Extreme Networks® ExtremeSwitching™ 220-24p-10GE2 Switch for DM NVX™ Encoders/Decoders

Configuration Guide

Crestron Electronics, Inc.

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Extreme Networks® ExtremeSwitching™ 220-24p-10GE2 Switch for DM NVX Encoders/Decoders

Introduction

The ExtremeSwitching™ 220-24p-10GE2 network switch of Extreme Networks, Inc. includes twenty-four 1 Gigabit Ethernet PoE+ ports and two 10 Gigabit Ethernet SFP+ ports. The switch is suitable for a small-scale network using Crestron® DM NVX™ encoders/decoders.

This guide provides information about the following:

- Application scenarios
- Upgrading the ExtremeSwitching 220-24p-10GE2 firmware
- Configuring the ExtremeSwitching 220-24p-10GE2

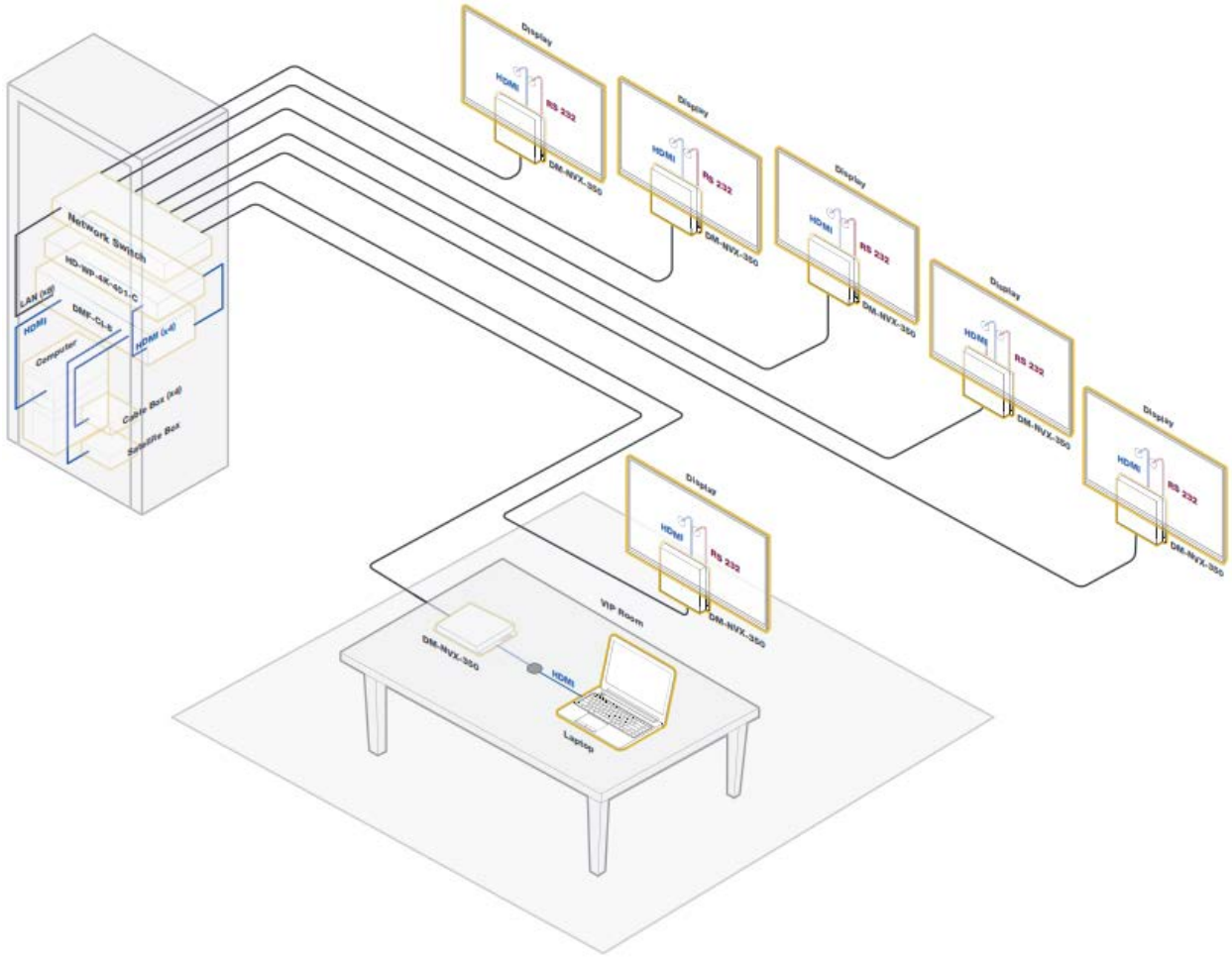
For more information, refer to OLH Answer ID 5828 in the Online Help section of the Crestron website (www.crestron.com/onlinehelp).

Application Scenarios

The ExtremeSwitching 220-24p-10GE2 network switch can be used in small-scale network applications. 4K60 HDMI® video from content servers, satellite receivers, cable boxes, and Blu-ray™ players can be displayed throughout a residence, conference room, or boardroom. The network design enables flat Layer 2 communication.

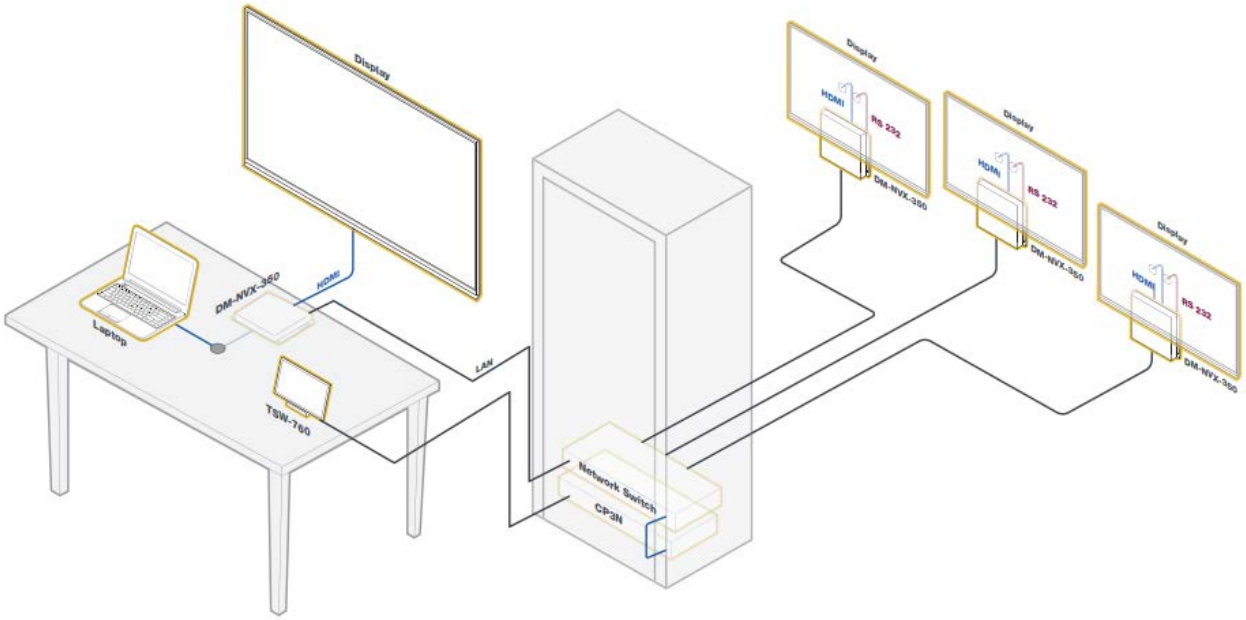
The following illustrations provide two application scenarios. In the first scenario shown on the following page, the key DigitalMedia™ products consist of the following:

- DM-NVX-351-C encoder/decoder card with audio downmixing
- DMF-CI-8 card chassis
- DM-NVX-351 encoder/decoder with audio downmixing
- DM-NVX-350 encoder/decoder
- HD-WP-4K-401-C 4K multi-window video processor


Display
HDMI
RS 232
DM-NVX-350
Network Switch
HD-WP-4K-401-C
LAN (x2)
HDMI
DMF-CI-4
HDMI (x4)
Computer
Cable Box (x4)
Satellite Box
VIP Room
Laptop

In the second scenario shown below, the key DigitalMedia products consist of the following:

- DM-NVX-350 encoders/decoders
- TSW-760 touch screen
- CP3N 3-Series® control system



Upgrading the ExtremeSwitching 220-24p-10GE2 Firmware

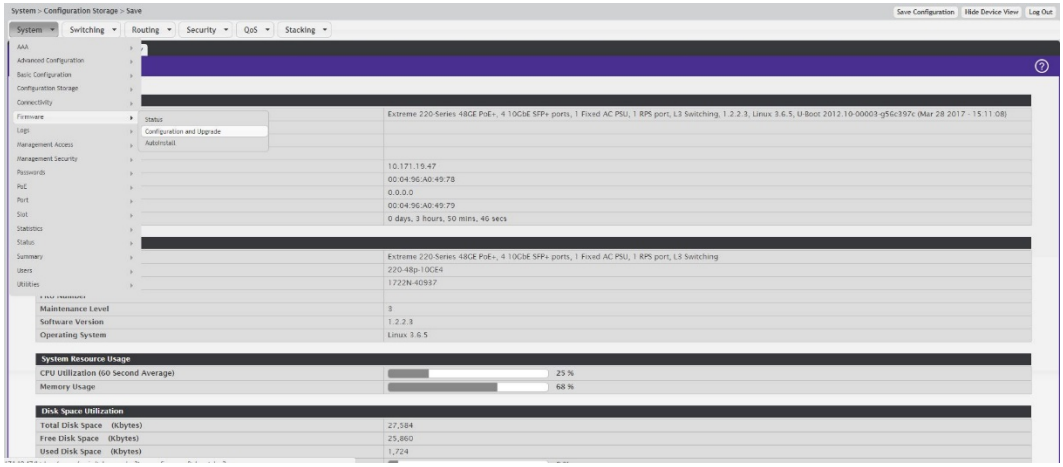
Before configuring the ExtremeSwitching 220-24p-10GE2, upgrade the firmware of the switch.

To upgrade the firmware:

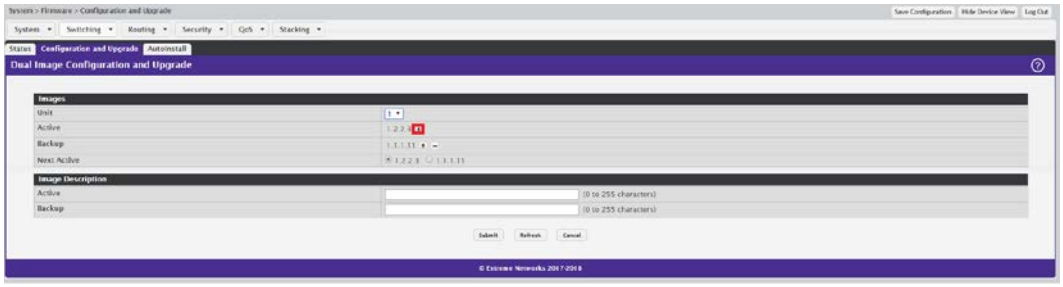
1. Connect the switch to a network that is running a DHCP (Dynamic Host Configuration Protocol) server.

   NOTE: The switch has no default IP address.

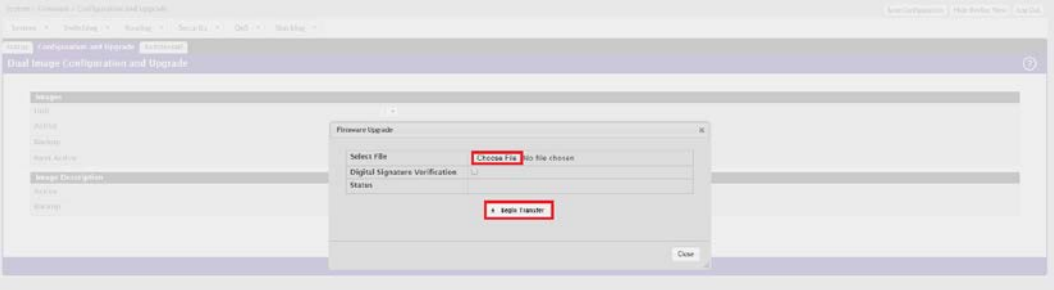
2. Use an IP scanner to detect the IP address of the switch.
3. Access the web interface of the switch:
   a. Open a web browser, and then go to the IP address.
   b. Log in to the web interface by entering the username. The default username is *admin*. The switch has no default password.
4. In the navigation menu, click **System > Firmware > Configuration and Upgrade**.



5. In the Images section of the Dual Image and Configuration page, select the down arrow in the **Active** field.



6. In the Firmware Upgrade dialog box, click **Choose File**, browse to the desired file, select the file, and then click **Begin Transfer.**



7. When the firmware upgrade process is complete, reboot the switch.

Configuring the ExtremeSwitching 220-24p-10GE2

When configuring the ExtremeSwitching 220-24p-10GE2 for use with DM NVX encoders/decoders, be aware of the following:

- All multicast traffic must be contained within the switch.
- A DHCP server may be used to assign IP addresses to connected nodes.
- A Crestron 3-Series control system that has a CONTROL SUBNET port may be used as a DHCP server.
- If a Crestron 3-Series control system with a CONTROL SUBNET port is used, the `igmpproxy off` command must be issued on the control system. For additional information, refer to OLH Answer ID 5887 in the Online Help section of the Crestron website (www.crestron.com/onlinehelp).

To configure the ExtremeSwitching 220-24p-10GE2, use the web interface of the switch.

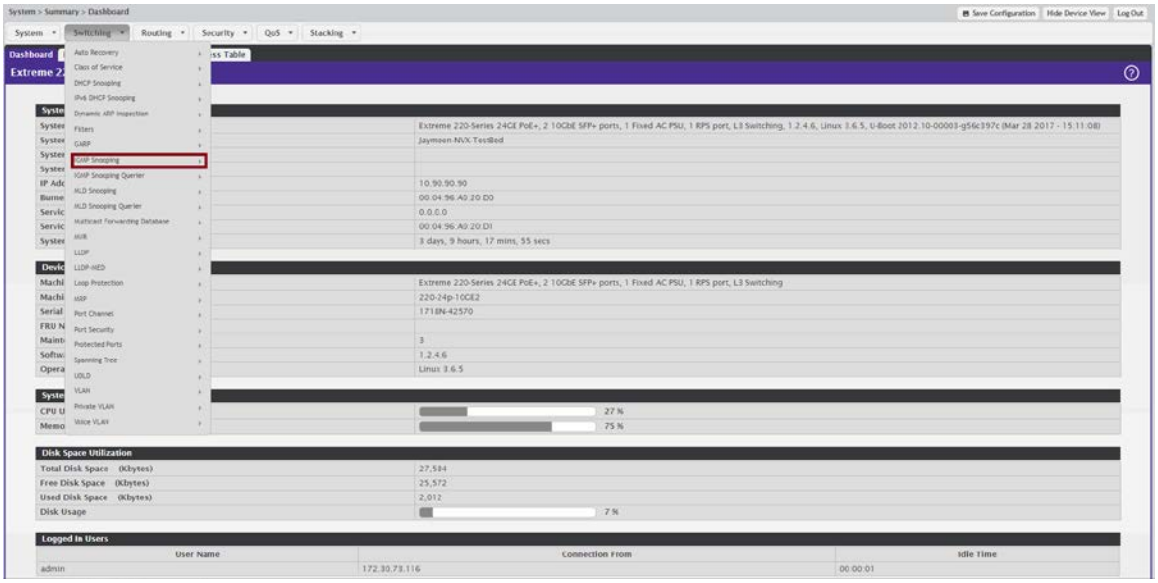
The following sections provide instructions to do the following:

- Configure IGMP snooping
- Configure the IGMP snooping querier
- Save the configuration

NOTE: Throughout the configuration sections, change only the settings as indicated. Do not change the default settings unless instructed to do so.

Configure IGMP Snooping

To configure IGMP Snooping in the web interface, click **Switching > IGMP Snooping** in the navigation menu.



Configure IGMP snooping by doing the following:

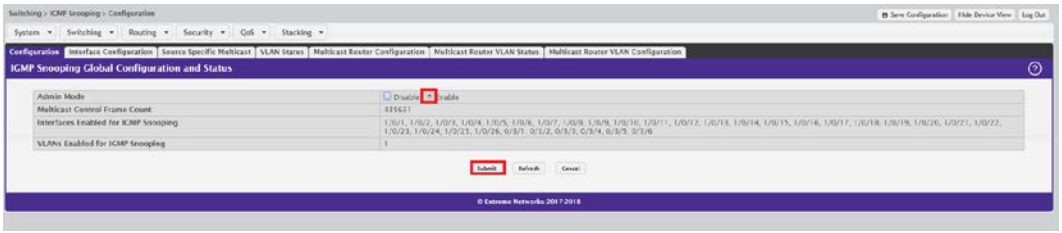
- Enable IGMP snooping on the switch
- Configure IGMP snooping interfaces
- Enable IGMP snooping on a VLAN
- Configure multicast router interfaces

Refer to the following sections to configure IGMP snooping.

Enable IGMP Snooping on the Switch

To enable IGMP snooping:

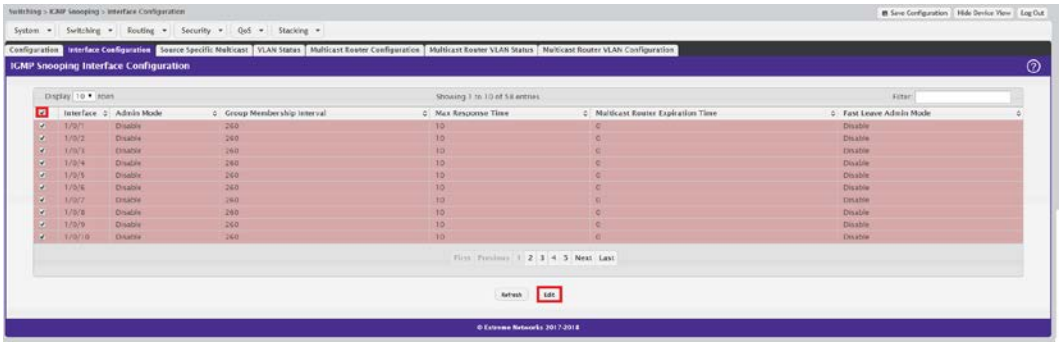
1. In the navigation menu, click **Switching > IGMP Snooping > Configuration.**
2. On the IGMP Snooping Global Configuration and Status page, set the **Admin Mode** field to **Enable** and then click **Submit**.



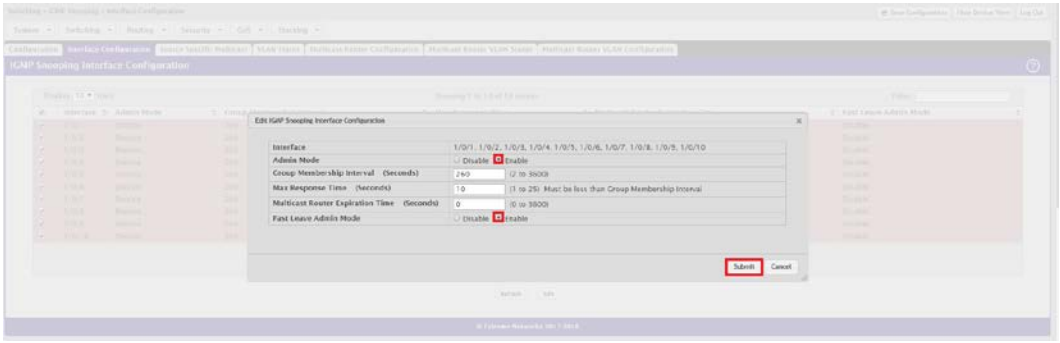
Configure IGMP Snooping Interfaces

To configure IGMP snooping interfaces:

1. In the navigation menu, click **Switching > IGMP Snooping > Interface Configuration.**
2. On the IGMP Snooping Interface Configuration page, select all interfaces and then click **Edit**.



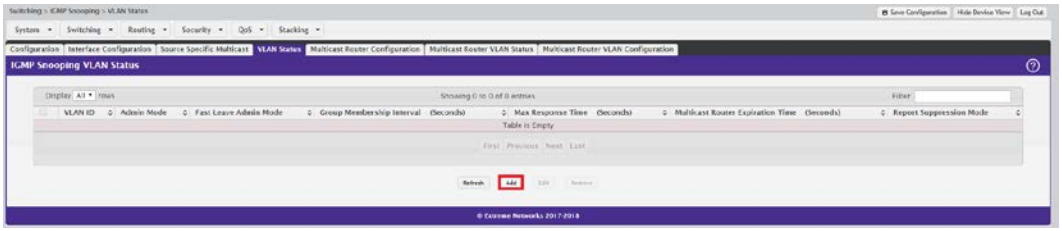
3. In the Edit IGMP Snooping Configuration dialog box, set the **Admin Mode** and **Fast Leave Admin Mode** fields to **Enable** and then click **Submit**.



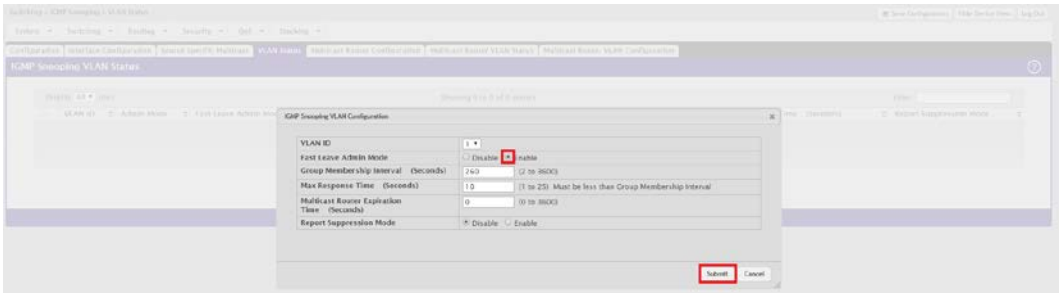
Enable IGMP Snooping on a VLAN

To enable IGMP snooping on a VLAN:

1. In the navigation menu, click **Switching > IGMP Snooping > VLAN Status.**
2. Click **Add**.



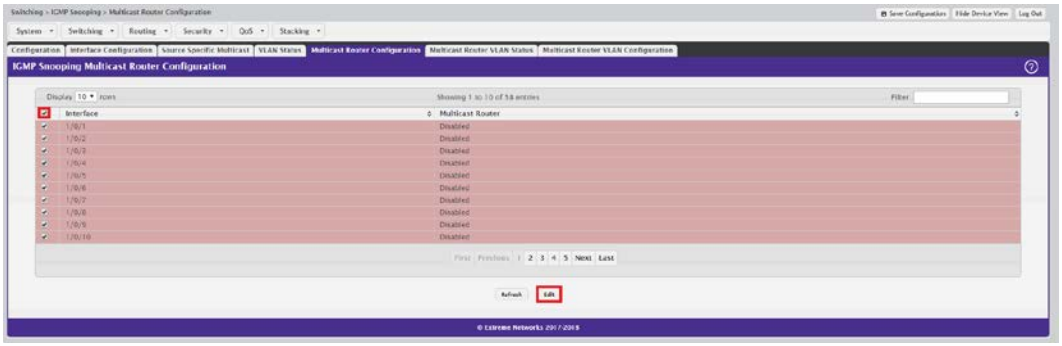
3. In the IGMP Snooping VLAN Configuration dialog box, set the **Fast Leave Admin Mode** field to **Enable** and then click **Submit**.



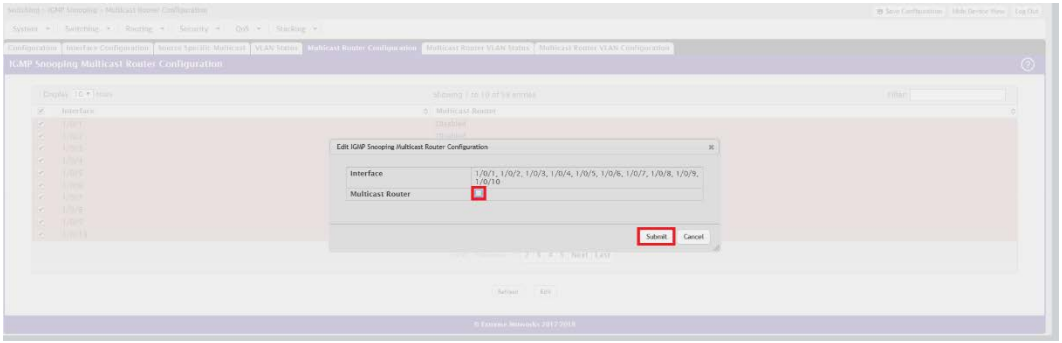
Configure Multicast Router Interfaces

To configure multicast router interfaces:

1. In the navigation menu, click **Switching > IGMP Snooping > Multicast Router Configuration**.
2. On the IGMP Snooping Multicast Router Configuration page, select all interfaces and then click **Edit.**



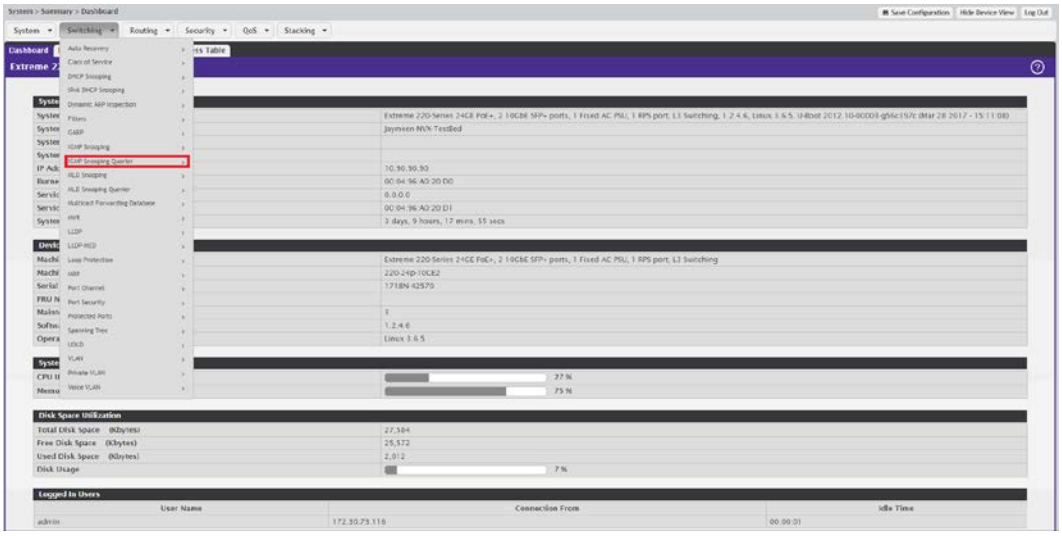
3. In the Edit IGMP Snooping Multicast Router Configuration dialog box, deselect the **Multicast Router** check box and then click **Submit**.



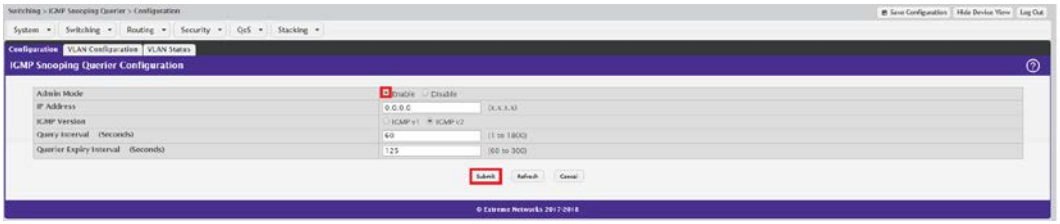
Configure the IGMP Snooping Querier

To configure the IGMP snooping querier:

1. In the navigation menu, click **Switching > IGMP Snooping Querier > Configuration.**



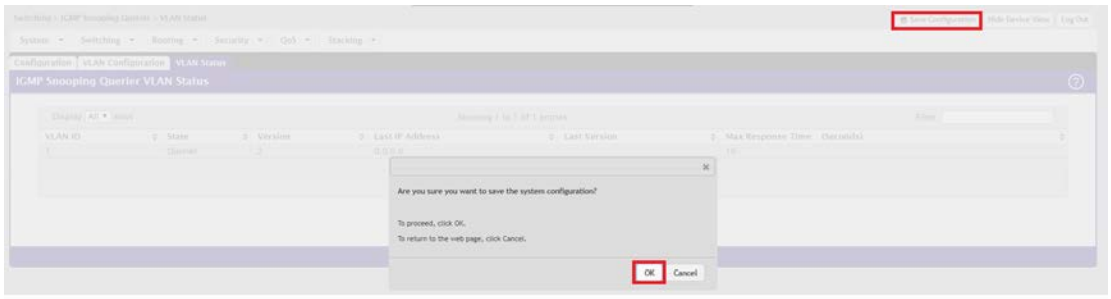
2. Set the **Admin Mode** field to **Enable** and then click **Submit**.



Save the Configuration

To save the configuration to nonvolatile memory:

1. Click the **Save Configuration** button in the upper-right section of the screen.
2. Click **OK** to save the configuration.



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