Cisco Nexus 9000 Design and Configuration

Längd: 2 Days **Kurskod: NX9KDC** **Version: 1.0**

Sammanfattning:

In this course, you will learn about the next-generation Cisco Nexus 9000 Switches. These switches are highly-programmable, high-density, 1/10/40G Ethernet switches that offer thehighest performance, extensibility to 100GE switching and thelowest cost per port. They offerextremely high flexibility and programmability for next-generation automation and orchestration. Cisco Nexus 9000 Switches build on existing NX-OS technology to bring two new data center network deployment options to customers.

This course focuses on the first deployment option, known as Standalone Mode. This mode offers significant extensions to NX-OS in the area of programmability, including:A RESTful API, Python scripting, Linux BASH access, and direct ASIC-level access for traffic flow monitoring. Support for open-systems automation and orchestration DevOps platforms, including Puppet, Chef, and Cisco's own onePK. Support for software defined networking (SDN) and emerging overlay network technologies, including VXLAN, OpenFlow, and the OpenDaylight Controller.

The course and the hands-on labs focus on the hardware architecture of the Nexus 9000 and the new programmability features and interfaces that have been added to NX-OS. Prior knowledge of NX-OS and the Nexus 5000, 6000, or 7000 platforms is highly recommended.

You will also be introduced to the second operating mode, called Application Centric Infrastructure---or ACI. ACI runs on the same Nexus 9000 hardware platform and builds on the fundamental concepts of SDN to deliver a completely reconceptualized operational model that goes far beyond existing SDN solutions.

Målgrupp:

System engineers, network engineers, architects, and Data Center architects who design, implement, and manage Data Center networks using the Cisco Nexus 9000. The focus is on the Nexus 9000 operating in Standalone mode, with a brief overview of ACI Fabric mode.

Målsättning:

- **After attending this course you be should be able to:**
- Identify Nexus 9000 platform components
- Understand how the Nexus 9000 platform addresses current trends in Data Center architecture and management
- Recognize the new NX-OS features available on the Nexus 9000 Switches
- Understand Operation and configuration details of VXLAN
- Understand ACI operating mode
- Recognize Programmability, automation, and monitoring options available on the Nexus 9000 switches
- Understand the OpenFlow protocol
- Recognizedesign possibilities with the Nexus 9000 Switches

Förkunskaper:

Delegates should meet the following pre-requisites:

- Experience with Cisco NX-OS
- Understanding of Cisco Data Center network architecture

Test och certifiering

Recommended preparation for the following exam(s):

- There are no exams currently associated to this course.

Innehåll:

Cisco Nexus 9000 Solution Overview

- Data Center Trends?
- Nexus 9000 Overview
- ?Introduction to NX-OS Enhancements

Hardware Overview

- Nexus 9500 Chassis
- Line Card Modules
- Supervisors
- ?Fabric Modules
- Power Supplies
- System Controllers
- Nexus 9300 Switches
- FEX Support
- 40G and 100GE Networking
- Supported Optics

Hardware Architecture

- 9500 Architecture
- Line Card Architecture
- 9300 Architecture
- Packet Forwarding

Nexus 9000 NX-OS Enhancements

- Nexus 9000 NX-OS Feature Overview
- High Availability ?
- Management

VXLAN

- Introduction to Overlay Networks
- VXLAN Overview?
- VXLAN Control Plane?
- VXLAN Forwarding Plane
- Configuring VXLAN

Cisco ACI Overview

- What is Application Centric Infrastructure? ACI Architectural Overview?
- ACI Benefits

Programmability and Automation

- Programming Features
- Automation Features ?
- Visibility and Monitoring Features

OpenFlow Overview

- OpenFlow Concepts and Architecture OpenFlow Protocol

Nexus 9000 Topology Designs

- Traditional Data Center Topologies
- Spine and Leaf Topologies
- Overlay Topologies

Labs

- Lab 1: Nexus 9000 Initial Configuration
- Lab 2: Configuring VXLAN
- Lab 3: Using NX-OS API
- Lab 4: Python Scripting
- Lab 5: XMPP Management
- Lab 6: OpenFlow

Övrig information:

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

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