Troubleshoot Layer 3 Interface Configuration Problem in Meraki MS and MX Device

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Introduction

This document describes how to troubleshoot the Layer 3 interface configuration problem in Meraki MS And MX devices.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Basic knowledge of Meraki Solutions
- Configuration exposure on Meraki MS Switch
- Configuration exposure on Meraki MX Security Appliance

Components Used

The information in this document is based on these software and hardware versions:

- Meraki MS Stack Switch And Software Version prior release to MS 15.8.
- Meraki MX Security Appliance And Software Version prior release to MX 15.8.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Problem

Steps to add new Layer 3 Interface in Meraki stack switch:

1. Login into the Meraki dashboard.

- 2. Navigate to Switch> Configure > Routing & DHCP as shown in the image.
- 3. In the Interface section click Add as shown in the image.

disdis Meraki	Q Search Dashboard							⊕ Help ▼	
ORGANIZATION	Routing & DHCP	0							
	SWITCH OR SWITCH STACK	IP ADDRESS Select							
	Interfaces Search 5	2 Interfaces							Add Edit *
Network-wide	Switch		VLAN	Name	Subnet	IP	DHCP Settings	OSPF Routing	Multicast Routing
Switch	MONITOR	CONFIGURE	1011	OSPF Uplink To VE1	10.247.168.136/30	10.247.168.138	Off	Enabled	Disabled
Organization	Switches Switch ports	OSPF routing	1012 72	OSPF Uplink To VE2 Wireless	10.247.168.140/30	10.247.168.142 10.151.192.1	Off Relay	Enabled Enabled	Disabled Disabled
	Switch stacks DHCP servers & ARP	ACL Access policies	102	3rd floor VOIP1	10.151.193.0/24	10.151.193.1	Relay	Enabled	Disabled
		Port schedules	103	3rd_FL_VOIP6_SIU Department VOIP	10.151.194.0/24	10.151.194.1	Relay	Enabled	Disabled
		Switch settings	104	3rd_FL_Data6_SIU Department Data	10.151.195.0/24	10.151.195.1	Relay	Enabled	Disabled
		Staged upgrades	105	2rd El Datad ald2rd El Datal	10 151 106 0/24	10.151108.1	Dalau	Enabled	Dirablad

Meraki MS Switch Routing & DHCP Setting

Steps to add a new Layer 3 Interface in Meraki MX Security Appliance:

- 1. Login into the Meraki dashboard.
- 2. Navigate to Security & SD-WAN > Configure > Addressing & VLANs as shown in the image.
- 3. In the $\ensuremath{\textbf{Routing}}$ section click $\ensuremath{\textbf{Add}}\ensuremath{\textbf{VLAN}}$ as shown in the image.

disco Meraki	Q. Search Dashboard		🕫 Announcements * 💿 Help *									
0001071700	This network is acting as the configuration template for <u>1 network</u> .											
	Addressing & VLANs											
NETWORK	Deployment Settings											
-	Mode	O Routed										
Network-wide		In this mode, the MXK will act as a layer 3 gateway between the subsensi configured beack. Client ruffic to an internet is stratistical OARHed to that its source IP becomes the uplink P-of the security appliance. Configure OR-po the <u>BECE stratistical sales</u> .										
		Passthrough or VPN Concentrator										
Cellular Gateway		This option can be used for two deployment models: in-line passthrough or one-arm concentrator. In a passthrough deployment, the security appliance										
Security & SD-WAN	CONFIGURE	cere and occentration: in a parasitrough registrough sequences, the security adjustment acts as a Layer 2-bridge, and does not route or transmiss cleant traffic. In a one-arm concentration deployment, the security appliance acts as a termination point for Merial Auk and WH staffic to and there are the security appliance acts as for more information on how to deploy as MK in one-arm concentrator mode, see au <u>c</u> concentration										
Switch	Addressing & VLANs Wireless settings											
Wireless	DHCP											
Organization	Firewall											
	Site-to-site VPN	O MAC address — Default										
	Active Directory	Clients are identified by their MAC addresses. You should use this if client devices and your security appliance are on the same subnet and broadcast.										
	SD-WAN &	domain. Clients behind a layer 3 routing device downstream from this security appliance will not be identified.										
	traffic shaping	IP address										
	Content filtering	Clients are identified by their IP addresses. You should use this if there are non-Merchi laws 3 devices service demonstration effects.										
	Access control	neur mettens regen is vermeter sowong vermine een unterne.										
	Splash page											
	Wireless concentrator											
	Routing											
	LAN setting	VLANs Single LAN										
	Subnets	🐲 🔹 Search by VLAN name, MX (P. 🛛										
		ID VLAN name Subnet M0X IP Oroup policy VPN mode										
		1 LAN /29 from 10.0.0/8 Auto-generated None Enabled										
		2 NO DHCP /29 from 10.0.0.0/8 Auto-generated None Enabled										

Meraki MX Security Appliance Routing Setting

When you configure the new Layer 3 Interface on the Meraki MS425 stack switch And Meraki MX Security Appliance, refer to observed symptoms.

1. Meraki stack switch and MX Security Appliance goes in Unreachable state in Meraki dashboard, Meraki MS switch and MX Security Appliance device lost the connectivity to Meraki dashboard.

2. Meraki stack switch and Meraki MX Security Appliance stops forward traffic.

3. Change in the L3 interface would trigger the Meraki stack switch and Meraki MX Security Appliance number the wrong VLAN for routes.

Solution

Meraki MS Stack Switch:

1. Add a new Layer 3 interface on the Meraki stack switch and Reboot the stack switch. This refresh the correct VLAN route information and the Meraki stack start forward the traffic. (Temporary fix)

2. Upgrade Meraki stack switch software version to MS 15.8 or later release.

Meraki MX Security Appliance:

1. Add a new Layer 3 interface on the MX Security Appliance and Reboot the MX Security Appliance. This refreshes the correct VLAN route information and the Meraki Security Appliance starts forward the traffic. (Temporary fix)

2. Upgrade Meraki MX Security Appliance software version to MX 15.8 or later release.