



# FIREFLY

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## Installing and Configuring Meraki MS Switch Appliances

DURATION: 2 DAYS

COURSE CODE: ICM-SA FORMAT:

HANDS-ON TRAINING

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### COURSE DESCRIPTION

This course provides students with the skills to configure, optimize, and troubleshoot a Cisco Meraki switching solution. Students will learn how to install and optimize Meraki MS Switches. Students will also learn how to configure the Meraki Dashboard. Student will troubleshoot and configure the Meraki environment and learn how to diagnose and resolve user and Network issues that may arise.

### WHY FIREFLY

The best instructors: networking gurus who are among the top 10% as rated by Cisco

The best labs: code is updated frequently so you are always working on the latest recommended releases

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### WHO SHOULD ATTEND

IT Staff and Managers

Network and systems personnel and engineers

Small to mid-sized organizations that require fundamental knowledge on networking terms/concepts and configuration guidance for Meraki equipment

Organizations looking to implement remote sites, provide a guest wireless solution, and collect user analytics

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### LEARNING OBJECTIVES

Navigate and configure the dashboard

Add MX/MS devices to the Dashboard

Configure Configuration Templates

Configure Group Policies

Manage, configure, and integrate users and RADIUS policies

Configure, monitor, and troubleshoot MS switches

Troubleshoot devices and connectivity

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## COURSE OUTLINE

### 1. Introduction to Meraki

- The Meraki Mission
- Cisco Meraki: Bringing the Cloud to Enterprise Networks
- Cloud-Managed Networking Architecture
- Benefits of a Cloud-Based Solution
- The Meraki Full Stack: New and Unique Value Proposition
- Meraki Deployment – How it works
- Why Customers Choose Meraki
- Meraki MS Switches Overview
- Meraki API Overview
- Meraki Licensing
- Enterprise Support
- Cisco Meraki Documentation

### 2. Cloud Management with the Meraki Dashboard

- The Meraki Dashboard
- Dashboard: Organizational Structure
- Out-of-band Cloud Management
- Loss of Connectivity to the Cisco Meraki Cloud
- Meraki Dashboard Logins
- Create Dashboard Accounts and Organization
- MSP Logins - Manage Multiple Organizations
- Modify an Organization
- View Organizations Health
- Meraki Dashboard Best Practices
- Dashboard Search
- Meraki Help
- Organizational Wide Settings
  - Configure
    - Configuring Organizational Wide Settings
    - Using Configuration Sync to View and Copy Settings
    - Administrators
    - Configuring and Monitoring Licensing
    - Creating Bulk Networks
    - Creating and Managing Networks (sites)
    - Managing the Meraki Inventory
  - Monitor
    - Overview
    - Monitoring the Change log
    - Monitoring Login Attempts
    - Monitoring the Security Center
    - Using Location Analytics
    - Monitoring VPN Status
    - Scheduling and Managing Firmware
    - Using the Summary Report

- Create and Manage Configuration Templates

  - Understand Configuration Templates

  - VLAN Templates

  - Attach Network to Configuration Templates

- Network-Wide Settings

  - Configure

    - Configuring Network Wide General Settings

    - Traffic Analysis

    - Location and Scanning

    - Configuring CloudShark for Capturing Traffic

    - Manage the Local Status Page

    - Manage Syslog, SNMP, Location, and NetFlow Services

    - Managing Network Admins and Guest Ambassadors

    - Managing Network Users

    - Managing Port Management Privileges

    - Configuring Group Policies

    - Adding Devices to the Network

  - Monitoring Networks

    - Monitoring Clients

    - Monitoring Traffic Analytics

    - Displaying and Exploring the Meraki Topology

    - Performing Packet Captures

    - Using the event Log to Perform Troubleshooting

### 3. Meraki Switching

- MS Switch Platforms and Features

- MS Feature: Multi-gigabit Ethernet

- Cisco Meraki MS Access Switches

  - Meraki MS 120/220 Switch Family

  - Meraki MS 210/225 Switch Family

  - Meraki MS 210/225 Switch Family

  - Meraki MS 350/350X Switch Family

- Cisco Meraki MS Aggregation Switches

  - Meraki MS 410 Switch Family

  - Meraki MS 425 10 GB Switch Family

- Using Tags to search, monitor and configure Meraki Switches

  - Meraki Switch Configuration

    - Add a Switch to the Network

    - Configuring Switch Stacks

    - Configuring Warm Spare and VRRP

    - VLAN Configuration

## COURSE OUTLINE

### 3. Meraki Switching (Continued)

- Configuring Layer 2 and Layer 3

  - Configuring Static Routing

  - Configuring OSPF

- Configuring Access Control Lists (ACL)

- Configuring Access Policies (802.1X)

  - Integrating Radius and ISE with Access Policies

- Configuring DHCP Servers on Switches

- Configuring Spanning Tree

- Configuring Quality of Service

- Configuring Switch MTU

- Configuring Multicast Routing

  - Internet Group Management Protocol

- Port Configuration

  - Configuring Ports on a Switch

  - Configuring Ports using Ranges and Search Criteria

  - Configuring Ports on a Switch Stack

  - Configure Link Aggregation on a Switch

  - Configuring Port Schedules

  - Configuring Access Policies

  - Configure Port Mirroring

- Meraki Switch Monitoring

  - Monitoring Switch Status

  - Monitoring Switch Port Status

  - Monitoring Real-time and Historical Data

  - Monitoring DHCP on the Switch

  - Monitoring Power

  - Monitoring DHCP and Routing

  - Monitoring Event Logs

  - Summary Reports

- Troubleshooting Tools

  - Turn on Switch Blinking for Switch Identification

  - Performing Packet Captures

  - Performing Cable Tests

  - Performing Port Reset

  - Performing Throughput Tests

  - Performing device Reboots

  - Using ARP and Route Tables for Troubleshooting

  - Troubleshoot using Ping and Traceroutes

- Managing Firmware Upgrades

## DISCOVERY LABS

### 1: Configuring the Organization

- Configure Organizational Settings
- Add All Devices to Organization
- Create Networks
- Manage Network-Wide Settings
- Create group Policies
- Manage Firmware Upgrades
- Create Templates
- Manage VLAN Templates
- Bind Templates to Networks

### 2: Configuring MS Switches

#### Switch Configuration

- Configure Basic Switch Settings
- Configure Switch Stack
- Configure Spanning Tree
- Create Layer 3 Interfaces
- Configure DHCP server
- Create a Static Route
- Configure OSPF Routing
- Configure ACLs
- Create Access Policies
- Configuring Packet Captures
- Configure Port Policies

#### Configure Switch Using a Network Template

- Configure Spanning Tree
- Create Layer 3 Interfaces
- Create a Static Route
- Configure OSPF Routing
- Configure ACLs
- Create Access Policies

#### Configuring Ports

- Configure Trunk Ports
- Configure Access Ports
- Set VLAN on Multiple Ports
- Configure Link Aggregation
- Configure Port Schedules
- Configure Port Mirroring

#### Meraki Switch Monitoring

- Monitoring Switch Status
- Monitoring Switch Port Status
- Monitoring Real-time and Historical Data
- Monitoring DHCP on the Switch
- Monitoring Power

- Monitoring DHCP and Routing
- Monitoring Event Logs
- Summary Reports
- Troubleshooting Tools
  - Turn on Switch Blinking for Switch Identification
  - Performing Packet Captures
  - Performing Cable Tests
  - Performing Port Reset
  - Performing Throughput Tests
  - Performing device Reboots
  - Using ARP and Route Tables for Troubleshooting
  - Troubleshoot using Ping and Traceroutes
- Managing Firmware Upgrades