Network Switch Set-up Guides

Araknis

AN-220 & AN-320 Series

when used in a 1Gb Blustream AV over IP system, in a single switch configuration system

Revision: 1.0 - Feb 2026

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Introduction

The 1Gb Blustream AV over IP solutions require a 1Gb managed network switch in order for HDMI distribution to be achieved reliably, and without any loss of performance.

The following guide is a step-by-step instruction on how to connect and configure your network switch to support 1Gb Blustream AV over IP products.

Please ensure each step is followed and checked at each stage. Before exiting the set-up, it is advisable to reboot the switch, log-in, and double check all settings.

Switch Requirements

The following features need to be enabled on the network switch being used for a Blustream AV over IP system:

1. Multicast
2. Jumbo Frames / Jumbo Packets / MTU
3. IGMP Management / Snooping
4. PoE (where being utilised)

Feature explanation:

- **Multicast** (one-to-many or many-to-many distribution) is a group communication where information is addressed to a group of network devices simultaneously (Blustream AV over IP products).
- **Jumbo Frames / Jumbo Packets / MTU** are Ethernet frames with more than 1,500 bytes of payload. Conventionally, jumbo frames can carry up to 9,216 bytes of payload and must be activated in order to send large packets of data for HDMI distribution. Without this enabled, the ability for the IP***UHD-TX units to transmit the HDMI data will not be achievable.
- **IGMP Management & IGMP Snooping** is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to listen in on the IGMP conversation between hosts, routers & receivers (IP Transmitters, the network switch, and IP Receivers). By listening to this flow of traffic the switch maintains a map of which links need which IP multicast streams i.e. which Blustream AV over IP products are active and where the signal is being distributed to.
- **PoE** (Power over Ethernet) the Blustream TX, RX and ACM devices are all capable of being powered by PoE. Power Supply Units are available for Blustream TX, RX and ACM devices, however, the products are not sold with these included. PoE can be disbaled on the switch if external PSU's are being used.

Network Topology for AV over IP

Our recommendation for the set-up of a Blustream AV over IP system would be to have the customers business, or home network be kept independent of the Blustream AV over IP video distribution network or VLAN. This negates the possibility of data flowing through one network / VLAN reducing the performance of the other and vice-versa. The Blustream ACM will act as a "bridge" between the two networks / VLAN's allowing for control data to be seamlessly transmitted between the two.

Where the the business / home network and AV over IP network are sharing a switch/es (not recommended). We would suggest creating a separate VLAN for the AV over IP network, ensuring there is a minimum 1Gb of bandwidth allocated to the VLAN. A networking professional should be consulted when designing this type of system to ensure the networks can co-exist on the same infrastructure.

Connecting to the Switch Web-GUI

To access the switch web-GUI, a connection between your computer and the switch should be made using an Ethernet cable.

Your computer must also be in the same IP range as the Araknis switch default IP address. If you are unsure how to update your computer IP range follow the 'Amending your IP Address' instructions towards the rear of this guide.

1. Open an internet browser (Google Chrome, Mozilla, Internet Explorer etc)
2. Type the network switch default IP address into the web browser bar
3. Enter the default user name and password

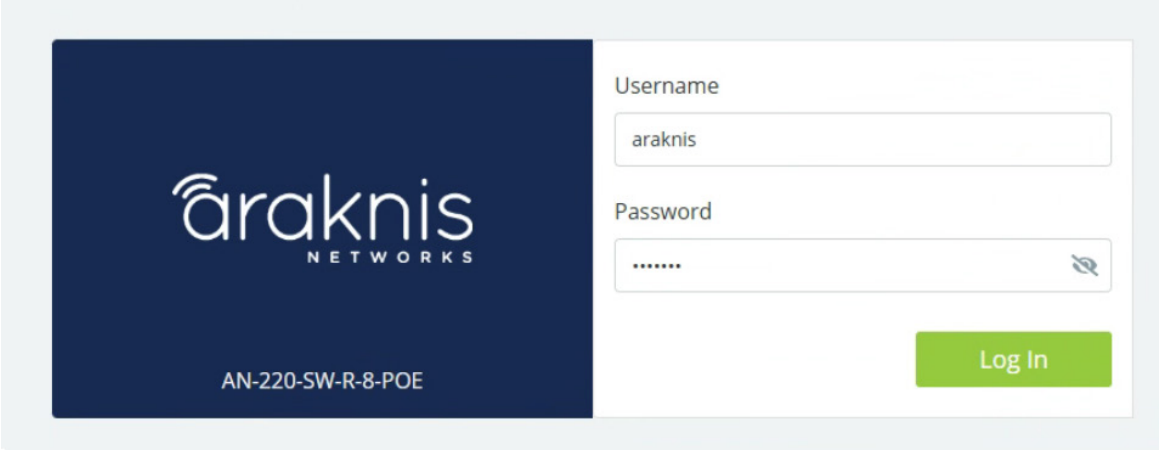
The switch factory default details are:

- IP Address: **192.168.20.254**
- User: **araknis**
- Password: **araknis**

Araknis firmware used for this guide: 1.0.22

Please note: if the switch is not using the factory default settings, or the switch has been used previously, you will need to know the login details.

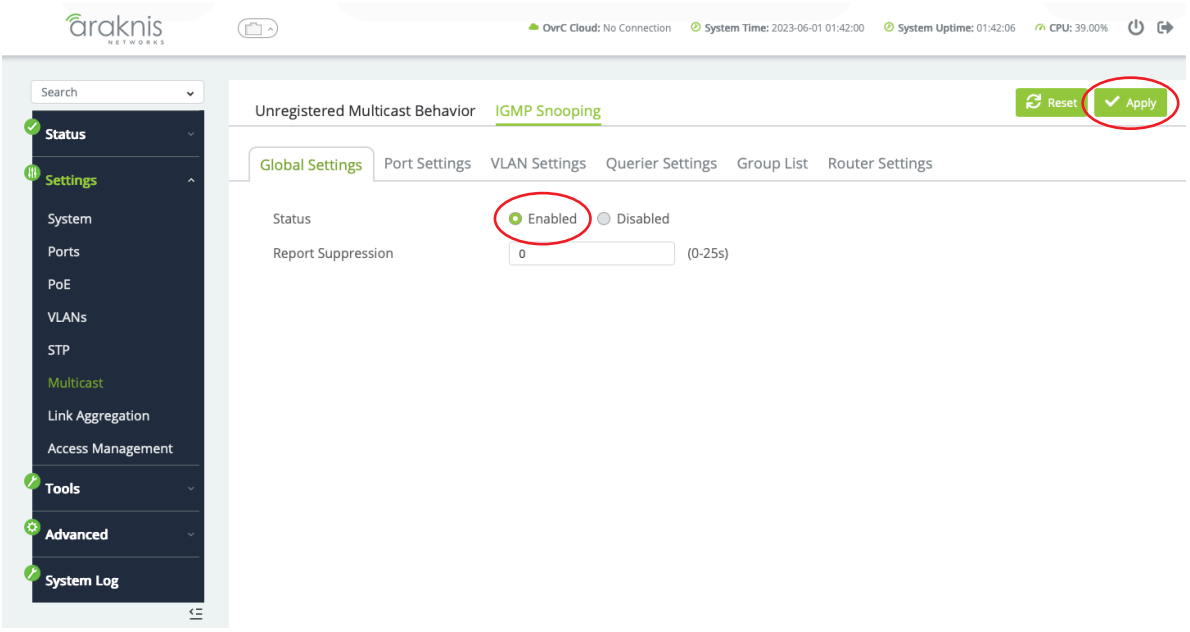
For new Blustream Av over IP systems, or where a switch is not brand new, we would recommend factory resetting the switch, and firmware updating prior to commencing any further through this guide. For details of how to factory reset the network switch please refer to the Araknis user manual.



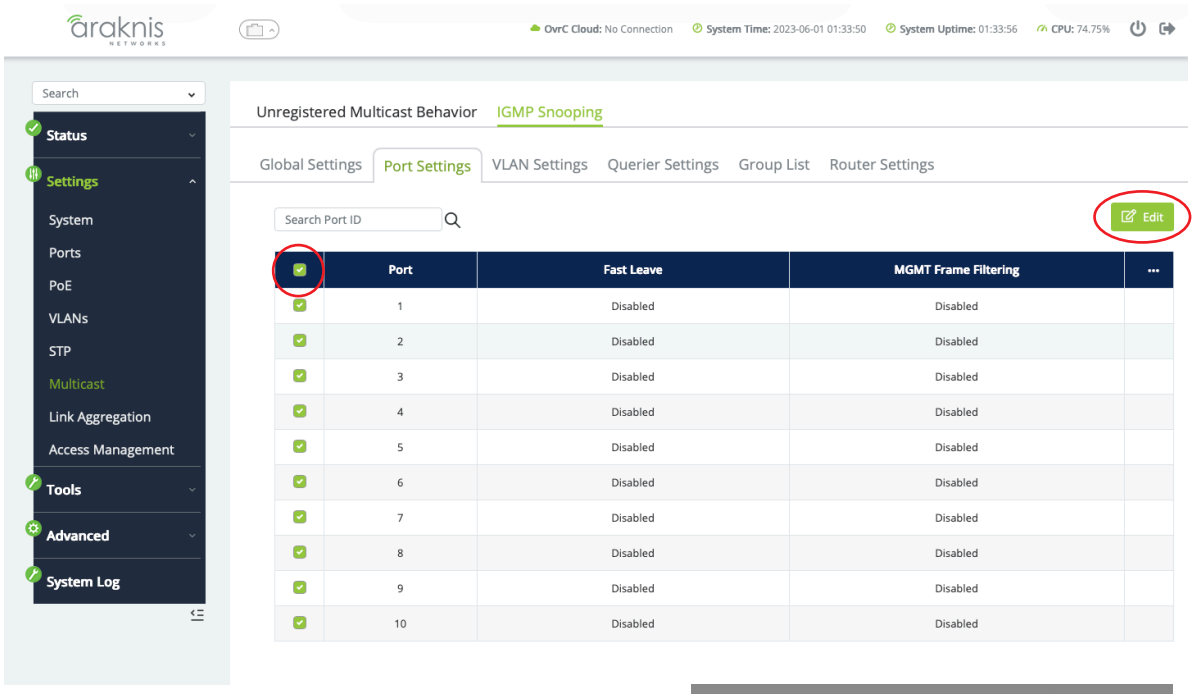
Please note: you will be required to change the default password on first log-in to the unit, Please make a note of the new password.

Activating IGMP Snooping

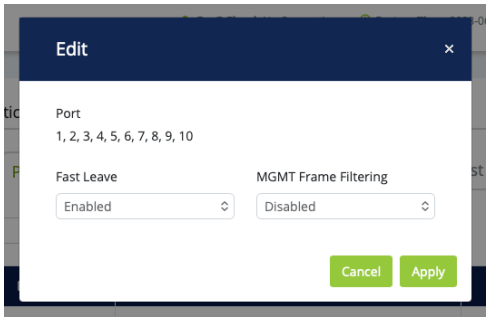
In the left-hand menu tree, navigate to: **Settings / Multicast**
Click the 'IGMP Snooping' menu option at the top of the page, and enable IGMP Global Settings as highlighted below:



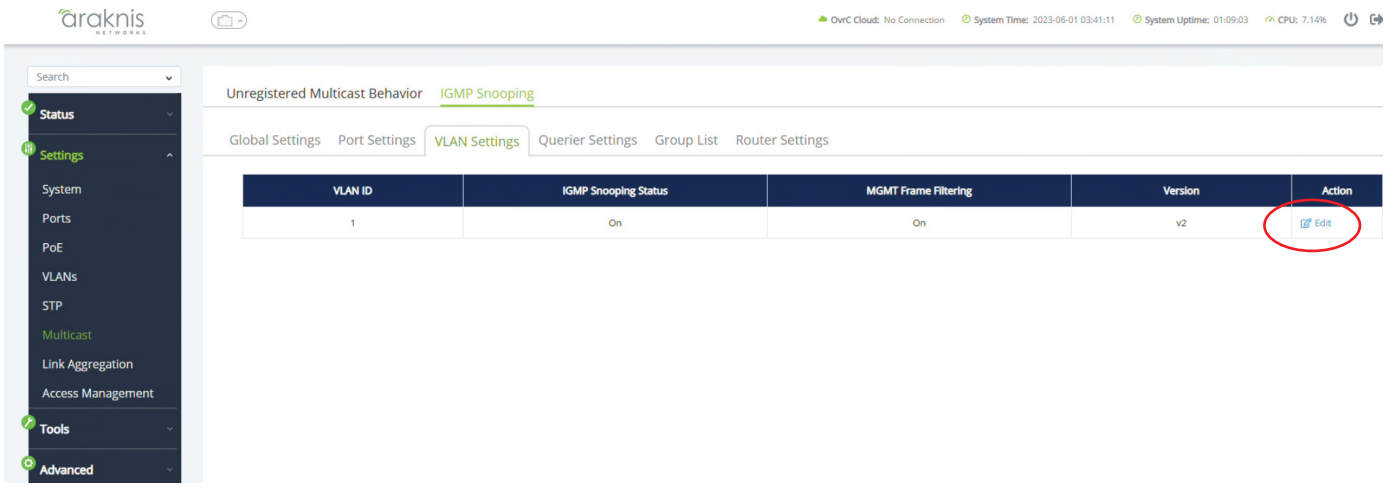
Click the 'Port Settings' tab at the top of the page:



Click the 'all' tick box at the top in the table header to select all ports, then click the 'Edit' button on the top right of the screen. Fast Leave will be automatically set to enable on clicking 'Apply'. Once this has been applied, all ports will then have Fast Leave enabled on the table.



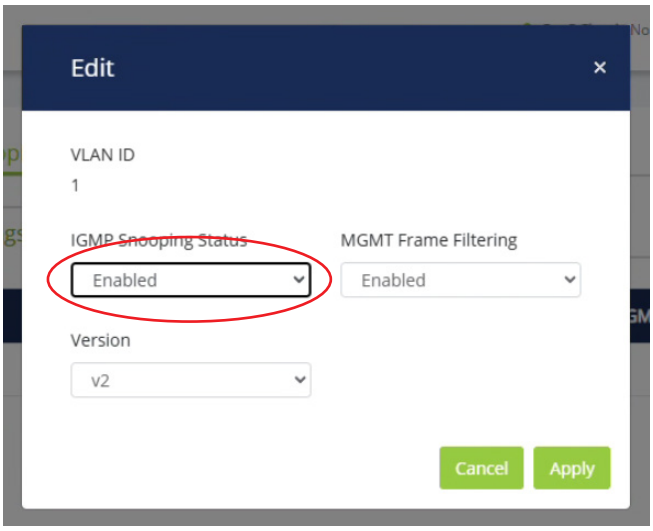
Click the 'VLAN Settings' tab at the top of the page:



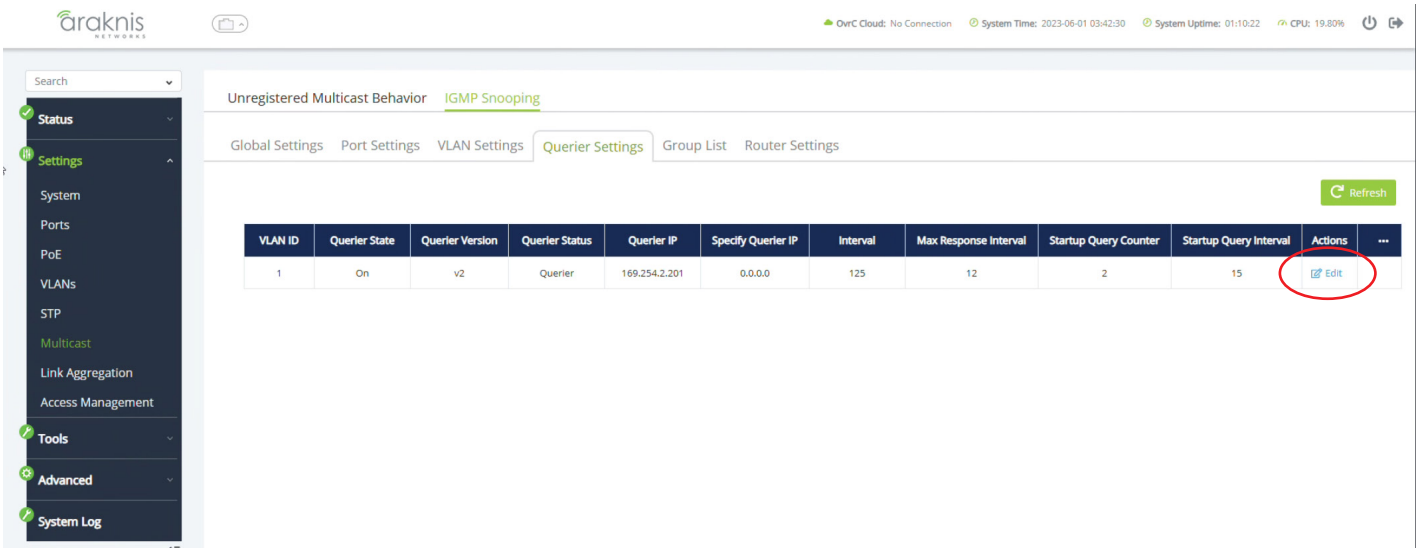
Click the 'Edit' button in the right column for the VLAN.

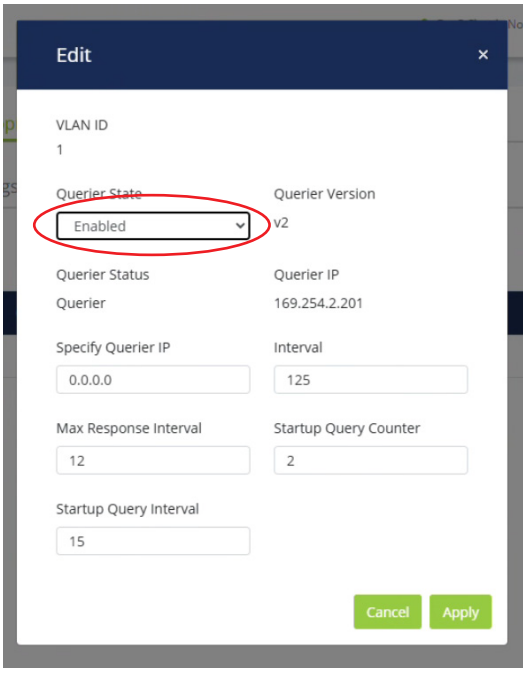
Ensure 'IGMP Snooping Status' is set to 'Enabled' and then click 'Apply'.

Once this has been applied, the IGMP Snooping Status column will show 'On'.



Now click the 'Querier Settings' tab at the top of the page:





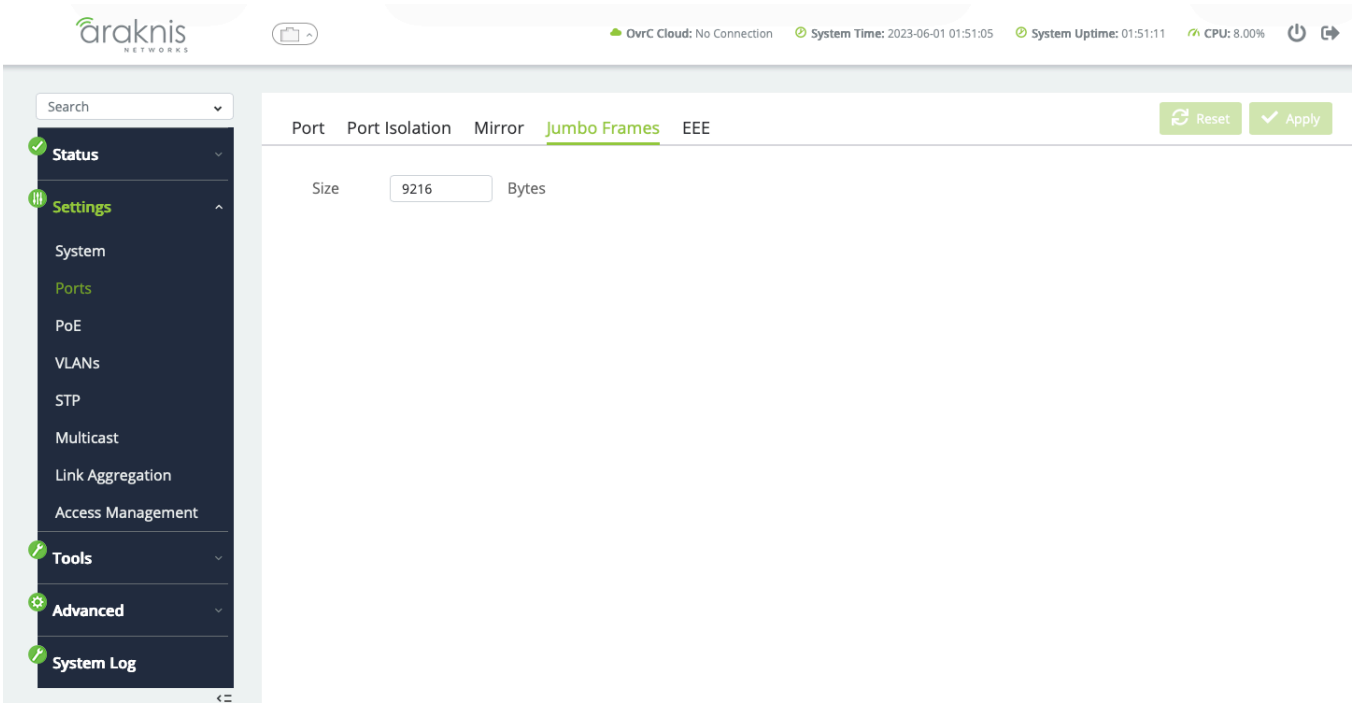
Click the 'Edit' button in the right column for the VLAN.

Ensure 'Querier State' is set to 'Enabled' and then click 'Apply'.

Once this has been applied, the Querier State column will show 'On'.

Activating Jumbo Frames

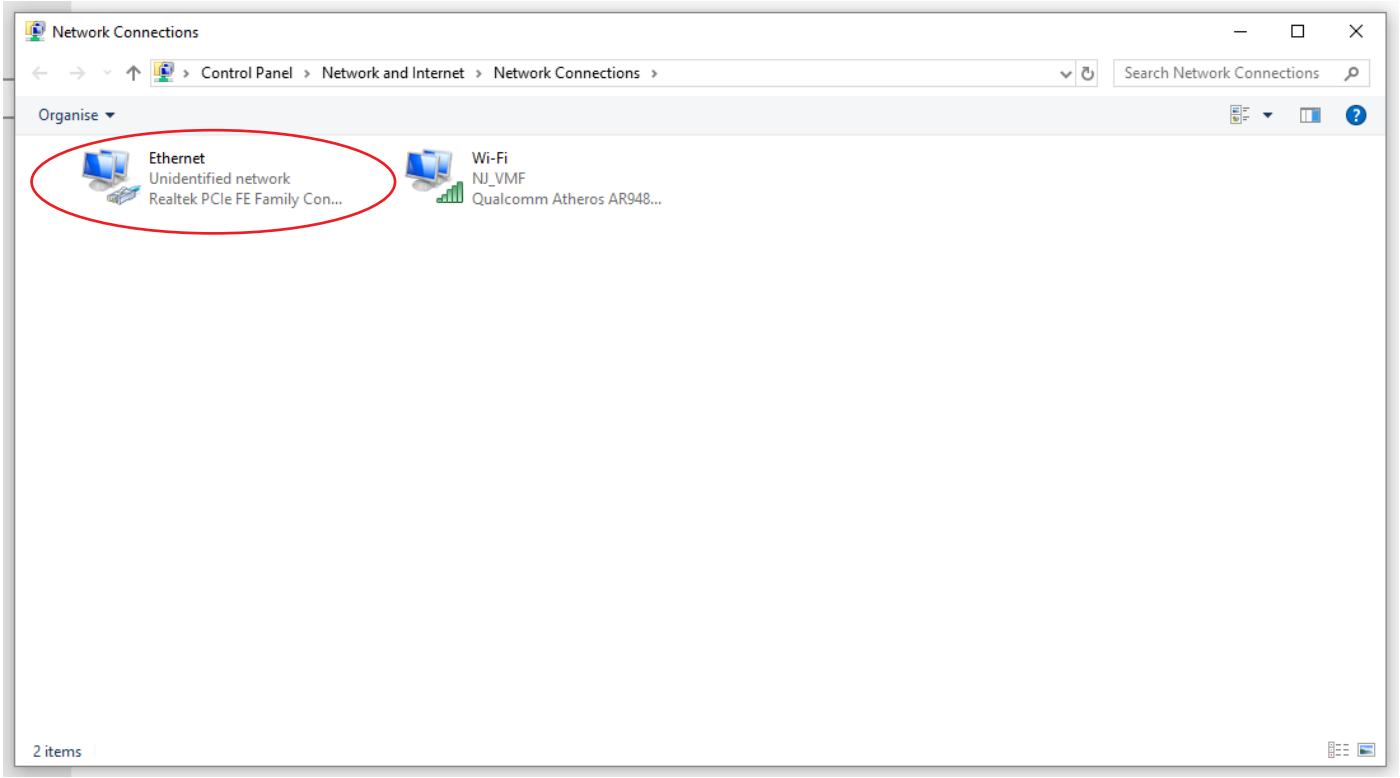
Jumbo Frames will be set to 9216 by default, to amend these settings:
In the left-hand menu tree, navigate to: **Settings / Ports**
Navigate to the 'Jumbo Frames' tab at the top of the page:



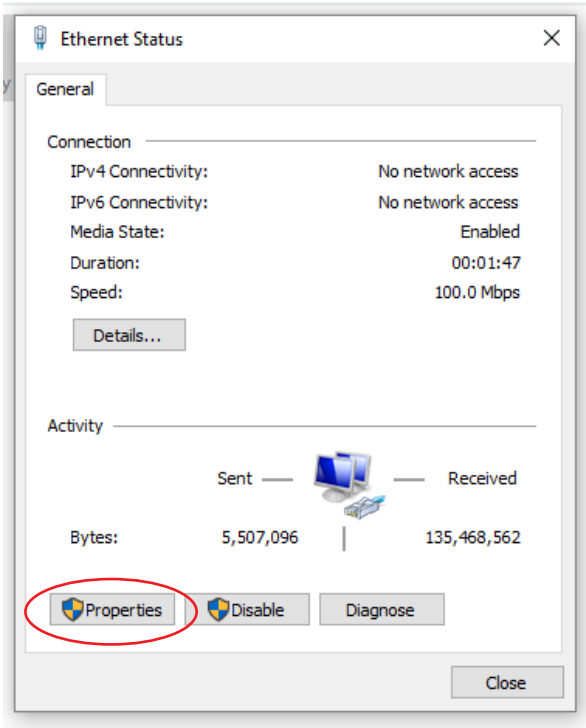
Configuration of the Araknis switch is now complete.
A backup of the configuration can be saved to your PC by navigating to:
Tools / File Management and clicking the 'Download' button for Backup in the Configuration File section of the page.

Amending your IP Address in Windows

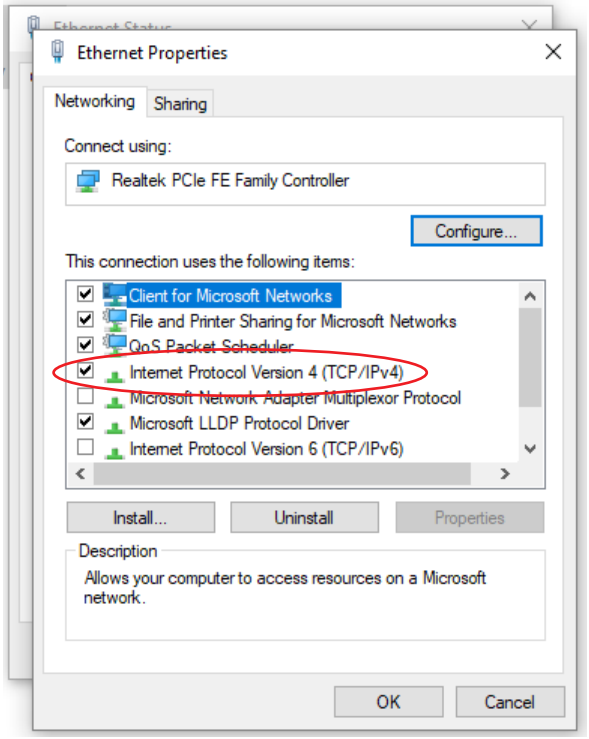
1. Connect the computer to the network switch using an Ethernet cable
2. Navigate to: **CONTROL PANEL / NETWORK & INTERNET / NETWORK CONNECTIONS**
3. Double click on the Ethernet conneciton as highlighted below:



4. In the pop-up windown that appears, click on: **PROPERTIES**



5. In the pop-up window that appears, double-click on: **INTERNET PROTOCOL VERSION 4 (TCP/IPv4)**

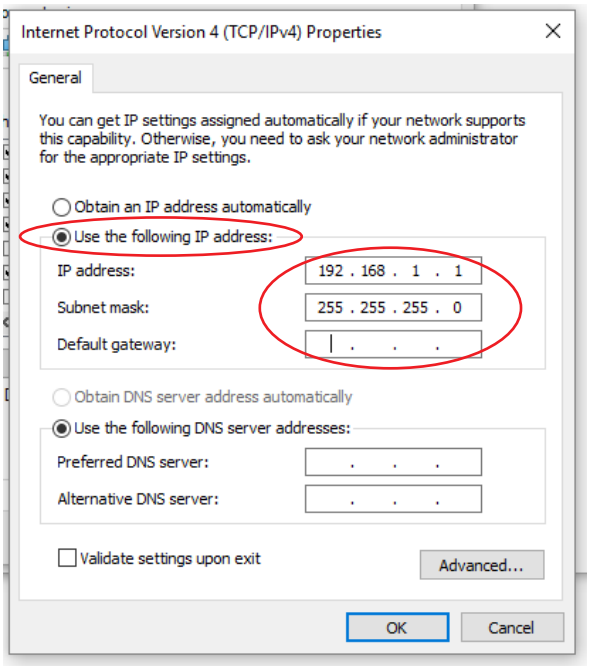


5. In the pop-up window that appears, double-click on the button marked: **USE THE FOLLOWING IP ADDRESS**
6. Enter the details as below:

IP Address: **192.168.20.1**

Subnet mask: **255.255.255.0**

Default gateway: *Leave this field blank*

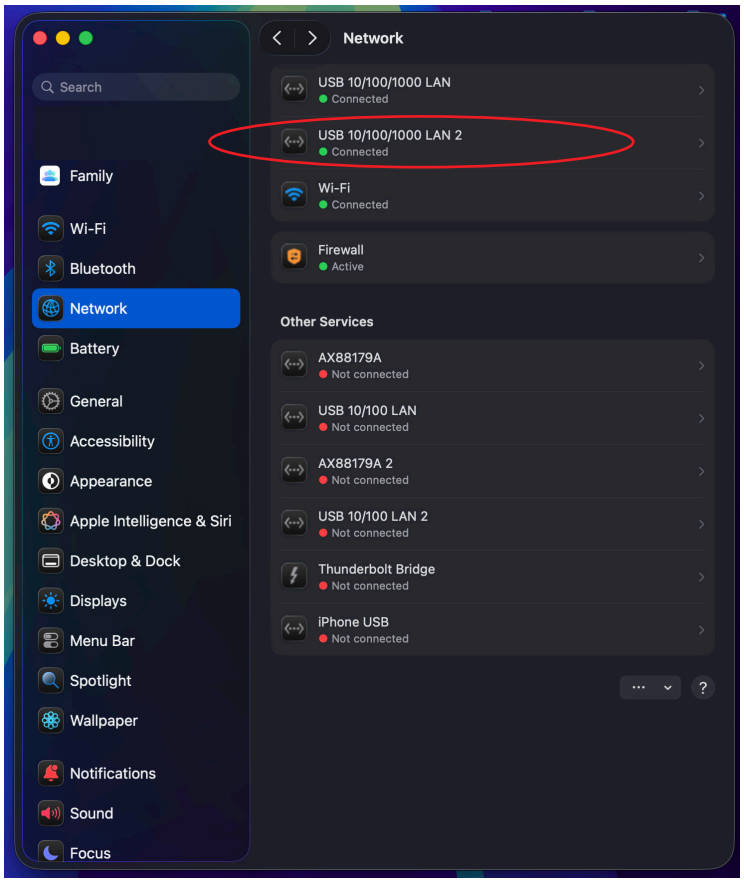


7. Click: **OK / OK / CLOSE**

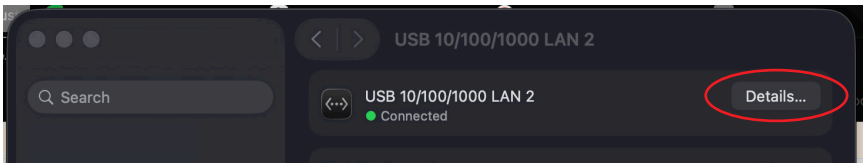
Your Windows PC will now be working in the IP range as set above and you will now be able to communicate with the equipment working within the same IP range.

Amending your IP Address in Mac OS

1. Connect the Mac to the network switch using an Ethernet cable
2. Click on the '**System Settings**' cog
3. Navigate to '**Network**' on the left hand menu tree
4. Find the active Ethernet connection to the network switch



5. Click on the '**Details...**' button



6. Click on '**TCP/IP**' on the left hand menu tree and enter the details as below:

IP Address: **192.168.20.1**

Subnet mask: **255.255.255.0**

Router: *Leave this field blank*

7. Click: **'OK'** at the bottom of the page and close.

Your Mac will now be working in the IP range as set above and you will now be able to communicate with the equipment working within the same IP range.

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