

Data Center Network Infrastructure - 2

Längd: 5 Days Kurskod: DCNI-2

Sammanfattning:

This 5-day hands on instructor led course is designed to teach attendees how to implement the routing and switching infrastructure in the Cisco Enterprise Data Center Architecture using the Cisco Nexus 7000, 5000 and 2000 platforms. This course provides a technical overview of the Cisco Nexus platform architecture, deployment and operations including Virtual Device Contexts, Layer 2 and Layer 3 features, quality of service and security. Intensive hands-on labs using an integrated combination of Cisco Nexus 7000, 5000 and 2000 devices, Cisco MDS Fibre Channel switches, ESX servers and attached storage will allow you to explore the features of the NX-OS software and platform. 65% of this course is focused on the Nexus 7000 with the remaining duration spent on the Cisco Nexus 5000, 2000 and Fibre Channel over Ethernet.

Målgrupp:

This course is designed for Network Engineers responsible for the design, implementation or support of a Cisco Nexus based Network.

Målsättning:

- **After you complete this course you will be able to:**
- Describe the key features of the Cisco Nexus 7000 hardware platform
- Describe the supervisor engine, line card and fabric module features
- Describe the basic architecture of Cisco NX-OS Software
- Explain Cisco NX-OS process survivability
- Explain Cisco NX-OS supervisor redundancy
- Understand the benefits and features of VDC's
- Understand the key Cisco NX-OS Layer 2 and Layer 3 features
- Understand the Cisco NX-OS QoS features
- Understand the Cisco NX-OS security features
- Explain how the Cisco Nexus 5000 and 2000 functions within SAN and LAN environments
- Understand the basic operation of the Fibre Channel Protocol (FCP).
- Describe the FCoE protocol
- Understand the NPV feature of the Cisco Nexus 5000

Förkunskaper:

Attendees should meet the following prerequisites:

- ICND1 - Interconnecting Cisco Networking Devices Part 1
- ICND2 - Interconnecting Cisco Networking Devices Part 2
- SWITCH - Implementing Cisco Switched Networks
- ROUTE - Implementing Cisco IP Routing
- SNRS - Securing Networks with Cisco Routers and Switches

Test och certifiering:

Recommended as preparation for exam :

- 642-974 **DCNI-2** - Data Center Network Infrastructure Support - 2

This course is required for the Cisco Data Center Networking Infrastructure Support Specialist Specialisation and for those delegates looking to achieve the Cisco Channel Partner Data Center Accreditation.

Fortsättningskurs:

The following courses are recommended for further study:

- DCNI-1 - Data Center Network Infrastructure Support -1

Innehåll:

Using the Cisco Nexus 7000 in Data Center Networks

Understanding the Cisco Nexus 7000 Series Switches

- Cisco Nexus 7000 Series Chassis Overview
- Introducing the Supervisor Engine and Line Cards
- Introduction to the Cisco Nexus 7000 Series Fabric Modules
- Virtual Output Queuing
- VOQ Operation
- Introducing Power Supplies and Cooling
- Connectivity Management Processor
- Cisco Nexus 7018 Chassis
- Cisco Nexus 7000 Series Site Preparation

Overview of the Cisco Nexus 7000

- Introducing Cisco NX-OS
- Introducing Cisco NX-OS Process Recovery
- Introducing Cisco NX-OS Supervisor Redundancy

Introducing the Virtual Device Contexts in the Cisco Nexus 7000

- Introducing Virtualization
- VDC Configuration
- High Availability

Managing the Cisco Nexus 7000

- SNMP and XML
- Cisco Generic Online Diagnosis
- Cisco Embedded Event Manager
- Smart Call Home
- Cisco Data Center Network Manager
- System Message Logging
- Authentication, Authorization, and Accounting
- Role-Based Access Control
- Configuration Rollback

Cisco Nexus 7000 and Cisco NX-OS Layer 2 Protocols and Features

- Cisco Nexus 7000 and Cisco NX-OS Layer 2 Overview
- VLANs and PVLANS
- Spanning Tree Protocol
- Port Channels
- IGMP Snooping
- Unidirectional Link Detection

Cisco Nexus 7000 and Cisco NX-OS Layer 3 Protocols and Features

- Layer 3 Unicast Routing Overview
- First-Hop Routing Protocols
- Routing Protocols
- Virtual Routing and Forwarding
- Policy-Based Routing
- Layer 3 Port Channel
- Tunnels
- Layer 3 Multicast

Cisco Nexus 7000 and Cisco NX-OS Quality of Service

- Cisco Nexus 7000 Series QoS Overview
- Port QoS
- Forwarding Engine QoS
- Modular QoS CLI Overview
- Class Map
- Table Map
- Policy Map
- Service Policy

Cisco Nexus 7000 and Cisco NX-OS Security

- Introduction to Cisco Nexus 7000 and Cisco NX-OS Security
- Traffic Integrity
- Control Plane Protection
- Access Control
- Admission Control
- Data Confidentiality
- Role-Based Access Control

Troubleshooting

- Ethalyzer: Wireshark in Cisco NX-OS Software
- SPAN and RSPAN
- Cisco NX-OS Software Troubleshooting Process

Using the Cisco Nexus 5000 and 2000 in Data Center Networks

Overview of the Cisco Nexus 5000 and Cisco Nexus 2000

- Challenges in the Data Center
- I/O Consideration
- Cisco Nexus 5000 Switch Products
- Cisco Nexus 5000 Switch Features and Benefits
- FCoE Adapters and Software Stack
- Cisco Nexus 5000 Switch Management Tools
- Cisco Nexus 2000 Fabric Extender
- Configuring the Cisco Nexus 2000 Fabric Extender

Understanding Fibre Channel

- Fibre Channel Networks
- Fibre Channel Frames
- Fibre Channel Flow Control
- Fabric Login
- Process Login
- Fabric Shortest Path First
- VSANS and Zoning
- N_Port Identifier Virtualization
- Cisco N_Port Virtualizer
- Standard Fabric Services

Implementing an FCoE Network Using Cisco Nexus 5000 Series Switches

- FCoE Network Design
- Virtualizing Host Connections
- Configuring FCoE on the Cisco Nexus 5000
- Configuring Zoning on the Cisco Nexus 5000
- Configuring N_Port Virtualization on the Cisco Nexus 5000

Labs

- Lab 1: Cisco Nexus 7000 Hardware Platform
- Lab 2: Managing System Configuration
- Lab 3: Creating VDCs
- Lab 4: Layer 2 Switching
- Lab 5: First-Hop Redundancy Protocols
- Lab 6: Configuring Routing Protocols
- Lab 7: Quality of Service
- Lab 8: Cisco Nexus 7000 Security Features
- Lab 9: Cisco Data Center Network Manager
- Lab 10: Troubleshooting Using Ethalyzer and SPAN
- Lab 11: Cisco Nexus 5000 Hardware Platform and System Management
- Lab 12: Configuring FCoE and the Cisco Nexus 2148T Fabric Extender

- Lab 13: Configuring the VMware ESX Server and the CNA
- Lab 14: Cisco Nexus Product Family Solution Example
- Lab 15: Configuring N_Port Virtualization on the Cisco Nexus 5020 Switch

Övrig information:

För mer information eller kursbokning, vänligen kontakta oss på telefon.020-73 73 73

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