Engineering Cisco Meraki Solutions V1.0

CODICE	DURATA	PREZZO	LINGUA	MODALITÀ
ECMS	4 Giorni	3.300,00€ (iva escl.)	Inglese - Italiano	Virtual Classroom

CISCO LEARNING CREDIT
38
CONTINUING EDUCATION CREDIT
24

SCHEDULAZIONE
- A Richiesta

The **Engineering Cisco Meraki Solutions** course helps you gain the core knowledge and skills needed to deploy, plan, design, implement, and operate complex Cisco Meraki solutions.

This course combines Engineering Cisco Meraki Solutions Part 1 and 2 trainings. Prepare for roles focused on implementing, securing, and managing Cisco Meraki™ based networks from a centralized dashboard.

Topics covered include Cisco Meraki's cloud-based solutions, understanding of network security protocols, design of scalable architectures, and application of troubleshooting strategies.

This training prepares you for the Cisco Meraki Solutions Specialist (ECMS 500-220) exam. If passed, you earn the Cisco Meraki Solutions Specialist certification.

This course is worth 24 Continuing Education (CE) credits towards recertification.

PREREQUISITI

Attendees should meet the following prerequisites:

- 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)

Recommended prerequisites:

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

OBIETTIVI

- Describe Cisco Meraki cloud architecture, administration, and licensing
- Describe the hardware and features of Cisco Meraki product families
- Describe best practices for troubleshooting and when to contact Cisco Meraki support
- Plan new Cisco Meraki architectures and expand existing deployments
- Design the network for scalable management and high availability
- Describe how to automate and scale Cisco Meraki deployments with dashboard tools
- Use dynamic routing protocols to expand networks and improve wide-area network (WAN) performance
- Describe proper quality of service (QoS), policy, and performance-based routing configurations across a Cisco Meraki network and WAN optimization through traffic shaping
- Describe virtual private network (VPN) and WAN topologies and how to integrate them

- Secure, expand, and shape the network
- Implement switched network concepts and practices, and configure guest networks
- Implement wireless configuration practices and concepts
- Describe endpoint management concepts and practices using Cisco Meraki Systems Manager
- Describe physical security concepts and practices
- Gain network insight by monitoring applications
- Describe how to prepare monitoring, logging, and alerting services
- Set up reporting and auditing capabilities in the Cisco Meraki dashboard
- Monitor and troubleshoot issues using Cisco Meraki tools

DESTINATARI

Anyone seeking foundational level knowledge and skills for Cisco Meraki solutions, including cloud management, design, implementation, monitoring, troubleshooting, and the comprehensive features of the Cisco Meraki product suite.

Individuals looking to obtain the Cisco Meraki Solution Specialist Certification.

CONTENUTI

Introducing the Cloud and the Cisco Meraki Dashboard

- Single Pane of Glass Management
- Cisco Meraki Full-Stack Capabilities
- Cisco Meraki Devices and the Cloud
- Benefits of a Cloud-Based Solution
- Cisco Meraki Dashboard Organizational Structure
- Multiorganizational Structure
- Licensing
- Cisco Meraki Dasboard Demo

Introducing Cisco Meraki Products and Administration

- Cisco Meraki MX Security and SD-WAN Appliance
- Cisco Meraki MS Switches

- Cisco Meraki MR Wireless APs
- Cisco Meraki Systems Manager Endpoint Management
- Cisco Meraki MV Security Cameras
- Cisco Meraki Insight Web-Based Application Analytics
- Advanced Use of Cisco Meraki Dashboard Demo

Introducing Cisco Meraki Troubleshooting

- Cisco Meraki Dashboard Sync
- Cisco Meraki Monitoring and Troubleshooting Tools
- Integration of Cisco Meraki Monitoring and Troubleshooting Tools into existing systems
- Application Programming Interfaces
- How to Work with Cisco Meraki Support
- Cisco Meraki Troubleshooting Demo

Planning New Cisco Meraki Architectures and Expanding Existing Deployment

- Cisco Meraki Soluton Sizing
- Explore Various Dashboard User Interface Features Demo
- Licensing
- Reference

Designing for Scalable Management and High Availability

- Role-Based Access
- Tag Design and Structure
- Cisco Meraki MX Security Appliance High-Availability
- Cisco Meraki MS Switch High Availability
- High-Density Wireless Design
- References

Automating and Scaling Cisco Meraki Deployments

- RBAC with SAML
- Configure SAML and Create SAML Roles Demo
- Network Cloning
- Clone a Network and Synchronize a Configuration Demo
- Configuration Templates
- Explore Configuration Template Demo
- Network Provisioning with APIs
- Use Google Sheets and Script Editor with the Cisco Meraki Dashboard API Demo
- References

Designing Routing on the Cisco Meraki Platform

- Routing Across Cisco Meraki Networks
- Explore Layer 3 Routing Including Creating, Editing and Moving SVIs Demo
- Dynamic Routing with OSPF
- BGP for Scalable WAN Routing and Redundancy

Introducing QoS and Traffic Shaping Design

- Wireless and Wired QoS Design
- Prepare the Network for Voice
- Traffic Shaping and Prioritizing on the Cisco Meraki MX Platform

Building VPN and WAN Topologies

- Cisco Meraki MX VPN Operation Modes
- VPN Design and Topologies
- Auto VPN
- Design a Scalable VPN Topology

- Explore the Cisco Meraki MX Sizing Guide Demo
- Integrate Cisco Meraki vMX into an Auto VPN Architecture
- SD-WAN Fundamentals
- SD-WAN Design
- Explore CIsco Meraki vMX and SD-WAN Configurations in the Dashboard Demo

Securing, Expanding, and Shaping the Network

- Cisco Meraki Security Overview
- Default Behavior and Rule-Processing Order
- Advanced Security Services
- Content Filtering
- Cisco Umbrella Integration

Introducing Switched Network Concepts and Practices

- Access Policies Using Cisco Meraki Authentication
- Cloning of Switch Settings
- Switch Templates and Profiles
- Explore Switch Profiles Demo
- LAN and WLAN Guest Access Best Practices
- References

Implementing Wireless Configuration Practices and Concepts

- Cisco Meraki Dashboard Maps and Floor Plans
- RF Profiles
- Wireless Encryption and Authentication
- SSID Modes for Client IP Addressing
- Bluetooth Low Energy

- BLE Scanning and Bluetooth Clients Demo
- Wireless Threats

Introducing Endpoint Management Concepts and Practices

- Cisco Meraki Systems Manager Platform Overview
- Cisco Meraki Systems Manager Overview Demo
- Device Deployment Methodologies
- Deployent of Application and Containerization Profiles
- Security Policies and Devices Out of Compliance Demo
- Pairing Network Group Policies with Systems Manager Demo
- Agentless Onboarding with Trusted Access

Introducing Physical Security Concepts and Practices

- Cisco Meraki MV Architectures
- Flexible Camera Deployments with Wireless
- Cisco Meraki MV Product Portfolio, Features and Functionalities
- Motion Search, Motion Recap, Motion Heat Maps, and Person Detection Demo
- Business Intelligence
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Gaining Network Insight by Monitoring Applications

- Cisco Meraki Insight Overview
- Cisco Meraki Insight Scaling and Licensing
- Cisco Meraki Insight Overview: A Closer Look at Tracked Applications and WAN Health Demo

Preparing, Monitoring, Logging, and Alerting Services

- Logging Capabilities
- Examine Event, Change, and Video Access Logs Demo

- Monitoring Tools and Services
- Examine Monitoring Tools and Features Demo
- Supported Alerts
- Cisco Meraki Dashboard API
- References

Setting Up Reporting and Auditing Capabilities in the Cisco Meraki Dashboard

- Cisco Meraki Reports
- Manage Firmware Through the Dashboard
- PCI Auditing
- References

Gaining Visibility and Resolving Issues Using Cisco Meraki Tools

- Troubleshooting Methods
- Logging Capabilities
- Cisco Meraki Security Center Overview Demo
- Wireless Troubleshooting
- Explore Wireless Troubleshooting Tools Demo
- Troubleshoot Cisco Meraki Cloud Application Performance
- Troubleshoot Cisco Meraki Auto VPN
- Explore VPN Status, Firewall, and Static Port Forwarding
- Local Status Page
- References

Labs

- Discovery Lab 1; Configure the Cisco Meraki Dashboard
- Discovery Lab 2: Enable Advanced Features and Optimize Networking
- Discovery Lab 3: Troubleshoot the Network Using the Cisco Meraki Dashboard

- Discovery Lab 4: Configure Tags, Link Aggregation, Port Mirroring, and High-Density SSIDs
- Discovery Lab 5: Establish Auto VPN
- Discovery Lab 6: Configure Virtual Interfaces and Routing on Cisco Meraki MS Switches
- Discovery Lab 7: Configure Routes and Redistribution
- Discovery Lab 8: Configure QoS,
- Discovery Lab 9: Configure Traffic Shaping
- Discovery Lab 10: Configure Load Balancing
- Discovery Lab 11: Define Firewall Rules
- Discovery Lab 12: Enable Advanced Malware Protection
- Discovery Lab 13: Enable Content Filtering
- Discovery Lab 14: Configure and Apply Access Policies
- Discovery Lab 15: Configure Wireless Guest Access
- Discovery Lab 16: Configure SSIDs
- Discovery Lab 17: Implement RF Profiles
- Discovery Lab 18: Implement Air Marshal
- DIscovery Lab 19: Create Cisco Meraki Systems Manager Configuration Profiles
- Discovery Lab 20: Define Security Polices
- Discovery Lab 21: Enforce End-to-End Security
- Discovery Lab 22: Setup Motion Alerts
- Discovery Lab 23: Deploy Wireless Cameras
- Discovery Lab 24: Manage Video Retention
- Discovery Lab 25: Enable Alerts
- Discovery Lab 26: Add Monitring and Reporting
- Discovery Lab 27: Generate and Analyze Summary Reports
- Discovery Lab 28: Manage Firmware
- Discovery Lab 29: Generate a PCI Compliance Report
- Discovery Lab 30: Troubleshoot an Offline Device

- Discovery Lab 31: Troubleshoot Content Filtering
- Discovery Lab 32: Troubleshoot Remote Site Connectivity

Prezzi e corsi potrebbero subire variazioni; si consiglia di verificare sul sito www.novanext.it/training.