

## Implementing Cisco NX-OS Switches and Fabrics in the Data Center

**Durée: 5 Jours**    **Réf de cours: DCNX**    **Version: 1.0**    **Méthodes d'apprentissage: Classe à distance**

### Résumé:

The Implementing Cisco NX-OS Switches and Fabrics in the Data Center (DCNX) course gives you a detailed understanding of the Cisco® Nexus switch platform and teaches you how to install, configure, and manage Cisco Nexus® switch platforms in a scalable, highly available environment. Through a combination of lectures and hands-on labs, you will learn how to describe various aspects of the Cisco Nexus product families and platforms, including implementation, management, security, programmability and storage. Additionally, you will learn how to configure device aliases and zoning, Fibre Channel over Ethernet (FCoE), and N-Port Identifier Virtualization (NPIV), and N-Port Virtualization (NPV) modes.

Virtual and Classroom learning - V&C Select™

V&C Select™ is a simple concept and a flexible approach to delivery. You can 'select' a course from our public schedule and attend in person or as a virtual delegate. Virtual delegates do not travel to this course, we will send you all the information you need before the start of the course and you can test the logins.

### Public visé:

Engineers using the Cisco Nexus Series Switch Platforms.

### Objectifs pédagogiques:

- **After completing this course you should be able to:**
- Describe the platforms that make the Cisco Nexus 9000, 7000, 3000, and 2000 product families
- Describe Cisco Nexus platform implementations
- Explain Cisco Nexus platform management
- Describe Port Channels and Virtual Port Channels
- Configure First Hop Redundancy protocols
- Configure security features of Cisco Nexus devices
- Describe the Cisco Nexus devices routing and forwarding
- Describe Virtual Extensible LAN (VXLAN)
- Describe Quality of Service (QoS) on Cisco Nexus Devices
- Explain system management and monitoring processes
- Describe Cisco NX-OS programmability
- Describe Cisco Nexus storage services
- Configure device aliases and zoning
- Configure FCoE
- Configure NPIV and NPV modes

### Pré-requis:

Attendees should meet the following prerequisites:

- Be familiar with Cisco data center technologies
- Understand networking protocols, routing, and switching
- CCNA - Mettre en oeuvre et administrer des solutions réseaux Cisco
- DCFNDU - Comprendre les bases du Data Center Cisco

### Test et certification

Recommended as preparation for the following exams:

- There are no exams currently aligned to this course

## Contenu:

### Describing Cisco Nexus Series Switches

- Describe Cisco Nexus 9000 Series Switches
- Describe Cisco Nexus 7000 Series Switches
- Describe Cisco Nexus 3000 Series Switches
- Describe Cisco Nexus 2000 Series Fabric Extenders

### Describing Cisco Nexus Platforms Implementation

- Describe Cisco Nexus in the Data Center Architecture
- Describe Cisco NX-OS Software
- Describe the Licensing Model

### Describing Cisco Nexus Platforms Management

- Describe Cisco Nexus CLI and GUI Management Interfaces
- Describe Cisco NX-OS Setup Utility
- Describe Virtual Device Context on Cisco Nexus 7000 Series
- Describe PowerOn Auto Provisioning
- Describe Cisco NX-OS User Management
- Describe Cisco NX-OS AAA Services

### Describing Port Channels and Virtual Port Channels

- Describe Port Channel Operation
- Describe vPC Concepts and Benefits
- Describe vPC Architecture
- Describe vPC Control and Data Plane

### Configuring First Hop Redundancy Protocols

- Describe HSRP
- Describe VRRP

### Configuring Cisco Nexus Security Features

- Configure Access Control Lists
- Configure Port Security
- Configure DHCP Snooping
- Configure Dynamic ARP Inspection
- Configure IP Source Guard
- Configure Unicast RPF
- Configure Keychain Management
- Configure Control Plane Policing
- Configure MACsec

### Describing Cisco NX-OS Routing and Forwarding

- Describe Routing in Cisco NX-OS
- Describe Multicast Routing in Cisco NX-OS
- Describe Unicast and Multicast RIB and FIB in NX-OS
- Describe Layer 3 Best Practices for vPC

### Describing Virtual Extensible LAN

- Describe VXLAN Benefits over VLAN
- Describe VXLAN Overlay
- Describe VXLAN MP-BGP EVPN Control Plane
- Describe VXLAN Data Plane

### Describing QoS on Cisco Nexus Devices

- Describe QoS on Cisco Nexus Devices
- Configure QoS on Cisco Nexus Devices
- Describe Monitoring of QoS Statistics

### Configuring System Management and Monitoring

- Configure System Management
- Configure System Monitoring and Troubleshooting Tools

### Describing Cisco NX-OS Programmability

- Describe On-Box Programmability on Cisco NX-OS
- Describe Ansible for Cisco NX-OS

### Describing Cisco Nexus Storage Services

- Describe IP Storage on Cisco Nexus Switches
- Describe Fibre Channel
- Describe Fibre Channel Flow Control
- Describe Fibre Channel Domain Initialization
- Describe Fibre Channel Addressing

### Configuring Fibre Channel Over Ethernet

- Describe Fibre Channel over Ethernet
- Describe FCoE Requirements
- Describe Data Center Bridging
- Describe FCoE Addressing Scheme
- Describe FCoE Initialization Protocol
- Describe FCoE Port Types

### Describing Device Aliases and Zoning

- Describe Distributed Device Alias Services
- Describe Zoning
- Describe Zone Merging
- Describe Recovering from Zone Merge Failures
- Describe Enhanced Zoning

### Configuring NPIV and NPV Modes

- Describe N-Port ID Virtualization
- Describe Fibre Channel NPV Mode
- Describe FCoE NPV Mode

### Labs

- Test Cisco Nexus Platforms
- Configure User Management
- Configure vPC
- Configure First Hop Redundancy Protocol (FHRP) Protocols
- Configure Cisco Nexus Security Features
- Configure Open Shortest Path First (OSPF)
- Configure VXLAN
- Configure QoS
- Configure System Management
- Configure Cisco NX-OS On-Box Programmability
- Configure Containers on Cisco NX-OS
- Configure Cisco NX-OS Using Ansible
- Configure Basic Fibre Channel Features
- Configure FCoE
- Configure Fiber Channel Device Aliases and Zoning
- Configure NPV

## Autres moyens pédagogiques et de suivi:

- Compétence du formateur : Les experts qui animent la formation sont des spécialistes des matières abordées et ont au minimum cinq ans d'expérience d'animation. Nos équipes ont validé à la fois leurs connaissances techniques (certifications le cas échéant) ainsi que leur compétence pédagogique.
- Suivi d'exécution : Une feuille d'émargement par demi-journée de présence est signée par tous les participants et le formateur.
- Modalités d'évaluation : le participant est invité à s'auto-évaluer par rapport aux objectifs énoncés.
- Chaque participant, à l'issue de la formation, répond à un questionnaire de satisfaction qui est ensuite étudié par nos équipes pédagogiques en vue de maintenir et d'améliorer la qualité de nos prestations.

### Délais d'inscription :

- Vous pouvez vous inscrire sur l'une de nos sessions planifiées en inter-entreprises jusqu'à 5 jours ouvrés avant le début de la formation sous réserve de disponibilité de places et de labs le cas échéant.
- Votre place sera confirmée à la réception d'un devis ou "booking form" signé. Vous recevrez ensuite la convocation et les modalités d'accès en présentiel ou distanciel.
- Attention, si vous utilisez votre Compte Personnel de Formation pour financer votre inscription, vous devrez respecter un délai minimum et non négociable fixé à 11 jours ouvrés.