

Engineering Cisco Meraki Solutions (ECMS) 1.0

Duration: 32 Hours (4 Days)

Overview

Engineering Cisco Meraki Solutions (ECMS) 1.0 is a comprehensive course designed to provide the core knowledge and skills necessary for deploying, planning, designing, implementing, and operating complex Cisco Meraki solutions. This 32-hour training prepares you for roles focused on implementing, securing, and managing Cisco Meraki™ networks through a centralized dashboard. Key areas include Cloud-based solutions, Network security protocols, Scalable architecture design, and Troubleshooting strategies. The course covers a wide range of topics from the Cisco Meraki Dashboard and product administration to advanced concepts like QoS, VPN, and WAN topologies. Practical applications are emphasized, ensuring that you can apply what you learn directly to real-world scenarios.

Audience Profile

Engineering Cisco Meraki Solutions (ECMS) 1.0 is designed for IT professionals aiming to master deploying, planning, and managing Cisco Meraki solutions in complex network environments.

- Target Audience and Job Roles:
- Network Engineers
- Network Administrators
- Systems Engineers
- IT Managers
- Cloud Solutions Architects
- Enterprise Network Consultants
- Security Professionals
- IT Infrastructure Specialists
- Wireless Network Engineers
- Solutions Architects
- Technical Support Engineers
- IT Project Managers
- IT Specialists focused on Network Security
- Professionals aiming for Cisco Meraki certifications
- IT professionals responsible for VPN and WAN technologies
- Network Analysts
- Wireless Network Designers
- Professionals involved in network monitoring and management techniques
- Infrastructure and Network Auditors
- IT professionals working with hierarchical network segmentation and dynamic routing protocols (OSPF, BGP)

Course Syllabus

Prerequisite

- Before taking this offering, you should have earned a Cisco Certified Networking Associate (CCNA) certification or be familiar with:

General Networking

- Be actively engaged in the design, deployment, scaling, configuration, and management of enterprise networks, IPsec, and associated VPN technologies
- Be experienced with hierarchical network segmentation (access, distribution, and core layer) design and best practices
- Strong fundamental knowledge of internet protocol (IP) addressing and subnetting schemas necessary to build local area networks (LANs)
- A foundational understanding of network authentication, authorization, and accounting services
- Strong fundamental knowledge of dynamic routing protocols with focus and emphasis on open shortest path first (OSPF) and border gateway protocol (BGP)
- A foundational understanding of wired and wireless QoS mechanisms, packet queue operations, and practical implementations
- A foundational understanding of threat modeling concepts and methodologies and the ability to apply them to identify, analyze, and respond to cybersecurity threats
- A foundational understanding of network security controls and protocols, network management best practices, and data security
- Intermediate fundamental knowledge of radio frequency (RF) concepts, terminology, design principles, and practical implementations as they apply to wireless networking and current 802.11 wireless standards
- A foundational understanding of wireless security best practices centered on access control (802.1x) and spectrum security through wireless intrusion detection system (WIDS) and prevention system (WIPS)
- A foundational understanding of standard logging and monitoring protocols with a focus and emphasis on simple network management protocol (SNMP), syslog, and webhooks, and related implementation components or tools
- Be familiar with and have basic knowledge of Application Programming Interface (APIs) and related languages and formats, such as representational state transfer (REST) and JavaScript Object Notation (JSON)

The following recommended Cisco offerings may help you meet these prerequisites:

- Implementing and Administering Cisco Solutions (CCNA)
- Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Outline

- Introducing the Cloud and the Cisco Meraki Dashboard
- Introducing Cisco Meraki Products and Administration
- Introducing Cisco Meraki Troubleshooting
- Planning New Cisco Meraki Architectures and Expanding Existing Deployment
- Designing for Scalable Management and High Availability
- Automating and Scaling Cisco Meraki Deployments
- Designing Routing on the Cisco Meraki Platform
- Introducing QoS and Traffic Shaping Design
- Building VPN and WAN Topologies
- Securing, Expanding, and Shaping the Network
- Introducing Switched Network Concepts and Practices

- Implementing Wireless Configuration Practices and Concepts
- Introducing Endpoint Management Concepts and Practices
- Introducing Physical Security Concepts and Practices
- Gaining Network Insight by Monitoring Applications
- Preparing, Monitoring, Logging, and Alerting Services
- Setting Up Reporting and Auditing Capabilities in the Cisco Meraki Dashboard
- Gaining Visibility and Resolving Issues Using Cisco Meraki Tools