RAVENNA

Switch setup

Typical installation

One Merging sender and receiver use the RAVENNA profile on a dedicated multicast audio network, VLAN 1.

1 Connect and check both endpoints

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. Open the endpoint settings. Confirm the RAVENNA profile and matching PTP domain (clock group).

2 Keep the media links awake

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. Keep standard Ethernet frames for this example.

3 Give clock packets first priority

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. For the Merging RAVENNA example, assign clock 48 to class 7 and audio 46 to class 6. Check QoS > Port Scheduler for Strict Priority.

4 Deliver the multicast stream

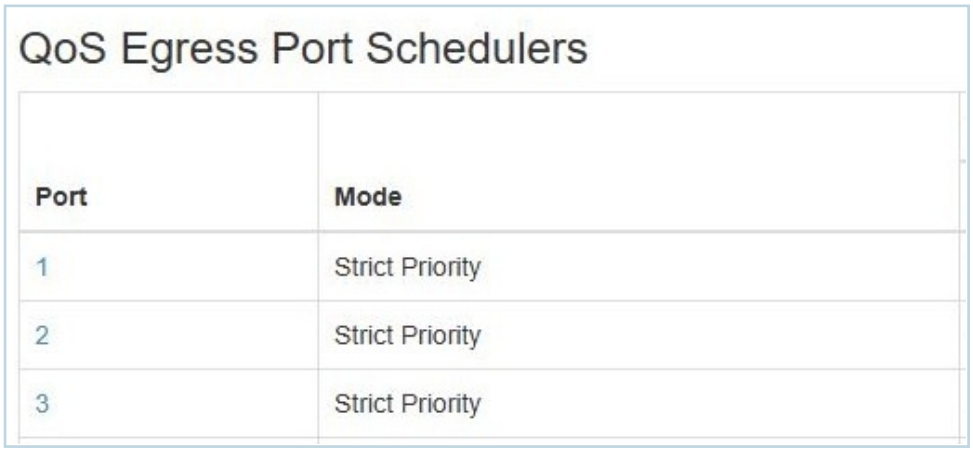
Under Configuration > IPMC > IGMP Snooping > Basic Configuration, enable Snooping and save. Keep Fast Leave clear. Under VLAN Configuration, enable Snooping and Querier Election on VLAN 1. Save. The querier checks which receivers still want each stream.

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

The switch gives the highest class first service in Strict Priority mode.

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 the receiver’s control software, confirm PTP lock to the intended clock. Select the sender’s stream and check that the receiver plays the correct channels without interruptions.

When the installation differs

If the sender uses AES67 mode, Merging documents clock 46 and audio 34. For another manufacturer, read the two markings from its active profile and use those values for classes 7 and 6. Leave switch clock functions at their defaults unless the system design specifies one.

References

Niveo NRS user manual
Merging endpoint profiles