

GALAXY AVB Extreme Switch Configuration User Guide



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GALAXY AVB EXTREME SWITCH CONFIG USER GUIDE, PN 05.230.105.01 A

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CHAPTER 1: INTRODUCTION

When building an AVB network with one or more Meyer Sound AVB products, you must use an AVB-compliant device, preferably one certified by the Avnu Alliance. Click the link below to see the Avnu-certified Extreme Networks Summit Family switches:

<http://www.extremenetworks.com/>



NOTE: Meyer Sound cannot guarantee the performance of switches not certified by the Avnu Alliance.

To determine the exact number of switches required to meet your application requirements, contact Meyer Sound Technical Support (see next page).

The procedures in this guide use a web browser and require a second-generation Extreme Networks Summit Family switch with firmware version *21.x and later*. To make sure you have the latest firmware in your switch, click the link below and follow the instructions:

https://gtacknowledge.extremenetworks.com/articles/How_To/How-to-upgrade-EXOS-on-a-Summit-Stack

HOW TO USE THIS GUIDE

You will encounter the following icons for notes, tips, and cautions:



NOTE: A note identifies an important or useful piece of information relating to the topic under discussion.



TIP: A tip offers a helpful tip relevant to the topic at hand.



CAUTION: A caution gives notice that an action may have serious consequences and could cause harm to equipment or personnel, or could cause delays or other problems.

Information and specifications are subject to change. Updates and supplementary information are available at www.meyersound.com.

MEYER SOUND TECHNICAL SUPPORT

Meyer Sound Technical Support is available at:

- **Tel:** +1 510 486.1166
- **Tel:** +1 510 486.0657 (after hours support)
- **Web:** www.meyersound.com/contact

CHAPTER 2: EXTREME NETWORKS AVB FEATURE PACK

Extreme Networks switches do not perform AVB functions out-of-the-box. You must first purchase and install an **Extreme Networks Audio Video Bridging Feature Pack**. The AVB Feature Pack includes a voucher that will generate an AVB license key when redeemed. The license key enables AVB functionality in your switch. This need only be performed once.

To purchase and activate an Extreme Networks AVB Feature Pack:

1. Purchase the **Extreme Networks Audio Video Bridging Feature Pack** from a third-party retailer.
2. Click the following link to register for an Extreme Networks Support Portal account:

<https://extremeportal.force.com/ExtrSupportHome>

When you submit the form, you will receive an activation link via email.

3. To activate your account, click the link below and login to the Support Portal using your email address and the password you just created.

<https://extremeportal.force.com/ExtrLogin?startURL=%2FExtrLicenseLanding>

4. Locate the serial number of your switch.
You will use this in conjunction with your voucher to generate a license.
5. Click the **Generate License** button and follow instructions.
The voucher ID will be added as a link in a list at the bottom of the page.
6. Click the link and copy the AVB license key.

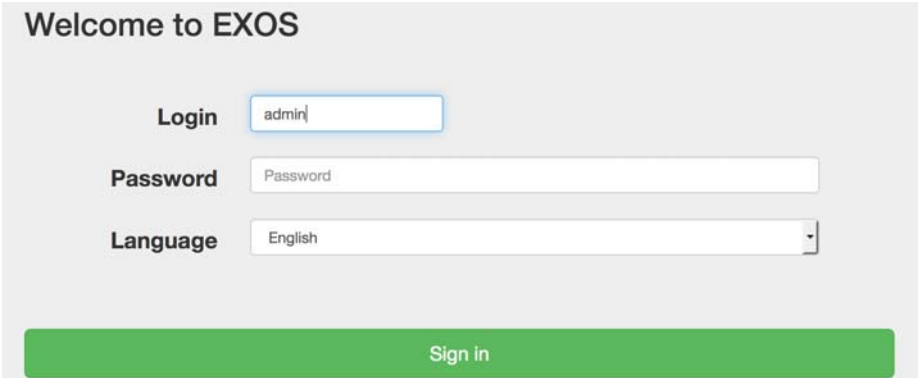
EXTREME NETWORKS SWITCH QUICKSTART

The network ports on the G2 Extreme Networks switches do not have an associated IPv4 address.

This procedure sets an IPv4 address by connecting to the **Management** port:

1. Disable WiFi on your computer.
2. Set your computer's wired network interface controller to **DHCP**.
3. Connect your computer to the **Management** port on your Extreme Networks switch with a network cable.
4. Locate the last four digits of your switch's mac address (printed on a label on the switch).
5. Open a web browser and enter the following URL into the address bar:
http://0xa9fe followed by the last four digits of the mac address (i.e., **http://0xa9fedx17**).
6. When prompted to log in, enter **admin** as the user name; leave the password field blank.

The next steps will let you to get started quickly but do not enact Security features. Evaluate your network and enact the features you deem necessary.



Welcome to EXOS

Login

Password

Language

Sign in

7. From the **Dashboard**, click the **Next** button to continue unless you wish to create custom login settings. In that case, click **Configure>Quick Setup Account**, update your login settings, then click the **Next** button.

8. In the **Device** section, enter a name for your switch, and click the **Next** button.
9. In the **IP Address** section, enter an IPv4 address for your switch in the **Default VLAN** field.
10. Enter a **Default Gateway** and click the **Next** button.

The first three octets should match your IPv4 address. The last octet should be 1.



NOTE: Do not change the **Management VLAN** or **Management Gateway** fields.

11. In the **Security** section, you do not need to change the default settings; click the **Next** button.
12. In the **Summary** section, click **Apply**.
13. From the **Dashboard**, select the **System Text** box, and click **Reboot Switch** at the bottom-right.

Respond **Yes** to the confirmation dialog and your switch will restart.

ENABLING THE AVB FEATURE PACK

1. Connect to network port, and set the user IP to a compatible subnet of the switch.
2. When prompted to log in, enter **admin** for the user **Login**, leave the **Password** field blank, and click **Sign in** (or press **Enter**).

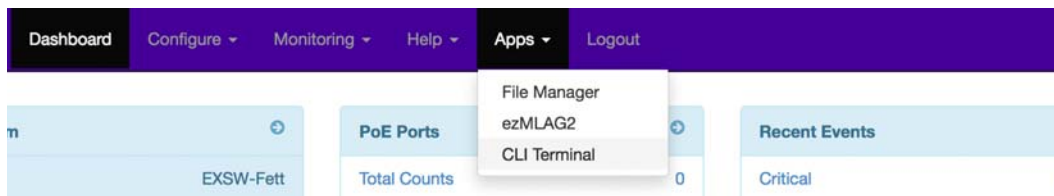
Welcome to EXOS

Login

Password

Language

3. From the **Dashboard**, select **Apps>CLI Terminal**.



4. You will be asked several questions about Security settings. We recommend accepting the standard settings (indicated by the capital letter).

For example, for these options [y/N/q], type **N** for no.

To accept all standard settings without seeing additional questions, type **q**. This can be done for the first or any subsequent question.

5. Type **enable license** followed by your AVB license key, and press **Enter**.

For example: **enable license 3632-1463-ae05-c780-f57f**

6. To verify that your license is enabled, type **show license** and press **Enter**.

The AVB Feature Pack just licensed will display.

CONFIGURING THE AVB FEATURE PACK

1. When prompted to log in, enter **admin** for the user **Login**, leave the **Password** field blank, and click **Sign in** (or press **Enter**).
2. From **Dashboard**, select **Apps>CLI Terminal**.
3. Type **enable avb**, and press **Enter**.
4. Type **enable avb ports all**, and press **Enter**.

This enables gPTP, MSRP, and MVRP across all configurable switch ports. These protocols are critical to AVB performance.

5. To verify that all ports are enabled, type **show avb**, and press **Enter**.

All AVB-enabled ports on your switch will display (see Figure 1).

```
* X440G2-24t-10G4.3 # enable avb ports all
* X440G2-24t-10G4.4 # show avb
gPTP status          : Enabled
gPTP enabled ports  : 1d    2d    3d    4d    5d
                    6d    7d    8d    9d   10d
                    11d   12d   13d   14d   15d
                    16d   17d   18d   19d   20d
                    21d   22d   23d   24d   25d
                    26d   27d   28d

MSRP status          : Enabled
MSRP enabled ports  : 1     2     3     4     5
                    6     7     8     9    10
                    11    12    13    14    15
                    16    17    18    19    20
                    21    22    23    24    25
                    26    27    28

MVRP status          : Enabled
MVRP enabled ports  : 1     2     3     4     5
                    6     7     8     9    10
                    11    12    13    14    15
                    16    17    18    19    20
                    21    22    23    24    25
                    26    27    28

Flags:               (*) Active,                (!) Administratively disabled,
                    (a) SR Class A allowed,      (b) SR Class B allowed,
                    (d) Disabled gPTP port role, (g) Load sharing port,
                    (G) Multi-switch LAG Group port,
                    (m) Master gPTP port role,   (p) Passive gPTP port role,
                    (s) Slave gPTP port role
```

Figure 1: Enabling AVB ports and displaying status

6. Type the following commands in the order listed:

```
enable snmp access
configure snmp add community readonly public
configure vlan "Default" ipaddress ipv6-link-local
configure lldp ports all advertise all-tlvs
enable lldp ports all
enable telnet
```

7. To enable RSTP (**R**apid **S**panning **T**ree **P**rotocol), type the following commands in the order listed:

```
disable stpd "s0"
configure stpd "s0" mode dot1w
enable stpd "s0" ports all
enable stpd "s0"
```

8. To write this configuration file to the switch, type `save configuration MSLI-AVB-GALAXY` and press `Enter`.

The results of the last 3 steps is shown in Figure 2.

```
* X440G2-24t-G4.5 # enable snmp access
* X440G2-24t-G4.6 # configure snmp add community readonly public
* X440G2-24t-G4.7 # configure vlan "Default" ipaddress ipv6-link-local
* X440G2-24t-G4.8 # configure lldp ports all advertise all-tlvs
* X440G2-24t-G4.9 # enable lldp ports all
* X440G2-24t-G4.10 # enable telnet
* X440G2-24t-G4.11 # disable stpd "s0"
* X440G2-24t-G4.12 # configure stpd "s0" mode dot1w
* X440G2-24t-G4.13 # enable stpd "s0" ports all
* X440G2-24t-G4.14 # enable stpd "s0"
* X440G2-24t-G4.15 # save configuration MSLI-AVB-GALAXY
```

Figure 2: Configuring and enabling ports and enabling RSTP

9. When prompted to overwrite the file `MSLI-AVB-GALAXY`, type `Y` for yes, and press `Enter`.

To rename the file, type `N` for no, type a new name, and press `Enter`.

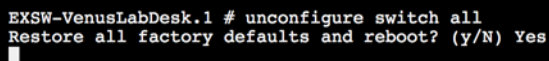
10. When prompted to make this the default database, type `Y` for yes, `N` for no, then press `Enter`.

RESETTING THE AVB SWITCH

In some circumstances, you may want to reset the switch to factory default settings. The following procedure removes the User settings from the switch, including the IPv4 address, but does not remove the AVB license.

To reset the AVB switch:

1. When prompted to log in, enter **admin** for the user **Login**, leave the **Password** field blank, and click **Sign in** (or press **Enter**).
2. From the **Dashboard** select **Apps>CLI Terminal**.
3. Enter the command **unconfigure switch all**.



```
EXSW-VenusLabDesk.1 # unconfigure switch all
Restore all factory defaults and reboot? (y/N) Yes
█
```

Figure 3: Rebooting with factory defaults

4. When the switch reboot is complete, you must login again to reconnect to the switch.
5. You will be asked several questions about Security settings. We recommend accepting the standard settings (indicated by the capital letter).

For example, for these options [y/N/q], type **N** for no.

To accept all standard settings without seeing additional questions, type **q**. This can be done for the first or any subsequent question.





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