



FIREFLY

Installing and Configuring Meraki MR Wireless Aps

DURATION: 3 DAYS

COURSE CODE: ICM-WA

FORMAT: HANDS-ON TRAINING

COURSE DESCRIPTION

This course provides students with the skills to configure, optimize, and troubleshoot a Cisco Meraki solution. Students will learn how to install and optimize Meraki MR Access Points. Students will also learn how to configure the Meraki Dashboard, 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

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

LEARNING OBJECTIVES

Navigate and configure the dashboard

Add MX/MR/MS/MV devices to the Dashboard

Configure Configuration Templates

Configure Group Policies

Manage, configure, and integrate users and RADIUS policies

Configure, monitor, and troubleshoot MR Access Points

Monitor Meraki network health

Troubleshoot devices and connectivity

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 MX Security Appliances Overview
- Meraki SD-WAN Overview
- Meraki MR Wireless Access Points Overview
- Cisco Meraki Systems Manager Overview
- Cisco Meraki MV Vision Security Cameras 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

Organizational Wide Settings

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 MR Wireless

- Meraki MR Wireless Overview
- Meraki 2.5G Multigigabit (MGig) Wireless
- Meraki Mesh Routing
- Meraki's solution for RF Environments
- Securing Guest Wireless

COURSE OUTLINE

3. Meraki MR Wireless (Continued)

- Bluetooth Integrated Analytics
- Meraki Location Heatmap
- High Density Wireless
- Zero-Touch Provisioning for Wireless
- Dedicated Scanning Radio for Rouges and Interference
- Mounting indoor and Outdoor Antennas
- Meraki MR Licensing
- IEEE 802.11 Wireless LAN Standards
 - 802.11b/g 2.4 Spectrum
 - 802.11b/g 2.4 Channel Plan
 - 802.11a/ac 5 GHz
- Site Survey & Design for ensuring connectivity and user experience
 - Channel Planning
- Meraki AP Models Overview
 - Meraki Legacy APs
 - Meraki Indoor APs, Antennas, and Radiation Patterns
 - Meraki Outdoor APs, Antennas, and Radiation Patterns
 - Meraki MGig APs
 - Meraki AP External Power options
- Configuring Meraki APs
 - Connecting APs to the Network
 - Configuring Basic information including Tags
 - Configuring Layer 3 Roaming
 - Configuring ISE Integration with Access Policies
 - Configuring Access Policies for Wireless
 - Configuring Wireless RF Radio Settings
 - Auto RF
 - Transmit Power Control
 - Channel Selection
 - Band Steering
 - Client Balancing
 - Configuring Bluetooth for Analytics
 - Guest Self-Registration
 - Configuring Splash Pages
 - Configuring Floor Plans
 - Placing APs on the FloorPlans
 - Configuring RF Channel and Power Settings
 - Configure Air Marshall to Isolate Rouge APs and Clients

- Configuring SSIDs
 - Provisioning SSIDs
 - Open with Splash Pages
 - Click-Through
 - Systems Manager Sign-in
 - Facebook Sign-in
 - Google Sign-in
 - SMS Authenticated
 - Billing Configuration for SSIDs
 - Using Preshared Keys with WPA2
 - Using WPA2-Enterprise SSIDs with 802.1X
 - RADIUS
 - Cisco ISE
 - MAC-based Access Control Filtered SSIDs
- Firewall & Traffic Shaping Configuration for Wireless
 - Block local network for Guests
 - Layer 3 Firewall Rules
 - Block Applications
 - Traffic Shaping Rules per SSID
- Monitoring Meraki APs
 - Monitoring AP Status
 - Using Meraki Wireless Health
 - Monitoring Clients
 - Monitoring RF Metrics
 - Monitoring the RF Spectrum
 - Monitoring SSID Availability
- Trouble Shooting
 - Using Heatmaps to Troubleshoot RF Issues
 - Identify Problematic Areas
 - Signal Attenuation
 - Ping and Traceroute
 - Reboot Device
 - Blink LEDs
 - Throughput
 - Checking PCI Compliance
 - Using the Event Log for Troubleshooting

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: Perform Basic Switch Configuration

- Configuring Meraki APs
 - Connecting APs to the Network
 - Configuring Basic information including Tags
- Configuring SSIDs
 - Provisioning SSIDs
 - Open with Splash Pages
 - Click-Through
 - Systems Manager Sign-in
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 - SMS Authenticated
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Monitoring Meraki APs

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Trouble Shooting

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