



6210 Central Ave, Portage, IN. 46368 Phone: 219.764.3800 Fax: 219.764.3805 Web: <http://www.ctclc.com>



Implementing and Configuring Meraki MX, MS, MR, MV, MT Technologies v1.0 (ICMT-CT)

In this 5-day Meraki course provides students with the skills to Deploy, Monitor, and Troubleshoot a Full Stack Meraki Solution. Students to configure Organization / Network Settings using the Meraki Dashboard. Students will learn how to add Licenses, Devices, and Networks. Students will learn how to Deploy, Monitor, and Troubleshoot SDWAN / Security Appliances with Routing, DHCP, Firewall, Auto-VPN, AnyConnect, SDWAN, Traffic Shaping, Threat Protection, Active Directory and Access Control. Student will then learn how to Deploy and Configure MS Switches / Catalyst 9K Switches with Switch Stacks, VLANs, ACLs, Access Policies, Port settings, Spanning Tree, and Upgrades. Students will learn how to Deploy, Monitor, and Troubleshoot Meraki MR Access Points / Catalyst Converged APs with SSIDs, Access Control, Firewall, Traffic Shaping, Radio Settings, Bluetooth, RF Spectrum, Wireless Health, Splash Pages, Air Marshall, Location Heatmaps, and Umbrella. Student will then learn how to Deploy and Configure MV Cameras / MT Sensors with Camera Profiles, Camera Settings, Access Control, Meraki Vision, and Exporting Footage. Student will then learn how to Deploy and Configure Insight and Systems Manager (EMM/MDM). Students will Monitor and Troubleshoot the Meraki environment and learn how to diagnose and resolve the most common user and Network issues.

Why Attend with Current Technologies CLC

- Our Instructors are 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

Course Objectives

Following completion of this course, students will understand, Install, Configure, Monitor, and Troubleshoot the following:

- Navigate and Configure the dashboard
- Add MX/MR/MS/MV devices to the Dashboard
- Understand and Configure Configuration Templates
- Understand and Configure Group Policies
- Manage/Configure/Integrate Users and Radius Policies
- Configure, Monitor, and Troubleshoot MX Firewalls
- Configure, Monitor, and Troubleshoot MS Switches
- Configure, Monitor, and Troubleshoot MR Access Points
- Configure, Monitor, and Troubleshoot MT Sensors

Course Duration

5 day

Course Price

\$4,295.00 or 43 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

- Configure, Monitor, and Troubleshoot MV Cameras -Optional
- Configure Systems Manage (EMM/MDM) - Optional
- Use Meraki Insight to Monitor Meraki Network Health
- Troubleshoot devices and Connectivity

Who Should Attend

The primary audience for this course is as follows:

- 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
- This also includes organizations looking to implement remote sites, provide a guest wireless solution, and collect user analytics

Outline

Module 0: Introduction

- Module Introduction
 - Topic List
- Lesson 1: Introductions
 - Course Goal
 - WebEx Basics
 - General Administration
 - Introductions
 - The Integrated Cisco Network
- Module Summary

Module 1: Introduction to Meraki

- Module Introduction
 - Topic List
- Lesson 1: Why Cisco Meraki?
 - Cloud Management
- Lesson 2: Meraki Product Overview
 - Meraki MS Switches
 - Meraki MR Wireless Access Points
 - Meraki MX Security and SD-WAN Appliances
 - Meraki MV Vision Security Cameras (MG and MT)
 - Meraki Systems Manager (SM)
 - Meraki MT Sensors Access Points
 - Cisco Meraki Insight
- Lesson 3: Meraki API Overview
- Lesson 4: Meraki Licensing and Support
 - Enterprise Support and Hardware Warranties
 - Cisco Meraki Documentations

- Module Summary

Module 2: Cloud Management with the Meraki Dashboard

- Module Introduction
 - Topic List
- Lesson 1: Overview of the Meraki Dashboard
 - The Cisco Meraki Dashboard
 - The Meraki Phone App
 - Dashboard: Organizational Structure
 - Meraki Dashboard Best Practices – Campus
 - Dashboard Compliance and Data Protection
 - Cloud Reliability
 - Loss of Connectivity to the Cisco Meraki Cloud
 - Safe Configuration
 - Meraki Dashboard Login (1)
 - Create Dashboard Account (1)
 - Create Dashboard Account and Organization
 - Verify Created Account
 - First Login to New Organization
 - Account Login with Multiple Assigned Organizations
 - Manage Multiple Organizations
 - View Health Status for Multiple Organizations (1)
 - Meraki Dashboard Best Practices - Multiple Locations
 - Dashboard Search
 - Logged in User Profile
 - Modify User Profile (1)
 - Announcements
- Lesson 2: Help & Support
 - Meraki Help
 - Dashboard - Help - Get Help (1)
 - Dashboard - Help – Community
 - Dashboard - Help – Marketplace
 - Dashboard - Help – Cases
 - Dashboard - Help - Data Protection Requests
 - Dashboard - Help - New Features
 - Dashboard - Help - Firewall Rules Info
 - Dashboard - Help - API Docs
 - Dashboard - Help - Hardware Replacement
 - Dashboard - Give Your Feedback
- Lesson 3: Organizational Wide Configure Settings
 - Organizational Menu Settings
 - Settings – Org Name and Security Settings
 - Settings – Authentication (1)
 - Configuring SAML SSO with ADFS
 - Configuring SAML SSO with OneLogin
 - Settings - Administration Settings
 - Settings - Privacy and Support Access Settings
 - Settings - SNMP Configuration

- Settings - Threat Grid
- Settings - Dashboard API Access
- Settings - Delete This Organization
- Organization > CONFIGURE > Configuration Sync
- Configuration Sync
- Organization > CONFIGURE > MDM
- Organization > CONFIGURE > Administrator
- Create Administrator Account – Org Access
- Create Administrator Account – Network Access
- Create Administrator Account – Camera Access
- Create Administrator Account
- Verify Administrator Account
- Deleting an Administrator Account
- Organization > Configure > Camera Roles
- Organization > Configure > License Info
- License Information – Co-Termination
- Add Licenses to Organization – Co-Termination
- License History – Co-Termination
- Converting to PDL (Per Device Licensing) (1)
- Licensing & Inventory Page – PDL (1)
- Organization > CONFIGURE > Create Network
- Create Network – Setup Network
- Create Network – Select Devices from Inventory
- Create Network – Add Devices
- Finding Meraki Order Number
- Delete Networks
- Organization > Configure > Inventory
- Organization > Inventory - Searching for Devices
- Organization > Inventory - Claiming Devices
- Organization > Inventory - Unclaiming Devices
- Organization > Add a Device to a Network
- Recovering a Missing or Stolen Device
- Organization > Monitor > Overview > Networks
- Organization > Monitor > Overview > Networks Tags
- Organization > Monitor > Overview > Devices
- Organization > Monitor > Change Log
- Organization > Monitor > Login Attempts
- Organization > Monitor > Security Center (1)
- Organization > Monitor > Location Analytics (1)
- Organization > Monitor > VPN Status
- Organization > Monitor > Firmware Upgrades
- Firmware Upgrades - Scheduling Firmware Upgrades (1)
- Organization > Monitor > Firmware Upgrades (1)
- Organization > Firmware Upgrades > Overview
- Organization > Firmware Upgrades > Firmware Status
- Organization > Firmware Upgrades > Firmware Release Notes
- Organization > Firmware Upgrades > Firmware Roll Back (1)
- Firmware Upgrades Through APIs
- Organization > Monitor > Summary Report (1)
- Organization > Summary Report - Anomalies
- Organization > Summary Report - Clients with High Usage

- Organization > Summary Report - Usage stats
- Organization > Summary Report - Sessions
- Organization - Top SSIDs by Usage
- Organization > Summary Report - Top Devices
- Top Device Models by Usage
- Top Security Appliances by Utilization
- Summary Report – Port Utilization Graph
- Summary Report – Client Stats
- Summary Report -Top Clients by Usage
- Clients
- Organization-Top Client Device Manufacturers
- Organization-Top Operating Systems By Usage
- Organization - Top Application Categories
- Organization - Top Applications by Usage
- Organization – Power Details
- Lesson 4: Network-Wide Settings
 - Network-Wide
 - Network-Wide > Configure > General (1)
 - Network-Wide > General > Traffic Analysis
 - Network-Wide > General > Location and Scanning
 - Network-Wide > General > SMS Auth with Twilio
 - Network-Wide > General > CloudShark
 - Network-Wide > Wireless Multicast to Unicast Conversion
 - Network-Wide > General > Device Configuration (1)
 - Network-Wide > General > Reporting > Syslog
 - Network-Wide > General > SNMP
 - Network-Wide > General > Reporting > Location
 - Network-Wide > General > NetFlow
 - Network-Wide > General > Firmware Upgrades
 - Network-Wide > General > Switch & Wireless Alternate Management Interface (1)
 - Network-Wide > General > Status & APIs
 - Network-Wide > General > Status
 - Network-Wide > General > Umbrella
 - Network-Wide > Administration > Org Admins
 - Network-Wide > Administration > Network Admin
 - Network-Wide > Administration > Guest Ambassadors
 - Network-Wide > Admin > Port Management Privileges
 - Network-Wide > General > Camera-Only Admins
 - Network-Wide > Users > Guest Access
 - Network-Wide > Users (1)
 - Network-Wide > Group Policy
 - Network-Wide > Group Policy > New Group
 - Network-Wide > Group Policy > Schedule
 - Network-Wide > Group Policy > Bandwidth
 - Network-Wide > Group Policy > Hostname Visibility
 - Network-Wide > Group Policy > Firewall
 - Firewall - Layer 7 Rules
 - Network-Wide > Group Policy > Umbrella
 - Network-Wide > Group Policy > Traffic Shaping (1)
 - Network-Wide > Group Policy > Wireless Only
 - Network-Wide > Group Policy > Security Appliance Only

- Network-Wide > General > Add Devices
- Network Wide > Monitor > Clients (1)
- Searching for Clients
- Modifying Columns
- Network Wide > Monitor > Clients > Applications
- Network Wide > Monitor > Clients > Ports
- Network Wide > Monitor > Clients > HTTP Content
- Network Wide > Monitor > Clients > Custom Pie Chart
- Changing the Policies Applied to a Client
- Adding a Client
- Display Client Information – Overview (1)
- Display Client Information – Connections (1)
- Display Client Information – Performance (1)
- Display Client Information – Timeline
- Network-Wide > Monitor > Traffic Analytics (1)
- Network-wide > Monitor > Topology
- Topology – L2
- Topology – L3
- Lesson 5: Packet Captures
 - Packet Capture for Multiple Devices (1)
 - Event log (1)
- Lesson 6: Location / Mapping Devices
 - Maps & Floor Plans (1)
 - Maps & Floor Plans - Drag & Drop Devices
 - Maps & Floor Plans - Assign Devices to...
 - Maps & Floor Plans - Geolocate Devices (1)
 - Maps & Floor Plans (1)
- Lesson 7: Configuring Templates
 - Organization > Monitor > Configuration Templates
 - Templates
 - Configuration Templates > Create New Template (1)
 - Configuration Templates
 - Unbinding Networks from a Template
 - Splitting Configuration Templates
 - Combining Configuration Templates
 - Deleting a Configuration Template
 - MR - Wireless Network Templates
 - MX/Z3 - Template VLAN IP Address Range Allocations
 - MX/Z3 - Template VLAN IP Address Range Allocations
 - VLAN Templates
 - Configuration Templates (1)
 - MS Templates
 - Switch Profiles
 - Configuration Templates > Local Overrides (1)
 - Configuration Templates > Local Overrides
- Module Summary

Module 3: Meraki MX Security Appliances

- Module Introduction

- Topic List
- Lesson 1: What is MX?
 - One Unified Platform
 - Complete Connectivity and Threat Management Solution
 - Built-in Ironclad Security
 - Security Integrations/Interoperability
 - Cisco SourceFire AMP
 - AMP & Threat Grid (1)
 - Advanced Malware Protection for Meraki MX
 - Umbrella Integration for MX and Z-series
 - DNS/web-layer Security - Solution Overview
 - Backed by Cisco Talos Threat Intelligence
 - Cisco SD-WAN Solutions
 - Reliable, Cost Effective Connectivity with SD-WAN
 - Automated Site-to-Site VPN (Auto VPN)
 - VPN Options
 - High Availability and Path Redundancy
 - SD-WAN Functionality for the Branch
 - Connections that Fit your Business and Location Needs
 - VPN Health, Bandwidth, and Performance Monitoring
 - MX Appliance Licensing
 - MX Sizing Guide
- Lesson 2: Meraki Security and SD-WAN Portfolio
 - Teleworker Z3
 - Small Branch MX64/MX64W
 - Small Branch - MX65/MX65W
 - Small Branch - MX67/MX67W
 - Small Branch - MX67C
 - Small Branch - MX68/MX68W
 - Small Branch - MX68CW
 - Small Branch - MX75
 - Medium Branch - MX84
 - Medium Branch - MX100
 - Medium Branch - MX85
 - Medium Branch - MX95
 - Medium/Large Branch - MX105
 - WAN behavior on MX75/85/95/105 (1)
 - MX250/MX450 New Design (1)
 - Large Branch, Campus / Concentrator (1)
 - Virtual Platforms – vMX
 - Virtual Platforms
 - New MX Appliance Overview
 - Meraki MX - Local Status Page
 - MX Local Status Page – Connection
 - MX Local Status Page – Configure (1)
 - MX Local Status Page - Set Interface Addresses
 - MX Local Status Page – Ethernet
 - Claim the MX Appliance
 - MX Create a Network For MX Appliance
 - Create Combined Network for MX in HQ
 - Check Newly Added Appliance Status

- Change Name of Device
- Set Location Data for Maps
- Configure Warm Spare
- View WAN Uplinks
- Dynamic DNS
- Device Tags & Notes
- Remove MX From Network
- Appliance Status – Summary Tab
- Appliance Status – Uplink Tab (1)
- Appliance Status – Location Tab (1)
- Tools Tab > Ping
- Tools Tab > Reboot Device
- Tools Tab > Blink LEDs
- Tools Tab > Dashboard Throughput
- Tools Tab > Traceroute
- Tools Tab > MTR Traceroute
- Tools Tab > DNS lookup
- Tools Tab > ARP table
- Tools Tab > Test Umbrella Connectivity
- Addressing & VLANs
- Mode: Pass-Through or VPN Concentrator Mode
- Mode: Routed
- Addressing & VLANs - Client Tracking (1)
- Addressing & VLANs - Enabling VLANs
- Addressing & VLANs – Adding a VLAN
- Edit MX Built-in Port Configuration
- Static Routes
- Security Appliance – Configure – DHCP
- DHCP Turn up and Lease Time
- DHCP – DNS Name Servers
- DHCP - Boot options
- DHCP – Options
- DHCP - Reserved IP Ranges (Excluded Addresses)
- DHCP - Fixed IP Assignments (Reservations)
- Lesson 3: Meraki Firewall Configuration
 - Security Appliance - Configure – Firewall (1)
 - Inbound Firewall Logging
 - Layer 3 vs Layer 7 Firewall
 - Firewall Outbound Rules
 - Firewall - Cellular Failover Rules
 - Firewall - Security Appliance Services
 - Firewall - Layer 7 Rules
 - Geo-IP Based Firewalling
 - Forwarding Rules - Port Forwarding
 - Forwarding Rules - 1:1 NAT
 - Forwarding Rules - 1:Many NAT
 - Bonjour Forwarding

- IP source address spoofing protection
- Lesson 4: Meraki Site-to-Site VPN
 - Automated Site-to-Site VPN (Auto VPN)
 - What is a VPN?
 - Site-to-Site VPN
 - Configuring Site-to-Site VPN AutoVPN
 - Site-to-Site VPN - Hub Configuration
 - Site-to-Site VPN - Hub Configuration with Exit Hub
 - Site-to-Site VPN – Spoke Configuration Split Tunnel
 - Site-to-Site VPN – Spoke Configuration Full Tunnel
 - Site-to-Site VPN – Local Networks
 - Site-to-Site VPN – NAT Traversal
 - Site-to-Site VPN - Remote VPN Participants
 - Site-to-Site VPN - VPN Subnet Translation
 - Site-to-Site VPN - Non-Meraki VPN Peers
 - Site-to-Site VPN - Non-Meraki IPSEC Policy
 - Site-to-Site VPN - VPN Firewall Rules
 - Site-to-Site VPN - Monitor Status
- Lesson 5: Meraki Client VPN
 - Enable Meraki's L2TP Client VPN
 - Configure Meraki's L2TP Client VPN (1)
 - Meraki's Client VPN Authentication Methods (1)
 - VPN Clients
 - Enable the AnyConnect Client VPN (1)
 - AnyConnect Client VPN Authentication Methods (1)
 - AnyConnect Client VPN (1)
- Lesson 6: Meraki Active Directory
 - Active Directory Integration (1)
 - Apply Group Policy to Active Directory Groups
- Lesson 7: Meraki SD-WAN and Traffic Shaping
 - Reliable, Cost Effective Connectivity with Meraki SD-WAN
 - Intelligent path control to suit your needs
 - SD-WAN & Traffic Shaping (1)
- Lesson 8: Meraki Threat Protection
 - Threat Protection - AMP
 - Threat Protection – IDS/IPS
 - Threat Protection – Umbrella Protection
- Lesson 9: Meraki Content Filtering
 - Content Filtering (1)
- Lesson 10: Meraki Access Control
 - Access Control
 - Access Control > Network Access (1)
 - Network Access > Access Control > Radius (1)
 - Access Control > Network Access > Facebook (1)
 - Network Access > Access Control > Google (1)
- Lesson 11: Meraki Splash Page
 - Splash Page
 - Customize Splash URL
 - Customize Splash Page (1)
 - Preview Splash Page – Modern

- Preview Splash Page – Fluid
- Create Custom Themed Splash Page
- Lesson 12: Security and SD-WAN Wireless Concentrator
 - Teleworker VPN / L3 roaming (1)
 - Creating Teleworker Networks
- Module Summary

Module 4: Meraki MS Switch Appliances

- Module Introduction
 - Topic List
- Lesson 1: Why use MS?
 - Avoiding Downtime, Client Disruption
 - Cloud Managed from Access through Aggregation
 - Ongoing Feature Updates Delivered from the Cloud
 - MS Feature: Multigigabit Ethernet
 - Integrated Event Logs, Alerts, and Anomaly Detection
 - Advanced Network-Wide Security
- Lesson 2: Meraki MS Switching Platforms
 - Layer 2 Access Switches
 - MS120 Compact Switch
 - MS120 Switch Family
 - MS125 Switch Family
 - Layer 3 Access Switches
 - MS210 Switch Family
 - MS225 Switch Family
 - MS250 Switch Family
 - MS350 Switch Family
 - MS355 Switch Family
 - Prepare for 802.11AX with Meraki MS355 Switches
 - MS390 Switch Family
 - Stackable Access Switches MS390
 - Distribution Switches
 - MS410 Switch Family
 - MS425 10GB Switch Family
 - MS450 40GB Switch Family
- Lesson 3: Basic Switch Configuration and Monitoring
 - Switch - Monitor – Switch
 - Add a Switch to Network
 - Move or Remove MS Switch from the Network
 - Switch Overview
 - Switch Status
 - Switch > Monitor > Switch
 - Summary Tab > Change Name of Device
 - Summary Tab > Set Location Data for Maps
 - Summary Tab > IP Information

- LAN IPv6 Addressing
- Summary Tab > Device Tags & Notes
- Summary Tab > Switch Settings (1)
- Summary Tab
- Summary Tab > Historical Data
- Configuring Ports on a Switch (1)
- Summary or Port Tab > Switch Port Status (1)
- Summary or Port Tab > Port Status
- Ports Tab > Individual Port > Historical Data
- Ports Tab > Individual Port > Configuration
- Ports Tab > Port Configuration – Access Port
- Ports Tab > Port Configuration – Trunk Port (1)
- Ports Tab > Status
- Ports Tab > Troubleshooting > Packet Capture (1)
- Ports Tab > Troubleshooting > Cable Test
- Ports Tab > Troubleshooting > Reset Port
- Switch > Ports Tab > Packet Counts
- Switch > Power Tab
- Switch > Event Log Tab
- Switch > Location > Map
- Location Tab > Switch Location > Map
- Location Tab > Switch Location > Photo (1)
- Location Tab > Switch Location > Topology
- Tools Tab > Ping Devices
- Tools Tab > Ping the Switch
- Tools Tab > Reboot Device
- Tools Tab > Blink LEDs
- Tools Tab > Dashboard Throughput
- Tools Tab > Traceroute
- Tools Tab > MTR Traceroute
- Tools Tab > Cable Test
- Tools Tab > Cycle Ports
- Tools Tab > MAC Forwarding Table
- Tools Tab > Wake Client
- Lesson 4: Provisioning Switch Stacks
 - Stacking Mechanisms and Availability
 - Meraki Stacking: Virtual and Physical
 - Cloud-Managed Physical Stacking
 - Flexible Stacking
 - Provisioning Switch Stacks (1)
 - Create the Switch Stack
 - Delete the Switch Stack
 - View the Stack
 - Configuring Ports on a Stack Switch Ports
 - Blink the Switch
 - Add and Remove Members to the Stack
 - Clone and Replace a Member of the Stack
- Lesson 5: Meraki MS Switch Settings
 - MS Switch > Default Configuration

- Switch > Switch Settings
- Switch > Switch Settings > VLAN Configuration
- Spanning Tree Protocol (STP, RSTP) (1)
- Switch > Spanning Tree > Port Configuration
- Switch > Switch Settings > STP Configuration
- Switch > Switch Settings > Quality of Service
- Class of Service (CoS) Weight
- Quality of Service > DSCP Tagging
- Switch Settings > Multicast Settings
- Switch Settings > MTU Configuration
- Switch Settings > Storm Control
- Switch Settings > Power Supply Settings
- Lesson 6: Configuring Switch Ports
 - Edit and Monitoring Switch Ports (1)
 - Searching for Switch Ports
 - Editing Switch Ports (1)
 - Editing Multiple Switch Ports (1)
- Lesson 7: Link Aggregation
 - Switch Ports > Aggregation (1)
 - Switch Ports > Split the Aggregation
- Lesson 8: Mirroring Switch Ports
 - Mirroring Switch Ports > Modify Columns
 - UnMirror Ports
- Lesson 9: DHCP Server Status
 - DHCP Servers and ARP
 - Switch > DHCP Servers
 - View DHCP Leases Provided by Switches
 - View DHCP Configuration
 - Dynamic ARP Inspection (1)
 - Switch – Configure – Routing & DHCP
 - Routing & DHCP - Initializing Layer 2 Switching
 - Routing & DHCP - Create Layer 2 VLAN
 - Layer 3 vs Layer 2 Switch for VLANs
 - MS Layer 3 Switching - Supported models
 - Enable Layer 3 on Switch or Switch Stack
 - Routing & DHCP - Initializing Layer 3 Routing
 - Routing & DHCP - Create Layer 3 Interface (1)
 - View, Edit, Move, Delete Layer 3 Interfaces
 - DHCP Turn up and Lease Time
 - DHCP – DNS Name Servers
 - DHCP - Boot Options
 - DHCP - Options
 - DHCP - Fixed IP Assignments (Reservations)
 - DHCP - Reserved IP Ranges (Excluded Addresses)
- Lesson 10: Meraki MS Multicast Configuration
 - How Does IP Multicast Work?
 - Internet Group Management Protocol
 - Enable Multicast Routing
 - IGMP Snooping Querier
 - Multicast Routing

- Lesson 11: Meraki MS Warm Spare – Virtual Router Redundancy Protocol (VRRP)
 - MS Warm Spare (VRRP) Overview
 - MS Warm Spare (VRRP) Configuration
- Lesson 12: Meraki MS – Open Shortest Path First (OSPF)
 - OSPF Areas
 - OSPF LSA Types
 - Normal Area
 - Stub Area
 - Not-So-Stubby Areas (NSSA)
 - Open Shortest Path First (OSPF) Routing
 - Create OSPF Areas
 - Configure Interfaces into OSPF Areas (1)
 - OSPF for Static Routes
 - OSPF Timers
 - OSPF Authentication
 - View OSPF Routes and OSPF Neighbors
- Lesson 13: Meraki MS – Access Control Lists
 - Switch ACL Operation
 - Dashboard Service Rules
 - Switch ACL
 - Explicit Allow with Explicit Deny
 - Source VLAN ACL
 - Access Control Lists
- Lesson 14: Meraki MS – Access Policies (802.1x)
 - Access Policies (802.1X)
 - Access Policy Host Modes (1)
 - Access Policy Types (1)
 - Hybrid Authentication
 - Change of Authorization (CoA)
 - Add an Access Policy
 - Add an Access Policy > Authentication (1)
 - Access Policy
- Lesson 15: Meraki MS – Port Schedules
 - Port Schedules (1)
 - Apply Port Schedule to Ports
- Lesson 16: Meraki MS – Staged Upgrades
 - Staged Upgrades
 - Schedule Multiple Firmware Switch Upgrade Windows
 - Switch > Configure > Staged Upgrades
 - Staged Upgrades > Scheduling
 - Switch > Configure > Staged Upgrades
- Module Summary

Module 5: Meraki MR Wireless

- Module Introduction
 - Topic List
- Lesson 1: Wireless Features
 - MR Wireless Access Points
 - Meraki Location Analytics are Built-in

- Granular Control Over Bandwidth, Apps, and Client Devices
- MR Feature: Multigigabit Ethernet
- MR Feature: Mesh Routing
- MR Dedicated Scanning Radio
- Secure Guest Wireless in Seconds
- Built-in Bluetooth Beacons
- Bluetooth Beacons
- Meraki Location Heatmap is Built-in
- High Density Support
- ISE Integration
- Guest Self-Registration
- Cisco Umbrella and Cisco Meraki
- DNS/Web-layer Security - Solution Overview
- Zero-Touch Provisioning
- Meraki | Application Program Interfaces (APIs)
- Licensing and Support
- Lesson 2: Wireless Standards
 - IEEE 802.11 Wireless LANs
 - 802.11b/g 2.4 GHz Spectrum
 - 802.11b/g 2.4 GHz Channel Plan
 - 802.11a/n/ac 5 GHz Channels
 - 802.11a/ac 5 GHz Channels
 - 802.11ac Standard
 - 802.11ac Wave 1
 - 802.11ac Wave 2
 - 802.11ac Wave 1 vs Wave 2
 - 802.11ax Wi-Fi 6
 - Wi-Fi 6 Key Technologies
 - Wi-Fi 6 Key Technologies – Backwards Compatible
 - Wi-Fi 6 Key Technologies – Spatial Diversity and MU-MIMO
 - Wi-Fi 6 Key Technologies – Orthogonal Frequency Division Multiple Access (OFDMA)
 - Wi-Fi 6 Key Technologies – 1024 Quadrature Amplitude Modulation (QAM)
 - Wi-Fi 6 Key Technologies – BSS Color
 - Wi-Fi 6 Key Technologies – Target Wakeup Time (TWT) (1)
- Lesson 3: Site Survey
 - Site Survey & Design
 - Capacity Planning
 - Types of Site Surveys – Passive Surveys
 - Types of Site Surveys – Active Surveys
 - Types of Site Surveys – Predictive Surveys
 - Site Survey Tools
 - MR Internal AP 2.4 GHz Radiation Pattern
 - MR Internal AP 5 GHz Radiation Pattern
 - Mounting Meraki MR Wireless APs
 - Identify Problematic Areas
 - Signal Attenuation
- Lesson 4: Meraki MR Models
 - Meraki MR Wireless AP Models Indoor
 - MR20 Indoor AP
 - MR30H Indoor AP
 - MR33 Indoor AP

- MR42 Indoor AP
 - MR42E Indoor AP
 - MR52 Indoor AP
 - MR53 Indoor AP (M-Gig)
 - MR53E Indoor AP (M-Gig)
- Meraki MR Wireless AP Models Indoor
 - MR45 Indoor AP (M-Gig)
 - MR55 Indoor AP
 - MR36 Indoor AP
 - MR36H Indoor AP
 - MR44 Indoor AP (M-Gig)
 - MR46 Indoor AP (M-Gig)
 - MR46E Indoor AP (M-Gig)
 - MR56 Indoor AP (M-gig)
- Meraki MR Access Point Models Outdoor
 - MR70 Outdoor AP
 - MR74 Outdoor AP
 - MR84 Outdoor AP
 - MR76 Outdoor AP
 - MR86 Outdoor AP
- Directional Antennas
 - External Antennas – Indoor Aps
 - External Antennas for Outdoor/Ruggedized APs
- AP Adapter Options
- Multi Color LED Access Points
- Lesson 5: Wireless Configuration
 - Wireless > Access Points > Access Point Status Page (1)
 - Set the AP Name
 - Set the AP Location
 - Default SSID and Channel Selection
 - Dynamic IP Addressing and VLAN Assignment for AP
 - Static IP Addressing for AP
 - LAN IPv6 Addressing
 - Serial Number, Tags, and Notes
 - Firmware, Config and Power
 - Wireless > Monitor > Access Points > Summary
 - Access Points > Summary > Current Clients
 - SUMMARY > Radius and VLAN Request Status
 - SUMMARY > Utilization on Current Channels (1)
 - SUMMARY > Live Mesh Neighbors
 - SUMMARY > Historical Data (1)
 - Access Points > Event Log (1)
 - Access Points > Full Event Log
 - Access Points > Location > Map
 - Access Points > Location > Satellite
 - Access Points > Location > Photo
 - Access Points > Location > Topology
 - Access Points > Connections (1)
 - Access Points > Performance (1)
 - AP > Tools Tab > Ping
 - AP > Tools Tab > Reboot Device

- AP > Tools Tab > Blink LEDs
- AP > Tools Tab > Dashboard Throughput
- AP > Tools Tab > Traceroute
- AP > Tools Tab > ARP Table
- AP > LAN Tab > Radius Request Status
- AP > LAN Tab > VLAN Request Status
- Lesson 6: SSID Configuration
 - Configuring SSIDS
 - Provision SSIDS
 - Access Control
 - Wireless Encryption and Authentication
 - Access Control (1)
 - Access Control > Open
 - Access Control > Pre-Shared Keys
 - Access Control WPA versions
 - Access Control 802.11w
 - Access Control > MAC-based Access Control
 - Access Control – Enterprise with...
 - Access Control > Supported EAP Types
 - Enterprise with 802.1X Authentication
 - Enterprise with Meraki Authentication – SM
 - Enterprise with Meraki Authentication – Trusted Access (1)
 - Enterprise with...
 - Access Control > Identity PSK with Radius
 - Access Control > Splash Page
 - Access Control > Splash Page > None
 - Access Control > Splash Page > Click-through
 - Access Control > Splash Page > Sponsored Guest Login
 - Access Control > Splash Page > Sign-on
 - Access Control > Splash Page > SMS Auth.
 - Access Control > Splash Page > ISE Splash Page (1)
 - Access Control > Splash Page > Systems Manager (1)
 - Access Control > Splash Page > Billing
 - Access Control > Network Access Control
 - Access Control > Assign Group Policies by Device Type
 - Access Control > Captive Portal Strength
 - Access Control > Walled Garden
 - Access Control > Controller Disconnection Behavior
 - Access Control > SSID Modes for Client IP Assignment (1)
 - Distributed L3 Roaming in a Nutshell
 - Access Control > SSID Modes for Client IP Assignment (1)
 - Teleworker VPN / L3 Roaming
 - Access Control > SSID Modes for Client IP Assignment (1)
 - Access Control > Wireless Options
 - Per SSID – Firewall & Traffic Shaping (1)
 - Firewall & Traffic Shaping > Block IPs and Ports
 - Firewall & Traffic Shaping > Layer 3 Firewall Rules (1)
 - Firewall & Traffic Shaping > Block Applications
 - Firewall & Traffic Shaping > DNS Layer Protection
 - Firewall & Traffic Shaping > DNS Exclusion
 - Firewall & Traffic Shaping > Traffic Shaping SSIDs

- Firewall & Traffic Shaping > Traffic Shaping Rules (1)
- Lesson 7: Splash Page
 - Customize Splash URL for Payment Vendors
 - Customize Splash Page (1)
 - Preview Splash Page – Modern
 - Preview Splash Page – Fluid
 - Create Custom Themed Splash Page
- Lesson 8: SSID Availability
 - SSID Availability (1)
- Lesson 9: Bluetooth Settings
 - Bluetooth Low Energy (BLE)
 - Bluetooth Settings > Enable Bluetooth Scanning
 - Wireless > Bluetooth Clients
 - Bluetooth Beaconing (1)
 - Asset Tracking
- Lesson 10: Port Profiles
 - Port Profiles (1)
- Lesson 11: Wireless RF Radio Settings
 - Radio Settings
 - Auto RF – Dedicated Scanning Radio
 - RF Metrics
 - Radio Settings > 2.4 GHz
 - Radio Settings > 5 GHz
 - Radio Settings > Bulk Edit Settings
 - Radio Settings > Bulk Edit Settings > Antenna Type
 - Radio Settings > Bulk Edit Settings > 2.4 GHz
 - Radio Settings > Bulk Edit Settings > 5 GHz
 - Channel Planning
 - Auto RF – Channel Changes
 - Radio Settings > Bulk Edit Settings > Transmit Power
 - Radio Settings > Transmit Power Control (Current)
 - Auto RF – TX Power Considerations
 - Auto RF – TX Power Changes
 - Radio Settings > Bulk Edit Settings > Review Changes
 - Radio Settings – RF Profile (1)
 - Radio Settings – RF Profile > Band Selection
 - RF Profile > Band Selection – All SSIDs (1)
 - Access Control > Wireless Options – Band Steering
 - Radio Settings – RF Profile > Minimum Bitrate
 - Radio Settings – RF Profile > Client Balancing
 - Client Balancing
 - Radio Settings – RF Profile > 2.4 GHz Settings (1)
 - Radio Settings – RF Profile > 5 GHz Settings
 - Radio Settings – Radio Channel Width
 - Radio Settings – RF Profile > 5 GHz Settings (1)
 - Radio Settings – RF Profile > Exclude DFS
 - Radio Settings – RF Profile > RX-SOP (1)
- Lesson 12: Wireless Threats and Air Marshal
 - Network Impersonation
 - Wired Network Compromise Via Rouge AP

- Wireless > Air Marshal
- Wireless Threats
- Air Marshal Containment
- Air Marshal – Hybrid vs Dedicated
- Configuring Meraki's Air marshal WIDS/WIPS Platform
- Air Marshal > Configure
- Clients Connecting to Rouge SSIDs Settings
- Air Marshal > Configure > SSID Blocklist
- Air Marshal > Configure > SSID Allowed list
- Air Marshal > Configure > SSID Alerting
- Air Marshal > Configure > Rouge SSID
- Rogue SSID Containment Types and Status
- Containment of Rouge SSIDS
- Air Marshal > Rouge SSID > Contain
- Air Marshal > Other SSID
 - Air Marshal > Other SSID > Alerts
- Air Marshal > Spoofs
- Air Marshal > Malicious Broadcasts
- Air Marshal > Packet Floods
- Lesson 13: Location Heatmap
 - Location Heatmap (1)
- Lesson 14: PCI Compliance
 - PCI Compliance (1)
 - PCI Compliance > Run Report (1)
 - PCI Compliance Report
 - PCI Compliance Remediation
- Lesson 15: RF Spectrum
 - RF Overview
 - RF Overview > 2.4 GHz Spectrograms
 - RF Overview > 2.4 GHz Utilization
 - RF Overview > 2.4 GHz Interfering APs
 - RF Overview > 5 GHz Spectrograms
 - RF Overview > 5 GHz Utilization
 - RF Overview > 5 GHz Interfering APs
- Lesson 15: Wireless Health
 - Wireless Health – Run Diagnostics (1)
 - Wireless Health – Health Tab (1)
 - Wireless Health – Map Tab
 - Wireless Health
 - Some Additional Wireless Troubleshooting
- Module Summary

Module 6: Introduction to Meraki MV Camera

- Module Introduction
 - Module Topics
- Lesson 1: Meraki MV Security Cameras Product Family
 - Use Cases

- Current Video Surveillance Solutions
- MV Camera Features
- Meraki Mobile App
- MV Licensing
- Meraki MV Warranty Extended to 5 Years
- Cutting Edge Architecture
 - Edge Architecture and Optimized Retention
- Camera Video Display – Direct Stream
- Camera Video Display – Cloud Proxy Streaming
- Object Detection (Person Detection)
- Meraki Sense
- Meraki MV Camera Intelligence Training
- Meraki Cloud Archive
- Physical Security Meets Business Intelligence
- MV Feature: Secure Encrypted Video
- Lesson 2: Meraki MV Camera Models
 - MV Camera Models
 - MV Cameras- MV12 Indoor Models
 - MV12N, MV12WE, MV12W
 - Meraki MV2 Flexible Camera
 - MV2 Flexible Camera Mounting and Swivel
 - MV2 LED Indicators
 - MV Cameras- Indoor Models
 - MV21, MV22, MV22x
 - MV Camera Models: MV32 – MV32, MV2
 - MV Cameras – Outdoor Models
 - MV52, MV72, MV72X
 - MV52 Bullet Camera
 - MV52 Long Distance
- Lesson 3: Meraki MV Camera Accessory
 - MV Power Accessory
 - Cisco Meraki PoE Injector
 - Telescoping Pendant Mount
 - Wall Mount Arm for MV12 and MV32
 - Wall Mount Arm for MV22 and MV22x
 - Conduit Back Box / Wall Mount Arm for MV72
 - Pole Mount
- Lesson 4: Network Wide Settings for NV Cameras
 - Camera Lights and Frequency
 - MV Firmware Upgrades
 - Camera Alerts
 - Event log for Cameras

- Camera Map and floor Plans
- Lesson 5: Security Role Configuration for MV Cameras
 - MV Feature: Role-based Access
 - Organizational Camera Administrators (1)
 - Network Camera Administrators
 - Verify Access to Camera Network
- Lesson 6: Switch Configuration for MV Cameras
 - Set Port Information for Cameras
 - Camera Port Status
- Lesson 7: MV Cameras > Monitor
 - View Camera Status
 - Display Columns
 - Camera Recording Schedule
 - Create a New Recording Schedule
- Lesson 8: Wireless Role Configuration for MV Cameras
 - Integrated Wireless for MV Cameras
 - Wireless Details
 - Create Wireless Profile (1)
 - Create A Wireless Profile
 - Select Wireless Profiles for Camera
 - Applying Wireless Profiles
- Lesson 9: Viewing Video
 - MV Feature: Retroactive Video Search
 - Meraki Camera Video Viewing
 - Meraki Camera Motion Search
 - Camera – Export / Screen Shot
 - Camera Video Analytics – People Count
 - Camera Video Analytics – Motion Heatmaps
- Lesson 10: MV Camera Quality & Retention Profile
 - Camera Profiles > Quality and Retention Profiles (1)
- Lesson 11: MV Camera Intelligence Training
 - Camera > Intelligence Training
 - Camera > Intelligence Training> Opt-in Cameras (1)
 - Camera > Intelligence Training
- Lesson 12: MV Camera Initial Configuration
 - Cisco Meraki Camera Configuration (1)
 - Change Camera Name
 - Camera > Video Tab
 - Camera > Video > Share
 - Camera > Video > Share > Internal Dashboard Link
 - Camera > Video > Share > External Dashboard Link

- Camera > Video > Share > Export Video
- Camera – Analytics Tab
 - Camera – Analytics Tab – Vehicles
 - Camera – Analytics Tab – Motion Heatmaps
- Change Camera Physical Address
- View Camera Network Settings
- View Camera Network Connectivity
- Camera Connectivity Tools Ping (1)
- Camera Location Map
 - Camera Location > Map – Satellite
 - Camera Location – Photo
 - Camera Location – Topology
- Camera Event Log
- Camera Settings - Video Settings
- Camera Settings - Video Settings > Focus
- Camera Settings - Video Settings > Aperture
- Camera Settings - Video Settings (1)
- Camera Settings - Video Settings > Sensor Crop
- Camera Settings - Video Settings > Privacy Windows
- Camera Settings - Video Settings > External RTSP
- Camera Settings – Quality and Retention
 - Camera Settings - Quality and Retention > Cloud Achieve
 - Camera Settings - Quality and Retention > Profiles
 - Camera Settings - Quality and Retention > Recording Schedule
 - Camera Settings - Quality and Retention > Motion Based Retention
 - Camera Settings - Quality and Retention > Bandwidth
 - Camera Settings – Video Quality Modes
 - Camera Settings – Resolution and Storage
 - Camera Settings - Audio Recording
 - Camera Settings – Retention Length
- Camera Settings > Low Light Mode
 - Camera Settings > Low Light Mode - Infrared Illuminators
 - Camera Settings > Low Light Mode - Transition Thresholds
 - Camera Settings - Motion Alerts – Schedule
- Camera Motion Email Alert
- Camera Settings > Motion Alerts (1)
 - Camera Settings > Motion Alerts - Area of Interest
 - Camera Settings > Motion Alerts – Summary
- Camera Settings > Wireless Profiles
- Camera Settings > Zones (1)
- Camera Settings > Sense
- Lesson 13: MV Video Access
 - Camera > Video Access
 - Camera > Video Access > Video Access Log

- Camera > Video Access > External Stream Users
- Lesson 14: Meraki Export
 - Camera > Exports (1)
- Lesson 15: MV Video Wall
 - MV Feature: Video Wall
 - Guidelines for MV Streaming Workstations
 - Create Video Wall
 - Video Wall Layout
 - MV32 Video Wall De-warp Tiles
 - General Video Wall Improvements
 - Video Wall Automatic Rotation between Layouts
- Lesson 16: Meraki Vision
 - Vision Key Improvements over Dashboard
 - Meraki Vision Login
 - Meraki Vision – Search for Cameras / Networks
 - Meraki Vision – Select Cameras by using the Map
 - Meraki Vision – Site View
 - Meraki Vision – Camera View
 - Meraki Vision – Video Wall
 - Meraki Vision – Exports
- Lesson 17: MV Cameras APIs
 - Focus on Solving Customer Problems, not Building Features
 - Why this Matters
 - Meraki API
 - Meraki API Use Cases
 - Introducing Meraki MV Sense
 - Introducing Meraki MV Sense Data Types
 - REST vs MQTT (MQ Telemetry Transport) APIs
 - Zones
 - Optimized Video Retention
 - Full Frame Snapshots via API
- Lesson 18: Meraki Magic
 - Introducing Smart Codec
 - Quality Comparisons
 - Network Bandwidth Savings
- Module Summary

Module 7: Meraki Insight

- Module Introduction
 - Module Topics
- Lesson 1: Meraki Insight Introduction
 - Lifecycle Assurance across the Meraki Full Stack
 - Introducing Meraki Insight

- Meraki Insight Collector
- Meraki Insight Infrastructure
- Meraki Insight Scenario (1)
- Lesson 2: Meraki Insight Licensing
 - Meraki Insight Licensing Menu
 - Meraki Insight License
 - Add Meraki Insight to your Organization
 - Add Meraki Insight to ORG License
 - Meraki Insight licensing for MX Networks
 - Add Meraki Insight from MX Networks
 - Remove Meraki Insight from MX Networks
 - Meraki Insight Menu
- Lesson 3: Meraki Insight Web App Health
 - Web App Health – Configure Web Application (1)
 - Web App Health – Web Application Performance
 - Web App Health – Web App > WAN Performance (1)
 - Web App Health – Web App > LAN Performance (1)
 - Web App Health – Application Performance (1)
 - Meraki Insight – WAN Health (1)
 - Meraki Insight – VoIP Health
 - Meraki Insight VoIP Health Overview
 - Meraki Insight VoIP Health Configure Voice Servers
 - VoIP Health Detailed View –Trace Route (1)
 - VoIP Health Detailed – Target VoIP Server Diagnostics (1)
- Lesson 4: Meraki Insight Alerting
 - Meraki Alerting Menu
 - Meraki Insight - Add Alert
 - Meraki Insight – Add Alert – Select Networks
 - Meraki Insight – Add Alert – Configure Alert (1)
 - Meraki Insight – Add Alert – Select Recipients
 - Meraki Insight – Add Alert – Summary
- Module Summary

Module 8: Meraki Sensors

- Module Introduction
 - Module Topics
- Lesson 1: What is - Meraki Sensors?
 - Meraki Sensors (MT) family
 - Insight into a Variety of Physical Spaces
 - Benefits of MT sensors

- Use Cases - Consuming Telemetry at Scale
- MT Sensors are Simple & Intuitive to use
- Meraki Sensors – MT
- MT Cable Accessories
- Cisco Meraki Sensors Connectivity
- MT Device Security
- Cisco Meraki Sensors Room Usage
- Cisco Meraki Sensors
 - Sensor Sight
 - Introducing MT14
- Volatile Organic Compounds (VOC)
- Particulate Matter (PM2.5)
- Introducing MT30
- What can you do with the Smart Automation Button?
- The smart automation button can increase efficiency for customers across industries and spaces
- Lesson 2: MQTT (Message Queuing Transmit Telemetry) – The IOT Protocol
 - Why use MQTT?
 - Enabling MQTT for MT sensors
 - Environmental Sensors
 - Environmental Sensors - Alert Profiles
 - Maps and Floor Plans for Sensors
- Module Summary

Module 9: Meraki (SM) System Manager

- Module Introduction
 - Module Topics
- Lesson 1: Why use Systems Manager?
 - Key Capabilities
 - What is Enterprise Mobility Management?
 - Mobile Device Management (MDM)
 - Mobile Application Management (MAM)
 - Mobile Content Management (MCM)
 - Mobile Identity (MI)
- Lesson 2: Sentry Overview
 - Systems Manager Sentry
 - Sentry: Seamless Network Integration (1)
- Lesson 3: SM Supported Devices & Licenses
 - SM Supported Devices (1)
 - Systems Manager Licensing
- Lesson 4: Systems Manager Features
 - Meraki SM Features – All Platforms (1)
 - Meraki SM Features – Apple (1)
 - Meraki SM Features – Android

- Meraki SM Features – Windows
- Meraki SM Features – Chrome OS
- Lesson 5: Creating an EMM Network
 - Creating an EMM Network (1)
- Lesson 6: Organizational MDM Settings
 - Setup Organizational MDM Settings
 - Setup Apple Push Certificate
 - Apple MDM Push Certificate (1)
 - Apple Device Enrollment / Apple School Manager
 - Apple VPP Accounts
 - Android for Enterprise (1)
 - Chrome OS Device Management
 - SCEP CA Certificate Configuration
 - File Vault
 - Cisco ISE Settings
- Lesson 7: Systems Manager (SM) Configuration
 - Configuring Systems Manager is EASY..
 - Enrollment – Agents & Management Profiles (1)
- Lesson 8: Enrolling Devices
 - Enrolling Devices
 - Enrolling Device Types
 - Enrolling Apple IOS Devices (1)
 - Enrolling Apple MacOS Devices
 - Enrolling Android Devices (1)
 - Enrolling Android Devices – Company Owned
 - Enrolling Windows 10 Devices
 - Enrolling Windows Devices
 - Enrolling Chrome Devices
- Lesson 9: Systems Manager Tags
 - Tags for Grouping of Devices
 - Systems Manager Tags (1)
 - Types of Tags
 - Manual Tags
 - Security Policy – Tags Page
 - Security Policy – Policies Page (1)
 - Geofencing – Tags Page
 - Geofencing Page (1)
 - Schedule Tags – Tags Page
 - Owner Tags – Tags Page
 - Owner Tags (1)
 - User Tags
 - Default Tags
 - Default Tags (2)
- Lesson 10: Scoping Using Target Groups

- Scopes
- Target Groups
- Target Groups – Device Scoping
- Target Groups – User Scoping
- Lesson 11: Configuration Profiles
 - Configuration Profile Settings (1)
- Lesson 12: Sentry Using Profile Settings
 - Enabling SM Sentry Enrollment (1)
 - Enabling SM Sentry WiFi Security
 - Enabling SM Sentry WiFi Security – Auto-profile (1)
 - Enabling SM Sentry WiFi Security – Manual profile (1)
 - Enabling SM Sentry VPN
 - Enabling SM Sentry VPN – Auto-profile (1)
 - Enabling SM Sentry VPN – Manual profile
 - Enabling SM Sentry Policies (1)
 - Alerting on Removal of Systems Manager Profile
- Lesson 13: App Management
 - MDM Applications
 - Adding Applications
 - Adding Applications – iOS + macOS
 - Adding Applications – tvOS
 - Adding Applications – Android + Windows
 - Adding Applications (1)
 - Managing Applications
- Lesson 14: Systems Manager Alerts
 - Systems Manager Alerts (1)
 - Systems Manager Alerts – Webhooks
- Module Summary

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
 - Trouble shooting with Packet Capture

Lab 3: 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

Lab 4: Meraki MR Wireless

- 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
 - Facebook Sign-in
 - Google Sign-in
 - SMS Authenticated
 - Billing Configuration for SSIDs
 - Using Preshared Keys with WPA2
 - Using WPA2-Enterprise SSIDs with 802.1X
 - 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
- 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 Floor Plans
- Configuring RF Channel and Power Settings
- Configure Air Marshal to Isolate Rogue APs and Clients
- Monitoring Meraki APs
 - Monitoring AP Status
 - Using Meraki Wireless Health
 - Monitoring Clients
 - Monitoring RF Metrics
 - Monitoring the RF Spectrum
 - Monitoring SSID Availability
- Troubleshooting
 - 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

Lab 5: Meraki MV Cameras

- Adding Cameras to a dedicated Network
 - Connecting APs to the Network
 - Configuring Basic information including Tags
- Configuring Users
- Configure Admins

- Configuring Camera Settings
 - Configuring Video Settings
 - Configuring Camera Analytics
 - Configuring MV NightMode
 - Create Recording Schedule
 - Motion Based Recording
 - Configuring Camera Retention
- View Camera Events
 - Cloud Proxy Viewing
 - Direct Streaming
- Searching Video for Events
- Creating Configuring Video Wall Boards
- Troubleshooting Camera Connectivity
- Using the Event Log for Camera Events
- Configure Wall Boards

Lab 6: Meraki Insight and Wireless Health

- Using insight to diagnose Issues in the network
- Using Wireless Health to troubleshoot Client Issues