



Switch Configuration Example for Q-SYS™ Platform

Netgear Standalone Smart Switches

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 Netgear switches:

GS510TP | GS516TP | GS728TP | GS752TP | GS716Tv3* | GS724Tv4* | GS748Tv5*

*Prior versions of these models had insufficient packet buffer for QLAN. Please be very careful to order the correct version.

Introduction

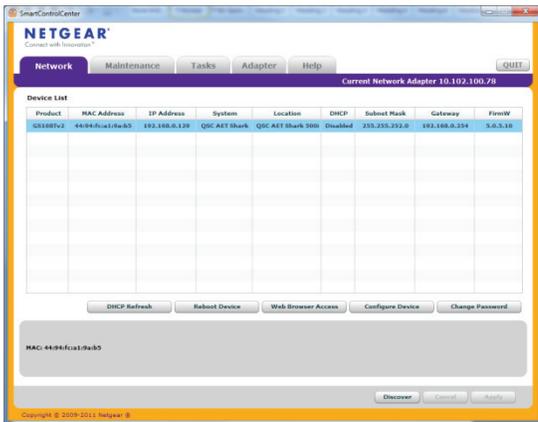
As of release 5.3.x, Q-SYS Designer software now supports AES67-standard interoperability. The AES67 standard does not prescribe a method of discovery for devices so manufacturers are free to implement one or more discovery services for their devices. In this configuration document, the process uses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

1. Open the Netgear Smart Control Center utility software (downloadable at netgear.com).

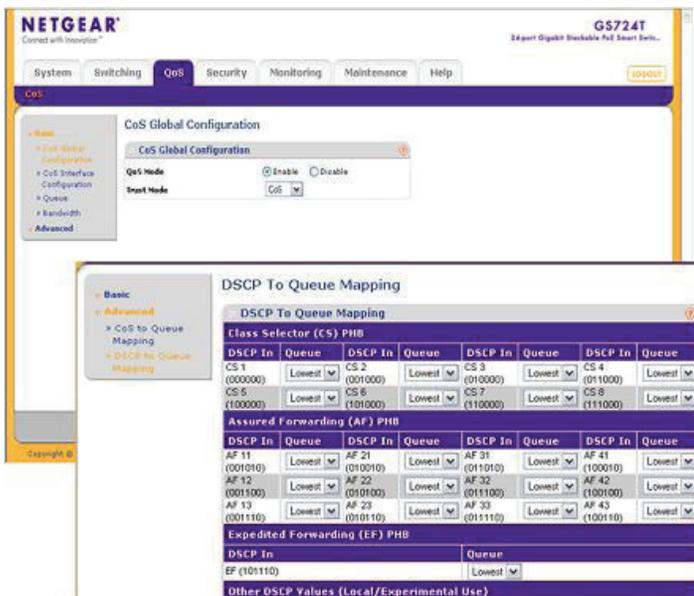
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In a network with a DHCP server, select the switch and discover its IP address. If the network does not have a DHCP server, select the switch and click **Configure Device**, and then assign a static IP address to it.

2. Access the switch's web interface using a browser or by selecting the switch and then clicking **Web Browser Access**. Log in to the switch; the default password is **password**.

3. Select **QoS**.
4. Select **CoS Interface Configuration**. Change **Global Trust Mode** to **DSCP** and then click **Apply**.
5. Select **Advanced**.
6. Click **Interface Queue Configuration**.
7. Select **All Interfaces**.
8. At **Scheduler Type**, select **Strict**. Click **Apply**.
9. Select **DSCP to Queue Mapping**.



10. **On the GS510TP or GS516TP:** In this window, change all boxes that are 2 or 3 to 1. (Don't click on **Apply** yet.) Also change **AF 41 (100010)** to **2** and **EF (101110)** to **3**.

On all other models: Change **AF 41 (100010)** to **5** and **EF (101110)** to **6**.

11. Click **Apply**.

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Q-LAN Quality of Service is now set up. The settings are saved in the switch, but you might also wish to back up the configuration to your computer. To do so, click **Maintenance** and select **Upload**. Use the **HTTP File Upload** option, which uploads the configuration file to the computer through the browser. Click **Apply** to begin the upload.

If you wish to enable IGMP Snooping, follow these steps. IGMP Snooping will keep non-Q-SYS multicast packets from being sent to ports hosting Q-SYS devices and vice-versa.

1. Select **Switching** and click **Multicast**.
2. Click **IGMP Snooping Configuration**.
3. Select both **IGMP Snooping Status** and **Block Unknown Multicast Address** and click **Apply**.

If you have enabled only one VLAN—the default one—proceed to step 4.

IGMP Snooping VLAN Configuration

IGMP Snooping VLAN Configuration						
VLAN ID	Fast Leave Admin Mode	Host Timeout	Maximum Response Time	MRouter Timeout	Query Mode	Query Interval (30 to 1800 secs)
1	Enable				Enable	60

If you have enabled multiple VLANs, you must designate which ones should have IGMP snooping. To do this, click **IGMP Snooping VLAN Configuration**.

On each VLAN that will have IGMP snooping (including the default on VLAN ID 1), enable both **Fast Leave Admin Mode** and **Query Mode**. At **Query Interval**, enter **60** unless you have a reason to use another value. Click **Apply**.

4. Click **IGMP Snooping Querier**.
5. Enable **Querier Admin Mode** and click **Apply**.
6. Click **Querier VLAN Configuration**.
7. At **VLAN ID** enter **1** to designate the default VLAN.
8. Enable **Querier Election Participate Mode** and click **Apply**.
9. The switch is now fully configured for use with Q-SYS. It is good practice to back up the configuration at this point.



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