

Implementing Cisco Catalyst 9000 Series Switches

Duración: 3 Días **Código del Curso: ENC9K** **Version: 2.0**

Temario:

The Implementing Cisco Catalyst 9000 Switches (ENC9K) course introduces you to the architecture, capabilities and implementation of the Cisco Catalyst 9000 switching platform. This hands-on course covers many features of this Cisco IOS XE platform and describes how to manage devices from a single dashboard called Cisco DNA Center. You will learn how to use the Cisco Catalyst 9000 family of switches to enable Software Defined Access (SD-Access) and provide end-to-end security and automation with centralized management using DNA Center.

Dirigido a:

Network engineers, designers, managers, and system engineers who are adopting the Cisco Digital Network Architecture (Cisco DNA) and who will use Cisco Catalyst 9000 Switches to enable an SD-Access solution provisioned with DNA Center.

Objetivos:

- **After completing this course you should be able to:**
- Review the Cisco Catalyst 9000 switching family, identify the switches' features, and examine the functionalities purpose-built for Cisco DNA and the SD-Access solution
- 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
- Position the different Cisco Catalyst 9000 family 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 family of switches
- Describe the Cisco Catalyst 9000 family of 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 switching family
- Describe the scalability and performance features supported by the Cisco Catalyst 9000 switching family
- Describe the Cisco Catalyst 9000 family's support for security, quality of service (QoS), and Internet of Things (IoT) convergence features
- Describe the Cisco Catalyst 9000 family's support for cloud hosting and connectivity, along with automation features
- Explore the SD-Access solution fundamentals, deployment models for the Cisco Catalyst 9000 family, and the use of Cisco DNA Center to manage infrastructure devices

Prerequisites:

Attendees should meet the following prerequisites:

- Cisco CCNP Routing and Switching certification or equivalent experience
- Knowledge of configuring LAN routing and switching with legacy Cisco Catalyst switches
- Familiarity with the Cisco IOS XE operating system
- Awareness of Cisco Identity Services Engine (ISE) as an authentication platform and policy manager

Exámenes y certificación

Recommended as preparation for the following exams:

- There are no exams currently aligned to this course

- DCACI - Implementing Cisco Application Centric Infrastructure
 - ENCOR - Implementing and Operating Cisco Enterprise Network Core Technologies
 - SCOR - Implementing and Operating Cisco Security Core Technologies
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Siguientes cursos recomendados:

Should you wish to learn more about the Cisco Identity Services Engine (ISE) then the following course is recommended:

- **SISE** - Implementing and Configuring Cisco Identity Services Engine
 - SISE - Implementing and Configuring Cisco Identity Services Engine
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Contenido:

Introducing Cisco Catalyst 9000 Series Switches

- Introducing Cisco Catalyst 9000 Platforms
- Introducing Cisco UDAP ASIC 2.0
- Cisco UDAP 2.0 Core Architecture
- Packet Walk with ASIC
- Cisco Open IOS XE
- Role of Cisco Catalyst 9000 Series Switches in Cisco DNA Architecture
- Cisco Catalyst 9000 Series Licensing

Introducing Cisco Catalyst 9300 Series Switches

- Cisco Catalyst 9300 Product Overview
- Switch Models
- Cisco Catalyst 9300 Switch Uplink Models
- Cisco Catalyst 9300 Series Switches, Power Supplies, Stacking and Stack Cables
- Enhanced Storage Options on Cisco Catalyst 9300
- Cisco Catalyst 9300 Port Layouts
- Multigigabit Ports

Introducing Cisco Catalyst 9400 Series Switches

- Cisco Catalyst 9400 Product Overview
- Cisco Catalyst 9400 4-slot Modular Switch Chassis
- Cisco Catalyst 9400 7-Slot Modular Switch Chassis
- Cisco Catalyst 9400 10-Slot Modular Switch Chassis
- Cisco Catalyst 9400 Supervisor and Line Cards
- Power Supplies
- Cisco Catalyst 9400 High Availability Features
- Cisco Catalyst 9400 Architecture
- Cisco Catalyst 9400 Supervisor Uplinks and Uplink Redundancy
- Cisco Catalyst 9400 Power Redundancy Modes
- Cisco Catalyst 9400 Multigigabit Ports

Introducing Cisco Catalyst 9500 Series Switches

- Cisco Catalyst 9500 Product Overview
- Cisco Catalyst 9500 24-Q Series Switch
- Cisco Catalyst 9500 12-Q Series Switch
- Cisco Catalyst 9500-40X Series Switch
- Cisco Catalyst 9500 Redundant Platinum Rated Power Supply
- Cisco Catalyst 9500 Modular Fans
- Cisco Catalyst 9500 Series Switch RFID
- Cisco Catalyst 9500 24x40G Architecture
- Cisco Catalyst 9500 12x40G Architecture
- Cisco Catalyst 9500 40x10G Architecture

Positioning Cisco Catalyst 9000 Series

Examining Cisco Catalyst 9000 Series Switches Management Capabilities

- Cisco IOS Software Command-Line Interface
- Cisco Prime Infrastructure
- Cisco Application Policy Infrastructure Controller Enterprise Model
- Cisco DNA Center
- Onboard Cisco IOS XE Software Web User Interface GUI
- Simple Network Management Protocol
- Network Programmability Features

Deploying Cisco Catalyst 9000 Series Switches in Cisco StackWise Virtual and SD-Access Fabric

- Cisco Stackwise Virtual Topology in N-Tier Network Topology
- Deploying Cisco Catalyst 9000 Series in SD Access Fabric

Describing New Features on Cisco Catalyst 9000 Series Switches

- Open IOS XE Patchability and Software Management
- Software Upgrades, Backup and Restore
- Graceful Insertion and Removal
- New Licensing Packaging Structure
- Cisco DNA Software Capabilities by Subscription
- Open IOS XE Containers and Hosted Applications

Describing Scale and Performance Features on Cisco Catalyst 9000 Series Switches

- Bandwidth Per Stack
- Uplinks
- Multigigabit Technology
- Flexible NetFlow
- Forwarding TCAM Resources, Flexible Lookup Tables Shared Across Cores, FlexTables
- Cisco Catalyst 9500 Series Flexible ASIC Templates

Describing Security, QoS, and IoT Convergence Features on Cisco Catalyst 9000 Series Switches

- Group-Based policy and Cisco TrustSec SGT for Wired and Wireless
- AES-256 MACsec Encryption
- FabricSec Encryption
- Encrypted Traffic Analytics
- Extend Security to Infrastructure with Trustworthy Systems
- QoS Features and Packet Walk
- Describe IoT Convergence Features on Cisco Catalyst 9000 Series Switches

Describing Cloud and Automation Features on Cisco Catalyst 9000 Series Switches

- Cloud Hosting (AssurancePolicy) and Cloud Connectivity
- Telemetry
- DevOps Toolkit
- NETCONF and YANG Management Model
- Cisco DNA Center and SD-Access Programmability
- High Availability Features

Describing Cisco SD-Access Solution and Cisco Catalyst 9000 Series Switches

- Cisco SD-Access Solutions Fundamentals
- Role of the Cisco Catalyst 9000 Series in the Cisco SD-Access Solution
- Cisco DNA Center Components and Architecture
- Cisco DNA Center Four Step Automation WorkFlow for SD-Access

Labs - Part 1

- Lab 1: Discover and Automate the Underlay Topology using PnP Base Automation Service of Cisco DNA Center GUI
- Lab 2: Perform GIR on Cisco Catalyst 9000 Series Switch
- Lab 3: Manage and Patch Cisco Catalyst 9000 Series Software Images using Cisco DNA Center GUI and CLI Commands
- Lab 4: Enable and Verify Encrypted Traffic Analytics
- Lab 5: Configure Perpetual PoE and Fast PoE on the Cisco Catalyst 9000 Series Switch
- Lab 6: Use Programmability with Python Scripts and NETCONF/YANG for Cisco Catalyst 9000 Series Switch Management Automation
- Lab 7: Deploy Cisco SD-Access Campus Fabric Using Cisco DNA Center Automation

Switches

- Positioning Cisco Catalyst 9300 Series Switches
- Positioning Cisco Catalyst 9400 Series Switches
- Positioning Cisco Catalyst 9500 Series Switches
- Migrating from the Cisco Catalyst 3850 to the Cisco Catalyst 9300
- Migrating from the Cisco Catalyst 4500E to the Cisco Catalyst 9400
- Migrating from the Cisco Catalyst 4500X, 6840X and 6880 to the Cisco Catalyst 9500

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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