QSC

Switch Configuration Example **for Q-SYS™ Platform**
Dell PowerConnect 28xx

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 Dell switches:
> **PowerConnect 2808 | PowerConnect 2816 | PowerConnect 2824 | PowerConnect 2848**

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

Firmware: 28xx v1.0.0.45 (Software); 28xx v1.0.0.13 (Boot)

Log into the switch as directed in the user guide. The switch must be in Managed Mode before it can be set up. Managed Mode activates the web interface and is indicated by the **MANAGED** LED.

Some changes were made as of firmware version 1.0.0.44 in how the Managed Mode button functions, so it is advisable to upgrade any prior firmware version to the latest. The same boot and software firmware files are valid for all models in the 2800 series.

1. The default WebUI credentials are **admin** with no password.

2. To change the switch's management IP address, select **System > IP Addressing**.

3. Select **Quality of Service** in the main menu and then **CoS Global Parameters**.

4. Click **CoS Settings**.

5. Make sure CoS Mode is set to **Enable** and change **Trust Mode** to **DSCP**. Click **Apply Changes**.

6. Click **DSCP** to **Queue Mapping**.

7. On DSCP values 32 to 63, change the queue to **2**.

    NOTE: Some DSCP values are permanently locked to certain queues. The locked values within the range of Q-LAN are 35, 43, 51, and 59. Dell gives no reason for this, but it should not affect the performance ith Q-LAN.

8. Change the queue on DSCP 34 to **3** and on DSCP 46 to **4**. Click **Apply Settings**. The switch will also save the configuration to non-volatile memory. The switch is now properly configured for use with Q-LAN.

9. To save a backup file of the switch configuration, select **System > File Management > File Upload > Upload via HTTP**.

10. The switch will download a file (**startup-config.ber**) containing the current configuration settings to the computer. It is a binary file and cannot be edited. It contains the model number and current management IP address, so be careful if you use the file wiith a different switch.

IGMP Snooping Settings

This Dell PowerConnect 28xx series switches feature an IGMP Querier, which allows IGMP Snooping on the network. IGMP Snooping filters multicast traffic to groups but allows Q-LAN to function.

1. Select **Switch > Multicast Support > IGMP Snooping**. Select these values:

    VLAN ID (the VLAN hosting Q-SYS): **1** (if two or more VLANs are defined)
    IGMP Snooping Status: **Enable**
    IGMP Querier Status: **Enable**
    Leave Timeout: **Immediate Leave**
    Leave all other default settings unchanged.

    Click **Apply Changes**.

2. Select **Global Parameters** and enable **Bridge Multicast Filtering** and **IGMP Snooping Status**. Click **Apply Changes**. Save a backup of the configuration file.