Implementing Cisco Catalyst 9000 Series Switches (ENC9K) v3.0

What you'll learn in this course

The **Implementing Cisco Catalyst 9000 Series Switches (ENC9K) v3.0** course provides you with insight into Cisco Catalyst 9000 Series Switches and its solution components. Cisco Catalyst 9000 Series Switches are the next generation in the Cisco Catalyst family of enterprise LAN access, aggregation, and core switches. The switches integrate the new realities of the digital era: they are twice as fast, with double the capacity, providing end-to-end security, and automation using centralized management in the Cisco DNA Center.

Course duration

- Instructor-led training: 3 days in the classroom with hands-on lab practice
- Virtual instructor-led training: 3 days of web-based classes with hands-on lab practice
- E-learning: Equivalent of 3 days of instruction with hands-on lab practice and videos

How you'll benefit

This course will help you:

- Prepare for successful deployment of the Cisco Catalyst 9000 Series Switches
- Understand the role of Cisco Catalyst 9000 Series Switches in the SD-Access fabric
- Learn to provision Cisco Catalyst 9000 Series Switches using Cisco DNA center as the orchestration platform
- Gain hands-on practice through in-depth lab exercises

Who should enroll

- Network designers
- Network managers
- System engineers

How to enroll

E-learning

- To buy a single e-learning license, visit the Cisco Learning Network Store.
- For more than one license, or a learning library subscription, contact us at learning-bdm@cisco.com.

Instructor-led training

- Find a class at the Cisco Learning Locator.
- Arrange training at your location through Cisco Private Group Training.

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Technology areas

- Networking

Course details

Objectives

After taking this course, you should be able to:

- Review the Cisco Catalyst 9000 Series Switches identify the switches' features and examine the functionalities purpose-built for Cisco DNA and the SD-Access solution.
- Describe the Cisco Catalyst 9200 Series Switch architecture, model types, port types, uplink modules, components including power supplies, and other switch features and capabilities.
- 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.
- Describe the Cisco Catalyst 9600 Series Switch architecture, supervisor and line card options, and high availability features.
- Position the different Cisco Catalyst 9000 Series 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 Series Switches.
- Describe the Cisco Catalyst 9000 Series 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 Series Switches.
- Describe the ThousandEyes Enterprise Agent using the Docker environment on the Cisco Catalyst 9000 Series switches.
- Describe the scalability and performance features supported by the Cisco Catalyst 9000 Series Switches.
- Describe the Cisco Catalyst 9000 Series Switch support for security, Quality of Service (QoS), and Internet of Things (IoT) convergence features.
- Describe the Cisco Catalyst 9000 Series support for cloud hosting and connectivity, along with automation features.
- Explore the SD-Access solution fundamentals, deployment models for the Cisco Catalyst 9000 Series Switch, and the use of Cisco DNA Center to manage infrastructure devices.

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Prerequisites

You are expected to have the following knowledge and skills before attending this course:

- Cisco CCNP® certification or equivalent experience
- Knowledge of configuring LAN routing and switching with Cisco Catalyst switches
- Familiarity with the Cisco IOS XE operating system
- Familiarity with Cisco Identity Services Engine (ISE)
- Familiarity with using network management software
- Familiarity with Cisco Intent-based networking and policy-based management automation technologies

The following Cisco offerings can help you prepare for this course:

- **Implementing and Administering Cisco Solutions (CCNA)**
- **Understanding Cisco SDA Fundamentals (SDAFND)**
- **Implementing Automation for Cisco Enterprise Solutions (ENAUI)**

Outline

- Introducing the Cisco Catalyst 9000 Series Switches
- Introducing Cisco Catalyst 9200 Series Switches
- Introducing Cisco Catalyst 9300 Series Switches
- Introducing Cisco Catalyst 9400 Series Switches
- Introducing Cisco Catalyst 9500 Series Switches
- Introducing Cisco Catalyst 9600 Series Switches
- Positioning Cisco Catalyst 9000 Series Switches
- Examining the Cisco Catalyst 9000 Series Switches Management Capabilities
- Describing New Features on Cisco Catalyst 9000 Series Switches
- Describing Scale and Performance Features on Cisco Catalyst 9000 Series Switches
- Describing Security, QoS, and IoT Convergence Features on Cisco Catalyst 9000 Series Switches
- Describing Cloud and Automation Features on Cisco Catalyst 9000 Series Switches
- Describing Cisco SD-Access Solution and Cisco Catalyst 9000 Series Switches

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Lab outline

- Application Hosting on Cisco Catalyst 9000 Series Switches Using the CLI
- Perform GIR on a Cisco Catalyst 9000 Series Switch
- Application Hosting on Cisco Catalyst 9300 Using Cisco DNA Center
- Configuring and Verifying a Switch Stack
- Enable and Verify Encrypted Traffic Analytics
- Configure Perpetual PoE and Fast PoE on a Cisco Catalyst 9000 Series Switch
- Configure Packet Capture on a Cisco Catalyst 9300 Series Switch
- Explore Switch Management Automation and Programmability

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