# Introduction

This document will be an overview of Catalyst on Meraki. This will primarily cover monitor mode.

# Prerequisites

The following are required to follow this document.

- Organization Admin access to the desired Meraki tenant
- Organization API key
- Catalyst switch(es)
- User account with priviledge-15
- A PC capable of running the Catalyst Onboarding application

# Resources and Documentation

There is a plethora of documentation provided by Meraki; these can sometimes be hard to fine. Here is a list of some of the more vital documentation.

Cloud Monitoring for Catalyst

Cloud Monitoring for Catalyst Onboarding

Cloud Monitoring Detailed Device Configurations

Cloud Monitoring Required Configuration

IOS XE image upgrades (Cloud Monitoring for Catalyst switches)

Configuration History

# Before You Begin

There are a couple things that need to be verified before beginning. First the Cloud Monitoring features need to be enabled in the *Organization > Early Access* section.

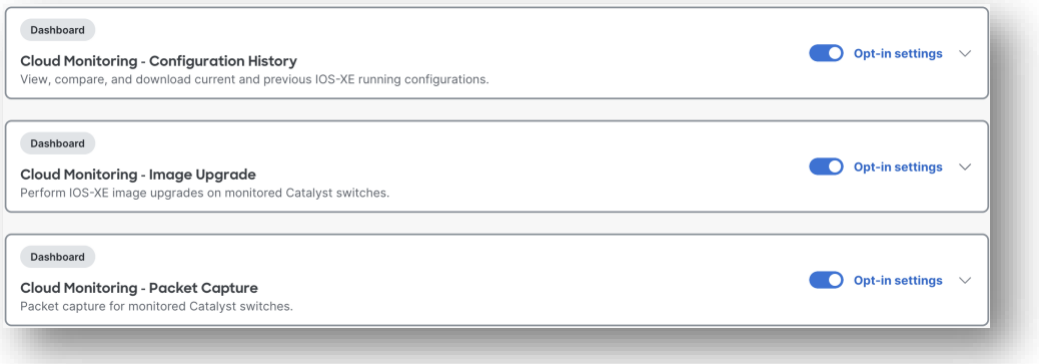


*Figure 1: Early Access options for Catalyst Monitoring*

An API key generated by the default Organization Administrator (this will not work if using an API key generated by someone logging in via SAML or a personal API key) for the Onboarding application to function properly. This can be access by navigating to the user profile and scrolling down to the *API access* section.

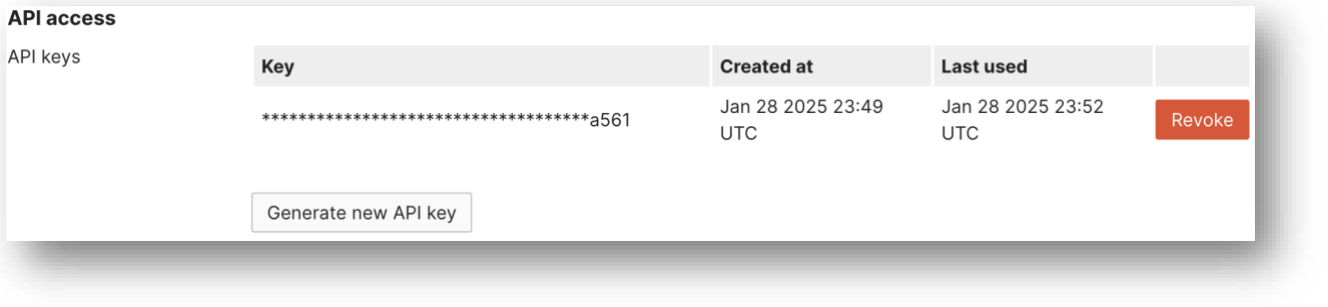


*Figure 2: User profile API access*

There are also various caveats to be aware of, these are all listed in the Cloud Monitoring for Catalyst Onboarding. A few of those are highlighted here.

- IOS-XE firmware 17.3 – 17.10.1 and 17.12.3 – 17.12.4
- The management IP of the switch(es) onboarded requires access to the internet the Meraki Dashboard
- The out-of-band management port is not supported
- Only the default VRF is supported
- DNS needs to be properly configured
- NTP needs to be properly configured
- AAA has to be configured and using **aaa new-model**

NETCONF utilizes port 830 and must not be bound to another port such as if you were using Cisco Catalyst Center (formerly DNA Center) to manage devices, which requires you to manually select the NETCONF port. If moving devices from Catalyst Center to Meraki in Monitor Mode be sure to fully deprovision the device from Catalyst Center as there is a lot of configuration overlap between the two and could potentially cause a conflict during onboarding.

Monitor mode also requires several VTY lines. It is recommended that only VTY lines 0 to 15 are used in the base configuration. Otherwise, when onboarding a switch there could be issues with the Onboarding applying its configuration to the device.

# Usage

## Firmware Updates

With a Catalyst device in monitor mode, you are now able to manage firmware updates. To do so navigate to *Organization* > *Firmware Upgrades* > *Schedule Upgrades* > *Cloud Monitored* to schedule an upgrade on any device.

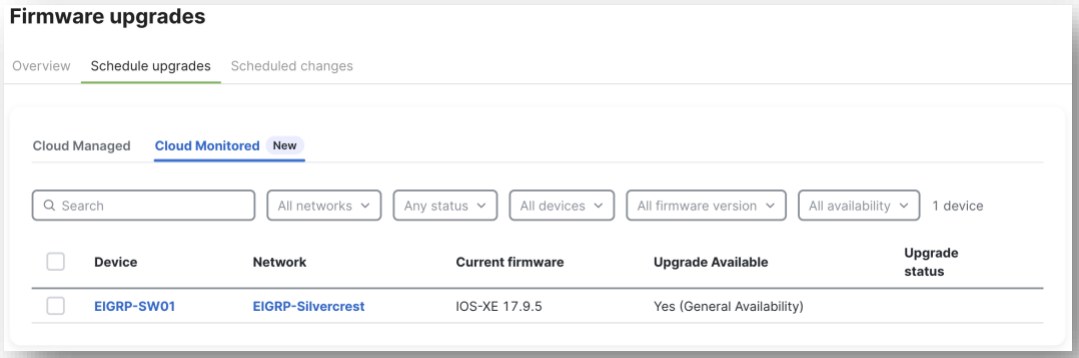


*Figure 3: Firmware Upgrade Selection Menu for Cloud Monitored Devices*

## Configuration History

With a Catalyst device in monitor mode, you are now able to view configuration history on the device. Just navigate to the device and select the *Config history* tab. This also allows you to compare configurations, copy, and download them.

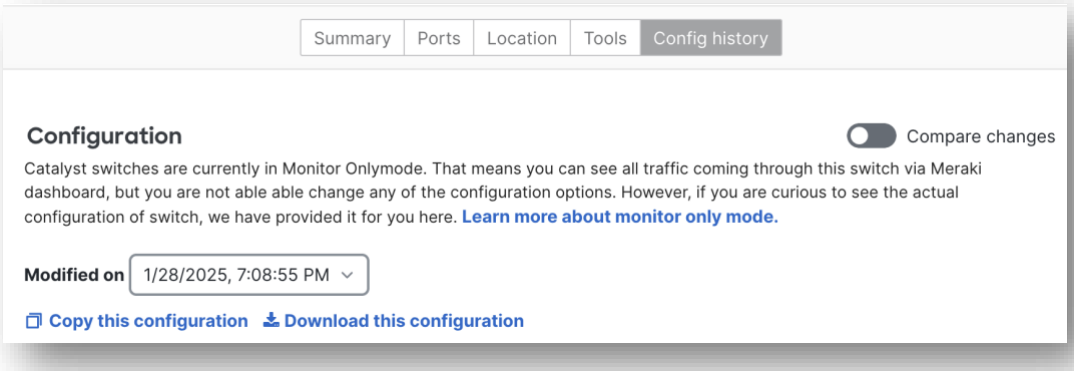


*Figure 4: Configuration History*

## Tools

There are now several tools that can be used on a monitored Catalyst device. This includes a limited terminal which only permits read-only commands, cycling ports on and off, and viewing the mac-address table among others.

## Stacking

The stacking ports are shown in the Meraki dashboard, not to be confused with an uplink port.

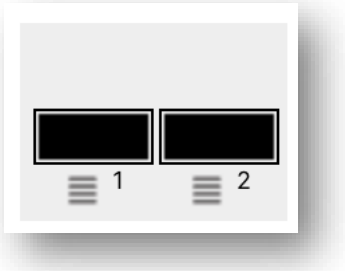


*Figure 5: Stacking Ports*

Switches in the Meraki dashboard are listed as a separate device regardless if they are in a stack or not. If they are in a stack the Meraki dashboard appends a hyphen followed by the stack ID of the switch to the end of the name in the dashboard. It is critical to ensure that the physical configuration matches both in the Meraki dashboard and the switch configuration itself to avoid confusion in the future.

The procedure to add a switch to a stack is the same and the new switch(es) will be detected and added to the dashboard automatically.

If onboarding a pair of switches in a SVL configuration such as a pair of 9500 switches, these switches will be treated like a standard Stackwise stack in the Meraki dashboard.

## CLI

There are several show commands for Meraki in the CLI.

```
EIGRP-SW01#show meraki ?
  compatibility  Show meraki compatibility
  connect        meraki connect info
  switch         Switch
  |              Output modifiers
  <cr>           <cr>

EIGRP-SW01#show meraki
Switch                  Serial                                                  Migration
Num    PID              Number          Cloud ID        Mac Address       Status        Mode
-------------------------------------------------------------------------------------------
1   C9300-24UX          FCW2307C0XN     N/A             N/A               N/A           C9K-C
EIGRP-SW01#show meraki switch 1
Switch                  Serial                                                  Migration
Num    PID              Number          Cloud ID        Mac Address       Status        Mode
-------------------------------------------------------------------------------------------
1   C9300-24UX          FCW2307C0XN     N/A             N/A               N/A           C9K-C
EIGRP-SW01#show meraki compatibility
===========================================================================================
Meraki Cloud Monitoring: Compatible
===========================================================================================
Meraki Cloud Management:
Compatibility Check  Status
-------------------------------------------------------------------------------------------
Boot Mode       INSTALL  - Compatible
-------------------------------------------------------------------------------------------
Switch#  SKU                                    Bootloader Version              Network Modules
-------------------------------------------------------------------------------------------
1        C9300-24UX          - Compatible    17.12.1r        - Compatible    N/A
-------------------------------------------------------------------------------------------
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Compatible SKUs: C9300-24P, C9300-24T, C9300-24U, C9300-24UX, C9300-48P, C9300-48T, C9300-48U,
C9300-48UN, C9300-48UXM, C9300X-48HX, C9300X-48TX, C9300X-48HXN, C9300X-24HX, C9300L-24T-4X,
C9300L-24P-4X, C9300L-48T-4X, C9300L-48P-4X, C9300L-48PF-4X, C9300L-24UXG-4X, C9300L-48UXG-4X,
C9300-24S, C9300-48S, C9300X-12Y, C9300X-24Y
Compatible NMs : C3850-NM-2-40G, C3850-NM-4-10G, C3850-NM-8-10G, C9300-NM-2Q, C9300-NM-8X, MA-MOD-
2X40G, MA-MOD-4X10G,
                 MA-MOD-8X10G, C9300X-NM-8Y, C9300X-NM-2C, C9300-NM-2Y
-------------------------------------------------------------------------------------------
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EIGRP-SW01#
```

The Meraki connector is only enabled for switches being managed my Meraki and thus does not apply to devices in Monitor mode.

When a device is onboarded to Meraki it is assigned