



# Q-SYS Networked Systems Technical Notes

## Q-SYS Core Processors and Peripherals

### Basic troubleshooting for networking and SIP phone issues

Check these items:

1. **Default Gateway and Static Routing** — Make sure the Q-SYS Core Processor or any other Q-SYS devices do not have a default gateway configured on more than one network interface. A default gateway is for reaching a remote IP subnet. For reaching additional remote IP subnets, set up static routes instead. If you make any changes to default gateway or static route configurations, reboot the Q-SYS Core Processor or device to effect the changes.
2. **Tagged Frames** — Ethernet tagged frames (802.1q, ISL or other such VLAN tagging technology) are incompatible with Q-SYS. Make sure frame tagging is not enabled within any of the switch ports connecting to Q-SYS equipment. Also make sure Dynamic Trunk Protocol (DTP) is disabled on these ports.
3. **No LAN Overlap** — Make sure LAN A, LAN B, AUX A, and AUX B have no overlap of IP subnets or IP addresses.
4. **LANs on Separate Switches or VLANs** — Make sure LAN A, LAN B, AUX A, and AUX B are on separate switches or separate VLANs. If you are unfamiliar with setting up VLANs on managed switches, then use separate switches.
5. **Spanning-Tree** — If you use Spanning-Tree Portfast (STP) on a switch, configure its ports as edge ports.
6. **QoS** — Make sure switches are configured with the proper Quality of Service (QoS) settings on all ports carrying Q-SYS traffic and any other time-sensitive traffic: PTPv2, Q-SYS Audio, AES67, Q-SYS Video, etc.
7. **IGMP Snooping** — Make sure the switches have IGMP v2 enabled and configured. One switch must be configured to be the IGMP Snooping Querier.
8. **Gigabit Ethernet** — Make sure the switches and ports carrying Q-SYS traffic are 1 Gbps or faster.

**NOTE:** Q-SYS devices (except Q-SYS PTZ cameras) offer on-board PCAP (packet capture) for advanced monitoring and troubleshooting. Use a browser to connect to a device's PCAP at [http://<ip address of Q-SYS device>/pcap\\_capture.html](http://<ip address of Q-SYS device>/pcap_capture.html). To perform a PCAP, select the LAN interface you wish to monitor (i.e., LAN A, LAN B, AUX A, or AUX B) and set **Packet Length (optional)** to 1600 bytes. For advanced troubleshooting, download the capture and open it in Wireshark.

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