Switch Configuration Example **for Q-SYS™ Platform**
H3C S5500

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 H3C switches:
> **S5500**

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.

Configuration

The initial configuration instructions assign an IP address and allow other management access. If this has already been done, you may skip to the next section.

Configuration requires a serial terminal connection between the computer and the switch's console port. Use a terminal emulation program such as PuTTY. The console port is an RJ45 connector labeled CON on the back of the switch. Use a Cisco-style DB9 to RJ45 cable and set the serial communications to 9600, n, 8, 1.

1. Type `system view` and press **Enter** to go into configuration mode.

2. Type `interface vlan-interface 1` and then press **Enter** to start configuring the default VLAN.

3. Type `ip address <ip-address> <subnet-mask>` (where <ip-address> is the IPv4 address you wish to set and <subnet-mask> is the subnet mask for the IP address) and press **Enter** to set the switch's IP address.

4. Default VLAN configuration is complete. Type `quit` and then press **Enter**.

5. Type `telnet server enable` and press **Enter** to enable switch management via telnet access.

6. Type `user-interface vty 0` and press **Enter** to configure the telnet session interface.

7. Type `authentication-mode password` and then press **Enter** to require a password for telnet access authentication. In the next step you will designate the password.

8. Type `set authentication password simple <password>` (where <password> is the password you wish to set) and press **Enter** to designate the password for access.

9. Type `user privilege 3` and press **Enter** to allow all management operations through telnet.

10. Telnet access configuration is complete. Type `quit` and press **Enter**.

Optional: Enable Web Interface

1. Type `local-user <password>` (where <password> is the password you set in the previous procedures) and press **Enter**.

2. Type `service-type telnet` and press **Enter**.

3. Type `authorization-attribute level 2` and press **Enter**.

4. Type `password simple <password>` (where <password> is the desired web interface password) and press **Enter**.

QoS Configuration

Step 4 below is only necessary if the switch has been configured previously and has *qos sp* enabled. If you are not sure whether the switch does or not, type `show running-config` and press **Enter**. The terminal window will display the switch's current running configuration.

1. Type `port-group manual all` and press **Enter** to create a group for configuring all the ports.

2. Type `group-member GigabitEthernet 1/0/1 to GigabitEthernet 1/0/28` and press **Enter**, to add all the ports to the group.

3. Type `qos trust dscp` and press **Enter**. This instructs the switch to trust DSCP markings on incoming packets.

4. Only if *qos sp* is enabled:

   Type `qos wrr` and press **Enter**. This turns off universal strict priority queueing for all queues.

5. Type `qos wrr 7 group sp` and press **Enter**. This enables strict priority queueing on queue 7.

6. Type `qos wrr 6 group sp` and press **Enter**. This enables strict priority queueing on queue 6.

7. Type `undo jumboframes enable` and press **Enter**. This disables jumbo frames.

8. Type `quit` and press **Enter** to exit port configuration.

Map DSCP-marked packets to specific queues

1. Type `qos map-table dscp-dot1p` and press **Enter**. This enters map-table mode.

2. Type `import 48 49 50 51 52 53 54 55 export 5` and press **Enter** to lower the priority of DSCP values 48–55 to queue 5.

3. Type `import 56 57 58 59 60 61 62 63 export 5` and press **Enter** to lower the priority of DSCP values 56–63 to queue 5.

4. Type `import 46 export 7` and press **Enter** to raise the priority of DSCP 46 to queue 7.

5. Type `import 34 export 6` and press **Enter** to raise the priority of DSCP 34 to queue 6.

6. Type `quit` and press **Enter** to exit the dscp-dot1p map-table configuration.

Optional: Enable IGMP Snooping

1. Type `igmp-snooping global enable` and press **Enter**. This enables IGMP snooping.

2. Type `quit` and press **Enter** to exit IGMP snooping configuration.

3. Type `vlan 1` and press **Enter** to configure the default VLAN.

4. Type `igmp-snooping enable` and press **Enter** to enable IGMP snooping on the default VLAN.

5. Type `quit` and press **Enter** to exit VLAN configuration.

Save Configuration

1. Type `quit` and press **Enter** to exit configuration mode. The switch is now ready for use with Q-SYS.

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