DCCNX

Configuring Cisco NX-OS Switches and Fabrics in the Data Center

24 horas | Data Center & Cloud | Cisco

INTRODUÇÃO

The Configuring Cisco Nexus Switches (DCCNX) v1.0 course shows you how to install, configure, and manage Cisco Nexus® Series Switch platforms using Cisco® NX-OS to support highly available, secure, scalable virtualized data centers. Through expert instruction and hands-on practice, you will learn how to deploy Cisco NX-OS software features including networking, virtualization, security, storage services, system management, and monitoring. You will also be introduced to automating Cisco Nexus devices using Cisco NX-OS Software programmability features.

For a technical overview of Cisco Nexus Switches, consider taking the Introducing Cisco NX-OS Switches and Fabrics in the Data Center (DCINX) course.

This course will help you:
• Gain the knowledge and skills to deploy advanced capabilities of Cisco Nexus NX-OS Software and Cisco Nexus Series data center switches;
• Learn through Cisco’s unique combination of lessons and hands-on practice using enterprise-grade Cisco learning technologies, data center equipment, and software;
• Succeed in today’s demanding data center operations roles.

OBJETIVO DO CURSO

After taking this course, you should be able to:
• Describe the Cisco Nexus devices routing and forwarding;
• Describe Overlap Transport Virtualization (OTV);
• Describe and configure Virtual Extensible LAN (VXLAN);
• Describe Locator/ID Separation Protocol (LISP);
• Describe the key features of Cisco Nexus devices;
• Describe Cisco Intelligent Traffic Director;
• Describe Quality of Service (QoS) on Cisco Nexus devices;
• Understand Cisco Nexus storage services;
• Configure device alliances and zoning;
• Configure Fibre Channel over Ethernet (FCoE);
• Configuring N-Port Identifier Virtualization (NPIV) and N-Port Virtualization (NPV) Modes;
• Describe NX-API and network orchestration solutions, and program Cisco NX-OS with Python;
• Explain system management, monitoring, and troubleshooting processes;
• Explain the troubleshooting processes.

PÚBLICO-ALVO

Professionals interested in knowing and implementing solutions using the Cisco Nexus Data Center Switches.

PRÉ-REQUISITOS

To fully benefit from this course, you should have the following knowledge and skills:

• Familiarity with Cisco data center technologies

• Understand networking protocols, routing, and switching

For reference, these are the recommended Cisco courses that may help you meet these prerequisites:

• Implementing and Administering Cisco Solutions (CCNA®)

• Understanding Cisco Data Center Foundations (DCFNDU)

• Implementing and Operating Cisco Data Center Core Technologies (DCCOR)

• Introducing Cisco Nexus Series Switches (DCINX)

CONTEÚDO PROGRAMÁTICO

Course Introduction

Course Outline

Course Goals & Objectives

Describing the Cisco NX-OS Routing and Forwarding

Routing Overview

Multicast Routing

Cisco NX-OS Routing and Forwarding

Unicast and Multicast RIB and FIB

Describing Overlay Transport Virtualization

Cisco OTV Overview

Cisco OTV Control and Data Planes

Failure Isolation

Cisco OTV Features

Optimizing Cisco OTV

Describing Virtual Extensible LAN

VXLAN Benefits over VLAN

Layer 2 and Layer 3 VXLAN Overlay

VXLAN MP-BGP EVPN Control Plane

VXLAN Data Plane

Describing Locator/ID Separation Protocol

Locator/ID Separation Protocol

LISP VM Mobility

LISP ESM Multihop Mobility

LISP VPN Virtualization

Cisco Nexus Security Features

ACLs

Port Security

DCHP Snooping

Dynamic ARP Inspection

IP Source Guard

Unicast RPF

Trafic Storm Control

CoPP

Cisco Intelligent Trafic Director

Cisco ITD Overview

Cisco ITD Deployment Models

Cisco ITD Configuration and Verification

Describing QoS on Cisco Nexus Devices

QoS on Cisco Nexus Devices

Configure QoS on Nexus

Monitor QoS Statistics

Introducing Cisco Nexus Storage Services

Fibre Channel

Fibre Channel Flow Control

Fibre Channel Domain Initialization

Fibre Channel Addressing

FSPF Protocol

Configuring Device Aliases and Zoning

Distributed Device Alias Services Overview

Zoning Overview

Merge Zones Without Disruption

Recover from Zone Merge Failures

Enhanced Zoning

Configuring Fibre Channel Over Ethernet

Fibre Channel Over Ethernet

FCoE Requirements

Data Center Bridging

FCoE Addressing Scheme

FCoE Initialization Protocol

FCoE Port Types

Storage VDC

Configuring NPIV and NPV Modes

Cisco NPV Mode

N-Port ID Virtualization

Managing Automation and Programmability of Cisco Nexus Devices

Cisco NX-OS RESTful API

Network Orchestration

Programming Cisco NX-OS with Python

Configuring System Management and Monitoring

System Management Overview

System Monitoring Tools

Troubleshooting Cisco Nexus Switches

Cisco Nexus Troubleshooting Tools

Shell Access and Linux Containers

Troubleshooting Memory and Packet Issues

Lab Outline

Lab 1: Configure OSPF

Lab 2: Configure Cisco OTV

Lab 3: Configure VXLAN

Lab 4: Configure Cisco Nexus Security Features

Lab 5: Configure Basic Fibre Channel Features

Lab 6: Configure Device Aliases and Zoning

Lab 7: Confgure FCoE

Lab 8: Configure NPV

Lab 9: Manage Switch over Cisco NX-API

Lab 10: Program a Switch with Python

Lab 11: Configure System Management and Monitoring

Lab 12: Troubleshoot and Manage Switches Using Bash and Guest Shell