Cisco Data Center Unified Computing Implementation

Duration: 5 Days   Course Code: DCUCI   Version: 5.3

Overview:

This course is designed to provide engineers involved in the deployment of Cisco's Unified Computing System (UCS) B-Series Blade Servers and Cisco UCS C-Series Rack-Mount Servers.The course will take students from rack installation to the provisioning ofserver hardware, operating systems, hypervisors, and applications. Management, maintenance and troubleshooting aspects are incorporated into this course.

Target Audience:

Any individuals involved in the deployment of the Cisco Unified Computing System.

Objectives:

- **After you complete this course you will be able to :**

- 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

- Implement LAN and SANconnectivity 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

- 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:

Attendees should meet the following prerequisites:

- CCNA DC (**DCICN** and **DCICT**) or equivalent knowledge.
- CCNA (ICND1 and ICND2) this will be superceeded by CCNA DC
- Prior Attendance of **DCUFI** and **ICSNS** recommended
- Familiarity with hypervisor technologies (VMware vSphere, Microsoft Hyper-V,Citrix Xen) - **VSICM** recommended

Testing and Certification

Recommended preparation for exam(s).

- **642-999 - DCUCI** - (V5 Exam)
*This exam is required for individuals looking to achieve the Cisco Certified Network Professional for Data Center Certification or the Cisco Data Center Unified Computing Support Specialist Certification - Please note that VCP certification is also required to obtain the Cisco Data Center Unified Computing Support Specialist Certification accreditation - **VSICM** attendance is recommeneded.*

Follow-on-Courses:

The following courses are recommended for further study:

Delegates looking to achieve their CCNP for DC will require:

- **DCUFI-** Implementing Cisco Data Center Unified Fabric

Plus

- **DCUCT** - Troubleshooting Cisco Data Center Unified Computing
- **DCUFT** - Troubleshooting Cisco Data Center Unified Fabric

or

- **DCUCD** - Designing Cisco Data Center UnifiedComputing
- **DCUFD** - Designing Cisco Data Center Unified Fabric

Delegates looking for skills and product knowledge may want to consider

- **DCUCSCTS** - Data Center Unified Computing System C-Series Troubleshooting
- **DCUCTS** - Data Center Unified Computing System Troubleshooting
- **UCSTSBC** - UCS Troubleshooting Boot Camp *The UCSTSBC course is a combination of the DCUCTS and DCUCSCTS courses*

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

Labs

- Lab 1-1: Perform Initial C-Series Implementation
- Lab 1-2: Update Cisco UCS C-Series Firmware from the Cisco UCS Host Upgrade Utility
- Lab 1-3: Implement LAN and SAN Connectivity
- Lab 1-4: Install VMware ESXi on the Local RAID and Verify SAN Connectivity
- Instructor Demo: Provision Initial B-Series Configuration
- Lab 2-1: Provision Cisco UCS Ethernet Connectivity and Management IP Pools
- Lab 2-2: Configure RBAC
- Lab 2-3: Back Up and Restore Cisco UCS Manager Database Objects
- Lab 2-4: Configure Logging in Cisco UCS
- Lab 4-1: Provision Identity and Resource Pools
- Lab 4-2: Provision Mobile Service Profiles from Updating Templates
- Lab 4-3: Test High Availability
- Lab 5-1: Provision VMware Integration
- Lab 5-2: Provision M81-KR Cisco VM-FEX
- Lab 5-3: Provision M81-KR Cisco VM-FEX Universal Pass-Through

Additional Information:

Recertification
Complete one of the following recertification options every two years: Re-take and pass all exams for each Specialist certification indicated on the specific certification page. Please note: this includes ALL exams whether refreshed or not. Pass a current CCIE or CCDE written exam Achieving or recertifying CCDE or any CCIE automatically extends your active Specialist certification(s) up to the point of expiration of the last certification achieved.

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

info@globalknowledge.ie

www.globalknowledge.ie

Global Knowledge, 3rd Floor Jervis House, Millennium Walkway, Dublin 1