



Cisco Meraki WLAN Solutions Workshop (CMWSW)

COURSE OVERVIEW

This 3-day workshop provides students with the skills to configure, optimize, and troubleshoot a Cisco Meraki wireless networking solution. Students will learn how to install and optimize Meraki MR access points as well as how to configure the Meraki dashboard. Students will learn how to troubleshoot and configure the Meraki environment and learn how to diagnose and resolve user and network issues that may arise.

Please note, this workshop is based on real-world use cases and deployment experiences that also will be discussed with the students. We will point out real-life deployments whenever discussing topics or performing practical exercises. This will enable students to conduct POV / POC events for verifying business cases after attending this workshop.

WHO WILL BENEFIT FROM THIS COURSE?

IT staff, network, and systems engineers interested in comprehensive knowledge of all Meraki products and solutions.

PREREQUISITES

Before taking this course, you should have earned CCNA certification or be familiar with:

- Network Fundamentals
- IP Addressing and Subnets
- Routing and Switching Technology
- Wireless Networking Concepts and Terminology

COURSE OBJECTIVES

After completing this course, students will be able to:

- Understand various use cases and design the best solution for a given enterprise customer
- Conduct a related POV / POC to allow the customer to verify their particular business case
- Design, deploy, and monitor a Cisco Meraki WLAN solution
- Diagnose and resolve most user and network issues in enterprise-scale deployments

COURSE OUTLINE

Introduction to Meraki

- Why Cisco Meraki
 - The Meraki Mission
 - Cloud Managed Networking Architecture
 - Benefits of a Cloud Based Solution
 - The Meraki Full Stack: New and Unique Value Proposition
 - Meraki Deployment
 - Use Cases: Why Customers choose Meraki



- Meraki Product Overview
 - Meraki MS Switches
 - Meraki MR Wireless Access Points
 - Meraki MX Security and SD-WAN Appliances
 - Meraki MV Vision Security Cameras
 - Meraki System Manager (SM)
 - Meraki MT Sensors Access Points
 - Cisco Meraki Insight
- Meraki API Overview
- Meraki Licensing and Support
 - Meraki Licensing
 - Enterprise Support and Warranties
 - Cisco Meraki Documentation

Cloud Management with the Meraki Dashboard

- Overview of the Meraki Dashboard
 - The Cisco Meraki Dashboard
 - Dashboard: Organizational Structure
 - Out-of-Band Cloud Management
 - Loss of Connectivity to the Cisco Meraki Cloud
 - Meraki Dashboard Logins
 - Create Dashboard Accounts and Organization
 - MSP Logins – Manage Multiple Organizations
 - Modify an Organization
 - View Organizations Health
 - Meraki Dashboard Best Practices
 - Dashboard Search
 - Meraki Help
- Organization-Wide Settings
 - Configuring Organizational-Wide Settings
 - Using Configuration Sync to View and Copy Settings
 - Administrators
 - Configuring and Monitoring Licensing
 - Creating Bulk Networks
 - Creating and Managing Networks (Sites)
 - Managing the Meraki Inventory
- Monitoring
 - Overview
 - Change Log, Login Attempts
 - Monitoring the Security Center
 - Using Location Analytics
 - Monitoring VPN Status
 - Scheduling and Managing Firmware
 - Using the Summary Report



- Creating and Managing Configuration Templates
 - Understand Configuration Templates
 - VLAN Templates
- Configuring Network-Wide Settings
 - Traffic Analysis
 - Location and Scanning
 - Configuring CloudShark for Capturing Traffic
 - Manage the Local Status Page
 - Manage Syslog, SNMP, Location, and NetFlow Services
 - Managing Network Admins and Guest Ambassadors
 - Managing Network Users
 - Managing Port Management Privileges
 - Configuring Group Policies
 - Adding Devices to the Network
- Monitoring Networks
 - Clients, Traffic Analytics
 - Displaying and exploring the Meraki Topology
 - Performing Packet Captures
 - Using the Event Log to Perform Troubleshooting

Meraki MR Wireless

- Overview and Features
 - MR Wireless Access Points
 - Meraki Built-In Location Analytics
 - Granular Control Over Bandwidth, Apps, and Client Devices
 - MR Feature: Multigigabit Ethernet
 - MR Feature: Mesh Routing
 - MR Dedicated Scanning Radio
 - Secure Guest Wireless
 - Built-In Bluetooth Beacons
 - Bluetooth Beacons
 - Built-In Meraki Location Heatmap
 - High Density Support
 - ISE Integration
 - Guest Self-Registration
 - Cisco Umbrella and Cisco Meraki
 - DNS/Web-Layer Security
 - Zero Touch Provisioning
 - Meraki Application Program Interfaces (APIs)
 - Licensing and Support
- Meraki Product Portfolio
 - Meraki MR Wireless Access Point Models Indoor
 - Meraki MR Wireless Access Point Models Outdoor
 - Directional Antennas



- AP Adapter Options
- Multi-Color LED Access Points
- Designing a Meraki Wireless Architecture
 - Wireless Standards
 - Meraki RF WLAN Design
 - Site Survey / Site Survey Tools
 - Mounting APs Best Practices
 - Meraki Design Principles
 - Meraki Roaming Design
 - Switch Design for Meraki Wireless Networks
 - Designing Meraki Network Services
 - Organization and Network Design
 - Migrating Cisco DNA APs to Meraki Dashboard
- Wireless Configuration
 - Connecting Access Points to the Network
 - Configuring Basic information including Tags
 - Configuring Wireless RF Radio Settings
 - Auto RF
 - Transmit Power Control
 - Channel Selection
 - Band Steering
 - Client Balancing
 - Configuring Floor Plans
 - Placing Access Points on the Floor Plans
 - Configuring RF Channel and Power Settings
- SSID Configuration
 - 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 Pre-Shared Keys with WPA2
 - Using WPA2-Enterprise SSIDs with 802.1X
 - RADIUS
 - Cisco ISE
 - Configuring Layer 3 Roaming
 - Configuring ISE Integration with Access Policies
 - Configuring Access Policies for Wireless
 - MAC-Based Access Control Filtered SSIDs
 - Firewall & Traffic Shaping Configuration



- Block Local Network for Guests
 - Layer 3 Firewall Rules
 - Block Applications
 - Traffic Shaping Rules per SSID
 - Bluetooth Settings
 - Bluetooth Low Energy (BLE)
 - Bluetooth Scanning
 - Bluetooth Clients
 - Bluetooth Beacons
 - Asset Tracking
 - Wireless Radio Settings
 - Radio Settings
 - Channel Planning
 - Auto RF - Channel Changes
 - RF Profile
 - Client Balancing
 - Monitoring
 - 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
- Automating Meraki Networks
- Introducing Meraki Automation
 - Dashboard APIs
 - Setting up Postman for Meraki

Lab Exercises

Generic Configuration Tasks

- Creating a Dashboard Account
- Configure Organizational Settings
- Add Devices to Your Organization



- Create Networks
- Manage Network-Wide Settings
- Create Group Policies
- Manage Firmware Upgrades
- Create Templates
- Manage VLAN Templates
- Bind Templates to Networks

Configuring MR Wireless Devices

- Configuring Meraki Access Points
 - Claiming your Devices and adding Devices to your Organization
 - MR Access Point Management
 - Accessing Meraki MR Devices – Local Status Page
 - Troubleshooting the Local Status Page
 - Checking Status of Meraki MR Devices Health and Connectivity
 - Configuring Templates and Deploying / Managing Meraki MR Devices through Templates
 - Unbinding Networks from a Template
 - Deleting a Configuration Template
 - Configuring Access Point Tags
 - Organizing a Wireless Network with Multiple Access Points
 - VLAN Tagging on Specific Access Points
- 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 Pre-Shared Keys with WPA2
 - Using WPA2-Enterprise SSIDs with 802.1X
 - Cisco ISE
 - MAC-based Access Control Filtered SSIDs
- Firewall & Traffic Shaping Configuration for Wireless
 - Blocking the Local Network for Guests
 - Layer 3 Firewall Rules
 - Blocking 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



- 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 Marshall to Isolate Rogue APs and Clients
- Monitoring Meraki Access Points
 - 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
 - Throughput
 - Checking PCI Compliance
 - Using the Event Log for Troubleshooting

Automation using Meraki APIs

- Meraki Dashboard API with Postman
- Meraki Organization and Networks Import into Postman
- Meraki Devices into the appropriate Networks using APIs
- Troubleshooting Meraki using APIs
 - Dashboard
 - Device Dashboard

WHY TRAIN WITH SUNSET LEARNING INSTITUTE?

Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their technology Investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

Premiere World Class Instruction Team

- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

Enhanced Learning Experience

- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

Convenient and Reliable Training Experience

- You have the option to attend classes live with the instructor, at any of our established training facilities, or from the convenience of your home or office
- All Sunset Learning Institute classes are guaranteed to run – you can count on us to deliver the training you need when you need it!

Outstanding Customer Service

- You will work with a dedicated account manager to suggest the optimal learning path for you and/or your team
- An enthusiastic student services team is available to answer any questions and ensure a quality training experience

Interested in Private Group Training?

[Contact Us](#)