Course Catalog

Datacenter Networking Engineer (DCNE)

v 1.0

Cisco Technologies

Engineered Training

Developed by

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Technology	Duration	Vendor	Audience	Delivery
Datacenter Networking Datacenter Facilities	40 Hours	Cisco	System/Presales Engineers Solution Architects Implementation Engineers Operation Engineers	Offsite Classroom Onsite Classroom

Course Overview

The Datacenter Networking Engineer (DCNE) is a Cisco Technologies course that is developed for whom seeking Cisco Datacenter Networking Technologies along with generic foundational knowledge in Datacenter Solutions. The course validates the ability to design, configure, and operate Cisco Nexus Switching Fabrics and NX-OS Datacenter technologies. The course is recommended for Datacenter Networking Specialists, Datacenter Networking Administrators and Datacenter Networking Designers.

This course is part of our Engineered Training Services that deliver a value-added courses which covers the concerned technologies from all aspects as well as other related fundamentals or technologies from zero level to the expert level incorporating case studies and real-life scenarios that benefit participants in their actual work environment.

Course Related Certifications

This course is not aligned to any Cisco exam. The Course is custom developed for Cisco Datacenter Infrastructure Technologies and can be recommended for all who seeks to take:

- CCNA Datacenter Certification
- CCNP Datacenter Certification
- CCIE Datacenter Certification

Course Prerequisites

There is no specific prerequisites for this course, although it's recommended to fulfil below points to better understand technologies and features:

- Recommended to have at least CCNA R&S and CCNP R&S certifications or equivalent knowledge.
- Recommended to have good knowledge of IPv4 Multicast PIM and MP-BGP protocols.
- Recommended to have at least 1 – 3 years of networking experience.
- Recommended to have a laptop in all lab sessions

Course Added Values

- Delivering the optimum technical knowledge reflecting experience and real-life scenarios in the class.
- Understanding Best practice designs, configurations and recommendations.
- Consolidating Cisco Networking Infrastructure Technologies in one course delivering complete vision of how datacenters networking can be designed, configured and operated.
- Delivering the latest architectures, technologies and devices models ensuring transferring up-to-date knowledge compared with regular certificate courses.

Course Objectives

- Understanding Cisco Nexus Unified Fabrics including architecture, key features and configurations.
- Understanding and configuring NX-OS datacenter features and protocols.
- Ability to configure and operate Cisco Nexus Fabrics in Datacenters.
- Ability to size and design a Cisco Nexus Fabric Solution for given data center networking requirements.
- Understanding Cisco Virtual Networking for Virtualized Environments.
- Understanding Different Architectures of Current Datacenters along with Network Deployment Models.
- Qualifying Course Audience for Designing, Configuring and Operating medium-size and Enterprise Datacenters with Cisco Networking Technologies.

Course Tools and Materials

- Animated Presentation Slides
- Labs Simulators or Real Gears
- Student Book – Printed Copy

Course Outline

The course is divided into 4 Modules. Each Module is sub-divided into sections. Course blueprint is listed below:

Module 1: Understanding Cisco Nexus Technologies

- Understanding Cisco NX-OS
- Understanding Virtual Portchannel (vPC)
- Understanding Fabric Extender (FEX)
- Understanding FabricPath
- Understanding Virtual Device Context (VDC)
- Understanding Overly Transport Virtualization (OTV)
- Understanding Ethernet Virtual Private Network (eVPN)
- Understanding Locator/ID Separation Protocol (LISP)
- Understanding VM Tracking
- Overview of Nexus Data Broker
- Overview of Cisco Tetration Analytics

Module 2: Understanding Cisco Nexus Switches

- Cisco Nexus 2000 Series
- Cisco Nexus 3000 Series
- Cisco Nexus 5000 Series
- Cisco Nexus 7000 Series
- Cisco Nexus 9000 Series

Module 3: Understanding Cisco Virtual Networking

- Understanding Cisco Nexus 1000 Virtual Switch Architecture
- Understanding Cisco vPath and Virtual Services
- Understanding Cisco Nexus 1000v Features

Module 4: Understanding and Designing Datacenter Facilities

- Designing Datacenter Facilities
- Datacenter Design Process
- Understanding ToR, MoR, EoR and Collapsed Deployments
- Designing a Datacenter using Cisco UCS and Nexus Fabrics

Course Schedule

The course consists of 5 sessions, each session 8 Hours (Total of 40 hours). Session Details are listed below:

Session	Session Content	LAB Session
Session 1	Module 1: Understanding Cisco Nexus Technologies	**LAB**
Session 2	Module 1: Understanding Cisco Nexus Technologies (Cont.)	
Session 3	Module 1: Understanding Cisco Nexus Technologies (Cont.)	**LAB**
Session 4	Module 1: Understanding Cisco Nexus Technologies (Cont.) LAB: Nexus Technologies	**LAB**
Session 10	Module 2: Understanding Cisco Nexus Switches Module 3: Understanding Cisco Nexus 1000 Virtual Switch Module 4: Datacenter Facilities Design	

***Note:** Session hours can be minimized to 4 hours, with total of 10 session or as per client desire.