MER-FS-ADMIN - Administering and Troubleshooting Meraki Full Stack (MX,MS,MR,MV,MI,SM,MT) Technologies v1.0 Training

Duration: **5 Day**

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The five-day instructor-led Hands-on Meraki Full Stack MX SDWAN/Security, Meraki MS, and Catalyst Switches, Meraki Access Points, Meraki Smart Camera, Meraki Sensors, and Meraki Systems Manager. Students learn how to deploy, manage, and secure a network infrastructure using Cisco Meraki's integrated Full Stack technologies. This extensive training program addresses the specific challenges and compliance standards administrators face, ensuring that participants can build and maintain a secure, efficient, and resilient network environment.

By the conclusion of this course, participants will be well-equipped with the necessary knowledge and skills to ensure the reliability, security, and efficiency of networks using Cisco Meraki MX Security Appliances, MS and Cisco Catalyst switches, and Meraki Wireless Networks. This includes a comprehensive understanding of how to design, implement, manage, and troubleshoot these networks effectively, making them invaluable assets to their respective agencies or departments.

Use this course towards your Cisco Continuing (CE) Education Credits (40)

Who Should Attend?

This course is specifically tailored for IT professionals working in networks who are keen on enhancing their proficiency in managing and troubleshooting networks utilizing Cisco Meraki MX Security Appliances, MS and Cisco Catalyst switches, and Meraki Wireless Networks.

The course is highly recommended for:

- **Network Engineers:**
  - Professionals tasked with the design, implementation, and maintenance of network infrastructure. This includes managing Wireless and data communication systems, ensuring they meet the high standards required for operations.
- **System Administrators:**
  - Individuals responsible for the daily management and configuration of network systems. Their role is crucial in ensuring the reliable operation of Meraki services across various departments.
- **IT Professionals:**
  - This group includes a wide range of IT personnel working within agencies who require a robust understanding of secure and reliable Meraki network systems. Their work is critical in ensuring these networks comply with stringent standards and regulations.
- **Technical Support Staff:**
  - These are the frontline personnel who provide essential technical support for Meraki network systems within environments. Their expertise ensures that any issues are promptly resolved to maintain network integrity and security.
- **Cisco Certified Professionals:**
  - Individuals who have already achieved Cisco certifications and are looking to further their knowledge and expertise, specifically in Meraki Networks and Technologies. This course allows them to specialize in Meraki solutions, enhancing their skill set in the context of network requirements.

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What You Will Learn

After completing this course, you will learn about:

- Meraki MX Security and SD-WAN Appliances
- Meraki MS and Catalyst Switches
- Meraki Wireless Access Points
- Meraki MV Smart Cameras
- Meraki MT Sensors
- Meraki SM Mobile Device Management
- Practical Labs and Exercises

Training Outline

Module 1: Introduction to Meraki

- Why Cisco Meraki?
- Meraki Product Overview
- Meraki Support

Module 2: Meraki Licensing

- Meraki Licensing Overview
- Co-Termination Licensing Overview
- Co-Term Licensing in the Dashboard
- Per Device Licensing (PDL) Overview
- PDL in the Dashboard
- Subscription Licensing Overview
- Subscription Licensing in the Dashboard

Module 3: Configuring the Meraki Dashboard

- Security Center
- Configuring Network-Wide Settings
- Network-Wide Administrators & Users
- Network-Wide > Add Devices
- Monitoring Clients
- Group Policy
- Configuring Location / Mapping Devices
- Configuring Templates
- Meraki RADIUS, ISE & Adaptive Policy Overview
- Umbrella Overview
- Meraki App
- Meraki Dashboard, Organizations, and Networks
- Help & Support
- Organizational-Wide Configure Settings
- Configuring Administrators
- Creating Networks & Managing Inventory
- Organization > Overview Page
- Login Attempts

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- VPN Status
- Manage Firmware
- Summary Reports
- Organization Summary

Module 4: Meraki MX Security Appliances

- MX Models & Features
- Cellular Capabilities
- Local Status Page
- Initial Setup using the Appliance Status Page
- Addressing & VLANS
- DHCP
- Access Control
- Splash Pages
- Teleworker VPN With MX & MR
- Security Introduction
- Firewall Configuration
- Threat Protection
- Content Filtering
- Meraki SD-WAN with Site-to-Site VPNs
- Configuring Meraki SD-WAN
- Monitor Site-to-Site VPNs
- Meraki SD-WAN & Traffic Shaping
- Routing
- Client VPN
- Active Directory

Module 5: Meraki Switch Overview

- Meraki MS Warm Spare Virtual Router Redundancy Protocol (VRRP)
- Meraki Switch Open Shortest Path First (OSPF)
- Meraki Switch Access Control Lists
- Meraki Switch Access Policies (802.1X)
- Organization-Wide Radius
- Access Policy
- Meraki Switch Port Profiles
- Meraki Switch Port Schedules
- Meraki Switch Staged Upgrades
- VLAN Profiles
- Meraki Switch Overview
- Meraki Switching Portfolio
- Catalyst Meraki 9200/9300 Switches
- Basic Switch Configuration
- Provisioning Switch Stacks
- Meraki Switch Settings
- Configuring Switch Ports
- Link Aggregation
- Mirroring Switch Ports
- DHCP Server Status
- Routing & DHCP
- Meraki Switch Multicast Configuration

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Module 6: Meraki Wireless APs

- Configuring SSID Availability
- Configuring Bluetooth Settings
- Configuring Port Profiles
- Wireless RF Radio Settings
- RF Spectrum
- Wireless Threats & Air Marshal
- Location Heatmap
- PCI Report
- Location Analytics
- Access Point Wireless Health Overview
- Wi-Fi Standards & Meraki AP Features
- Meraki WIFI 6 AP Models
- Meraki WIFI 6E Indoor Portfolio
- Meraki Antennas, Power, Mounts, & Accessories
- Wireless Design
- Wireless Configuration
- SSID Configuration with Access Control
- Per SSID - Firewall & Traffic Shaping
- Splash Page Configuration

Module 7: Meraki Troubleshooting Overview

- Troubleshooting Methodology
- Meraki Help and Support
- Configure and Monitor Alerts
- Change Log and Event Log
- Meraki Packet Captures
- Client Troubleshooting
- Meraki MX Troubleshooting
- Meraki MX Tools Tab
- Meraki MS Troubleshooting
- Meraki MS Tools Tab
- Meraki MR Troubleshooting
- Meraki MR Tools Tab

Module 8: Meraki Insight

- Meraki Insight Introduction
- Meraki Insight Licensing
- Meraki Insight Web App Health
- Meraki Insight WAN Health
- Meraki Insight VoIP Health
- MX Thousand Eyes Integration

Module 9: Meraki Gateways MG

- Wireless WAN Capabilities
- Cellular Solutions & MG Portfolio
- MG Design
- MG Appliance Page
- MG Settings

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Module 10: Introduction to Meraki MV Cameras

- MV Security Cameras Introduction & Features
- MV Camera Models
- Monitor > Cameras
- Basic Camera Configuration
- MV Camera Profiles
- MV Camera Intelligence Training
- MV Camera - Video Settings
- Viewing Analytics
- MV Video Access
- MV Export
- MV Cameras APIs
- Meraki MV Viewing Applications
- Viewing Meraki MV Video
- Meraki MV Video Wall
- Meraki Vision Portal

Module 11: Meraki Systems Manager

- Systems Manager Tags
- Scopes Using Target Groups
- Configuration Profiles
- Sentry Using Profile Settings
- App Management
- Systems Manager Alerts
- Why use Systems Manager?
- Sentry Overview
- SM Supported Devices & Licenses
- Systems Manager Features
- Creating an EMM Network
- Organizational MDM Settings
- Systems Manager (SM) Configuration
- Enrolling Devices

Module 12: Meraki Sensors

- What is – Meraki Sensors?
- MQTT (Message Queuing Transmit Telemetry) – The IOT Protocol