Network Programmability with Cisco DevNet

Course Overview

The training gives IT professionals hands-on experience solving real-world infrastructure problems using Cisco Application Programming Interfaces (APIs) and modern development tools. Instead of relying on manual command-line interface (CLI) configurations, students learn to use code to manage, scale, and secure network infrastructure

Course Description

Network Programmability with Cisco DevNet—officially titled Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC)—focuses on bridging the gap between software development and network engineering. It teaches students how to implement basic network applications using Cisco platforms as a base and how to create automated workflows across modern network, security, collaboration, and computing infrastructures.

Learning Curriculum

Module 1

Software Development and Design

Data Formats: Understanding JSON, XML, and YAML.Version Control: Using Git for source control and collaboration.Architecture: Fundamentals of API architectures, RESTful principles, and HTTP response codes.

Module 2

Understanding and Using APIs

API Consumption: Using tools like Postman to interact with APIs.Webhooks: Understanding event-driven architectures.Authentication: Managing basic auth, tokens, and OAuth

Module 3

Cisco Platforms and Ecosystem

Intent-Based Networking: Exploring Cisco platforms such as Catalyst Center (formerly DNA Center) and Meraki.Collaboration: Integrating with Webex APIs.Compute/Security: Working with Cisco UCS and AppDynamics

Module 4

Network Fundamentals

Network Planes: Understanding control, data, and management planes.Network Devices: Interpreting topologies and device configurations.IP Services: Understanding DNS, DHCP, NAT, and NTP

Module 5

Application Deployment and Security

Containers: Basics of Docker and containerization.DevOps Methodologies: CI/CD pipelines and the software lifecycle.Security Concepts: AAA, firewalls, load balancers, and OWASP

Module 6

Infrastructure and Automation

Model-Driven Programmability: Using NETCONF, RESTCONF, and YANG data models.Configuration Management: Automating network tasks using tools like Ansible

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