ENC9K – Implementing Cisco Catalyst 9000 Switches

COURSE OVERVIEW:
This hands-on course covers many features of the Cisco IOS XE platform and describes how to manage devices from a single dashboard, the Cisco DNA Center. You will learn how to use the Cisco Catalyst 9000 family of switches to enable Software Defined Access (SD-Access) and provide end-to-end security and automation with centralized management using DNA Center.

WHO WILL BENEFIT FROM THIS COURSE?
Network engineers, designers, managers, and system engineers who are adopting Cisco Digital Network Architecture (Cisco DNA) and will use Cisco Catalyst 9000 Switches to enable an SD-Access solution provisioned with DNA Center.

PREREQUISITES:
It is recommended, but not required, to have the following skills and knowledge before attending this course:
- Cisco CCNP Routing and Switching certification or equivalent experience
- Knowledge of configuring LAN routing and switching with legacy Cisco Catalyst switches
- Familiarity with the Cisco IOS XE operating system
- Awareness of Cisco Identity Services Engine (ISE) as an authentication platform and policy manager

COURSE OBJECTIVES:
- Review the Cisco Catalyst 9000 switching family, identify the product features, and examine the functionalities purpose-built for Cisco DNA and the SD-Access solution
- Describe the Cisco Catalyst 9300 Series Switch architecture, model types, port types, uplink modules, and components including power supplies and stacking cables
- Describe the Cisco Catalyst 9400 Series Switches, different modular chassis, supervisor and line card options, architectural components, uplink and power redundancy, and multigigabit ports
- Describe the Cisco Catalyst 9500 Series Switches, model types, switch components, RFID support, architecture, and switch profiles
- Position the different Cisco Catalyst 9000 family switch model types in the network and map older Cisco Catalyst switches to the 9000 family for migration
- Examine management capabilities of the Cisco Catalyst 9000 family of switches
- Describe the Cisco Catalyst 9000 family of switches deployed in a Cisco StackWise Virtual environment and an SD-Access fabric
- Describe the new Cisco IOS XE software management, patchability, and insertion and removal (GIR) features for the Cisco Catalyst 9000 switching family
- Describe the scalability and performance features supported by the Cisco Catalyst 9000 switching family
- Describe the Cisco Catalyst 9000 support for security, quality of service (QoS), and Internet of Things (IoT) convergence features
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- Describe the Cisco Catalyst 9000 support for cloud hosting and connectivity, along with automation features
- Explore the SD-Access solution fundamentals and deployment models for the Cisco Catalyst 9000, and the use of Cisco DNA Center to manage infrastructure devices
- Get to know the next generation in the Cisco Catalyst family of enterprise LAN access, aggregation, and core switches
- Prepare for successful deployment of the Cisco Catalyst 9000 switching family
- Understand the role of Cisco Catalyst 9000 switches in the SD-Access fabric
- Learn to provision Cisco Catalyst 9000 switches using Cisco DNA center as the orchestration platform

COURSE OUTLINE:

Section 1: Introducing Cisco Catalyst 9000 Series Switches
Section 2: Introducing Cisco Catalyst 9300 Series Switches
Section 3: Introducing Cisco Catalyst 9400 Series Switches
Section 4: Introducing Cisco Catalyst 9500 Series Switches
Section 5: Positioning Cisco Catalyst 9000 Series Switches
Section 6: Examining Cisco Catalyst 9000 Series Switches Management Capabilities
Section 7: Deploying Cisco Catalyst 9000 Series Switches in Cisco StackWise Virtual and SD-Access Fabric
Section 8: Describing New Features on Cisco Catalyst 9000 Series Switches
Section 9: Describing Scale and Performance Features on Cisco Catalyst 9000 Series Switches
Section 10: Describing Security, QoS, and IoT Convergence Features on Cisco Catalyst 9000 Series Switches
Section 11: Describing Cloud and Automation Features on Cisco Catalyst 9000 Series Switches
Section 12: Describing Cisco SD-Access Solution and Cisco Catalyst 9000 Series Switches

Labs:
Discovery 1: Discover and Automate the Underlay Topology using PnP Base Automation Service of Cisco DNA Center GUI
Discovery 2: Perform GIR on Cisco Catalyst 9000 Series Switch
Discovery 3: Manage and Patch Cisco Catalyst 9000 Series Software Images using Cisco DNA Center GUI and CLI Commands
Discovery 4: Enable and Verify Encrypted Traffic Analytics
Discovery 5: Configure Perpetual PoE and Fast PoE on the Cisco Catalyst 9000 Series Switch
Discovery 6: Use Programmability with Python Scripts and NETCONF/YANG for Cisco Catalyst 9000 Series Switch Management Automation
Discovery 7: Deploy Cisco SD-Access Campus Fabric Using Cisco DNA Center Automation

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