



Implementing Cisco Catalyst 9000 Series Switches (ENC9K) v4.0

What you'll learn

The Implementing Cisco Catalyst 9000 Series Switches (ENC9K) v4.0 training provides you with insight into Cisco Catalyst 9000 Series Switches and its solution components. You will learn about the architecture, capabilities, positioning, and implementation of the Cisco Catalyst 9000 Series switches, as well as the management of the switches using CLI, Cisco DNA Center, and IOS-XE web user GUI. Additionally, you will be introduced to security, cloud, automation, and other important features of Cisco Catalyst 9000 Series switches.

How you'll benefit

This training 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

Technology areas

Networking

Training overview

Objectives



After taking this training, 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.

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.

Identify the role and value of Cisco Silicon One in a campus environment.

Examine management capabilities of 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 automation features, Application Programming Interface (API), Infrastructure as Code, and automation tools supported on Cisco Catalyst 9000 Series switches.

Describe the new QoS, IoT, and BGP EVPN Features on Cisco Catalyst 9000 Series Switches.

Describe the maintenance features on Cisco Catalyst 9000 Series switches.

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.

Automate Day 0 device onboarding with Cisco DNA Center LAN Automation and Network PnP.

Describe how to manage and host applications on Cisco Catalyst 9000 Series switches using Cisco DNA Center.

Explore a modern approach to cloud-managed networking for Cisco Catalyst 9000 Series switches and wireless access points that uses the Meraki Dashboard and analytics.

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.

Prerequisites

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

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 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 training:

Implementing and Administering Cisco Solutions (CCNA)

Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Lab outline

Configure and Troubleshoot Network Issues Using WebGUI

Application Hosting on Cisco Catalyst 9000 Series Switches Using the CLI

Configure a Switch Stack Using Cisco Catalyst 9300 Series Switches

Enable and Verify Switch-to-Switch MACSec

Enable and Verify Encrypted Traffic Analytics

Explore Switch Management Automation and Programmability

Network Automation Using Ansible Playbooks and Terraform Scripts on the Cisco IOS XE

Configure Perpetual PoE and fast PoE on the Cisco Catalyst 9000 Series Switches

Configure Packet Capture on Cisco Catalyst 9300 Series Switches

Perform GIR on a Cisco Catalyst 9000 Series Switch



Application Hosting on Cisco Catalyst 9300 Using Cisco DNA Center

Integrate Cisco DNA Center and Cisco ISE

Provision Underlay Networks with Cisco DNA Center LAN Automation