Supported Products:	NetworkHD IP Series
	NetworkHD 100 Series
	NetworkHD 200 Series
Supported Switch Firmware:	4.0.7

⚠️ IMPORTANT! To ensure proper operation of the NetworkHD system the Luxul AMS switch must be running firmware version 4.0.7 or higher. The current firmware version of the switch can be found in the top right corner of the Web UI. If the current is below 4.0.7 the switch MUST be updated.

Visit the Luxul Firmware Update Page (http://luxul.com/firmware-updates) to download the latest firmware.

Overview

NetworkHD uses the following features of a layer 2 managed switch. This document outlines the procedure for configuring a single Luxul AMS series switch.

Please note: Luxul switches can only be used with NetworkHD components in a single switch topology. If the requirements of the installation require more than one switch, WyreStorm highly recommends using Cisco SG500 series switches.

NetworkHD video walls are not supported when using Luxul switches. WyreStorm recommends using only NetworkHD 100 series components.

Multicast Video

With multicast video, only one instance of a video stream is transmitted onto the network. Clients in turn grab a copy of the video from the switch.
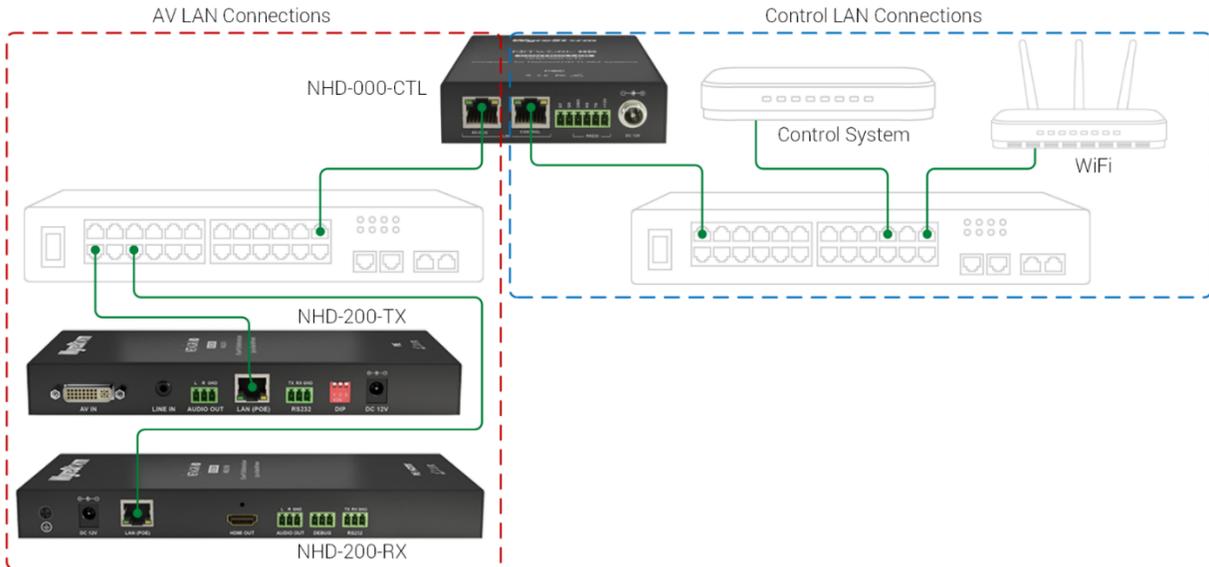
IGMP Snooping

IGMP snooping (Internet Group Management Protocol) is the process of listening to network traffic. This feature allows a network switch to listen in on the IGMP conversation between hosts and clients. NetworkHD utilizes this protocol to route video feeds.
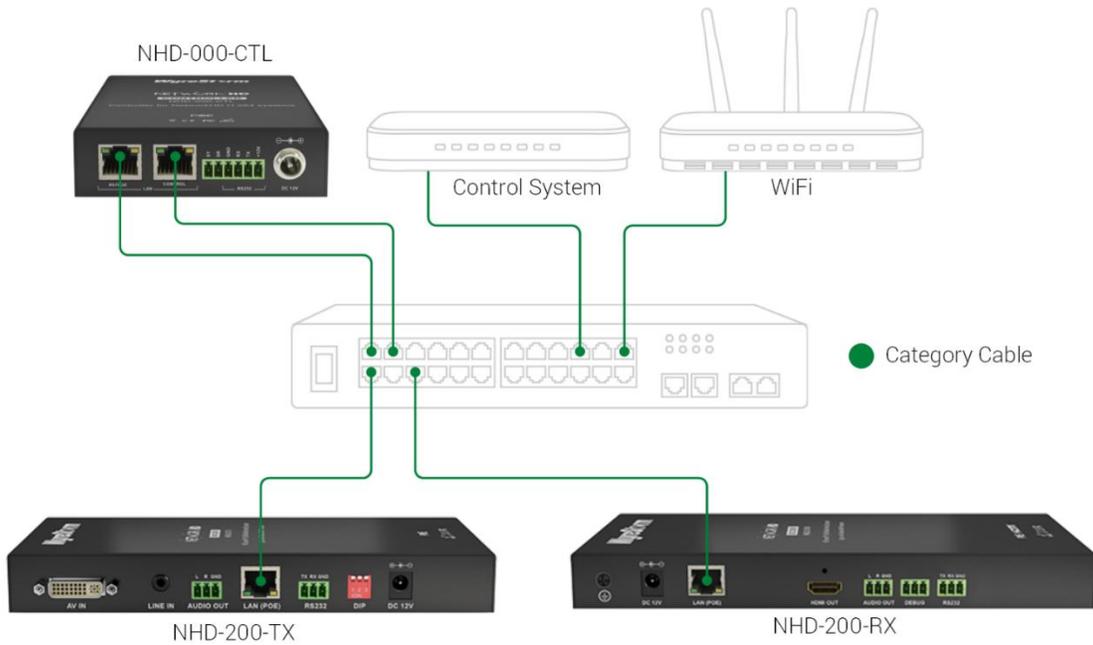
Network Topologies

WyreStorm recommends installing NetworkHD into a dedicated network where only NetworkHD encoders and decoders reside. Other components such as Wi-Fi access points, control systems and any IT infrastructure exist on a separate switch. The two networks should be connected via the two Ethernet ports on the NHD-000-CTL. These two Ethernet ports are completely isolated and will not allow traffic to transmit between networks.

In some networking environments, it may not be possible to have a dedicated switch for NetworkHD components. In this situation all NetworkHD components, control systems or other network devices all reside on the same switch. The two connection diagrams below show the differences between dedicated and integrated networks. If using an integrated network additional configuration steps should be taken to prevent multicasting A/V traffic from reaching control devices.

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Dedicated Network

Integrated Network

● Category Cable

Before You Begin

Read through this document in its entirety. .... ☐

Supported Luxul AMS Series Switch. .... ☐

NetworkHD components .... ☐

PC or Mac for configuring the switch. .... ☐

Switch Recommendation Table

| System Design	Description	AMS Series
Point-to-Point	Works like an extender set	✓
Point-to-Multi Point	Works like a large splitter	✓
Multi Point-to-Multi Point	Works like a video matrix	✓
Video Wall	Multiple screens making one large image up to 10 x 10 in size.	

Configuration

1. Connect your PC to the switch and configure its IP address to the same range as the switch (default 192.168.0.xxx). Enter the switch's IP address (default is 192.168.0.4) in your browser and press Enter. The browser will show a dialog box like below:
2. Input your username (default is "**admin**") and password (default is "**admin**").
3. Then click **Log In**.
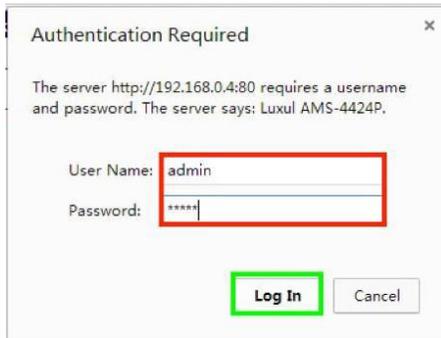
It is highly recommended that before starting you reset the switch to its factory default settings. To do so, perform the following steps:

4. Select the **Administration** menu from the left.
5. Select **Factory Defaults**, then click **Yes**.
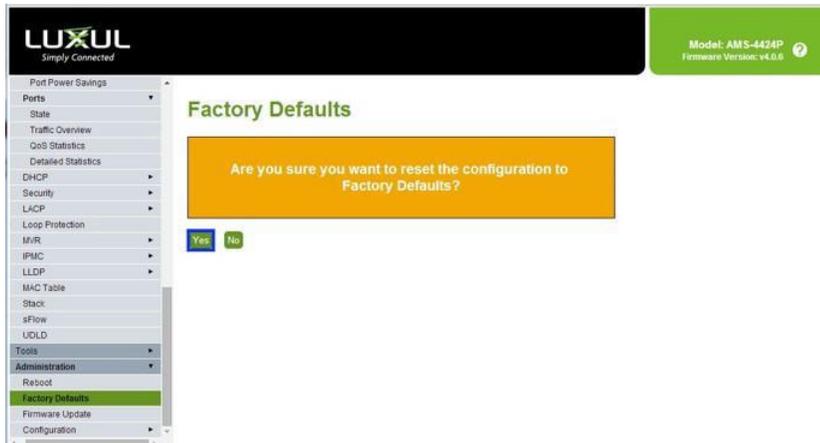
6. Select the **Configuration** menu from the left.
7. Choose **IPMC** and then **IGMP Snooping**.
8. Select **Basic Configuration**.
9. Check **Snooping Enabled**
10. Uncheck **Unregistered IPMCv4 Flooding Enabled**
11. Check **Fast Leave** for all ports.

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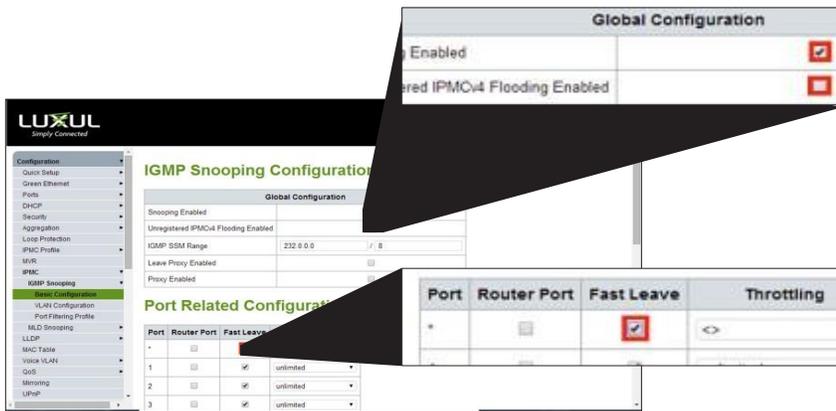
When finished click **Save**.

12. From the IGMP Snooping menu select **VLAN Configuration**
13. Click the **Add New IGMP VLAN** button and configure the following:
    - Set VLAN ID to 1
    - Check Snooping Enabled
    - Check Querier Election
    - Set the Querier Address to 192.168.22.222
   - Choose Forced IGMPv2 for Compatibility

14. Click the Save button.
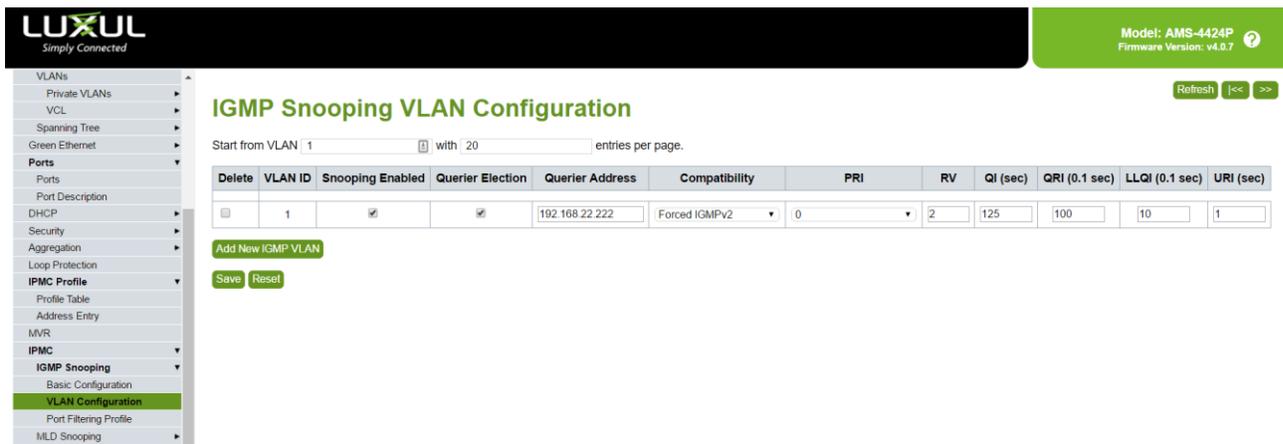
15. From the left menu, navigate to **Quick Setup**
16. Select **Spanning Tree** and then **CIST Ports**
17. **Uncheck STP Enabled** for both the Aggregated and Normal port configuration sections.
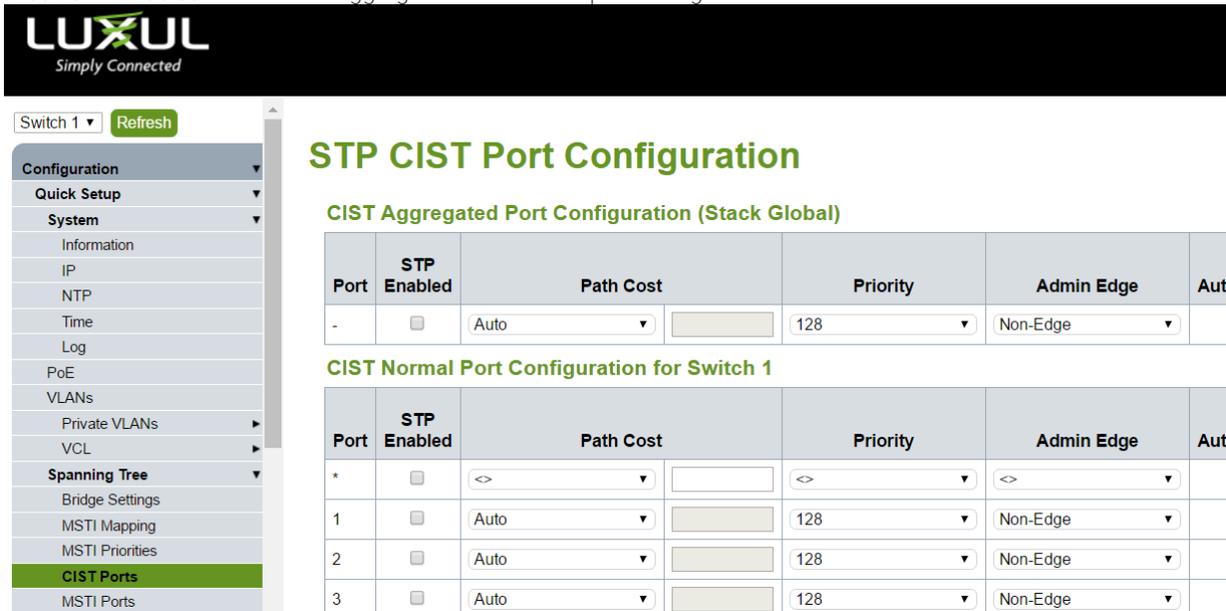
18. Choose **Administration** from the left menu and then select **Configuration**.
19. Select **Save startup-config** and then click **Save Configuration.**
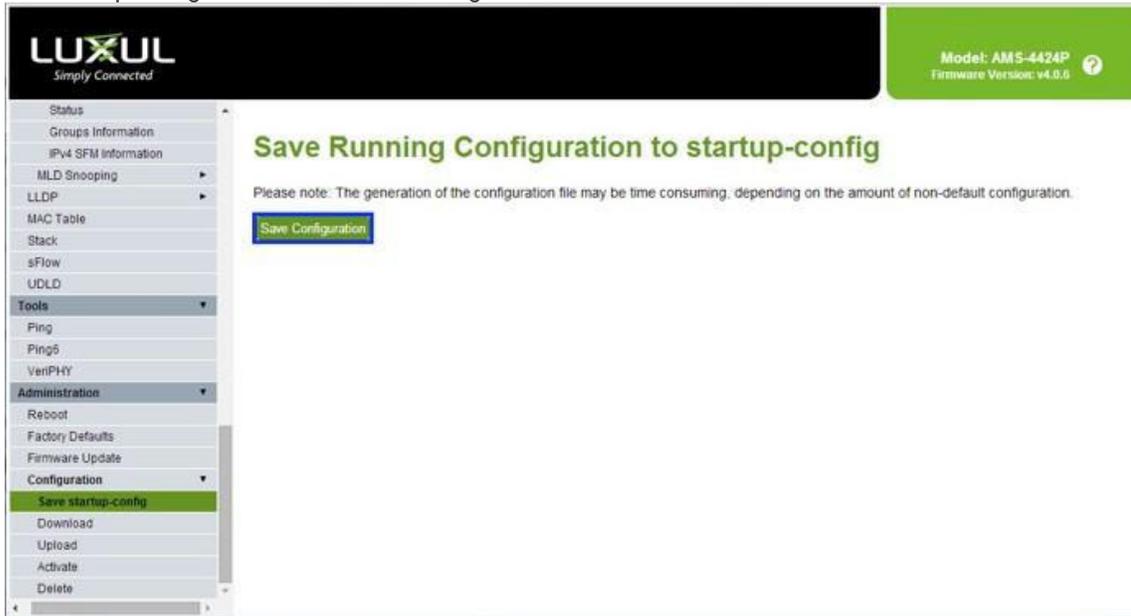
Contacting Support

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