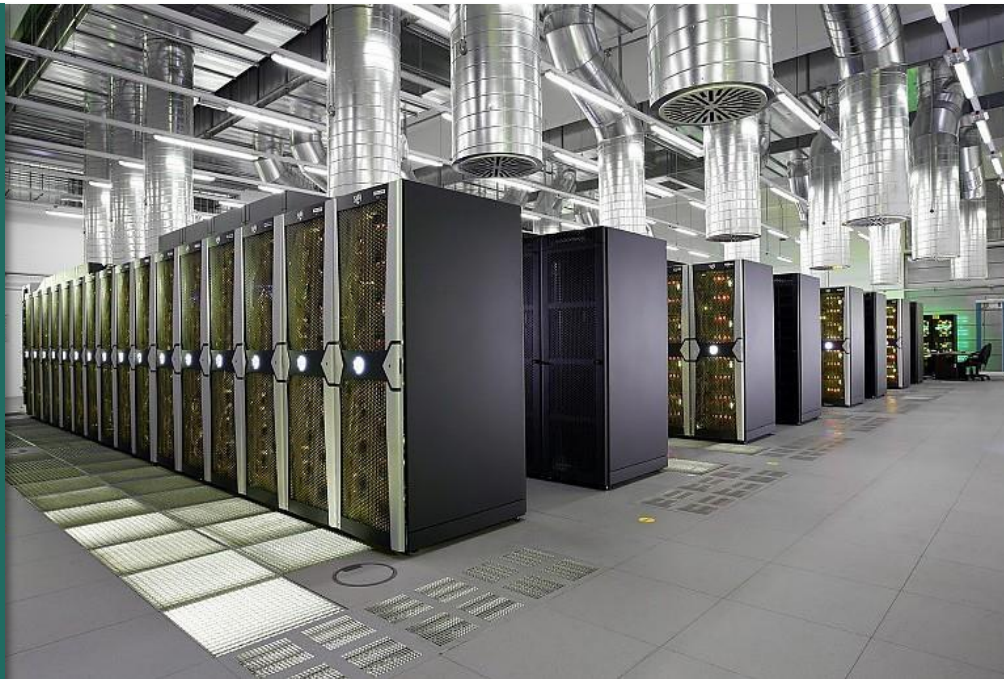


Course Catalog

Datacenter Infrastructure Fundamentals (DCIF)

v 1.0

Vendor Neutral



Engineered Training



Developed by

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Technology

Datacenter Storage
Datacenter Computing
Datacenter Networking
Datacenter Facilities

Duration

40 Hours

Vendor

Vendor Neutral

Audience

System/Presales Engineers
Solution Architects
Implementation Engineers
Operation Engineers

Delivery

Offsite Classroom
Onsite Classroom

Course Overview

The Datacenter Infrastructure Fundamentals (DCIF) is a vendor neutral course that is developed for whom seeking understanding Datacenter fundamentals in Computing, Storage and Networking. The course also covers Datacenter architectures, facilities and cabling design. The course validates well understanding of key concepts in new datacenter technologies as well as the ability to design optimum datacenters. The course is recommended for Datacenter Specialists, Datacenter Administrators and Datacenter Designers.

This course is part of our Engineered Training Services that deliver value-added courses which covers the concerned technology from all its 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 certification or exams. The Course is custom developed for Generic Datacenter Infrastructure Technologies and can be recommended for all who seeks to take any certification in Storage, Computing or Networking.

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.



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 Standard Storage, Computing and Networking Infrastructure Technologies in one course delivering complete vision of how datacenters 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 of datacenter storage principles, storage protocols and data protection technologies.
- Understanding of storage networking protocols that govern block and file access on Intelligent storage systems.
- Understanding of computing basics, server components and virtualization fundamentals.
- Understanding of Blade system architectures focusing on Cisco Unified Computing System (UCS) and its key features.
- Understanding of datacenter architectures and new technologies that enhance datacenter networking performance.
- Focusing on standard datacenter switching overlay protocols along with Datacenter Interconnects (DCI).
- Understanding and designing datacenter facilities along with ToR, MoE and EOR passive deployments.

Course Tools and Materials

- Animated Presentation Slides
- 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 Datacenter Storage

- Understanding Storage Fundamentals
- Understanding Data Protection Technologies
- Understanding Storage Networking Fundamentals
- Understanding Block Storage Protocols (FC, iSCSI, FCoE)
- Understanding Storage Networking Configuration

Module 2: Understanding Datacenter Computing

- Understanding Computing Fundamentals
- Understanding Virtualization Fundamentals



- Understanding Blade Servers Architecture
- Understanding UCS Architecture, Features and Components
- Computing Designing and Sizing Guidelines

Module 3: Understanding Datacenter Networking

- Understanding Datacenter Architectures
- Understanding Virtual Switching
- Understanding Single Root I/O virtualization (SR-IOV)
- Understanding Virtual Bridge Port Extension (VBE)
- Understanding Locator/ID Separation Protocol (LISP)
- Understanding Virtual Extensible LAN (VXLAN)
- Understanding Ethernet Virtual Private Network (eVPN)

Module 4: Understanding and Designing Datacenter Facilities

- Designing Datacenter Facilities
- Understanding ToR, MoR, EoR and Collapsed Deployments
- Understanding Datacenter Design Process

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 Datacenter Storage	
Session 2	Module 1: Understanding Datacenter Storage (Cont.) Module 2: Understanding Datacenter Computing	
Session 3	Module 2: Understanding Datacenter Computing (Cont.)	
Session 4	Module 3: Understanding Datacenter Networking	
Session 5	Module 3: Understanding Datacenter Networking (Cont.) Module 4: Understanding and Designing Datacenter Facilities	

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