

Pluribus Networks Freedom Series Quick Start Guide

Quick Start Guide Overview

This guide describes the initial setup of a Pluribus Networks server-switch, and is intended for experienced network administrators. You are guided through the initial configuration of a Pluribus Networks server-switch and the initial connectivity to your management and data networks.

Pluribus Networks server-switches provide out-of-band management on the MGMT1 port. A separate interface provides in-band management which is configured during initial setup. Use the in-band interface to manage available services on the server-switch such as SSH or vManage.

This guide assumes that you have basic networking skills including Layer 2 and Layer 3, along with basic system administration skills, and you have installed your server-switch in your network rack.

1 Before You Begin

Gather the following information:

System Name: _____

Password for network-admin(default login): _____
(Six characters or more required.)

MGMT interface IP address and netmask: _____

In-band IP address and netmask: _____

Default gateway IP address: _____

Console Port F64



Console Port E68



E28Q



2 Performing the Initial Configuration

You can connect to the server-switch by connecting a rollover cable to the console port or connecting a keyboard and monitor to the server-switch.

Connect the console port on the server-switch to your laptop or terminal concentrator using a serial cable.

Set terminal emulator connection to 9600 bps, 8 data bits, parity - none, stop bits 1, flow control - none.

Plug in and power on the server-switch.



CAUTION! Do not connect any ports to the network until the server-switch is configured. You can accidentally create loops on the network which may cause network connectivity problems..

1. Log into the server-switch with the username **network-admin** and the default password, **admin**.
2. Accept the EULA by entering Yes. To view the EULA, type `eula` and the entire EULA is displayed for your review.
3. You can begin initial configuration using the setup questions in the Quick Start Wizard.

```
console login: network-admin
Password: admin
Last login: Fri Oct 3 12:23:04 on console
Pluribus Command Line Interface v2.2
System setup required:
System Name (switch): hostname <return>
network-admin Password: password <return>
Re-enter Password: password <return>
Mgmt IP/Netmask: ip-address/netmask <return>
In-band IP/Netmask: ip-address/netmask <return>
Gateway IP (0.0.0.0): ip-address <return>
Primary DNS IP (0.0.0.0): ip-address <return>
```

```
Secondary DNS IP (0.0.0.0): ip-address <return>
Domain name (pluribusnetworks.com): domain-name <return>
Automatically Upload Diagnostics (yes): <return>
```

NOTE: The MGMT and in-band IP addresses must be on separate networks. Once you complete the initial configuration, you can display the system setup using the `switch-setup-show` command. Plug your network cable into the MGMT port and the network port.

3 Configuring the Initial Fabric

Note: Fabric Communication

All fabric communication occurs over the in-band or MGMT interfaces on a server-switch.



In order for server-switches to form a fabric, the server-switches communicate using Layer 2 or Layer 3 networking on the in-band or MGMT interfaces.

You must create a fabric even if you have only one server-switch. If the server-switch is joining an existing fabric, then you can add it to the fabric using a few simple commands.

1. To create a new fabric name **corp-fabric**, use the following command:

```
>fabric-create name corp-fabric network-type
in-band|mgmt
```

2. You can create a password for the fabric so that other server-switches can only join the fabric if the administrator knows the password. Add the password, **sw0rdf1\$h**, using the following command:

```
>fabric-create name corp-fab password <return>
password: <sw0rdf1$h>
```

You can now join the fabric, **corp-fabric**, using the `fabric-join` command:

```
>fabric-join name corp-fab <return>
fabric password:<sw0rdf1$h>
```

Joining an Existing Fabric

When a server-switch joins an existing fabric, it receives the rest of the configuration from the fabric and then keeps track of the fabric state.

1. To join the an existing fabric, **network-fab**, use the `fabric-join` command:

```
>fabric-join name network-fab
```

2. If the fabric was created with an optional password, you must enter the correct password to join the fabric:

```
>fabric-join name network-fab password
fabric password: <password>
```

Using the `fabric-join` command restarts nVOS and causes a short interruption on the network.

3. To show fabric details, use the `fabric-show` command:

```
>fabric-show
name      switch-ip      id              vlan network-type tid
-----
corp-fab 192.168.11.1  a000030:5537b46c 3   in-band      216
```

4 Confirming Connectivity on the Network

After you've connected your server-switch, you may want to take the time to ensure that you have connectivity by pinging an external IP address. To ping the external network from the server-switch, use the `ping` command:

```
>ping 98.138.253.109 : 56 data bytes
98.138.253.109 is alive.
```

To ping a domain, use the `ping` command again:

```
>ping yahoo.com
yahoo.com is alive.
```

You are now ready to connect your ports to the network .

5 Configuring Port Connectivity

A port on the server-switch becomes active automatically after a cable is connected to another device on the network. To check port status, use the following command:

```
>port-show port 31 format all layout vertical
switch: corp1
port: 31
ip: 192.168.42.10
mac: 64:0e:94:28:00:8e
hostname: pubdev01
status: up,LLDP
lport: 31
rport: 31
config: fd,10g
trunk: auto-129
```

The port comes up with RSTP and LLDP enabled but no LACP trunk.

Connecting to a Third Party Switch or Server

To connect to a third party switch or server, you may need to change the speed on the interface, turn off autonegotiation, or adjust other settings on the port. It is important to match the interface settings of the server-switch to interfaces on other devices.



Use the following command:

```
>port-config-modify
The server-switch port connected to a server becomes active once a cable is connected and the server NIC is active.
You add VLANs to the server-facing port as necessary and configure them as tagged or untagged depending on your requirements. To create a VLAN and then assign it to the port use the commands:
>vlan-create id 21 scope local
>vlan-port-add id 21 port 54
untagged
> vlan-show id 21
switch  id scope name      ports      untagged-ports
-----
corp1   21 local vlan-21  54,65-72,129 54
```

6 Upgrading nvOS Software

Instructions for upgrading to the latest version of nvOS may be obtained from your partner. If you have purchased a FreedomCare contract, the instructions are included in the Release Notes located at www.pluribusnetworks.com/support/documentation. Upgrading software requires a connection to the Internet or you can upgrade using offline software packages located on the Pluribus Support site.

Upgrading nvOS Software Using Offline Packages

To upgrade nvOS without an Internet connection, you can download and install offline packages. You need software such as Winscp for Windows or use the terminal application on your Mac.

1. Log into nvOS and use the `admin-sftp-modify` command to enable SFTP and create a password for SFTP.
2. Launch your SFTP client and create a profile for the server-switch using `sftp` as the user name and the password you created.
3. Connect to the server-switch and accept the key for the first time.
4. Navigate to the **import/** folder and copy the downloaded nvOS package.
5. Return to the server-switch and log into it using SSH.
6. Run the following command:

```
>software-upgrade package import/nvOS-2.2.X-XXXX-platform.pkg
```

The platform is either aquila (F64) or leo (E68 or E28Q). The software automatically begins upgrading to the new version. You can monitor the upgrade process using the `software-upgrade-status-show` command. Once the upgrade is complete, the server-switch automatically reboots to the new version of nvOS.



7 Licensing Information

The server-switch comes pre-installed with a base license. To view license details, use the `software-license-show` command. To install a new license, use the `software-license-install` command and follow the instructions on the license certificate included with the documentation package. To upgrade a license use the `software-license-upgrade` command and follow the instructions on the license certificate.

8 Submitting a Service Request

You can purchase optional support contracts from your partner, reseller, or Pluribus Networks. Purchasing a support contract from a local partner is sometimes preferred due to geographical or language requirements. Please contract your local partner to better understand the available service programs and pricing. If you purchased a Pluribus FreedomCare maintenance agreement, you can contact Pluribus Networks directly for support requirements. To review the various service offerings, please visit www.pluribusnetworks.com/support, or you can send your inquiries to servicerenewals@pluribusnetworks.com. For those under a current PluribusCare contract, you may submit support requests through the Pluribus Networks customer portal, by e-mail, or by telephone. Please visit www.pluribusnetworks.com/support. To provide technical feedback on this document, or to report errors or omissions, please send your comments to doc-feedback@pluribusnetworks.com.

Documentation

Product documentation is located at www.pluribusnetworks.com/support/documentation.

You can login using your username and password sent to you by the Pluribus Networks Support team. pnsupport@pluribusnetworks.com

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