

Implementing Cisco Catalyst 9000 Switches (ENC9K)

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In this Implementing Cisco Catalyst 9000 Series Switches course provides a comprehensive exploration of the Cisco Catalyst 9000 Series switching portfolio, focusing on architecture, performance, security, automation, and lifecycle management in modern enterprise campus networks. It is designed for network engineers and architects who need a deep understanding of how the Catalyst 9000 family supports scalable, secure, and software-defined networking environments. The course connects hardware capabilities with operational workflows and controller-based management.

Students begin by examining the positioning, hardware platforms, and Cisco Silicon One architecture that underpin the Catalyst 9000 Series. The curriculum then explores management capabilities, scale and performance features, quality of service, IoT support, BGP EVPN functionality, and advanced security features such as MACsec and encrypted traffic analytics. Automation topics highlight programmability using Cisco IOS XE, Ansible, Terraform, Cisco Catalyst Center, and Meraki Dashboard for cloud-based management.

The course also covers software-defined access, application hosting at the network edge, and maintenance features such as In-Service Software Upgrade and Graceful Insertion and Removal. Hands-on labs reinforce each topic through real-world scenarios, including switch stacking, PoE optimization, packet capture, network automation, DNA Center integration with Cisco ISE, and LAN Automation. By the end of the course, learners are prepared to design, deploy, automate, and operate enterprise networks built on the Cisco Catalyst 9000 Series.

How you'll benefit

This class 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

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- Network Designers
- Network Managers
- System Engineers

Course Duration

3 days

Course Price

\$3,095.00 or 30 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

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 using network management software
- Familiarity with Cisco Intent-based networking and policy-based management automation technologies

OUTLINE

Module 1: Introducing the Cisco Catalyst 9000 Series Switches

Module 2: Positioning Cisco Catalyst 9000 Series Switches

Module 3: Cisco Catalyst Silicon One Architecture

Module 4: Exploring Cisco Catalyst 9000 Series Switches Management Capabilities

Module 5: Scale and Performance Features on Cisco Catalyst 9000 Series Switches

Module 6: Security Features on Cisco Catalyst 9000 Series Switches

Module 7: Automation Features on Cisco Catalyst 9000 Series Switches

Module 8: QoS, IoT, and BGP EVPN Features on Cisco Catalyst 9000 Series Switches

Module 9: Maintenance Features on Cisco Catalyst 9000 Series Switches

Module 10: Cisco SD-Access Solution on Cisco Catalyst 9000 Series Switches

Module 11: Application Hosting on Cisco Catalyst 9000 Series Switches

Module 12: Cloud Management for Catalyst 9000 Series Using Meraki Dashboard

Module 13: Automating Network Changes with Cisco DNA Center

Module 14: Introducing Cisco Catalyst 9200 Series Switches

Module 15: Introducing Cisco Catalyst 9300 Series Switches

Module 16: Introducing Cisco Catalyst 9400 Series Switches

Module 17: Introducing Cisco Catalyst 9500 Series Switches

Module 18: Introducing Cisco Catalyst 9600 Series Switches

LAB OUTLINE

- Lab 1: Configure and Troubleshoot Network Issues Using WebGUI
- Lab 2: Application Hosting on Cisco Catalyst 9000 Series Switches Using the CLI
- Lab 3: Configure a Switch Stack Using Cisco Catalyst 9300 Series Switches
- Lab 4: Enable and Verify Switch-to-Switch MACSec
- Lab 5: Configure and Verify Cisco ETA and Flexible NetFlow Configuration on the Cisco Catalyst 9300 Series Switches
- Lab 6: Configure Cisco Flow Collector and Cisco SMC for ETA and Generating Reports
- Lab 7: Inspect ETA Results and Reports in the SMC Web Client GUI
- Lab 8: Explore Switch Management Automation and Programmability
- Lab 9: Network Automation using Ansible Playbooks and Terraform Scripts on the Cisco IOS XE
- Lab 10: Configure Perpetual PoE and Fast PoE on the Cisco Catalyst 9000 Series Switch
- Lab 11: Configure Packet Capture on Cisco Catalyst 9300 Series Switch
- Lab 12: Perform GIR on Cisco Catalyst 9000 Series Switch
- Lab 13: Application Hosting on Cisco Catalyst 9300 Using Cisco DNA Center
- Lab 14: Integrate Cisco DNA Center and Cisco ISE
- Lab 15: Provision Underlay Networks with Cisco DNA Center LAN Automation