



Switch Configuration Example for Q-SYS™ Platform

Avaya ERS4850 Series

Important Note

This switch configuration example is intended to serve as a network setup guideline for systems using only Q-LAN audio streaming within your Q-SYS system and should be used alongside the [Q-SYS Q-LAN Networking Overview](#) tech note for deeper setup insight. Keep in mind that QSC is unable to provide live network configuration support for third-party switch configuration. To learn more about network switch qualification services and the plug-and-play Q-SYS NS Series preconfigured network switches, visit <http://www.qsc.com/switches>.

This document applies to these Avaya switches:

ERS4826GTS | ERS4826GTS-PWR+ | ERS4850GTS | ERS4850GTS-PWR+X

Introduction

As of release 5.3.x, Q-SYS Designer software now supports AES67-standard interoperability. The AES67 standard does not prescribe a method of discovery for devices so manufacturers are free to implement one or more discovery services for their devices. In this configuration document, the process uses Bonjour as the discovery method for AES67 devices.

Q-SYS Designer now also offers a selection of Differential Services Code Point (DSCP) setting presets to optimize Quality of Service (QoS) for different types of deployment. DSCP codes are a six-bit value placed in the IP header of data packet, and they instruct a network switch to handle various types of data with defined levels of priority that ensure proper QoS.

NOTE: Firmware used: 5.8.0.1 Software used: v5.8.1.029

Assign an IP address, enable the optional web interface, and assign QoS

1. Using a standard network switch console or “rollover” cable, connect the serial port on the PC, or a USB-to-serial adapter, to the console port on the front of the switch.
2. Open a terminal emulator such as HyperTerminal or PuTTY and connect to the switch using the following serial settings: 9600, N, 8, 1; no flow control.

If the switch does not respond by initiating a terminal session, try turning it off and on again. As the switch boots up, the terminal emulator window should start displaying log messages.

- When the AVAYA logo appears, it will also display a status area indicating the switch model, hardware version, firmware version, and the software version.
- Press **Ctrl+Y**. A prompt showing the switch model number will appear—for example, **4850GTS-PWR+>** will appear. (Other models will display accordingly; for this setup guide, we will use the 4850GTS-PWR+ as an example.)
- Type **enable** and then press **Enter**.
- The prompt will change to **4850GTS-PWR+#**

Type
configure terminal
and press **Enter**.

- The message **Enter configuration commands, one per line. End with CNTL/Z.** will appear, followed by the configuration-mode prompt, **4850GTS-PWR+(config)#**

The next step is to configure the switch's intended IP address and subnet. Type

```
ip address xxx.xxx.xxx.xxx yyy.yyy.yyy.yyy
```

(where "xxx.xxx.xxx.xxx" is the intended IP address and "yyy.yyy.yyy.yyy" is the intended subnet mask) and then press **Enter**.

Note: If the switch will reside in a part of the network that is inaccessible to the computer except through a gateway, you must add the gateway's IP address to this command. (This is not a common situation.) In this case, you would type

```
ip address xxx.xxx.xxx.xxx yyy.yyy.yyy.yyy zzz.zzz.zzz.zzz
```

(where zzz.zzz.zzz.zzz is the optional gateway address) and then press **Enter**.

- Enabling the web interface is optional. To do so, type

```
web-server enable  
and press Enter.
```

- Next, set the QoS parameters for Q-LAN audio and PTP packets with the following sets of commands (you may copy and paste from the text below, but clear out any line breaks):

At the prompt, type

```
qos traffic-profile classifier name "QLAN_Audio" addr-type ipv4 ds-field 34 protocol 17 dst-port-min  
6517 dst-port-max 7030 update-dscp 46 update-ip 6 eval-order 1 drop-out-action enable  
and then press Enter.
```

Next, type

```
qos traffic-profile classifier name "QLAN_PTP" addr-type ipv4 ds-field 46 protocol 17 dst-port-min  
319 dst-port-max 320 update-dscp 46 update-ip 6 eval-order 1 drop-out-action enable  
and then press Enter.
```

10. The next step is to add traffic profiles to individual ports that host Q-LAN devices, so their data packets are steered into Avaya's "Premium Queue." QSC recommends not applying these profiles to ports that belong to other VLANs, so it often would not be appropriate to apply them to the entire switch. If a port uplinks to another Avaya switch, for example, it is better to let them honor their own IP precedence. In the commands below substitute the port number or numbers where it says "*port number(s)*"; use a hyphen to designate a range of port numbers, such as "1-3" for 1 through 3.

At the prompt, type

```
qos traffic-profile set port port number(s) name "QLAN_Audio" track-statistics aggregate
```

and then press Enter.

Then type

```
qos traffic-profile set port port number(s) name "QLAN_PTP"
track-statistics aggregate
```

and press **Enter**.

11. Configuration is done. So exit configuration mode and save the settings with these commands.

At the prompt, press **Ctrl+Z** (or type

```
exit
```

and then press **Enter**).

Next, type

```
save config
(or write mem)
```

and press **Enter**.

12. The switch is now correctly configured to properly prioritize Q-SYS traffic in an Avaya enterprise QoS environment.

Notes: How to set the switch to factory default configuration

If you have "Enable" access:

1. At the prompt, type

```
en
```

and then press **Enter**.

2. Type

```
boot default
```

and press **Enter**.

3. At the question **Reboot the unit(s) (y/n)?** press **Y**.

4. The switch will reboot with the factory default settings. This may take a couple minutes.

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If you do not have your credentials or have lost them:

1. Connect the computer to the switch's console port, using settings 9600, 8, N, 1. Open your terminal emulation program.
2. Turn the switch off and on again to reboot it.
3. When the first line of the diagnostic tests appears, press **Ctrl+C**.
4. A menu will appear listing a number of options. Press **I** to initialize the switch and load its default settings into its configuration.
5. Then press **A** to run the Agent code, which will complete the initialization and automatically reboot the switch.



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