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Administering Meraki MX (SDWAN/Security) Appliances v2.0 (MER-MXSDWAN)

Administering Meraki MX (SDWAN/Security) Appliances v2.0 (MER-MXSDWAN)

This course delivers an in-depth, end-to-end exploration of Cisco Meraki MX security and SD-WAN solutions, guiding learners from foundational concepts through advanced configuration, monitoring, troubleshooting, and automation. Participants begin with an introduction to Cisco Meraki and its cloud-managed architecture, followed by a detailed examination of Meraki licensing models, including co-termination, per-device, and subscription-based licensing, ensuring students understand how to properly plan, manage, and maintain Meraki environments. The curriculum then dives into Meraki MX security appliances, covering platform capabilities, sizing guidelines, cellular gateways, and local management, before transitioning into comprehensive Meraki Dashboard configuration for organizations, networks, administrators, firmware, policies, templates, and inventory management.

Building on the administrative foundation, the course provides extensive hands-on coverage of Meraki MX configuration and security, including addressing and VLANs, DHCP, teleworker VPNs, firewall policies, threat protection, and content filtering. Advanced identity and segmentation topics are addressed through deep integration with Cisco Identity Services Engine (ISE), Active Directory, TrustSec, Adaptive Policy, and RADIUS, enabling secure, scalable, and policy-driven network designs. Learners also gain strong expertise in Meraki SD-WAN design and deployment, covering traffic shaping, site-to-site VPNs, routing, data center redundancy, direct internet access, and interoperability with Cisco Catalyst SD-WAN, along with secure cloud and internet protection using Cisco Umbrella.

The course further emphasizes operational excellence through detailed monitoring, troubleshooting, and analytics modules, including IPv6 design and deployment, client and site VPNs, dashboard-based monitoring, syslog and SNMP, packet captures, alerting, and structured troubleshooting workflows. Advanced visibility and assurance are delivered through Meraki Insight, ThousandEyes integration, and AI-driven analytics, enabling root cause analysis across WAN, web applications, and voice traffic. The curriculum concludes with automation and cloud integration topics, such as Meraki APIs, action batches, vMX deployments across public cloud platforms, and optional modules covering Secure Connect and Cisco XDR, preparing students to design, secure, operate, and troubleshoot Cisco Meraki MX environments at enterprise scale.

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- Network Engineers
- System Administrators

Course Duration

5 days

Course Price

$4,395.00 or 45 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

- IT Professionals
- Technical Support Staff
- Cisco Certified Professionals

Prerequisites

- Basic Knowledge of Meraki MX Appliances

Module 0: Introduction
- Lesson 1: Introductions

Module 1: Introduction to Meraki
- Lesson 1: Why Cisco Meraki?
- Lesson 2: Meraki Product Overview

Module 2: Meraki MX Licensing
- Lesson 1: Meraki Licensing Overview
- Lesson 2: Co-Termination Licensing Overview
- Lesson 3: Co-Termination Licensing in the Dashboard
- Lesson 4: Per Device Licensing (PDL) Overview
- Lesson 5: PDL in the Dashboard
- Lesson 6: Subscription Licensing Overview
- Lesson 7: Subscription Licensing in the Dashboard

Module 3: Meraki MX Security Appliances
- Lesson 1: MX Models & Features
- Lesson 2: MX Capabilities & Sizing Guidelines
- Lesson 3: MG - Meraki Cellular Gateway
- Lesson 4: Local Status Page

Module 4: Configuring the Meraki Dashboard
- Lesson 1: Meraki Dashboard, Organizations, and Networks
- Lesson 2: Organizational - Wide Configure Settings
- Lesson 3: Configuring Administrators
- Lesson 4: Creating Networks and Managing Inventory
- Lesson 5: Organization > Overview Page
- Lesson 6: Manage MX Firmware
- Lesson 7: Configuring Network-Wide Settings
- Lesson 8: Network-Wide Administrators & Users
- Lesson 9: Network-Wide > Add Devices
- Lesson 10: Group Policy
- Lesson 11: Configuring Location / Mapping Devices
- Lesson 12: Configuring Templates

Module 5: Meraki MX Configuration
- Lesson 1: Initial Setup using the Appliance Status Page
- Lesson 2: Addressing & VLANS
- Lesson 3: DHCP
- Lesson 4: Teleworker VPN With MX & MR

Module 6: Meraki MX Security Configuration
- Lesson 1: Security Introduction
- Lesson 2: Firewall Configuration

- Lesson 3: Threat Protection
- Lesson 4: Content Filtering

Module 7: MX RADIUS, ISE, AD & Adaptive Policy
- Lesson 1: Cisco Identity Services Engine (ISE)
- Lesson 2: ISE with Meraki
- Lesson 3: ISE Integration with Meraki Switches
- Lesson 4: Cisco TrustSec (Software-Defined Segmentation)
- Lesson 5: Meraki Adaptive Policy
- Lesson 6: ISE Meraki Connector
- Lesson 7: Active Directory Users with Meraki Group Policies

Module 8: Meraki SDWAN Configuration
- Lesson 1: What is Meraki SD-WAN?
- Lesson 2: SD-WAN Concepts
- Lesson 3: Designing SD-WAN Networks
- Lesson 4: Direct Internet Access
- Lesson 5: Configuring Meraki SD-WAN
- Lesson 6: Monitor Site-to-Site VPNs
- Lesson 7: Meraki SD-WAN & Traffic Shaping
- Lesson 8: Data Center Redundancy
- Lesson 9: Routing
- Lesson 10: Meraki & Catalyst SD-WAN

Module 9: Meraki Integration with Umbrella
- Lesson 1: Meraki Integration with Umbrella
- Lesson 2: Enabling Umbrella (From the Umbrella Dashboard)
- Lesson 3: Enabling Umbrella (From the Meraki Dashboard)
- Lesson 4: Creating an Umbrella Policy (From the Umbrella Dashboard)
- Lesson 5: Applying Umbrella Policies

Module 10: MX Client VPNs
- Lesson 1: L2TP Client VPN Configuration
- Lesson 2: Cisco AnyConnect VPN

Module 11: Meraki IPv6 Configuration
- Lesson 1: Meraki IPv6 Overview
- Lesson 2: IPv6 Design & Deployment
- Lesson 3: Meraki MX IPv6 Configuration
- Lesson 4: MX IPv6 Addressing
- Lesson 5: IPv6 Concentrator Mode
- Lesson 6: IPv6 Security
- Lesson 7: Monitoring and Troubleshooting Meraki IPv6 Networks

Module 12: MX Monitoring
- Lesson 1: Meraki Monitoring Environments
- Lesson 2: Summary Reports
- Lesson 3: Organization Summary
- Lesson 4: Topology
- Lesson 5: Security Center
- Lesson 6: Login Attempts
- Lesson 7: VPN Status
- Lesson 8: Alerts
- Lesson 9: Simple Network Management Protocol (SNMP)

- Lesson 10: Syslog
- Lesson 11: Traffic Analytics
- Lesson 12: Monitoring Client
- Lesson 13: Meraki App

Module 13: MX Troubleshooting
- Lesson 1: Meraki Troubleshooting Methodology
- Lesson 2: Meraki Help and Support
- Lesson 3: Troubleshooting MX Management Tunnels
- Lesson 4: Troubleshooting a Faulty MX
- Lesson 5: Meraki MX Troubleshooting Tools
- Lesson 6: Change Log and Event Log
- Lesson 7: Meraki Packet Captures
- Lesson 8: Troubleshooting Uplinks to the Dashboard
- Lesson 9: Dashboard Alerts for Device Connectivity
- Lesson 10: Troubleshooting Client Connections

Module 14: MX Insight
- Lesson 1: Meraki Insight Introduction
- Lesson 2: Meraki Insight Licensing
- Lesson 3: Meraki Insight Web App Health
- Lesson 4: Root Cause Analysis for Web App Health
- Lesson 5: Smart Thresholds for Web App Health
- Lesson 6: Meraki Insight WAN Health
- Lesson 7: Meraki Insight VoIP Health
- Lesson 8: Meraki Insight Alerting

Module 15: ThousandEyes and MX
- Lesson 1: Thousand Eyes Introduction
- Lesson 2: MX Thousand Eyes Integration
- Lesson 3: Design & Technical Overview
- Lesson 4: Network Topologies and Deployment Considerations
- Lesson 5: ThousandEyes via Meraki App Platform
- Lesson 6: Enabling & Deploying ThousandEyes on the MX Platform
- Lesson 7: Thousand Eyes Active Application Monitoring
- Lesson 8: Thousand Eyes Internet Outages

Module 16: Meraki MX APIs and Integrations
- Lesson 1: Meraki API and Integration Overview
- Lesson 2: Meraki API Technologies and Tools
- Lesson 3: Meraki Dashboard API
- Lesson 4: Using Postman with Meraki
- Lesson 5: Meraki Dashboard API Python Library
- Lesson 6: AsyncIO
- Lesson 7: Dashboard APIs for MX
- Lesson 8: API VPN Map
- Lesson 9: Use Case - Pulling Statistics from Meraki Devices
- Lesson 10: Meraki Tools
- Lesson 11: Meraki Action Batches

Module 17: Meraki MX Cloud Integration with VMX
- Lesson 1: Meraki vMX Overview
- Lesson 2: Meraki vMX Sizing
- Lesson 3: NAT Mode on the vMX

- Lesson 4: Deploying VMX to AWS
- Lesson 5: Deploying VMX to GCP
- Lesson 6: Deploying VMX to AZURE
- Lesson 7: Deploying VMX to NFV/ESXi
- Lesson 8: Cloud On-Ramp & Cloud Integrations

Optional Modules

Module A: Secure Connect
- Lesson 1: Meraki Secure Connect Overview
- Lesson 2: Meraki Secure Connect Setup Process
- Lesson 3: Meraki Secure Connect Configuration
- Lesson 4: Meraki Secure Connect Guidelines
- Lesson 5: Sites Integration
- Lesson 6: Policy Best Practice

Module B: Monitoring Cisco XDR
- Lesson 1: Cisco Secure XDR Overview
- Lesson 2: Cisco XDR Telemetry
- Lesson 3: XDR Platform
- Lesson 4: Meraki SD-WAN and XDR
- Lesson 5: Meraki XDR Integration Details
- Lesson 6: XDR Verification & Troubleshooting
- Lesson 7: Viewing and Managing Incidents
- Lesson 8: XDR AI Analytics