MER-MXSDWAN - ADMINISTERING MERAKI MX (SDWAN/SECURITY) APPLIANCES V2.0

Course Code: 821656

This five-day, instructor-led, hands-on course on the Meraki MX SDWAN/Security course offers comprehensive training on deploying, managing, and troubleshooting the Cisco Meraki MX security and SD-WAN solutions in environments. This course is designed to equip participants with the knowledge and skills necessary to leverage these solutions for enhancing network security, improving operational efficiency, and ensuring compliance standards for data protection and privacy. Through theoretical learning and practical exercises, attendees will gain hands-on experience configuring advanced security features, optimizing traffic flow across wide-area networks, and utilizing cloud management capabilities to monitor and control network devices remotely. By the end of the course, participants will be well-prepared to implement and manage Cisco Meraki MX solutions effectively within departments, ensuring a secure, resilient, and high-performance network infrastructure.

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. This includes a comprehensive understanding of how to design, implement, manage, and troubleshoot these networks effectively, making them invaluable assets to their respective departments.

What You'll Learn

- Dashboard Navigation and Configuration
- Understanding Meraki MX Licensing
- Organizational and Network Settings Configuration
- Utilization of Templates and Group Policies
- MX Networks and Devices Management
- MX Interfaces, Addressing, and VLAN Configuration
- VPN and Firewall Configuration Across MX Networks
- Implementing SD-WAN and Traffic Shaping
- Site-to-site and Remote Access VPNs
- Access Control, Content Filtering, and Threat Protection
- User Management with Active Directory, ISE, and Radius
- MX Security Appliance Monitoring and Troubleshooting

- Client, Device, and Connectivity Monitoring and Troubleshooting

Who Needs to Attend

This course is specifically tailored for professionals working in or with networks who are keen on enhancing their proficiency in managing and troubleshooting networks utilizing Cisco Meraki MX Security Appliances.

The course is highly recommended for:

- **Network Engineers:**
  - Professionals tasked with the design, implementation, and maintenance of network infrastructure. This includes managing both voice and data communication systems, ensuring they meet the high standards required for operations.
- **System Administrators:**
  - Individuals responsible for the daily management and configuration of the 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 issues are promptly resolved to maintain network integrity and security.
- **Cisco Certified Professionals:**
  - Individuals who have already achieved Cisco certifications 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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CLASSROOM LIVE	$4,395 USD	5 Day

Classroom Live Outline

Module 1: Introduction to Meraki

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

Module 2: Meraki MX Licensing

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

Module 3: Meraki MX Security Appliances

- MX Models & Features
- Meraki vMX
- MX Capabilities & Sizing Guidelines
- MG - Meraki Cellular Gateway
- Local Status Page
- Manage MX Firmware

Module 4: Configuring the Meraki Dashboard

- Meraki Dashboard, Organizations, and Networks
- Organizational - Wide Configure Settings
- Configuring Administrators
- Creating Networks and Managing Inventory
- Organization > Overview Page
- Configuring Network - Wide Settings

- Network - Wide Administrators & Users
- Network - Wide > Add Devices
- Configuring Location / Mapping Devices

Module 5: Meraki MX Configuration

- Initial Setup using the Appliance Status Page
- Addressing and VLANs
- DHCP

Module 6: Meraki MX Security Configuration

- Security Introduction
- Firewall Configuration
- Threat Protection
- Lesson 4: Content Filtering

Module 7: Meraki Authentication with Active Directory, ISE, and Radius

- Managing Users
- Access Control
- Meraki Splash Page
- Active Directory Users and Group Meraki Integration
- Meraki Integration with Cisco Identity Services Engine (ISE)
- Meraki Radius Integration

Module 8: Meraki Adaptive Policy

- Adaptive Policy Architecture
- Configuration
- AutoVPN transport
- Compatibility with other Cisco Technologies

Module 9: Meraki SDWAN Configuration

- What is Meraki SD-WAN?
- How does it work?
- Designing SD-WAN
- DIA Design
- Configuring Meraki SD-WAN
- Routing with OSPF and BGP
- Data Center Redundancy
- Meraki SD-WAN and Traffic Shaping

Module 10: Meraki Integration with Umbrella

- Meraki Integration with Umbrella
- Enabling Umbrella (From the Umbrella Dashboard)
- Enabling Umbrella (From the Meraki Dashboard)
- Creating an Umbrella Policy (From the Umbrella Dashboard)
- Applying Umbrella Policies
- Using Umbrella for Meraki SDWAN

Module 11: Meraki Secure Connect (SASE)

- Meraki Secure Connect Solution Overview

- Cisco Secure Connect Account
- Secure Connect Cloud
- Configure Client - Based Remote Access Service
- Define Private Applications and Configure Application and Network Access Policies
- Configure Internet Usage and Security Policies

Module 12: MX Client VPNs

- Configuring Remote Access VPNs
- L2TP Client VPN Configuration
- Cisco AnyConnect VPN Configuration
- How to Use AnyConnect

Module 13: Meraki IPv6 Configuration

- Meraki IPv6 Overview
- Meraki IPv6 Features on Meraki
- Meraki IPv6 Dual Stack
- IPv6 DHCP and Addressing
- IPv6 Management Protocols
- IPv6 Security and ACLs
- Dual-Stack Local Device Management

Module 14: MX Insight and ThousandEyes

- Meraki Insight Introduction
- Meraki Insight Licensing
- Meraki Insight Web App Health
- Meraki Insight WAN Health
- Meraki Insight VoIP Health
- Meraki Insight Alerting
- Thousand Eyes Internet Outages
- Thousand Eyes Active Application Monitoring

Module 15: MX Monitoring Troubleshooting

- Meraki Troubleshooting Methodology
- Meraki Help and Support
- Troubleshooting Uplinks to the Dashboard
- Meraki Event Monitoring
- Meraki Packet Captures
- Meraki MX Troubleshooting Tools
- Troubleshooting WAN Links
- Troubleshooting Client Connections
- Troubleshooting Authentication Issues

Module 16: Meraki MX APIs

- Meraki API and Integration Overview
- Meraki API Technologies and Tools
- Meraki Dashboard API
- Using Postman with Meraki

- Meraki Dashboard API Python Library
- Use Case - Pulling Statistics from Meraki Devices
- Meraki Tools
- Meraki Action Batches

Module 17: Meraki MX Cloud Integration with VMX

- Meraki vMX Overview
- Meraki vMX Sizing
- Deploying VMX to AWS
- Deploying VMX to AZURE
- Deploying VMX to GCP
- Deploying VMX to NFV / ESXi

Classroom Live Labs

Lab Outline

Lab 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

Lab 2: Configuring MX Appliances and Z3 Teleworker Devices

- Configure MX Appliance and Configure Z3 Appliance
  - ⬚ Setup VLANs and Layer 3 Interfaces
  - ⬚ Setup a VPN Concentrator
  - ⬚ Setup and Manage DHCP Settings
  - ⬚ Configure Layer 3 Firewall Settings
  - ⬚ Configure Layer 7 Firewall Settings
  - ⬚ Configure Content Filtering
  - ⬚ Configure Traffic Shaping
  - ⬚ Configure SDWAN Feature and traffic Distribution
  - ⬚ Configure Site-to-site VPN
  - ⬚ Configure Client VPN
  - ⬚ Integrate Active Directory with Group Policy Settings
  - ⬚ Create Traffic Shaping Policies
  - ⬚ Configure Access control with Radius and ISE
  - ⬚ Create and Configure Splash Pages
- MX Appliances and Z3 Verification and Troubleshooting
  - ⬚ Verify and Trouble Shoot Appliance Status

- Verify and Trouble Shoot Site to Site VPN
- Verify and Trouble Shoot Firewall Settings
- Check the Routing Table
- Use the Tools
- Troubleshooting with Packet Capture

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Mar 9 - 13, 2026 | 8:00 AM - 5:00 PM CDT

May 18 - 22, 2026 | 8:00 AM - 5:00 PM CDT

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PRIVATE GROUP TRAINING	3 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.