

## Implementing Cisco Catalyst 9000 Series Switches

**Duration: 180 Days**    **Course Code: ENC9K**    **Version: 4.1**    **Delivery Method: Elearning (Self-paced)**

### Overview:

**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.

*Updated 08/06/2026*

e-Learning

Interactive self-paced content that provides flexibility in terms of pace, place and time to suit individuals and organisations. These resources also consist of online books, educational podcasts and vodcasts, and video-based learning.

### Target Audience:

This class is intended for the following participants:

- Network Designers
- Network Managers
- System Engineers

### Objectives:

- After this course participants 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
- 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

## Catalyst 9000 Series Switches

- Describe the maintenance features on Cisco Catalyst 9000 Series switches
- Describe the Cisco Catalyst 9600 Series Switch architecture, supervisor and line card options, and high availability features

---

### 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:

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

### Testing and Certification

**Recommended as preparation for the following exams :**

- There are no exams currently aligned to this course

---

### Follow-on-Courses:

- SISE - Implementing and Configuring Cisco Identity Services Engine
-

## Content:

### 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

---

## Additional Information:

“Official course book provided to participants.”

---

## Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

[training@globalknowledge.ae](mailto:training@globalknowledge.ae)

[www.globalknowledge.com/en-ae/](http://www.globalknowledge.com/en-ae/)

Global Knowledge, Dubai Knowledge Village, Block 2A, First Floor, Office F68, Dubai, UAE