

MEDIA OVER IP SYSTEM  
All B-900-MOIP-4K Units

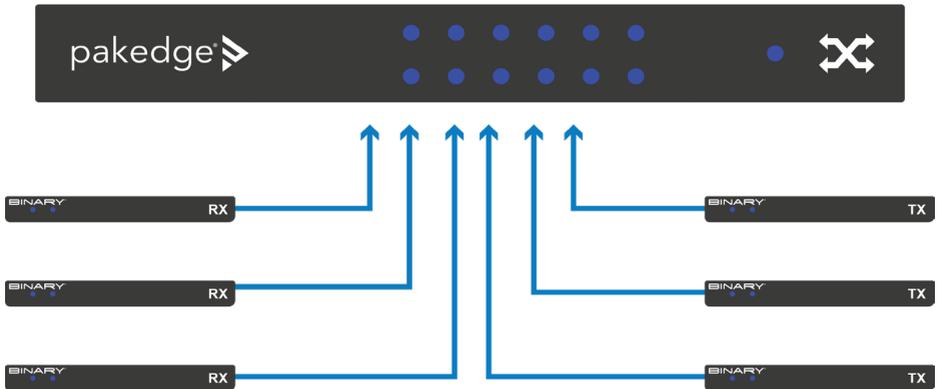
**BINARY**

## BINARY MOIP SETUP GUIDE FOR A SINGLE PAKEDGE MS SERIES SWITCH



## INTRODUCTION

This document covers MoIP configuration with a single Pakedge, MS series switch.



## VLAN SETUP

In large networks it can be beneficial to configure the MoIP system to be part of its own VLAN. This isolates MoIP traffic so it does not interfere with other systems on the network.

The following steps can be taken to configure a VLAN for MoIP. In the IGMP configuration that follows, the VLAN created here should be used. If no added VLANs are being used the IGMP configuration steps are the same, except for the VLAN used being your LAN.

1. Navigate to [Interfaces > VLAN](#)
2. Under the first section Database, click the **Option** icon, then click **Add** to create new VLANs on the switch. Click **Apply** at the top of the page, when finished.

### Add VLAN ⊗

VLAN ID or Range

Name

3. Next, navigate to [Interfaces](#) > [VLAN](#) > [Switchport Configuration](#). MS Switches support two Switchport options for VLAN tagging:
  - a. **Access** - A single VLAN ID can be assigned to a port and all incoming traffic on that port is placed into that VLAN. The default for all ports on the switch is Access mode, with the VLAN set to 1.
  - b. **Trunk** - A single VLAN ID is set as the Untagged "Native VLAN." Meaning any untagged, incoming traffic is assigned to that VLAN and any traffic outgoing for that VLAN is not tagged.  
A trunk port can be set to allow any number of VLANs as tagged traffic, so that traffic must be incoming or leaving on one of the specified VLANs.
4. All ports connected to MoIP devices should be set with your MoIP VLAN on **Access**.

**Edit Switchport Configuration** ✕

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Switchport Configuration Selected: 1

Switchport Mode

Trunk Native VLAN (Untagged)

Allow Trunk VLANs (Tagged)

Priority

5. Ports connected to your router, switch, and access points should be set to **Trunk**.

**Edit Switchport Configuration** ✕

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Select options that you want to modify for the selected Switchport Configurations. Anything not modified will not be changed.

Switchport Configuration Selected: 10,11,12,13,14,15,20,21,22

Switchport Mode

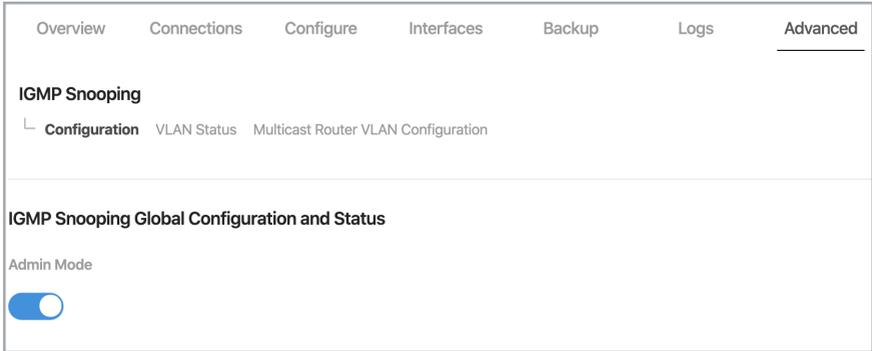
Access VLAN (Untagged)

Priority

## SWITCH CONFIGURATION

1. Switches running MoIP must have their MTU set to be greater than 8000 bytes. The default configuration of MS switches is already set to the maximum of 9198. Double check this under [Interfaces](#) > [Port](#) > [Port Summary](#) and by editing any port to view its details.
2. Navigate to [Advanced](#) > [IGMP Snooping](#) > [Configuration](#).

3. Set **IGMP Snooping Global Configuration Status Admin Mode** to **Enable**.

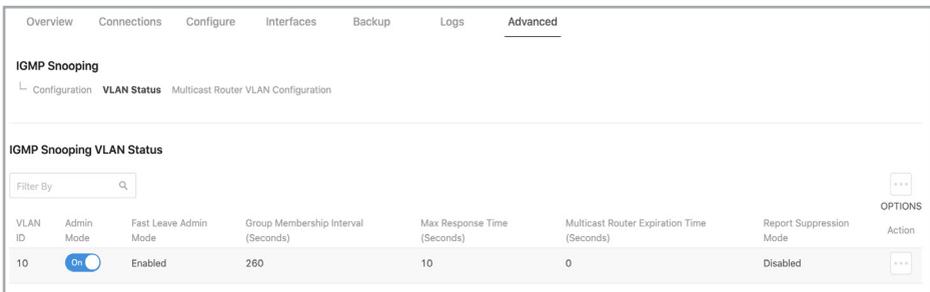
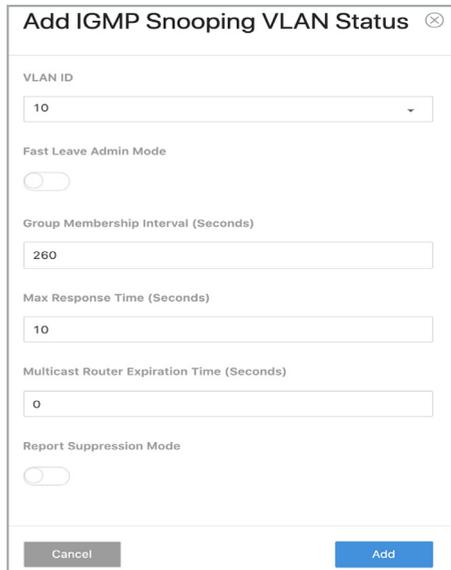


4. Navigate to **Advanced > IGMP Snooping > VLAN Status**.

5. Click the **Option** button, then select **Add**.

6. Select the **VLAN ID** of the MoIP VLAN you created.

7. Click the **Fast Leave Admin Mode** toggle. Fast leave will improve video switching times and bandwidth utilization



- The switch should have IGMP Snooping Querier Enabled. Navigate to **Advanced** > **IGMP Snooping Querier** > **Configuration** and click the **Admin Mode** toggle. Leave **IP Address** at 0.0.0.0.
- Under **IGMP Version**, select **IGMP V2**.

The screenshot shows the 'IGMP Snooping Querier' configuration page. At the top, there are tabs for Overview, Connections, Configure, Interfaces, Backup, Logs, and Advanced (which is selected). Below the tabs, there are sub-tabs for Configuration, VLAN Configuration, and VLAN Status. The main content area is titled 'IGMP Snooping Querier Configuration' and includes the following settings:

- Admin Mode:** A toggle switch that is currently turned on (blue).
- IP Address:** A text input field containing '0.0.0.0'.
- IGMP Version:** Three radio buttons: 'IGMP v1' (unselected), 'IGMP v2' (selected), and 'IGMP v3' (unselected).
- Query Interval (Seconds):** A text input field containing '60'.

- Under **IGMP Snooping Querier**, go to **VLAN Configuration** and click the **Option** button, then **Add**. Select the **VLAN ID** for the VLAN which is running IGMP Snooping.

The screenshot shows a dialog box titled 'Add IGMP Snooping Querier VLAN Configuration'. It contains the following fields and controls:

- VLAN ID:** A dropdown menu with '10' selected.
- Querier Election Participation:** A toggle switch that is currently turned off (grey).
- Querier VLAN IP Address:** A text input field containing '0.0.0.0'.
- At the bottom, there are two buttons: 'Cancel' (grey) and 'Add' (blue).

**Querier Election Participation** does not need to be enabled if you are manually setting the Core switch in the network as the querier, and you're leaving querier disabled on the edge switches. Leave Querier VLAN IP Address at 0.0.0.0

10. The MoIP VLAN must also have **Unregistered Multicast Behavior** set to drop. To do so, navigate to **Advanced > Unregistered Multicast Behavior** and click the **Unregistered Multicast Drop** toggle.

**Unregistered Multicast Behavior**

Configuration > Exception Details > Interface Configuration

**Unregistered Multicast Behavior Configuration**

Unregistered Multicast Drop

**Control Frames Exception Lists**

Filter By

| Exception List Name | Action | OPTIONS                            |
|---------------------|--------|------------------------------------|
| EXC_Test123         |        | <input type="button" value="..."/> |

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