID.
`ip` *`ip-address`*	Specifies the IP address.

Defaults None

Access Network administrator

History

Version 5.1.0	Command introduced.

Usage Use this command to display routes in the RIB.

Examples To display routes, use the following syntax:

```
CLI (network-admin@switch) > vrouter-rib-routes-lookup
```

vrouter-rib-routes-show

This command is used to display the Routing Information database (RIB) for vRouter routes.

Syntax `vrouter-rib-routes-show`

`vrid` *`vrid-number`*	The vRouter ID assigned.
`ip` *`ip-address`*	The IP address.
`prelen` *`prelen-number`*	The prefix length.
`numer-of-nexthops` *`numer-of-nexthops-number`*	The number of next hops for the route.
`nexthops-in-hw` *`nexthops-in-hw-number`*	The number of next hops for hardware routing.
`nexthop` *`ip-address`*	The IP address for the next hop on the route.
`ecmp-group` *`ecmp-group-number`*	The Equal Cost Multipath (ECMP) group number.
`egress-id` *`egress-id-number`*	The egress ID assigned to an outgoing route.
`flags ECMP|in-hw|in-cache|local-subnet`	The flags for the routes. ECMP `in-hw` - stored in hardware `cache` - stored in the RIB. l `local-subnet` - stored in the local subnet.
`vlan` *`vlan-number`*	The VLAN of the routes.
`intf_ip` *`ip-address`*	The IP address of the interface participating in the routing table.
`intf_id vrouter-hw-if hw-id`	The hardware ID if the router interface is hardware.
`ecmp-nexthops|no-ecmp-nexthops`	Specifies filter to display single/mutiple route entries (per nexthop)
`number-of-tunnels` *`number-of-tunnels-number`*	The number of tunnels dependent on this route.

Defaults None

Access CLI

History

Version 2.1	Command introduced.

Version 2.2	The parameters `vlan` and `vxlan` deprecated.
Version 2.2.3	The parameters `vlan`, and `intf_id` added.
Version 2.2.5	The parameter `local-subnet` added to RIB route flags.
Version 2.4	The parameter `number-of-tunnels` added.
Version 2.5.4	The parameter `ecmp-nexthops|no-ecmp-nexthops` added.

Usage Use this command to display the RIB for vRouters which can be helpful when troubleshooting a connection.

Examples To display the RIB routes, use the following command:

```
CLI (network-admin@switch) > vrouter-rib-routes-show format
ip,prelen,nexthop,flags,vlan
ip            prelen nexthop                   flags vlan
------------- ------ ------------------------- ----- ---
192.168.111.0 24     fe80::640e:94ff:feff:7bdc in-hw 4092
5001:11:1::   48     fe80::640e:94ff:feff:7bdc in-hw 4092
```

vrouter-rip-add

This command adds Routing Information Protocol (RIP) to a virtual router (vRouter) service on a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-rip-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`network` *`ip-address`*	Specify the IP address.
`netmask` *`netmask`*	Specify the netmask of the IP address.

Defaults None.

Access CLI.

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays adds RIP to an existing Router service.

Examples To add RIP with an IP address of 172.16.0.0/16 to the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-rip-add vrouter-name
MyvService network 172.16.0.0/16
```

vrouter-rip-remove

This command removes a RIP instance from a vRouter service on a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-rip-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`network` *`ip-address`*	Specify the IP address.

Defaults None.

Access CLI

History

Version 1.2.1	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command removes a RIP instance on an existing Router service.

Examples To remove RIP with an IP address of 172.16.0.0/16 from the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-rip-remove vrouter-name
MyvService network 172.16.0.0
```

vrouter-rip-show

This command displays RIP information on vRouter services on a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-rip-show`

`vrouter-name` *`name-string`*	Name of the vRouter service.
`network` *`ip-address`*	The IP address.
`netmask` *`netmask`*	Netmask of the IP address.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI.

History

Version 1.2	Command added.
Version 2.1	The parameter `metric` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays information about RIP instances on existing vRouter services.

Examples To display RIP information on all vRouter services, use the following command:

```
CLI (network-admin@switch) > vrouter-rip-show layout vertical
```

vrouter-rip-routes-show

This command displays RIP routes currently installed on vRouter services on a fabric, cluster, virtual network (vNET), or standalone switch.

Syntax `vrouter-rip-routes-show`

`vrouter-name` *`name-string`*	The name of the vRouter service.
`network` *`ip-address`*	The IP address.
`netmask` *`netmask`*	The netmask of the IP address.
`next-hop` *`ip-address`*	The next hop IP address.
`metric` *`metric-number`*	The metric assigned to the route.
`source` *`ip-address`*	The source IP address.
`tag` *`tag-number`*`s`	The tag number.
`type rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim|ospf6`	The type of connection.
`attribute normal|static|default|redistribute|interface`	The attribute for the connection.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI.

History

Version 2.2	Command introduced.

Usage This command displays information about RIP routes installed on the vRouter.

Examples To display RIP information on all vRouter services, use the following command:

```
CLI (network-admin@switch) > vrouter-rip-routes-show  layout
vertical
```

vrouter-route-map-add

NetVisor OS uses this command to create route maps for BGP, and OSPF vRouter configurations.

Syntax `vrouter-route-map-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following route-map arguments:	
`name` *`name-string`*	Specify the name of the route map.
`seq` *`number`*	Specify the sequence number to assign to the route map. This is a value between 1, and 65535.
Specify one or more of the following options:	
`action permit|deny`	Specify the route map to permit or deny packets.
`match-prefix` *`prefix-list-name`*	Specify the prefixes used to match.
`match-mac vrouter mac-list name`	Specify the MAC address used for matching.
`match-community` *`match-community-string`*	Specify the community string to match. (BGP only)
`match-evpn-default-route none|true|false`	Specify to match 0.0.0.0, and/or :: route. (BGP EVPN route only)
`match-evpn-route-type none|type-2|type-3| type-5`	Specifies to match EVPN router type.
`match-evpn-vni 0..16777215`	Specifies to match the EVPN VNI.
`match-evpn-rd match-evpn-rd-string`	Specifies to match evpn Route Distinguisher (RD) e.g., ASN:XX or A.B.C.D:XX.
`exact-match|no-exact-match`	Specify if the community string is an exact match or not. (BGP only)
`community-attribute unset|none|no-export| no-advertise| internet|local-AS`	Specify the community attribute. If you specify a community attribute, you cannot add a generic community attribute as well.
`community-attribute-generic` *`community-attribute-generic-string`*	Specify a generic community attribute such as AA:NN. (BGP only)
`additive|no-additive`	Specify if a given community is appended to existing communities value.

`comm-list-del vrouter` *`community-list name`*	Specify if you want to remove community values from BGP community attributes
`local-pref` *`integer`*	Specify a local preference. This is a value between 1, and 4294967295.
`ipv6-nh-prefer-global none|true|false`	Specify to set ipv6 next-hop prefer-global.
`metric none`	Specify a metric for the route map.
`metric-type 1|2`	Specify the metric type as 1 or 2.
`as-path-prepend` *`integer`*	Specify an integer from 1 to 4294967295.
`as-path-prepend-last-as` *`integer`*	Specify an integer from 1 to 10.
`as-path-exclude` *`integer`*	Specify an integer from 1 to 4294967295.
`origin none|egp|igp|incomplete`	Specify the origin of BGP prefix: • none — Resets the origin to none. • egp — Specifies the route as a remote EGP route. • igp — Specifies the route as a local IGP route. • incomplete — Route is of unknown heritage.

Defaults None

Access CLI - Network Admin

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameters `metric` and `metric-type` added for OSPF. The parameter `as-path-*` added.
Version 3.0.0	The parameters for BGP communities added.
Version 3.0.3	The parameter `origin` added.
Version 7.0.0	The parameters `match-evpn-default-route`, `match-evpn-route-type`, `match-evpn-vni`, and `match-evpn-rd` added.

Usage Use this command to create route maps for BGP or OSPF configurations to ensure that prefixes are installed into the route table.

Examples To add a route map on vRouter1, with the name bgp-map, sequence number 75, action permit, match-prefix prefix1, community-attribue local-AS, and local preference 25, use the following syntax:

```
CLI (network-admin@switch) > vrouter-route-map-add  vrouter-name
vRouter1 name bgp-map seq 75 action permit match-prefix prefix1
community-attribute  local-AS  local-pref  25
```

vrouter-route-map-modify

This command is used to modify route maps for BGP, and OSPF vRouter configurations.

Syntax `vrouter-route-map-modify`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
Specify the following route-map arguments:	
`name` *`name-string`*	Specify the name of the route map.
`seq` *`number`*	Specify the sequence number to assign to the route map. This is a value between 1, and 65535.
Specify one or more of the following options:	
`action permit|deny`	Specify the route map to permit or deny packets.
`match-prefix` *`prefix-list-name`*	Specify the prefixes used to match.
`match-mac vrouter mac-list name`	Specify the MAC address used for matching.
`match-community` *`match-community-string`*	Specify the community string to match. (BGP only)
`match-evpn-default-route none|true|false`	Specify to match 0.0.0.0, and/or :: route. (BGP EVPN route only)
`match-evpn-route-type none|type-2|type-3| type-5`	Specifies to match EVPN router type.
`match-evpn-vni 0..16777215`	Specifies to match the EVPN VNI.
`match-evpn-rd match-evpn-rd-string`	Specifies to match evpn Route Distinguisher (RD) e.g., ASN:XX or A.B.C.D:XX.
`exact-match|no-exact-match`	Specify if the community string is an exact match or not. (BGP only)
`community-attribute unset|none|no-export| no-advertise| internet|local-AS`	Specify the community attribute. If you specify a community attribute, you cannot add a generic community attribute as well.
`community-attribute-generic` *`community-attribute-generic-string`*	Specify a generic community attribute such as AA:NN. (BGP only)
`additive|no-additive`	Specify if a given community is appended to existing communities value.

`comm-list-del vrouter` *`community-list name`*	Specify if you want to remove community values from BGP community attributes
`local-pref` *`integer`*	Specify a local preference. This is a value between 1, and 4294967295.
`ipv6-nh-prefer-global none|true|false`	Specify to set ipv6 next-hop prefer-global.
`metric none`	Specify a metric for the route map.
`metric-type 1|2`	Specify the metric type as 1 or 2.
`as-path-prepend` *`integer`*	Specify an integer from 1 to 4294967295.
`as-path-prepend-last-as` *`integer`*	Specify an integer from 1 to 10.
`as-path-exclude` *`integer`*	Specify an integer from 1 to 4294967295.
`origin none|egp|igp|incomplete`	Specify the origin of BGP prefix: • none — Resets the origin to none. • egp — Specifies the route as a remote EGP route. • igp — Specifies the route as a local IGP route. • incomplete — Route is of unknown heritage.

Defaults None

Access CLI - Network Admin

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameters `metric` and `metric-type` added for OSPF. The parameter `as-path-*` added.
Version 3.0.0	The parameters for BGP communities added.
Version 3.0.3	The parameter `origin` added.
Version 7.0.0	The parameters `match-evpn-default-route`, `match-evpn-route-type`, `match-evpn-vni`, and `match-evpn-rd` added.

Usage Use this command to modify route maps for BGP or OSPF configurations to ensure that prefixes are installed into the route table.

Examples To modify a route map on vRouter1, with the name **bgp-map**, and change the local preference to 27, use the following syntax:

```
CLI (network-admin@switch) > vrouter-route-map-modify vrouter-name
vRouter1 name bgp-map local-pref 27
```

vrouter-route-map-remove

This command is used to remove route maps for BGP, and OSPF vRouter configurations.

Syntax `vrouter-route-map-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter.
`name` *`name-string`*	Specify the name of the route map.
`seq` *`number`*	Specify the sequence number to assign to the route map. This is a value between 1, and 65535.

Defaults None

Access CLI - Network Admin

History

Version 2.4	Command introduced.

Usage Use this command to remove route maps for BGP configurations.

Examples To remove a route map on vRouter1, with the name bgp-map, sequence number 75, use the following syntax:

```
CLI (network-admin@switch) > vrouter-route-map-remove  vrouter-name
vRouter1 name bgp-map seq 75
```

vrouter-route-map-show

This command is used to display route maps for BGP, and OSPF vRouter configurations.

Syntax `vrouter-route-map-show`

`vrouter-name` *`name-string`*	The name of the vRouter.
The following route-map arguments:	
`name` *`name-string`*	The name of the route map.
`seq` *`number`*	The sequence number to assign to the route map. This is a value between 1, and 65535.
`action permit|deny`	The route map to permit or deny packets.
`match-prefix` *`prefix-list-name`*	The prefixes used to match.
`match-mac vrouter mac-list name`	The MAC address used for matching.
`match-community` *`match-community-string`*	The community string to match. (BGP only)
`match-evpn-default-route none|true|false`	Specify to match 0.0.0.0, and/or :: route. (BGP EVPN route only)
`match-evpn-route-type none|type-2|type-3| type-5`	Specifies to match EVPN router type.
`match-evpn-vni 0..16777215`	Specifies to match the EVPN VNI.
`match-evpn-rd match-evpn-rd-string`	Specifies to match evpn Route Distinguisher (RD) e.g., ASN:XX or A.B.C.D:XX.
`exact-match|no-exact-match`	Specify if the community string is an exact match or not. (BGP only)
`community-attribute unset|none|no-export| no-advertise| internet|local-AS`	The community attribute. When specified a community attribute, user cannot add a generic community attribute as well.
`community-attribute-generic` *`community-attribute-generic-string`*	A generic community attribute such as AA:NN. (BGP only)
`additive|no-additive`	Specify if a given community is appended to existing communities value.
`comm-list-del vrouter` *`community-list name`*	Specify if the user wants to remove community values from BGP community attributes.

`local-pref` *`integer`*	A local preference. This is a value between 1, and 4294967295.
`ipv6-nh-prefer-global  none|true|false`	Specify to set ipv6 next-hop prefer-global.
`metric  none`	A metric for the route map.
`metric-type  1|2`	The metric type as 1 or 2.
`as-path-prepend` *`integer`*	Integer from 1 to 4294967295.
`as-path-prepend-last-as` *`integer`*	Integer from 1 to 10.
`as-path-exclude` *`integer`*	Integer from 1 to 4294967295.
`origin  none|egp|igp|incomplete`	The origin of BGP prefix: • none — Resets the origin to none. • egp — Specifies the route as a remote EGP route. • igp — Specifies the route as a local IGP route. • incomplete — Route is of unknown heritage.

Defaults None

Access CLI - Network Admin

History

Version 2.4.0	Command introduced.
Version 2.6.0	The parameters `metric` and `metric-type` added for OSPF. The parameters `as-path-*` added.
Version 3.0.0	The parameters for BGP communities added.
Version 3.0.3	The parameter `origin` added.
Version 7.0.0	The parameters `match-evpn-default-route`, `match-evpn-route-type`, `match-evpn-vni`, and `match-evpn-rd` added.

Usage Use this command to display route maps for BGP configurations.

Examples

- To display a route map on vRouter1, with the name r-map, use the following syntax:

```
CLI (network-admin@switch) > vrouter-route-map-show  format
vroutername,name,seq,action,match-prefix,match-evpn-route-type

vrouter-name name  seq action match-prefix match-evpn-route-type
------------ ----- --- ------ ------------ --------------------
```

```
vr1          rmap1 10  deny   100
vr1          rmap1 20  permit none         type-5
```

- To display a route map on vRouter1, with the name bgp-map, use the following syntax:

  CLI (network-admin@switch) > vrouter-route-map-show vrouter-name vRouter1 name bgp-map

```
vrouter-name   name    seq action match-prefix community-attribute
-------------- ------- --- ------ ------------ -------------------
vRouter1       bgp-map 75  permit  prefix1     local-AS
```

vrouter-routes-multicast-show

This command allows you to display information about multicast routes on a vRouter configured on the switch.

Syntax `vrouter-routes-multicast-show`

`vrouter-name` *`name-string`*	The vRouter name.
`source` *`ip-address`*	The source IP address.
`group` *`ip-address`*	The group IP address.
`proto rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim|ospf6`	The protocol used by the routes.
`input` *`input-string`*	The input interface for incoming routes.
`iVifI` *`iVifI-number`*	The input index for on a virtual interface (VNIC).
`output` *`output-string`*	The output interface for an outgoing routes.
`oVifI` *`oVifI-number`*	The output index for a virtual interface (VNIC).
`ttl` *`ttl-number`*	The time-to-live (TTL) value.
`uptime` *`uptime-string`*	The uptime for the route.

Defaults None

Access CLI

History

Version 1.2.1	Command introduced.

Usage You can display information about the multicast routes on a vRouter.

Examples To display multicast route information, use the following command:

```
CLI (network-admin@switch) > vrouter-routes-multicast-show  layout
vertical
vrouter-name:              vr1
source:                    10.13.25.200
group:                     232.1.1.1
proto:                     vr1.eth0
iVifI:                     2
output:                    vr1.eth1
oVifI:                     3
ttl:                       1
uptime:                    00:00:01
```

vrouter-routes-show

This command is used to display information about all routes on one or all configured vRouters.

Syntax `vrouter-routes-show`

`vrouter-name` *`name-string`*	Specifies the name of a vRouter.
Any of the routes arguments:	
`network` *`ip-address`*	Specifies the IP address of the vRouter.
`netmask` *`netmask`*	Specifies the netmask.
`type rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim|ospf6`	Specifies the type of route on the vRouter.
`interface` *`interface-string`*	Specifies the interface for the route.
`next-hop` *`ip-address`*	Specifies the IP address of the next-hop.
`distance` *`number`*	Specifies the administrative distance in a number from 0 to 255. • 0 — Connected interface • 1 — Static route • 110 — OSPF • 120 — RIP • 200 — Internal BGP
`metric` *`metric-number`*	Specifies the cost of advertised routes on the network.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None

Access CLI

History

Version 2.0	Command introduced.
Version 2.1	The parameters `next-hop` and `distance` added.
Version 2.2	The parameter `metric` added.

Usage Use this command to identify routes on vRouters configured on the switch.

Examples To display all route information for all vRouters, use the following command:

CLI (network-admin@switch) > `vrouter-routes-show`

```
vrovrouter-name network       type      interface
--------------- ------------- --------- ---------------
vr-ext-50       10.121.1.0/24 connected ext.50.mgr.eth0
vr-ext-50       10.111.1.0/24 rip       ext.50.mgr.eth0
vr-ext-50       127.0.0.0/8   connected lo0
vr-www-51       10.121.1.0/24 connected www.51.mgr.eth1
```

```
vr-www-51       10.111.1.0/24 connected www.51.mgr.eth0
vr-www-51       127.0.0.0/8   connected lo0
```

vrouter-routes-stats-show

This command is used to display statistical information about all routes on one or all configured vRouters.

Syntax `vrouter-routes-stats-show`

`vrouter-name` *`name-string`*	Name of the vRouter.
`fib-max-routes` *`fib-max-routes-number`*	Maximum number of routes in the Forwarding Information Database.
`fib-current-routes` *`fib-current-routes-number`*	The number of current routes in the Forwarding Information Database.
`rib-current-routes` *`rib-current-routes-number`*	The number of current routes in the Routing Information Database

Defaults None

Access CLI

History

Version 2.3.3	Command introduced.

Usage Use this command to identify routes on vRouters configured on the switch.

Examples To display all route information for all vRouters, use the following command:

```
CLI (network-admin@switch) > vrouter-routes-stats-show
vrouter-name network       type        interface
------------ ------------- ---------   ---------------
vr-ext-50    10.121.1.0/24 connected   ext.50.mgr.eth0
vr-ext-50    10.111.1.0/24 rip         ext.50.mgr.eth0
vr-ext-50    127.0.0.0/8   connected   lo0
vr-www-51    10.121.1.0/24 connected   www.51.mgr.eth1
vr-www-51    10.111.1.0/24 connected   www.51.mgr.eth0
vr-www-51    127.0.0.0/8   connected   lo0
```

vrouter-static-route-modify

This command modifies the administrative distance of a static route entry for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-static-route-modify`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`network` *`ip-address`*	Specify the IP subnet of the network that you want to modify a static route.
`netmask` *`netmask`*	Specify the netmask of the IP subnet.
`gateway-ip` *`ip-address`*	Specify the IP address of the gateway.
`drop`	Specify if you want to drop packets to create a null static route. **Note:** This option is mutually exclusive with `gateway-ip` parameter.
`bfd-dst-ip` *`ip-address`*	Specify the destination IP address for BFD monitoring.
`distance` *`number`*	Specify the administrative distance as a number between 0, and 255. • 0 — Connected interface • 1 — Static route • 110 — OSPF • 120 — RIP • 200 — Internal BGP
`interface` *`vrouter-interface-nic`*	Specify the vRouter interface for the static route, if the `gateway-ip` is a link-local IPv6 address.
`vrf` *`vrf`*	Specify the name of the VRF.

Defaults None.

Access CLI

History

Version 6.0.0	Command introduced.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command modifies the administrative distance of a static route entry for an existing Router service.

Examples To modify the administrative distance of a static route entry for the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-static-route-modify  vrouter-
name MyvService network 10.1.0.0/16 gateway-ip 10.0.0.1 distance 20
```

vrouter-static-route-add

This command adds a static route entry for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-static-route-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`network` *`ip-address`*	Specify the IP subnet of the network that you want to add a static route.
`netmask` *`netmask`*	Specify the netmask of the IP subnet.
`gateway-ip` *`ip-address`*	Specify the IP address of the gateway that you want to route packets destined for the network IP address to.
`drop`	Specify if you want to drop packets to create a null static route. **Note:** This option is mutually exclusive with `gateway-ip` parameter.
`bfd-dst-ip` *`ip-address`*	Specify the destination IP address for BFD monitoring.
`distance` *`number`*	Specify the administrative distance as a number between 0, and 255. • 0 — Connected interface • 1 — Static route • 110 — OSPF • 120 — RIP • 200 — Internal BGP
`interface` *`vrouter-interface-nic`*	Specify the vRouter interface for the static route, if the `gateway-ip` is a link-local IPv6 address.
`vrf` *`vrf`*	Specify the name of the VRF.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `distance` added.
Version 2.6.2	The parameter `bfd-dst-ip` added.
Version 3.0.0	The parameter `interface` added.
Version 3.0.3	The parameter `drop` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command adds a static route entrv for an existing Router service.

Examples To add a static route entry for the vRouter service, MyvService, use the following command:

```
CLI (network-admin@switch) > vrouter-static-route-add  vrouter-name
MyvService network 10.1.0.0/16 gateway-ip 10.0.0.1
```

vrouter-static-route-remove

This command removes a static route entry for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-static-route-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`network` *`ip-address`*	Specify the IP subnet of the network that you want to add a static router.
`gateway-ip` *`ip-address`*	Specify the IP address of the gateway that you want to route packets destined for the network IP address.
`interface` *`vrouter interface nic`*	Specify the vRouter interface for the static route.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `gateway` added.
Version 3.0.0	The parameter `interface` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command removes a static route entrv for an existing Router service.

Examples To remove static route, 10.0.0.0/16 from the vRouter service, MyvRouter, use the following command:

```
CLI (network-admin@switch) > vrouter-static-route-remove vrouter-name MyvService network 10.0.0.0/16
```

vrouter-static-route-show

This command displays static route entries for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (vNET).

Syntax `vrouter-static-route-show`

`vrouter-name` *`name-string`*	Name of the vRouter service.
`network` *`ip-address`*	The IP subnet of the network that you want to add a static router.
`netmask` *`netmask`*	The netmask of the IP subnet.
`gateway-ip` *`ip-address`*	The IP address of the gateway that you want to route packets destined for the network IP address.
`bfd-dst-ip` *`ip-address`*	The destination IP address for BFD monitoring.
`distance` *`number`*	The administrative distance in a number from 0 to 255. • 0 — Connected interface • 1 — Static route • 110 — OSPF • 120 — RIP • 200 — Internal BGP
`bfd none|single-hop|multi-hop`	The BFD protocol for the gateway fault detection.
`bfd-src-ip` *`ip-address`*	The source IP address for the BFD session.
`interface` *`vrouter interface nic`*	vRouter interface for the static route.
`drop`	Specify if user wants to drop packets to create a null static route.
`vrf vrouter vrf vrf|default`	Name of the VRF router.

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameter `distance` added.
Version 2.6.2	The parameters `bfd-dst-ip`, `bfd`, and `bfd-src-ip` added.
Version 3.0.0	The parameter `interface` added.

Version 3.0.3	The parameter `drop` added.

Usage Each fabric, cluster, standalone switch, or virtual network (vNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks, and implements Layer 3 protocols. This command displays static route entries for an existing Router service.

Examples To display all static routes for all vRouter services, use the following command:

```
CLI (network-admin@switch) > vrouter-static-route-show  layout
vertical
```

vrouter-static-bfd-remove

Currently when a static route is created, NetVisor installs a route entry in the routing information database (RIB) regardless of the reachability of the gateway. When static routes are conditional over BFD neighbor-ship formation, NetVisor alleviates this issue.

NetVisor OS supports static route reachability detection by using BFD protocol, and a static route entry is installed in the RIB only if BFD is able to communicate with the gateway. After installation, BFD periodically monitors reachability, and removes the route if connectivity is interrupted. The Pluribus vRouter acts as a gateway, and sends out BFD hellos periodically to specified neighbors. Static BFD sessions are also configurable.

IPv4, and IPv6 addresses are both supported.

Syntax `vrouter-static-bfd-remove`

`vrouter-name` *`name-string`*	Specify the vRouter name.
`src-ip` *`ip-address`*	Specify the source IPv4 or IPv6 address.
`dst-ip` *`ip-address`*	Specify the destination IPv4 or IPv6 address.

Defaults None

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to add BFD to a static route.

Examples To remove BFD from a static route with source IP address, 10.1.1.13 to destination IP address, 172.21.16.35, use the following syntax:

```
CLI (network-admin@switch) > vrouter-static-bfd-remove  src-ip
10.1.1.13 dst-ip 172.21.16.35 type single-hop
```

vrouter-static-bfd-add

Currently when a static route is created, NetVisor installs a route entry in the routing information database (RIB) regardless of the reachability of the gateway. When static routes are conditional over BFD neighbor-ship formation, NetVisor alleviates this issue.

NetVisor OS supports static route reachability detection by using BFD protocol, and a static route entry is installed in the RIB only if BFD is able to communicate with the gateway. After installation, BFD periodically monitors reachability, and removes the route if connectivity is interrupted. The Pluribus vRouter acts as a gateway, and sends out BFD hellos periodically to specified neighbors. Static BFD sessions are also configurable.

IPv4, and IPv6 addresses are both supported.

Syntax `vrouter-static-bfd-add`

`vrouter-name` *`name-string`*	Specify the vRouter name.
`src-ip` *`ip-address`*	Specify the source IPv4 or IPv6 address.
`dst-ip` *`ip-address`*	Specify the IPv4 or IPv6 destination address.
`type single-hop|multi-hop`	Specify the type of bi-directional forwarding hop, either single-hop or multi-hop.

Defaults None

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to add BFD to a static route.

Examples To add BFD to a static route with source IP address, 10.1.1.13 to destination IP address, 172.21.16.35, use the following syntax:

```
CLI (network-admin@switch) > vrouter-static-bfd-add src-ip
10.1.1.13 dst-ip 172.21.16.35 type single-hop
```

vrouter-static-bfd-show

Currently when a static route is created, NetVisor installs a route entry in the routing information database (RIB) regardless of the reachability of the gateway. When static routes are conditional over BFD neighbor-ship formation, NetVisor alleviates this issue.

NetVisor OS supports static route reachability detection by using BFD protocol, and a static route entry is installed in the RIB only if BFD is able to communicate with the gateway. After installation, BFD periodically monitors reachability, and removes the route if connectivity is interrupted. The Pluribus vRouter acts as a gateway, and sends out BFD hellos periodically to specified neighbors. Static BFD sessions are also configurable.

IPv4, and IPv6 addresses are both supported.

Syntax `vrouter-static-bfd-show`

`vrouter-name` *`name-string`*	The vRouter name.
`src-ip` *`ip-address`*	The source IPv4 or IPv6 address.
`dst-ip` *`ip-address`*	The IPv4 or IPv6 destination address.
`type none|single-hop|multi-hop`	The type of bi-directional forwarding hop, either single-hop or multi-hop.
`vrf vrouter vrf vrf|default`	Name of the VRF.

Defaults None

Access Network Administrator

History

Version 2.5.3	Command introduced.

Usage Use this command to display BFD on a static route.

Examples To display BFD from a static route with source IP address, 10.1.1.13 to destination IP address, 172.21.16.35, use the following syntax:

```
CLI (network-admin@switch) > vrouter-static-bfd-show  vrouter-name
static-1 src-ip 172.21.16.45 dst-ip 10.1.1.101 type multihop
```

vrouter-traceroute

This command is used to identify routing from a vRouter on the network.

Syntax `vrouter-traceroute`

`vrouter-name` *`vrouter-name`*	Specify the name of the vRouter service.
`host-ip` *`ip-address`*	Specify the host IP address.
Specify between 0, and 3 of the following options:	
`resolve|no-resolve`	Specify if you want to display IP addresses as host names in the output.
`src-ip` *`ip-address`*	Specify if you want to select an alternative source address.
`probe-type icmp-probe|udp-probe`	Specify the type of probe used in the traceroute function.
`outgoing-interface` *`outgoing-interface-string`*	Specify the outgoing interface to ping.

Defaults None

Access CLI

History

Version 2.3.1	Command introduced.
Version 2.6.2	The parameter `outgoing-interface` added.

Usage Use this command to identify routes on the network between a vRouter, and a host.

Examples To perform a traceroute between vRouter, vr-1, and host IP address, 192.168.11.134, use the following syntax:

```
CLI (network-admin@switch) > vrouter-traceroute vrouter-name vr-1
host-ip 192.168.11.134
```

vrouter-vrf-add

This command adds a VRF to a vRouter.

Syntax `vrouter-vrf-add`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`bgp-as` *`1..4294967295`*	Specify the BGP Autonomous System number from 1 to 4294967295
`bgp-redistribute static|connected|rip|ospf`	Specify a static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-static-metric none|-1..4294967295`	Specify a static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-connected-metric none|-1..4294967295`	Specify a connected metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-rip-metric none|-1..4294967295`	Specify a RIP metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-ospf-metric none|-1..4294967295`	Specify a OSPF metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-cluster-id ip-address`	Specify an IP address for a BGP cluster ID.
`bgp-dampening|no-bgp-dampening`	Enable or disable dampening for BGP routes.
`bgp-keepalive-interval 0..65535`	Specify a BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.
`bgp-holdtime 0..65535`	Specify a BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
`bgp-distance-external 0..255`	Specify the BGP distance for routes external to the AS.
`bgp-distance-internal 0..255`	Specify the BGP distance for routes internal to the AS.
`bgp-distance-local 0..255`	Specify the BGP distance for routes local to the AS.

`bgp-global-nh-preference none|true|false`	Use global nexthop preference for choosing nexthop type in BGP-IPv6.
`bgp-default-shutdown|no-bgp-default-shutdown`	Apply administrative shutdown to newly configured peers.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify to enable or disable BGP graceful shutdown (RFC 8326).

Defaults None.

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use the command to add a VRF to a vRouter.

Examples To add a VRF `vrf2` to the vRouter `vRouter1` use the following command:

```
CLI (network-admin@switch) > vrouter-vrf-add vrouter-name vRouter1
vrf vrf2 bgp-redistribute
```

vrouter-vrf-modify

This command modifies a vRouter VRF.

Syntax `vrouter-vrf-modify`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`bgp-as 1..4294967295`	Specify the BGP Autonomous System number from 1 to 4294967295
`bgp-redistribute static|connected|rip|ospf`	Specify a static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-static-metric none|-1..4294967295`	Specify a static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-connected-metric none|-1..4294967295`	Specify a connected metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-rip-metric none|-1..4294967295`	Specify a RIP metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-ospf-metric none|-1..4294967295`	Specify a OSPF metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-cluster-id ip-address`	Specify an IP address for a BGP cluster ID.
`bgp-dampening|no-bgp-dampening`	Enable or disable dampening for BGP routes.
`bgp-keepalive-interval 0..65535`	Specify a BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.
`bgp-holdtime 0..65535`	Specify a BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
`bgp-distance-external 0..255`	Specify the BGP distance for routes external to the AS.
`bgp-distance-internal 0..255`	Specify the BGP distance for routes internal to the AS.
`bgp-distance-local 0..255`	Specify the BGP distance for routes local to the AS.

`bgp-global-nh-preference none|true|false`	Use global nexthop preference for choosing nexthop type in BGP-IPv6.
`bgp-default-shutdown|no-bgp-default-shutdown`	Apply administrative shutdown to newly configured peers.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify to enable or disable BGP graceful shutdown (RFC 8326).

Defaults None.

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use the command to modify a vRouter VRF.

Examples To configure BGP dampening for the VRF `vrf2` belonging to the vRouter `vRouter1`, use the following command:

```
CLI (network-admin@switch) > vrouter-vrf-modify vrouter-name
vRouter1 vrf vrf2 bgp-dampening
```

vrouter-vrf-remove

This command removes a VRF from a vRouter.

Syntax `vrouter-vrf-remove`

`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`vrf` *`vrf-name`*	Specify the name of the VRF.

Defaults None.

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use the command to remove a VRF from a vRouter.

Examples To remove the VRF `vrf2` belonging to the vRouter `vRouter1,` use the following command:

```
CLI (network-admin@switch) > vrouter-vrf-remove vrouter-name
vRouter1 vrf vrf2
```

vrouter-vrf-show

This command displays a vRouter VRF configuration.

Syntax `vrouter-vrf-show`

`vrouter-name` *`name-string`*	Name of the vRouter service.
`vrf` *`vrf-name`*	Name of the VRF.
`bgp-as 1..4294967295`	The BGP Autonomous System number from 1 to 4294967295
`bgp-redistribute static|connected|rip|ospf`	A static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-static-metric none|-1..4294967295`	A static metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-connected-metric none|-1..4294967295`	A connected metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-rip-metric none|-1..4294967295`	An RIP metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-redist-ospf-metric none|-1..4294967295`	An OSPF metric for BGP route redistribution. This is a number between 0, and 4294967295 or specify none to unset.
`bgp-cluster-id ip-address`	An IP address for a BGP cluster ID.
`bgp-dampening|no-bgp-dampening`	Specify if dampening for BGP routes is enabled or disabled.
`bgp-keepalive-interval 0..65535`	BGP keepalive interval in seconds. The default is 60 seconds with a range of 0 to 65535 seconds.
`bgp-holdtime 0..65535`	BGP holdtime in seconds. The default is 180 seconds with a range of 0 to 65535 seconds.
`bgp-distance-external 0..255`	The BGP distance for routes external to the AS.
`bgp-distance-internal 0..255`	The BGP distance for routes internal to the AS.
`bgp-distance-local 0..255`	The BGP distance for routes local to the AS.
`bgp-global-nh-preference none|true|false`	Use global nexthop preference for choosing

	nexthop type in BGP-IPv6.
`bgp-default-shutdown|no-bgp-default-shutdown`	Apply administrative shutdown to newly configured peers.
`no-bgp-redist-static-route-map`	Remove route map for BGP static redistribution.
`no-bgp-redist-connected-route-map`	Remove route map for BGP connected redistribution.
`no-bgp-redist-ospf-route-map`	Remove route map for BGP OSPF redistribution.
`bgp-graceful-shutdown|no-bgp-graceful-shutdown`	Specify to enable or disable BGP graceful shutdown (RFC 8326).

Defaults None.

Access CLI

History

Version 6.1.1	Command introduced.

Usage Use the command to display a vRouter VRF configuration.

Examples To display the vRouter VRF configuration, use the command:

```
CLI (network-admin@switch)1 > vrouter-vrf-show
switch  vrouter-name vrf       hw-vrid bgp-as router-id bgp-redistribute
------- ------------ -------- ------- ------ --------- ---------------
switch1 vr1          vrf1     1       65100  110.0.1.1 connected
```

vrouter-vtysh-cmd

Display FRR show output using the NetVisor CLI.

Syntax `vrouter-vtysh-cmd`

`name` *`name-string`*	Specify the name of the vRouter service configuration.
`cmd` *`cmd-string`*	Specify any FRR show/debug/undebug/no debug/clear ip/clear ipv6 command.

Defaults None

Access CLI

History

Version 2.5.3	Command introduced.

Usage Use this command to display information on FRR show or debug output.

Examples To display information about IP routing, use the following syntax :

```
 CLI (network-admin@Spine1) > vrouter-vtysh-cmd name vr1 cmd "show
 ip route"
Codes: K - kernel route, C - connected, S - static, R - RIP,
      O - OSPF, I - IS-IS, B - BGP, P - PIM, A - Babel,
       > - selected route, * - FIB route

C>* 100.1.1.0/24 is directly connected, eth1.100
C>* 127.0.0.0/8 is directly connected, lo0
```

vsg-create

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to create a Virtual Service Group (vSG).

Syntax `vsg-create name`

`name` *`name-string`*	Specify a name for the vSG.
`description` *`description-string`*	Specify a vSG description.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to configure a vSG.

Examples To configure a vSG named vSG1, use the following syntax.

```
CLI (network-admin@switch) > vsg-create name VSG1
```

vsg-delete

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to delete a VRF Service Group (vSG).

Syntax `vsg-delete`

`name` *`name-string`*	Specify the name of the vSG.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to delete a vSG.

Examples To delete a vSG named VSG1, use the following syntax.

```
CLI (network-admin@switch) > vsg-delete name VSG1
```

vsg-modify

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to modify a vSG.

Syntax `vsg-modify name`

`name` *`name-string`*	Specify a name for the vSG.
`description` *`description-string`*	Specify a vSG description.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to modify a vSG.

Examples To add the description `network1` to a vSG named VSG1, use the following syntax:

```
CLI (network-admin@switch) > vsg-modify name VSG1 description
network1
```

vsg-show

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as ‘prefix leaking’.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it’s an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to display a vSG.

Syntax `vsg-show name`

`name` *`name-string`*	Name for the vSG.
`description` *`description-string`*	vSG description.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to display a vSG.

Examples To display a vSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-show name GROUP-A
switch name    description
------ ------- -------------------
switch GROUP-A ANY-TO-ANY-SHARING
```

vsg-network-add

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as ‘prefix leaking’.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it’s an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to add a network or subnet to a vSG.

Syntax `vsg-network-add`

`vsg-name` *`name-string`*	Specify the name of the vSG.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`vnet` *`vnet name`*	Specify the vNET for the VRF.
`subnet` *`subnet name`*	Specify the subnet name or 'all' for all subnets.
`network` *`ip-address`*	Specify the network IP address.
`netmask` *`netmask`*	Specify the network mask.
`network6` *`ip-address`*	Specify the IP subnet.
`netmask6` *`netmask`*	Specify the IP subnet network mask.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to add a network to a Virtual Service Group (vSG).

Examples To add a network to a vSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-network-add vsg-name GROUP-A vrf
TENANT-GREY subnet SUBNET-11
```

vsg-network-remove

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as ‘prefix leaking’.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it’s an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to add a network or subnet to a vSG.

Syntax `vsg-network-remove`

`vsg-name` *`name-string`*	Specify the name of the vSG to be removed.
`vrf` *`vrf-name`*	Specify the name of the VRF.
`vnet` *`vnet name`*	Specify the vNET for the VRF.
`subnet` *`subnet name`*	Specify the subnet name or 'all' for all subnets.
`network` *`ip-address`*	Specify the network IP address.
`netmask` *`netmask`*	Specify the network mask.
`network6` *`ip-address`*	Specify the IP subnet.
`netmask6` *`netmask`*	Specify the IP subnet network mask.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to remove a network from a Virtual Service Group (vSG).

Examples To remove a network from a VSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-network-remove vsg-name GROUP-A
vrf TENANT-GREY subnet SUBNET-11
```

vsg-network-show

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as ‘prefix leaking’.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it’s an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to display the network or subnets that belong to a vSG.

Syntax `vsg-network-show`

`vsg-name` *`name-string`*	The name of the vSG.
`vrf` *`vrf-name`*	The VRF name.
`vnet` *`vnet name`*	The vNET for the VRF.
`subnet` *`subnet name`*	The subnet name or 'all' for all subnets.
`network` *`ip-address`*	The network IP address.
`netmask` *`netmask`*	The network mask.
`network6` *`ip-address`*	The IP subnet.
`netmask6` *`netmask`*	The IP subnet network mask.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to display the network or subnets that belong to a Virtual Service Group (vSG).

Examples To display the networks that belong to the VSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-network-show
switch vsg-name vrf     vnet subnet  network     network-state
------ -------- ------- ---- ------- ----------- ------------
switch vsg1     blue    0:0  vlan_10 10.1.1.0/24 ok
switch vsg1     red     0:0  vlan_20 20.1.1.0/24 ok
switch vsg1     transit 0:0  vlan_30 30.1.1.2/32 ok
```

vsg-route-add

Use this command to add route to be leaked in vSG.

Syntax `vsg-route-add`

`name` *`name-string`*	Specifies the VRF service group name.
Any of the following route arguments:	
`vrf` *`vrf-name`*	Specifies the VRF name.
`vnet` *`vnet name`*	Specifies the vNET for the VRF.
`network` *`ip-address`*	Specifies the network IP address.
`netmask` *`netmask`*	Specifies the network mask.
`gateway-ip` *`ip-address`*	Specifies the gateway IP address.

Defaults None

Access Network Administrator

History

Version 6.1.0	Command introduced.

Usage Use this command to add route to be leaked in vSG.

Examples To add routes to be leaked in vSG, use the following syntax:

```
CLI (network-admin@switch) > vsg-route-add
```

vsg-route-remove

Use this command to remove a route to be leaked in vSG.

Syntax `vsg-route-remove`

`name` *`name-string`*	Specifies the VRF service group name.
The following route arguments:	
`vrf` *`vrf-name`*	Specifies the VRF name.
`network` *`ip-address`*	Specifies the network IP address.
`netmask` *`netmask`*	Specifies the network mask.
`gateway-ip` *`ip-address`*	Specifies the gateway IP address.
Any of the following arguments:	
`vnet` *`vnet name`*	Specifies the vNET for the VRF.

Defaults None

Access Network Administrator

History

Version 6.1.0	Command introduced.

Usage Use this command to remove a route to be leaked in vSG.

Examples To display the networks that belong to the VSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-route-remove
```

vsg-route-show

Use this command to display the routes leaked in vSG.

Syntax `vsg-route-show`

`name` *`name-string`*	The VRF service group name.
The following route arguments:	
`vrf` *`vrf-name`*	The VRF name.
`vnet` *`vnet name`*	The vNET for the VRF.
`network` *`ip-address`*	The network IP address.
`netmask` *`netmask`*	The network mask.
`gateway-ip` *`ip-address`*	The gateway IP address.

Defaults None

Access Network Administrator

History

Version 6.1.0	Command introduced.

Usage Use this command to show the routes leaked in vSG.

Examples To display the routes leaked in vSG, use the following syntax:

```
CLI (network-admin@switch) > vsg-route-show
```

vsg-vrf-add

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to add a VRF to a vSG.

The vsg-vrf-add command enables the user to optionally specify the type of prefix sharing to apply to each VRF as well as an associated vNET. The promiscuous keyword (i.e., the default option) identifies VRFs whose prefixes can be freely shared with any other VRF. Instead, the isolated keyword identifies VRFs whose prefixes can only be shared with VRFs marked as promiscuous.

Syntax `vsg-vrf-add`

`vsg-name` *`name-string`*	Specify the name of the vSG.
`vnet` *`vnet-name`*	Specify the vNET name for the VRF.
`vrf` *`vrf name`*	Specify the name of the VRF.
`type promiscuous|isolated`	Specify the VRF list type.
`export-leaked-networks none|evpn`	Specifies the VRF export to protocols.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.
Version 7.0.0	The parameter `export-leaked-networks` added.

Usage Use this command to add a VRF to a Virtual Service Group (vSG).

Examples To add the VRF `SERVICE-AMBER` to a vSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-vrf-add vsg-name GROUP-A vrf
SERVICE-AMBER promiscuous
```

vsg-vrf-remove

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to remove a VRF from a vSG.

Syntax `vsg-vrf-remove`

`vsg-name` *`name-string`*	Specify the name of the vSG.
`vnet` *`vnet-name`*	Specify the vNET name for the VRF.
`vrf` *`vrf name`*	Specify the name of the VRF.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.

Usage Use this command to remove a VRF from a Virtual Service Group (vSG).

Examples To remove the VRF `vrf1` from a VSG named VSG1, use the following syntax:

```
CLI (network-admin@switch) > vsg-vrf-remove vsg-name VSG1 vnet
vnet-1 vrf vrf1
```

vsg-vrf-show

Starting from NetVisor release 6.0.1 it is possible to import/export subnet prefixes between Unicast Fabric VRFs. This operation is sometimes informally referred to as 'prefix leaking'.

To implement this functionality a new innovative entity called Virtual Service Group (vSG) is introduced: it's an abstraction that defines in an intuitive, and user-friendly way the policies by which prefixes are shared.

Use this command to display the VRFs that belong to a vSG.

Syntax `vsg-vrf-show`

`vsg-name` *`name-string`*	Name of the vSG.
`vnet` *`vnet name`*	vNET name for the VRF.
`vrf` *`vrf name`*	VRF name.
`type promiscuous|isolated`	VRF list type.
`export-leaked-networks none|evpn`	VRF export to protocols.

Defaults None

Access Network Administrator

History

Version 6.0.1	Command introduced.
Version 7.0.0	The parameter `export-leaked-networks` added.

Usage Use this command to display the VRFs that belong to a Virtual Service Group (vSG).

Examples To display the VRFs that belong to a vSG named GROUP-A, use the following syntax:

```
CLI (network-admin@switch) > vsg-vrf-show
vsg-name vnet  vrf      type        export-leaked-networks
-------- ----- -------- ----------- ----------------------
vsg-1    0:0   vrf3     promiscuous evpn
```

vtep-create

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-create`

`name` *`name-string`*	Specify a name for the VTEP.
`location` *`fabric-node-extended-name`*	Specify the switch location.
`vrouter-name` *`name-string`*	Specify the name of the vRouter service.
`ip` *`ip-address`*	Specify the primary IP address.
`virtual-ip` *`ip-address`*	Specify the virtual IP address.
`description` *`description-string`*	Specify a VTEP description.
`mac-learning|no-mac-learning`	Specify if you want to enable or disable MAC address learning.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.

Usage Use this command to create a VTEP on a switch.

Examples To create a VTEP on Spine 1, use the following syntax:

```
CLI network-admin@Spine1 > vtep-create name vtep1 ip 10.10.10.1
vrouter-name VR1
```

vtep-modify

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-modify`

`name` *`name-string`*	Specify a name for the VTEP.
`mac-learning|no-mac-learning`	Specifies if the user wants to enable or disable MAC address learning.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added.

Usage Use this command to modify a VTEP

Examples To enable MAC address learning on vtep1, use the following syntax:

```
CLI network-admin@Spine1 > vtep-modify name vtep1 mac-learning
```

vtep-delete

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-delete`

`name` *`name-string`*	Specifies name of VTEP to be deleted.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to delete a VTEP on a switch.

Examples To delete a VTEP on Spine 1, use the following syntax:

```
CLI network-admin@Spine1>vtep-delete name vtep1
```

vtep-show

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-show`

`scope fabric`	The VTEP scope.
`name` *`name-string`*	Display a name for the VTEP.
`location fabric-node-name|host-external`	The location of the switch.
`vrouter-name` *`name-string`*	The name of the vRouter service.
`ip` *`ip-address`*	The primary IP address.
`virtual-ip` *`ip-address`*	The virtual IP address.
`description description-string`	The VTEP description.
`mac-learning|no-mac-learning`	Display VTEPs with either `mac-learning` or `no-mac-learning` configured.
`evpn-border true|false`	Display if VTEP is on EVPN border or not.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 6.0.0	The parameter `mac-learning` added. The keyword `host-external` for the `location` parameter added.
Version 6.1.0	The parameter `evpn-border true|false` added.

Usage Use this command to display a VTEP on a switch.

Examples To display the VTEPs on switch1, use the following syntax:

```
CLI (network-admin@switch1) > vtep-show format all
```

```
scope  name        location      vrouter-name        ip         virtual-ip description evpn-border
------ ----------- ------------- ------------------- ---------- ---------- ----------- -----------
fabric  VTEP1      switch1       vr1                 190.11.1.2 190.11.1.1             false
fabric  VTEP2      switch2       vr2                 190.11.1.3 190.11.1.1             false
fabric  VTEP3      switch3       vr3                 190.12.1.3 190.12.1.1             false
fabric  VTEP4      switch4       vr4                 190.12.1.2 190.12.1.1             false
fabric  FAB2-VTEP1 host-external                      20.1.1.1                          false
```

vtep-vxlan-add

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-vxlan-add`

`name` *`name-string`*	Specifies the name of the VTEP.
`vxlan` *`vxlan-id`*	Specifies the VXLAN identifier.
`isolated|not-isolated`	Specifies if the user wants to configure VNI mode as isolated or not.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 6.0.1	The parameter `isolated|not-isolated` added.

Usage Use this command to add a VXLAN to a VTEP on a switch.

Examples To add a VXLAN to VTEP1 on Spine 1, use the following syntax:

```
CLI network-admin@Spine1 > vtep-vxlan-add vtep-name vtep1 vxlan
10000
```

vtep-vxlan-remove

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-vxlan-remove`

`name` *`name-string`*	Specifies the name of the VTEP.
`vxlan` *`vxlan-id`*	Specifies the VXLAN identifier.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.

Usage Use this command to remove a VXLAN to a VTEP from a switch.

Examples To remove a VXLAN to VTEP1 on Spine 1, use the following syntax:

```
CLI network-admin@Spine1>vtep-vxlan-remove vtep-name vtep1 vxlan
10000
```

vtep-vxlan-show

Previous versions of NetVisor required configuring a tunnel from every node in the fabric, and manually adding VNIs to them. Also, when a new VTEP is added to the fabric, there is no notification about this event, and requires manually creating tunnels from the new node to all other nodes in the fabric. VTEP commands are used to automatically create tunnels between nodes in a fabric.

Syntax `vtep-vxlan-show`

`name` *`name-string`*	The name of the VTEP.
`vxlan` *`vxlan-id`*	The VXLAN identifier.
`hw_update_pending yes|no`	Hardware update for VXLAN is pending.
`bd_deactivated yes|no`	Static tunnel deactivated in hardware for this bridge domain.
`isolated|not-isolated`	The VNI mode is isolated or not.

Defaults None

Access Network Administrator

History

Version 2.6.0	Command introduced.
Version 6.0.1	The parameter `isolated|not-isolated` added.

Usage Use this command to display a VXLAN to a VTEP from a switch.

Examples To display a VXLAN to VTEP1 on Spine 1, use the following syntax:

```
CLI network-admin@Spine1 > vtep-vxlan-show
name       vxlan  isolated
---------- ------ -------
vtep-leaf1 10201  no
vtep-leaf1 103501 no
vtep-leaf1 10403  no
vtep-leaf2 10201  no
vtep-leaf2 103501 no
vtep-leaf2 10403  no
vtep-leaf3 10201  no
vtep-leaf3 103501 no
vtep-leaf3 10403  no
vtep-leaf4 10201  no
vtep-leaf4 103501 no
```

```
vtep-leaf4 10403  no
vtep-leaf5 10201  no
vtep-leaf5 103501 no
vtep-leaf5 10403  no
vtep-leaf6 10201  no
vtep-leaf6 103501 no
vtep-leaf6 10403  no
vtep-bgw11 10201  no
vtep-bgw11 103501 no
```

vtep-auto-vlan-modify

You use this command to automatically assign VLANs to a VTEP.

Syntax `vtep-auto-vlan-modify`

`vlans` *`0..4095`*	Specifies the starting VLAN ID.
`vlan-end` *`0..4095`*	Specifies the ending VLAN ID.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to automatically assign VLANs to VTEP.

Examples To automatically assign VLANs 10 to 20 to VTEPs, use the following syntax:

```
CLI (network-admin@switch) > vtep-auto-vlan-modify vlans 10 vlan-
end 20
```

vtep-auto-vlan-show

You use this command to display automatically assigned VLANs to a VTEP.

Syntax `vtep-auto-vlan-show`

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to display automatically assigned VLANs to VTEPs.

Examples To display assigned VXLANs to VTEPs, use the following syntax:

```
CLI (network-admin@switch) > vtep-auto-vlan-show
vlans:     2500-2999
```

vtep-auto-vxlan-modify

You use this command to automatically assign VXLANs to a VTEP.

Syntax `vtep-auto-vxlan-modify`

`vxlans` *`vxlan-id`*	Specifies the starting VXLAN ID.
`vxlan-end` *`vxlan-id`*	Specifies the ending VXLAN ID.

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to automatically assign VXLANs to VTEP.

Examples To automatically assign VXLANs to VTEPs, use the following syntax:

```
CLI (network-admin@switch) > vtep-auto-vxlan-modify
```

vtep-auto-vxlan-show

This command is used to display automatically assigned VXLANs for VTEPs.

Syntax `vtep-auto-vxlan-show`

Defaults None

Access Network Administrator

History

Version 3.1.0	Command introduced.

Usage Use the command to display automatically assigned VXLANs to VTEPs.

Examples To display assigned VXLANs to VTEPs, use the following syntax:

```
CLI (network-admin@switch) > vtep-auto-vxlan-show
vxlans:     12000000-12999999
```

vxlan-dest-port-modify

This command is used to modify a destination port for a VXLAN.

Syntax `vxlan-dest-port-modify`

One or more of the following options:	
`port port-number`	Specifies the VXLAN port number.

Defaults None

Access CLI

History

Version 2.3	Command introduced.

Usage Use this command to modify a destination port for a VXLAN.

Examples To modify the port, use the following syntax:

```
CLI (network-admin@switch) > vxlan-dest-port-modify port 21
```

vxlan-dest-port-show

This command is used to display a destination port for a VXLAN.

Syntax `vxlan-dest-port-show`

Defaults None

Access CLI

History

Version 2.3	Command introduced.

Usage Use this command to display a destination port for a VXLAN.

Examples To display the port, use the following syntax:

```
CLI (network-admin@switch) > vxlan-dest-port-show
port:       4789
hw-config:  4789
```

vxlan-stats-settings-modify

This command is used to modify settings for VXLAN statistics collection.

Syntax `vxlan-stats-settings-modify`

`disable|enable`	Specifies to enable or disable statistics collection.
`interval duration: #d#h#m#s`	Specify the interval between statistics collection.
`disk-space` *`disk-space-numbe`*	Specify the amount of disk space for statistics collection.

Defaults None

Access CLI

History

Version 2.5.1	Command introduced.

Usage Use this command to display the settings for VXLAN statistics collection.

Examples To enable the statistics collection, use the following syntax:

```
CLI (network-admin@switch) > vxlan-stats-settings-modify enable
```

vxlan-stats-settings-show

This command is used to display statistics settings for a VXLAN.

Syntax `vxlan-stats-settings-show`

Defaults None

Access CLI

History

Version 2.5.1	Command introduced.

Usage Use this command to display settings for VXLAN statistics collection.

Examples To display the statistics collection, use the following syntax:

```
CLI (network-admin@switch) > vxlan-stats-settings-show
switch:       Spine1
enable:       yes
interval:    30m
disk-space:  50M
switch:       Leaf1
enable:       yes
interval:    30m
disk-space:  50M
```

vxlan-stats-show

This command displays Virtual Extensible LANs (VXLAN) statistics on a fabric, cluster, virtual network (vNET), or a standalone switch.

Syntax `vxlan-stats-show`

`time date/time: yyyy-mm-ddTHH:mm:ss`	The time to start statistic collection.
`start-time date/time: yyyy-mm-ddTHH:mm:ss`	The start-time of statistic collection.
`end-time date/time: yyyy-mm-ddTHH:mm:ss`	The end-time of statistic collection.
`duration duration: #d#h#m#s`	The duration of statistic collection.
`interval duration: #d#h#m#s`	The interval between statistic collection.
`since-start`	The statistics collected since start time.
`older-than duration: #d#h#m#s`	The statistics older than the specified time.
`within-last duration: #d#h#m#s`	The statistics collected within the specified duration.
`vnid` *`vnid-number`*	A number for VNID. This is a value from 0, and 16777215.
`vxlan-name` *`vxlan-name`*	Name for the VXLAN.
`vnet` *`vnet name`*	vNET for the VLAN.
`bd` *`bridge-domain-name`*	The VXLAN bridge domain.
`vlan` *`vlan-name`*	Name of the VLAN.
`ibits` *`ibits-number`*	Number of incoming bits for VLAN
`obits` *`obits-number`*	Number of outgoing bits for VLAN

Defaults None.

Access CLI

History

Version 1.2	Command introduced.
Version 2.1	The parameters `multicast` `deep-inspection`, and `untagged-ports` deprecated. The parameter `vlan` added.
Version 2.6.2	The parameter `vnet` added.
Version 3.0.0	The output is now displayed in bits instead of bytes.
Version 6.1.0	The parameter `bd` added.

Usage Virtual Extensible LAN (VXLAN) is an encapsulation protocol for running an overlay network on existing Layer 3 infrastructure on a fabric, cluster, vNET, or standalone switch. Use this command to display information about a VXLAN.

Examples To view the VXLAN statistics for the bridge domain `BD100`, use the following command:

```
CLI (network-admin@switch) > vxlan-stats-show bd BD100 layout
vertical
time:         03:23:19
vnid:         12591499
vxlan-name:
vnet:
bd:           BD100
ibytes:       7.60T
ibits:        66.8T
ipkts:        3.59G
idrops-pkts:  0
obytes:       7.54T
obits:        66.5T
opkts:        3.59G
odrops-pkts:  0
```

vxlan-stats-clear

This command clears VXLAN statistics on a fabric, cluster, virtual network (vNET), or a standalone switch.

Syntax `vxlan-stats-clear`

`vnid` *`0..16777215`*	Specify the VXLAN ID.

Defaults None.

Access CLI

History

Version 6.1.0	Command introduced.

Usage VXLAN is an encapsulation protocol for running an overlay network on existing Layer 3 infrastructure on a fabric, cluster, vNET, or standalone switch. Use this command to clear VXLAN statistics.

Examples To clear the VXLAN statistics, use the following command:

```
CLI (network-admin@switch) > vxlan-stats-clear
```

W Commands

web-cert-clear

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-clear`

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to delete certificates from the OS.

Examples To delete a Web certificate, use the following syntax:

```
CLI (network-admin@switch) > web-cert-clear
```

web-cert-import

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-import`

`file-ca` *`file-ca-string`*	Specify the name of the CA Certificate file.
`file-server` *`file-server-string`*	Specify the name of the Server Certificate file.
`file-inter` *`file-inter-string`*	Specify the name of the intermediate CA Certificate file.

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to import certificates into the OS.

Examples To import a Web certificate, use the following syntax:

```
CLI (network-admin@switch) > web-cert-import
```

web-cert-info-show

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-info-show`

`cert-type ca|intermediate|server`	The type of the CA Certificate.
`subject` *`subject-string`*	The subject in the Certificate file.
`issuer` *`issuer-string`*	The issuer of the intermediate CA Certificate file.
`serial-number` *`serial-number-number`*	The serial number in the Certificate file.
`valid-from` *`valid-from-string`*	The valid from date in the Certificate file.
`valid-to` *`valid-to-string`*	The valid to date in the Certificate file.

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to display certificates in the OS.

Examples To display a Web certificate, use the following syntax:

```
CLI (network-admin@switch) > web-cert-info-show
switch:        switch1
cert-type:     ca
subject:        /C=se/ST=Stockholm/L=na/O=Ericsson/OU=TPC/CN=DN
issuer:         /C=se/ST=Stockholm/L=na/O=Ericsson/OU=TPC/CN=DN
serial-number: 1
valid-from:    Feb  2 00:40:39 2022 GMT
valid-to:      Feb  2 00:40:39 2023 GMT
status:
```

web-cert-request-show

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-request-show`

`cert-request` *`cert-request-string`*	The certificate request parameters.

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to display certificate requests.

Examples To display a certificate request, use the following syntax:

CLI (network-admin@switch) > `web-cert-request-show`

```
cert-request-----------------------------------------------------------------------BEGIN
CERTIFICATE      REQUEST----MIICnDCCAYQCAQEwVzELMAkGA1UEBhMCVVMxCzAJBgNVBAgMAkNBMQswCQYDVQQH
DAJTSjELMAkGA1UECgwCUE4xDTALBgNVBAsMBEVuZ2cxEjAQBgNVBAMMCWVxLWNv
bG8tMTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBALMmrZ8hvZ5J+FRs
Lo1sfVtwmmLEaxyhaxD/HNVdXSRhzbQDT20+qySfOudxtWGKyCsuCFFbgMUz7rgu
H1Xle8uwPSoxgTjLGq20sgBQIfNBT5UwDLDuzUUPzMEEjFb3/9Cg1VWju2t1KPim
Gqg3rcA3PCsMeCr/q+9Gz6gfLe6Rfx91yxTA44ZWsOWnvgDdXAPfHOLZ5zBWG8a3
ohgOwMLjy21ytDTA6aR1M9I12MkJwev3t0y6n/CLp6Zigp5wXiArPPnR9sZ+E7so
MqpEzz0rjFDfrNwNAGMzT3WPcmlYRjYrUJ0QsOEQ+O1uHJaNbw1pJEmK2jm97kbk       /HvEFmMCAwEAAaAAMA0GCSqGSIb3DQE
BBQUAA4IBAQCnlgEwzoesbuiCYG7HZJN/
Rxm/NcznpvJXxdlTAdzSbTWWLswrZMyX6bQqUTWEb3qvVccD4tIZShyIGiR0CpCD
22m8LD4+e6/FA6NijjanHkKsRW9Z7ka97TFpsUaH27sUTtfFDDkDImwRIGfns+nu      kTRNMuNiyC/
+uHovsvCxS8is3OasQtS1lkG28sZgxisvP17qmfjlb9fQC3pcvR4t
K8GciPMUfgcIA5qLDmCZAg1A6JBMb/UHtUuEnztLrLz4qjWqJJK3pWvdLWZcKDEz
C0t5Dre9ByJ2RT75GdUq2c16xYBGAwZNCzjdhParyBnvn00Mwb6PpPmLGcBQiRNn-----END    CERTIFICATE    REQUEST----
```

web-cert-request-create

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-request`

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to request certificates for the OS.

Examples Torequest a Web certificate, use the following syntax:

```
CLI (network-admin@switch) > web-cert-request-create
```

web-cert-self-signed-create

You can perform TLS certificate management for the NetVisor OS Web service. For HTTPS communication between a REST API client, and the Web application server running on the switch, you must configure a server certificate, and deploy it on the Web application server.

Syntax `web-cert-self-signed-create`

`country` *`country-string`*	Specify the country for the certificate.
`state` *`state-string`*	Specify the state for the certificate
`city` *`city-string`*	Specify the city for the certificate
`organization` *`organization-string`*	Specify the organization for the certificate
`common-name` *`common-name-string`*	Specify the common name for the certificate. The common name must match the host for authentication.

Defaults None

Access Network admin

History

Version 2.4.1	Command introduced.

Usage Use this command to create self-signed certificate requests.

Examples To create a self-signed certificate, use the following syntax:

```
CLI (network-admin@switch) > web-cert-self-signed-create country us
state ca city palo alto organization engineering common-name web-
server
```

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The Pluribus Networks Command Line Interface (CLI) used the following Open Source Software:

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DataTables

(DataTables):

@summary DataTables

@description Paginate, search, and sort HTML tables

@version 1.9.4

@file jquery.dataTables.js

@author Allan Jardine (www.sprymedia.co.uk)

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(Envision)

Envision.js

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Source: http://www.github.com/HumbleSoftware/envisionjs

Homepage: http://www.humblesoftware.com/envision

excanvas

(excanvas.js):

Filament Group modification note:

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Special thanks to:

Flotr: http://code.google.com/p/flotr/ (fork)

Flot: https://github.com/flot/flot (original fork)

g.Raphael

g.Raphael 0.5 - Charting library, based on RaphaÃ«l

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jQuery Cookie plugin

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Based upon the plugin by Tzury Bar Yochay:
http://github.com/tzuryby/hotkeys
Original idea by:
Binny V A, http://www.openjs.com/scripts/events/keyboard_shortcuts/

jquery.validate.min.js

Query Validation Plugin 1.8.1
http://bassistance.de/jquery-plugins/jquery-plugin-validation/
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jstree

jsTree 1.0-rc3

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$Revision: 236 $

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(log4j

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(pciutils-3.1.10):

The PCI Utilities -- Declarations

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qtip 2.0

qTip2 - Pretty powerful tooltips - v2.0.0 - 2012-10-03

http://craigsworks.com/projects/qtip2/

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raphael 2.1.0

Raphaël 2.1.0 - JavaScript Vector Library

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Eve 0.4.2 - JavaScript Events Library

Author Dmitry Baranovskiy (http://dmitry.baranovskiy.com/)

Rickshaw v1.1.2

Adapted from https://github.com/Jakobo/PTClass */

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Based on Alex Arnell's inheritance implementation.

section: Language

class Class

Manages Prototype's class-based OOP system.

Refer to Prototype's web site for a [tutorial on classes, and inheritance](http://prototypejs.org/learn/class-inheritance).

science.js 1.7.0

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sizzle

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tcl 8.5.9

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tcllib 1.13

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tclreadline 2.1.0

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Underscore.js v1.1.7

Underscore.js 1.1.7

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