NetworkHD Switch Configuration Guide

Luxul AMS Series Switches



	NetworkHD IP Series
Supported Products:	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.

Dedicated Network



Integrated Network



Before You Begin

Read through this document in its entirety
Supported Luxul AMS Series Switch.
NetworkHD components
PC or Mac for configuring the switch

2 of 5

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	\checkmark
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.

The center http://	/192 168 0 4-80 requires a username
and password. T	he server says: Luxul AMS-4424P.
User Name:	admin
Password:	****

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.

							Global Configuration							
							Enabled			2				
							red IPMC	v4 Flooding Ena	bled					
	-													
Configuration		101				41								
Quick Setup		IGN	nP Sho	poping C	ontigur	ation								
Green Ethemet														
Ports	•			Glo	obal Configuratio	on								
DHCP	•	Snoon	ing Enabled				_							
Security		Shoop	and managed											
Aggregation		Unregi	stered IPMCv4	Flooding Enabled			-							
Loop Protection		IGMP :	SSM Ranne		232.0.00				-					
IPINC Profile														
MVR		Leave	Proxy Enabled											
KAID Seconda		Proxy	Enabled			10	Party and a second							
Basic Configuration							Port	Router Port	East Leave	Throttling				
VLAN Configuration	51	Por	t Relat	ted Con	figuration		- OIL	reader Fort	. and reave	morning				
Port Filtering Profile		. 01		0011	gain				-					
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LLDP		Port	Router Port	PasiLesiVer					0.000	1.15-0				
MAC Table														
Voice VLAN		12	10		and and a set		1001	414						
QoS		3	. 610		unimited	1.1.2								
Mirroring		2		8	unlimited	•								
UPnP				0.000										
		3		8	unlimited	•			-					

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.

												Model: AMS-4 Firmware Version:	424P v4.0.7	
VLANs														
Private VLANs	•													
VCL	•	IGM	IP Sn											
Spanning Tree	•					-								
Green Ethernet	•	Start fro	m VLAN 1	1	with 20	entries pe	er page.							
Ports		_												
Ports		Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)	
Port Description														
DHCP	•		1			192.168.22.222	Forced IGMPv2 •	•	2	125	100	10	1	
Security	•													
Aggregation	•	Add Nev	VIGMP VLA	N										
Loop Protection			_											
IPMC Profile	•	Save	Reset											
Profile Table														
Address Entry														
MVR														
IPMC	•													
IGMP Snooping	•													
Basic Configuration														
VLAN Configuration														
Port Filtering Profile														
MLD Snooping	•													

- 15. From the left menu, navigate to Quick Setup
- 16. Select Spanning Tree and then CIST Ports
- 17. U

in <u>check STP Enabled</u>	for both tl	he Agg	regated	and Normal	port configur	ration sections.				
Switch 1 V Refresh	-									
		STP	CIST	F Port C	onfigura	ation				
System	- -	CIST	Aggrega	ated Port Co	nfiguration (St	tack Global)				
Information										
IP			STP							A
NTP		Port	Enabled		Path Cost	Pri	ority	Admin Edge		Auto
Time		-		Auto	•	128	•	Non-Edge	•	
Log										
PoE		CIST	Normal	Port Configu	ration for Swi	tch 1				
VLANs										
Private VLANs	•		STP			_ .				
VCL	•	Port	Enabled		Path Cost	Pri	ority	Admin Ed	ge	Aut
Spanning Tree	•	*		 	T	<	T		•	
Bridge Settings			_							
MSTI Mapping		1		Auto		128	•	Non-Edge	v	
MSTI Priorities		2		Auto		128	•	Non-Edge	•	
CIST Ports										
MSTI Ports		3		Auto	▼	128	•	Non-Edge	•	

- 18. Choose Administration from the left menu and then select Configuration.
- 19. Select Save startup-config and then click Save Configuration.



5 of 5

Contacting Support

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