Q-SYS

Switch setup

Typical installation

A Q-SYS Core and peripherals share one gigabit switch on VLAN 1. This example uses the Q-LAN QoS preset.

1 Connect the Core and peripherals

Connect the endpoints and your laptop to the same AV network. Open the switch's management address in a browser and sign in. In System Information, confirm NRS8T2P. Use Configuration > Ports to check the connected links. Check the design uses the Q-LAN preset.

2 Turn off port energy saving

Open Configuration > Green Ethernet > Port Power Savings. Clear EEE (Energy Efficient Ethernet) on the ports carrying this traffic and save. This keeps those links awake. Leave flow control at its existing setting, except on ports for Gen 1 or Gen 2 TSC touch panels, where Q-SYS recommends enabling it.

3 Prioritize clock, audio and video

Configuration > QoS > Port Classification: select DSCP Based on the ports carrying this traffic. Under DSCP-Based QoS, select Trust for the values below and assign their classes. Save each page. Assign 46 (clock) to class 7, 34 (audio) to 6, and 26 (video) to 5. Check QoS > Port Scheduler: clock and audio need strict priority; video ranks third.

4 Manage multicast on the AV network

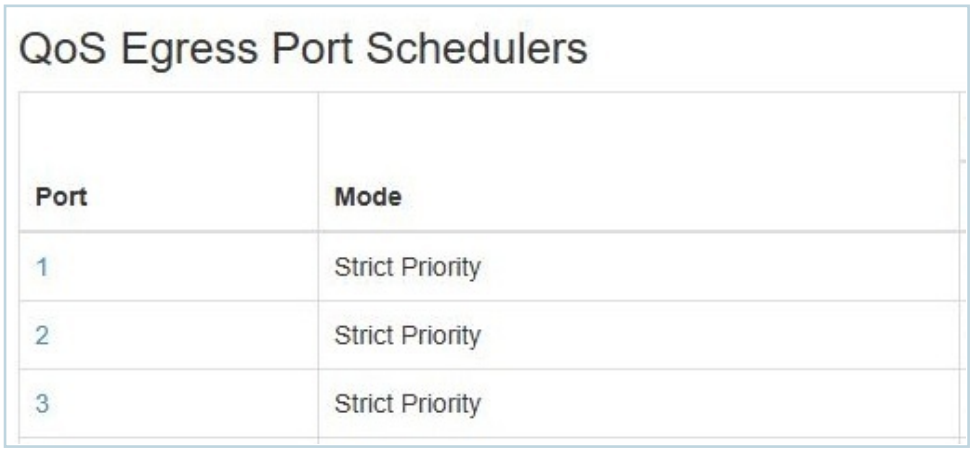
Under Configuration > IPMC > IGMP Snooping > Basic Configuration, enable Snooping and save. Keep Fast Leave clear. Under VLAN Configuration, enable Snooping and Querier Election on VLAN 1. Save. The querier checks which receivers still want each stream.

Reading the QoS settings

DSCP is a number the sender puts on a packet. The switch reads it and assigns a traffic class. When packets compete for the same outgoing link, the scheduler serves the highest strict-priority class first.

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Save and test



QoS Egress Port Schedulers

Port	Mode
1	Strict Priority
2	Strict Priority
3	Strict Priority

Use the scheduler to check how the switch serves the queues.

Save the settings

Click Save on each page you changed. Open Maintenance > Configuration > Save startup-config. Click Save Configuration and wait for “startup-config saved successfully.” Reopen the changed page and check the values.

Test with the equipment

In Q-SYS Designer, connect to the Core and confirm the peripherals are online. Send audio through the design and listen at the output. If using NV video, switch sources on each decoder and check the other displays.

When the installation differs

One NV-32-H encoder multicasting to several NV-32-H decoders? Enable Fast Leave on each single-decoder port. Leave it off shared ports and uplinks. If the design uses the Audinate QoS preset, use that preset’s markings.

References

Niveo NRS user manual
Q-SYS switch requirements
Q-SYS multicast