MER-SWITCH - ADMINISTERING MERAKI MS / CATALYST SWITCHES V2.0

Course Code: 821657

This four-day, instructor-led, hands-on course is designed for IT professionals focusing on Meraki-switched networks. It aims to provide participants with a comprehensive understanding and hands-on experience in deploying, managing, and troubleshooting networks that utilize Cisco Meraki MS and Cisco Catalyst switches. The course offers a balanced mixture of theoretical knowledge and practical skills, ensuring it is well-suited for those involved in the intricate aspects of network management and configuration.

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

Use this course towards your Cisco Continuing (CE) Education Credits (32)

What You'll Learn

- Understanding of Meraki Switch Fundamental Concepts
- Dashboard Navigation and Configuration
- Effective Meraki Switch Troubleshooting
- Provisioning Meraki Switches
- Configuration of Organizational and Network Settings
- Utilization of Meraki Configuration Templates and Group Policies
- Meraki Network and Device Management
- Switches Stacks and Port Configuration
- Meraki IPv6 Configuration
- Meraki Port Management with ISE and Radius
- Meraki Switch Monitoring and Connectivity Troubleshooting
- Device and Connectivity Troubleshooting on Meraki Networks
- Meraki APIs for MS and Catalyst Switches

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 MS and Cisco Catalyst switches.

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 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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CLASSROOM LIVE	$5,095 CAD	4 Day

Classroom Live Outline

Module 1: Introduction to Meraki

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

Module 2: Meraki MS / Catalyst 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
- Catalyst Licensing for the Meraki
- Migrating DNA Licensing to Meraki Dashboard

Module 3: Meraki Switches

- Meraki Layer 2 Access Switches
- Meraki Layer 3 Access Switches
- Meraki Aggregation Switches
- Catalyst Switches
- Power and Accessories

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
- Configuration Templates
- Configuring Group Policies

Module 5: Configuring Meraki MS Switches

- Basic Switch Configuration
- Provisioning Switch Stacks
- Meraki MS Switch Settings
- DHCP Server Status
- Meraki MS - Port Schedules
- Local Status Page
- Manage MS Firmware
- Manage MS Staged Upgrades
- Configuring Switch Ports
- Link Aggregation
- Mirroring Switch Ports

Module 6: Meraki MS Routing and Multicast

- Meraki Layer 2 vs Layer 3
- Static Routes
- Meraki Switch Warm Spare - Virtual Router Redundancy Protocol (VRRP)
- Meraki Switch Routing
- Meraki MS - Open Shortest Path First (OSPF)

Module 7: Monitoring Catalyst Switches in the Meraki Dashboard

- Monitoring Catalyst Switches
- Supported Catalyst Switches
- Cloud Monitoring for Catalyst Onboarding
- Cloud Monitoring for Catalyst Licensing
- Cloud - Based Monitoring
    - ⬚ View Network Topology
    - ⬚ Track Clients and Traffic
    - ⬚ Monitor Switch Status
    - ⬚ Troubleshoot Connections
    - ⬚ Inspect Port Details
    - ⬚ Application Statistics

Module 8: Managing Catalyst Switches in the Meraki Dashboard

- Managing Catalyst Switches
- Supported Catalyst Switches
- Migrating to Meraki - Managed Mode
- Register the Switch with the Meraki Dashboard
- Managed Catalyst Switch Meraki Feature Support
- Managing Catalyst Switches in the Dashboard

Module 9: Meraki Switch Security

- Access Control Lists

- Securing Switch Ports
- SecurePort Switch Ports for MR Access Points
- Port Isolation
- Enforce Segmentation with Group Policy ACL

Module 10: Meraki Authentication ISE and Radius

- Managing Users
- Access Control
- Meraki Integration with Cisco Identity Services Engine (ISE)
- Meraki 802.1x Radius Integration

Module 11: Meraki Adaptive Policy

- Meraki Switches Supported Models
- Adaptive Policy Architecture
  - ⬚ Identity Classification and Propagation
  - ⬚ Security Policy Definition
  - ⬚ Policy Deployment and Orchestration
- Configuration
  - ⬚ Adaptive Policy SGT Propagation Configuration
  - ⬚ Static Assignment of Adaptive Policy Group by Switchport
  - ⬚ RADIUS - Based Assignment of an Adaptive Policy Group
  - ⬚ Configure Access Policy on Switchports
  - ⬚ Testing and Validation

Module 12: Meraki IPv6 Configuration

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

Module 13: Monitoring Switches and Clients

- Monitoring Switch Ports
- Meraki Health
- Switch Traffic Analytics
- Switch Topology
- Monitoring Wired Clients

Module 14: Troubleshooting Switches and Clients

- Troubleshooting Clients Connections
- Troubleshooting Switch Connectivity
- Switch Event Logs
- Capturing Packets in a Switch
- Configuring Switch Alerts
- Switch Tools
- VLAN Mismatch Troubleshooting
- Use Wireshark to Decode Port Captures

Module 15: Meraki Switch 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

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PRIVATE GROUP TRAINING	3 Day

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