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# Implementing Cisco Catalyst 9000 Switches

DURATION: 3 DAYS

COURSE CODE: ENC9K

FORMAT: LECTURE/LAB

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## COURSE DESCRIPTION

The Implementing Cisco Catalyst 9000 Switches (ENC9K) v1.0 course introduces you to the architecture, capabilities, and implementation of the Cisco® Catalyst® 9000 switching platform. This hands-on course covers many features of this Cisco IOS® XE platform and describes how to manage devices from a single dashboard called 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.

This course will help you:

- 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
- Gain hands-on practice through in-depth lab exercises

## PREREQUISITES

We recommend but do not require the following knowledge and skills 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

The Cisco learning offering below can help you prepare for this course:

- Introduction to APIC EM Deployment

As a follow-up to the Implementing Cisco Catalyst 9000 Switches (ENC9K) course, the Cisco learning offering below can help you learn more about the architecture, solution, and components of Cisco Identity Services Engine (ISE) as a network threat mitigation and endpoint control solution:

- Implementing Cisco Secure Access Solutions

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## WHO SHOULD ATTEND

Network engineers, designers, managers, and system engineers who are adopting the Cisco Digital Network Architecture (Cisco DNA™) and will use Cisco Catalyst 9000 Switches to enable an SD-Access solution provisioned with DNA Center.

- Network engineers
- Network designers
- Network managers
- System engineers

## LEARNING OBJECTIVES

Review the Cisco Catalyst 9000 switching family, identify the switches' 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 Graceful Insertion and Removal (GIR) features on 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 family's support for security, Quality of Service (QoS), and Internet of Things (IoT) convergence features

Describe the Cisco Catalyst 9000 family's support for cloud hosting and connectivity, along with automation features

Explore the SD-Access solution fundamentals, deployment models for the Cisco Catalyst 9000 family, and the use of Cisco DNA Center to manage infrastructure devices

## COURSE OUTLINE

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

## DISCOVERY LABS

- 1: Discover and Automate the Underlay Topology Using PnP Base Automation Service of Cisco DNA Center GUI
- 2: Perform GIR on a Cisco Catalyst 9000 Family Switch
- 3: Enable and Verify Encrypted Traffic Analytics
- 4: Configure Perpetual PoE and Fast PoE on a Cisco Catalyst 9000 Family Switch
- 5: Deploy Cisco SD-Access Campus Fabric Using Cisco DNA Center Automation