

# Engineering Cisco Meraki Solutions 2

Référence : ECMS2

Durée : 3 jours

Certification : Aucune

## CONNAISSANCES PREALABLES

- Be CCNA-certified or have an equivalent level of technical expertise.
- Be employed by Cisco Systems, a Meraki partner, or a Meraki customer.
- Completed ECMS1 or CMNO, or possess equivalent Meraki knowledge and experience.
- Pré-requis recommandés : CCNA - ECMS1.

## PROFIL DES STAGIAIRES

- His may include professionals with job titles or in roles such as: Consulting Systems Engineer; Deployment Engineer; Network Administrator; Network Manager; Network Engineer; Site Reliability Engineer; Systems Engineer; Technical Solutions Architect; Wireless Design Engineer; Wireless Engineer.
- This course is ideal for those who regularly deploy or manage Meraki networks and want to deepen their technical expertise and understanding of the full Meraki product suite and features.

## OBJECTIFS

- Plan new Cisco Meraki architectures and expand existing deployments.
- Design the network for scalable management and high availability.
- Describe how to automate and scale Meraki deployments with dashboard tools.
- Use dynamic routing protocols to expand networks and improve WAN performance.
- Describe proper QoS, policy and performance-based routing configurations across a Cisco Meraki network and WAN optimization through traffic shaping.
- Describe Virtual Private Network (VPN) and Wide Area Network (WAN) topologies and how to integrate them.
- Secure, expand, and shape the network.
- Implement switched network concepts and practices, and configure guests networks.
- Implement wireless configurations concepts and practices.
- 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.

## CERTIFICATION PREPAREE

Aucune

## METHODES PEDAGOGIQUES

- Mise à disposition d'un poste de travail par stagiaire
- Remise d'une documentation pédagogique papier ou numérique pendant le stage
- La formation est constituée d'apports théoriques, d'exercices pratiques, de réflexions et de retours d'expérience
- Le suivi de cette formation donne lieu à la signature d'une feuille d'émargement

## FORMATEUR

Consultant-Formateur expert EduGroupe

## METHODE D'EVALUATION DES ACQUIS

- Auto-évaluation des acquis par le stagiaire via un questionnaire
- Attestation de fin de stage adressée avec la facture

## CONTENU DU COURS

### Planning New Meraki Architectures and Expanding Existing Deployments

- Cisco Meraki Solution 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

## Automation and Scaling 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 Templates Demo
- Network Provisioning with APIs
- Use Google Sheets and Script Editor with the Cisco Meraki Dashboard API Demo

## 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

## Describing 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 Behaviour and Rule-Processing Order
- Advanced Security Services
- Content Filtering
- Cisco Umbrella Integration

## Describing 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

## 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

## Describing Endpoint Management Concepts and Practices

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

## Describing Physical Security Concepts and Practices

- Cisco Meraki MV Architecture
- 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

## 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

## Setting up Reporting and Auditing Capabilities in the Cisco Meraki Dashboard

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

## 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
- Explore VPN Status, Firewall and Static Port Forwarding Information Demo
- Troubleshoot Cisco Meraki Auto VPN
- Local Status Page

### Labs

- Configure Tags, Link Aggregation, Port Mirroring, and High-Density SSIDs
- Establishing Auto VPN
- Configuring Virtual Interfaces and Routing on Cisco Meraki MS Switches
- Configuring Routes and Redistribution
- Configuring Quality of Service
- Configuring Traffic Shaping
- Configuring Load Balancing
- Defining Firewall Rules
- Enabling Advanced Malware Protection, Intrusion Detection, and Intrusion Prevention
- Enabling Content Filtering
- Configure and Apply Access Policies
- Configure Wireless Guest Access

- Configure Service Set Identifiers (SSIDs)
- Implementing RF Profiles
- Implement Air Marshal
- Create Cisco Meraki Systems Manager (SM) Configuration Profiles
- Define Security Policies
- Enforce End-to-End Security
- Set-up Motion Alerts
- Deploy Wireless Cameras
- Manage Video Retention
- Enable Alerts
- Add Monitoring and Reporting
- Generate and Analyze Summary Reports
- Manage Firmware
- Generate a Peripheral Component Interconnect (PCI) Compliance Report
- Troubleshoot an Offline Device
- Troubleshoot Content Filtering
- Troubleshooting Remote Site Connectivity