Implementing Cisco Catalyst 9000 Series Switches (ENC9K)

What you'll learn on this course

The Implementing Cisco Catalyst 9000 Series Switches (ENC9K) training provides you with an insight into Cisco Catalyst 9000 Series Switches and its solution components. It also covers inclusion of Silicon One ASICs for Cisco Catalyst 9000 Series Switches.

Cisco Catalyst 9000 Series Switches are the next generation in the legendary Cisco Catalyst family of enterprise LAN access, aggregation, and core switches. They are purpose built from the ground up for the new realities of the digital era. They are twice as fast, with twice the capacity, providing end-to-end security, and automation using centralized management using Cisco DNA Center. Cisco Catalyst 9000 switches lead the industry with the first 400G interfaces in enterprise computing, first Silicon One ASICs for campus, full multigigabit and UPoE+ ports, converged switching and routing. This training also earns you 18 Continuing Education (CE) credits toward recertification

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
- Earn 18 CE credits toward recertification

Who should enroll

- Network designers
- Network managers
- System engineers

Technology areas

- Networking

Course details

Objectives

- 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

Course Outline

- Introducing the Cisco Catalyst 9000 Series Switches
- Positioning Cisco Catalyst 9000 Series Switches
- Cisco Catalyst Silicon One Architecture
- Exploring Cisco Catalyst 9000 Series Switches Management Capabilities
- Scale and Performance Features on Cisco Catalyst 9000 Series Switches
- Security Features on Cisco Catalyst 9000 Series Switches
- Automation Features on Cisco Catalyst 9000 Series Switches
- QoS, IoT, and BGP EVPN Features on Cisco Catalyst 9000 Series Switches
- Maintenance Features on Cisco Catalyst 9000 Series Switches
- Cisco SD-Access Solution on Cisco Catalyst 9000 Series Switches
- Application Hosting on Cisco Catalyst 9000 Series Switches
- Cloud Management for Catalyst 9000 Series Using Meraki Dashboard
- Automating Network Changes with Cisco DNA Center
- 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

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
- Configure and Verify Cisco ETA and Flexible NetFlow Configuration on the Cisco Catalyst 9300 Series Switches
- Configure Cisco Flow Collector and Cisco SMC for ETA and Generating Reports
- Inspect ETA Results and Reports in the SMC Web Client GUI
- 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 Switch
- Configure Packet Capture on Cisco Catalyst 9300 Series Switch
- Perform GIR on 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

Course Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- 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

These skills can be found in the following Cisco Learning Offerings:

- Implementing and Administering Cisco Solutions (CCNA)
- Implementing Cisco Enterprise Network Core Technologies (ENCOR)