

Implementing Cisco Data Center Unified Computing

Duration: 5 Days **Course Code: DCUCI**

Overview:

Data Center Unified Computing Implementation (DCUCI) is designed to serve the needs of engineers and technicians who implement Cisco Unified Computing System (UCS) B-Series Blade Servers and Cisco UCS C-Series Rack-Mount Servers.

Target Audience:

This course is designed for: Data-center technicians, data-center administrators, and system engineers Data-center designers and managers

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Implement Cisco UCS C-Series rack servers in standalone mode. Boot from the local hard drive and mount the Fibre Channel SAN LUN for shared storage
- Install Cisco R-Series rack enclosures in the data center
- Install components in the Cisco UCS C-Series rack server prior to rack mounting
- Install Cisco UCS C-Series rack servers in a Cisco R-Series rack
- Use the Cisco UCS Host Upgrade Utility to upgrade or downgrade C-Series firmware to the correct version
- Provision SNMP and syslog, and use C-Series monitoring tools
- Use the Cisco Integrated Management Controller to provision LAN and SAN connectivity for the C-Series server
- Use the LSI MegaRAID web user interface to provision local hard drives into a RAID 5 array
- Install VMware ESXi in the C-Series server local hard drives
- Implement system management, maintenance, and high-availability services for Cisco UCS B-Series
- Implement local and remote authentication services to restrict privileges and delegate management authority in Cisco UCS Manager
- List the processes for managing the firmware repository and upgrade or downgrade Cisco UCS firmware components using Cisco UCS Manager
- Implement backup and restore capabilities in Cisco UCS Manager
- Implement syslog, Smart Call Home, and SPAN
- Maintain Cisco UCS in a high-availability configuration
- Implement generation 1 and generation 2 connectivity
- Differentiate between physical connections on the IOM and the redundant connections for management and data plane over the I/O MUX and midplane
- Install and power up Cisco UCS B-Series hardware
- Implement LAN connectivity for Cisco UCS B-Series hardware
- Implement SAN connectivity for Cisco UCS B-Series hardware
- Provision servers by leveraging reusable pools, policies, and templates that allow for rapid provisioning and consistency of policy
- Perform initial Cisco UCS cluster setup and provide management IP addresses for blade servers
- Provision VLANs and fabric interconnect uplinks for server connectivity to the Layer 3 data center cloud
- Provision VSANs and fabric interconnect Fibre Channel uplinks for server connectivity to the data center storage cloud
- Provision resource pools for servers, UUIDs, MAC addresses, WWNN, WWPN, and iSCSI
- Configure reusable server policies in Cisco UCS Manager
- Provision service profiles with initial and updating templates
- Implement virtualization features unique to Cisco UCS that improve performance and manageability
- Describe Cisco VM-FEX and Cisco VM-FEX universal passthrough technologies
- Provision Cisco VM-FEX in Cisco UCS Manager and the VMware vCenter Server
- Provision Cisco VM-FEX universal passthrough in Cisco UCS Manager and the VMware vCenter Server

Prerequisites:

The knowledge and skills that a learner must have before attending this course are as follows:

Server operating systems, hypervisor and virtualization familiarity

To gain the prerequisite skills and knowledge, Cisco strongly recommends knowledge of the following courses:

- Implementing Cisco Storage Networking Solutions (ICSNS)
- Implementing Cisco Data Center Unified Fabric (DCUFI)

Testing and Certification

Recommended as preparation for:

- 642-999 - Implementing Cisco Data Center Unified Computing DCUFI is one of the courses required for the **Cisco Data Center Unified Computing** Partner Specialization and the **Advanced Data Center Architecture** Specialization

Content:

Implement Cisco UCS C-Series Rack Servers

- Implementing Cisco R-Series Rack Enclosures
- Installing Cisco UCS C-Series Server Hardware
- Installing Cisco UCS C-Series Servers in a Cisco R-Series Rack Enclosure
- Updating Cisco UCS C-Series Firmware with the Host Upgrade Utility
- Provisioning Monitoring and Logging on the Cisco UCS C-Series Server
- Provisioning LAN and SAN Connectivity in the Cisco Integrated Management Controller
- Provisioning RAID on the Cisco UCS C-Series Server
- Installing VMware ESXi on the Cisco UCS C-Series Server Local RAID Array

Manage the Cisco UCS B-Series

- Implementing RBAC
- Managing and Upgrading Cisco UCS B-Series Firmware
- Implementing Backup, Import, and Restore of the Cisco UCS Manager Database
- Implementing Logging and Monitoring
- Implementing High Availability

Implement Cisco UCS B-Series Connectivity

- Implementing Cisco UCS B-Series Physical Connectivity
- Installing Cisco UCS B-Series Hardware
- Implementing Cisco UCS B-Series LAN Connectivity
- Implementing Cisco UCS B-Series SAN Connectivity

Provision Cisco UCS Compute Resources

- Provisioning the Cisco UCS Cluster
- Provisioning LAN Networking
- Provisioning SAN Networking
- Provisioning Resource Pools in Cisco UCS Manager
- Provisioning Server Policies in Cisco UCS Manager
- Provisioning Service Profiles from Templates in Cisco UCS Manager
- Provisioning Cisco UCS C-Series Server Integration in Cisco UCS Manager

Implement Cisco UCS Server Virtualization Features

- Provisioning Cisco VM-FEX and Cisco VM-FEX Universal Pass-Through
- Provisioning Cisco VM-FEX
- Provisioning Cisco VM-FEX Universal Pass-Through

Further Information:

For More information, or to book your course, please call us on +254 713 027 191

training@clclearningafrica.com

www.clclearningafrica.com

Computer Learning Centre 2nd Floor Museum Hill Centre, Muthithi Road, Westlands, Nairobi, Kenya

Designing Cisco Data Center Unified Computing

Duration: 4 Days Course Code: DCUCD

Overview:

The Designing Cisco Data Center Unified Computing (DCUCD) course enables engineers to choose and design scalable, reliable, and intelligent data center unified computing and virtualization solutions, based on the Cisco Unified Computing System (UCS) product portfolio as a centerpiece, integrated with contemporary virtualization solutions (for example, VMware vSphere, VMware View, Microsoft Hyper-V, Citrix XenServer, Citrix XenDesktop, Red Hat Kernel-Based Virtual Machine [KVM], and so on), operating systems (for example, Microsoft Windows and Linux), and applications (database, collaboration, and so on).

The course describes the data center unified computing and virtualization solutions based on the Cisco data center unified computing product portfolio, explains how to evaluate existing data center computing solutions and determine the requirements, and design Cisco data center unified computing solutions.

Target Audience:

This course is designed for: Data center designers, data center administrators, and system engineers Data center engineers and managers

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Evaluate the data center solution design and design process in regards to contemporary data center challenges, data center solution architecture, and components
 - Assess the requirements and performance characteristics of the data center computing solutions
 - Employ design steps to size the Cisco UCS solution for given data center requirements
 - Evaluate and design Cisco UCS solution LAN, SAN, and virtual access layer connectivity
 - Recognize and design Cisco UCS solution server deployment
 - Identify the Cisco UCS solution for Unified Communications and Hadoop distributed computing applications with their specifics, and Cisco UCS options that fit the application needs
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Prerequisites:

To gain the prerequisite skills and knowledge, Cisco strongly recommends knowledge of the following courses:

- Introducing Cisco Data Center Networking (DCICN)
- Introducing Cisco Data Center Technologies (DCICT)
- Implementing Cisco Data Center Unified Fabric (DCUFI)
- Designing Cisco Data Center Unified Fabric (DCUFD)

Testing and Certification

Recommended as preparation for :

- 642-998 - Cisco Data Center Unified Computing Design
DCUCD is one of the courses required for the **Cisco Data Center Unified Computing** Partner Specialization
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Content:

Cisco Data Center Solution Architecture and Components

- Identifying Data Center Solutions
- Identifying Data Center Applications
- Identifying Cloud Computing
- Identifying Cisco Data Center Architecture and Components

Assess Data Center Computing Requirements

- Defining a Cisco Unified Computing System Solution Design
- Analyzing Computing Solutions Characteristics
- Employing Data Center Analysis Tools

Size Cisco Unified Computing Solutions

- Sizing the Cisco UCS C-Series Server Solution
- Sizing the Cisco UCS B-Series Server Solution
- Planning Unified Computing Deployment

Design Cisco Unified Computing Solutions

- Designing the Unified Computing Network
- Designing Unified Computing Storage
- Designing the Virtual Access Layer

Design Cisco Unified Computing Solutions Server Deployment

- Designing Cisco UCS Server Deployment
- Designing Unified Computing Management

Cisco Unified Computing Solution Applications

- Designing Cisco Unified Communications on Cisco UCS
- Designing Distributed Computing on Cisco UCS

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Troubleshooting Cisco Data Center Unified Computing

Duration: 3 Days **Course Code: DCUCT**

Overview:

This 3-day course designed to prepare system engineers and implementers with the knowledge and hands-on experience required to troubleshoot Cisco UCS B-Series and C-Series servers operating in standalone and integrated modes. Hands-on labs provide practice with configuration procedures and common troubleshooting scenarios along with recommended solutions.

Target Audience:

This course is designed for: Engineers involved in the deployment and troubleshooting of Cisco Unified Computing Systems.

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Describe the Cisco UCS B-Series architecture, installation, and configuration, and the processes and tools for determining related issues
 - Describe troubleshooting processes on the standalone Cisco UCS C-Series deployments
 - Describe the valid Cisco UCS C-Series integrated architecture and the process of determining issues related to integration of Cisco UCS C-Series server with Cisco UCS Manager
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Prerequisites:

The knowledge and skills that a learner must have before attending this course are as follows:

- Familiarity with server virtualization (for example, VMware vSphere and Microsoft Hyper-V)
- Familiarity with administration of common operating systems (for example, Linux and Windows)

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Introducing Cisco Data Center Networking (DCICN)
 - Introducing Cisco Data Center Technologies (DCICT)
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Testing and Certification

Recommended as Preparation for:

- 642-035 - Troubleshooting Cisco Data Center Unified Computing (DCUCT)
Delegates looking to achieve the Cisco Certified Network Professional (CCNP) Data Center will also need the DCUCI and DCUFI exam plus DCUFT.

DCUCT is also one of the courses required for the **Cisco Data Center Unified Computing** Partner Specialization and **Cisco Data Center Architecture** Specialization for Channel Partner.

Follow-on-Courses:

Delegates looking to achieve their CCNP for DC will also require:

- DCUFI - Implementing Cisco Data Center Unified Fabric
- DCUCI- Implementing Cisco Data Center Unified Computing

Plus

- DCUFT - Troubleshooting Cisco Data Center Unified Fabric

Delegates looking for Cisco Specialist Certification will also need :

- DCUCI - Cisco Data Center Unified Computing Support Specialist
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Content:

Cisco UCS B-Series Troubleshooting

- Troubleshooting Cisco UCS B-Series Architecture and Initialization
- Troubleshooting Cisco UCS B-Series Configuration
- Troubleshooting Cisco UCS B-Series Operation
- Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity
- Troubleshooting and Upgrading Cisco UCS Manager
- Troubleshooting Cisco UCS B-Series Hardware

Cisco UCS C-Series Troubleshooting

- Cisco UCS C-Series Architecture and Configuration
- Troubleshooting Cisco UCS C-Series Hardware and Firmware
- Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity
- Troubleshooting Locally Attached Storage
- Troubleshooting Operating System-Related Issues

Cisco UCS C-Series Integration Troubleshooting

- Integrating Cisco UCS C-Series Servers and Cisco UCS Manager
- Troubleshooting Cisco UCS C-Series Server and Cisco UCS Manager Integration

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