

# DevNet Automation Bootcamp for Meraki

**Course Duration: 40 Hours**

**Course code: DevNet**

## 1. Course Overview

This course is designed to provide IT professionals with hands-on expertise in automating and managing cloud-based networking using Cisco Meraki. Participants will learn how to leverage the Meraki Dashboard API to automate configurations, monitor networks, and streamline operations across distributed environments. The course focuses on real-world automation scenarios, enabling learners to efficiently manage large-scale networks with minimal manual intervention while ensuring scalability, consistency, and security.

## 2. What you'll learn?

DevNet Automation Bootcamp for Meraki teaches you how to automate and manage Meraki cloud networks using APIs, Python, and DevNet tools. You will gain skills in working with the Meraki Dashboard, building automation workflows, integrating cloud-managed networking into DevOps pipelines, and optimizing network performance through automation.

## 3. Target Audience

**This course is ideal for:**

- 1- Network Engineers managing Meraki environments
- 2- Cloud Network Engineers and Administrators
- 3- DevOps and Automation Engineers
- 4- IT Professionals transitioning to cloud networking and automation roles

## 4. Pre-Requisites

**1- Basic Networking Knowledge:** Understanding of TCP/IP, routing, switching, and wireless concepts

**2- Meraki Fundamentals:** Familiarity with Meraki Dashboard and cloud-managed networking

**3- Programming Basics:** Basic understanding of Python

**4- API Knowledge:** Familiarity with REST APIs and JSON

**5- General IT Knowledge:** Understanding of cloud concepts and SaaS platforms

## 5. Course content

**Module 01 – Introduction to Meraki and DevNet Automation**

Overview of Cisco Meraki Cloud Architecture

Introduction to DevNet and Network Automation

Benefits of Cloud-Based Network Automation

**Module 02 – Meraki Dashboard and API Fundamentals**

Overview of Meraki Dashboard

Introduction to Meraki Dashboard API

API Authentication and API Keys

Exploring API Documentation

**Module 03 – REST API Concepts for Meraki**

Understanding REST API Methods (GET, POST, PUT, DELETE)

Working with JSON Data

API Testing using Postman and Curl

**Module 04 – Python Automation with Meraki**

Python Basics for API Automation

Using Meraki Python SDK

Writing Scripts to Interact with Meraki API

Automating Network Tasks

**Module 05 – Automating Meraki Network Configuration**

Automating Network Creation and Management

Managing Devices and Inventory  
Automating VLANs, SSIDs, and Firewall Rules

**Module 06 – Monitoring and Reporting Automation**

Retrieving Network Metrics via API  
Automating Alerts and Notifications  
Generating Reports using API Data

**Module 07 – Infrastructure as Code (IaC) for Meraki**

Introduction to IaC Concepts  
Using JSON Templates for Configuration  
Version Control with Git  
Automating Deployment of Network Configurations

**Module 08 – Automation with Ansible and Meraki**

Introduction to Ansible for Cloud Networking  
Using Meraki Ansible Modules  
Writing Playbooks for Automation  
Managing Configurations at Scale

**Module 09 – Advanced Automation and Integration**

Integrating Meraki APIs with Third-Party Tools  
Webhooks and Event-Driven Automation  
Automating Multi-Site Deployments

**Module 10 – Security and Access Management**

Securing API Keys and Access  
Role-Based Access Control in Meraki  
Best Practices for Secure Automation

**Module 11 – Real-World Use Cases & Hands-On Labs**

End-to-End Network Automation Scenarios  
Multi-Branch Deployment Automation  
Troubleshooting and Optimization

