Course Description

This course is designed for virtualization or data center administrators looking to operate, support, or manage Cisco UCS infrastructure and also covers architecture, configuration, and operation of Cisco Intersight. The course serves the needs of engineers seeking to understand the capabilities of Cisco Intersight from a pre- and post-deployment perspective. Participants will learn how to configure and manage Cisco UCS virtualized server infrastructure as well as implement and operate Cisco Intersight through hands-on labs.

Who Should Attend

+ System Administrators
+ UCS Administrators
+ Support Engineers
+ Virtualization Engineers

Prerequisites

+ Understanding of server system design and architecture
+ Understanding of Cisco Enterprise Data Center architecture
+ Familiarity with Server Virtualization
+ Knowledge on Data Center Server and Network Administration

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Module 1: Cisco Unified Computing System Overview
Data Center Trends
UCS Architecture Overview
UCS Hardware Overview
+ UCS Fabric Interconnects
+ UCS IOMs
+ UCS B-Series servers
+ UCS C-Series servers
+ UCS HX-Series Servers
+ Adapter Offerings
UCS Management Overview
+ UCS Manager
+ Understanding UCSM HA
+ UCSM C-Series Management
UCS Initial Configuration
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Module 2: Cisco UCS Manager Pool, Policies and Profiles
- Hardware State Abstraction
- Organizations in UCS
- Pools Overview
  - UUID Pools
  - MAC Pools
  - WWNN/WWPN Pools
  - Server Pools
- Policies Overview
- Understanding Templates
  - vNIC Templates
  - vHBA Templates
  - Service Profile Templates
  - Service Profiles
- Service Profile Templates and Expert Service Profile Wizards
- Service Profile Association
- Changes to a Service Profile that Trigger a Cisco UCS Server Reboot
- Service Profile to a New Server Blade in the Event of Hardware Failure
- KVM and Virtual Media
- Supported Operating Systems and Boot Options

Module 3: Cisco UCS Networking
Lesson 1 - Cisco UCS LAN Connectivity
  - UCS Manager Networking Features
  - Server and uplink Ethernet ports in Cisco UCS
  - Ethernet Port Channels on the UCS Fabric Interconnect
  - VLAN Configuration
  - End-Host and Switching Modes

Module 3: Cisco UCS Networking (cont’d)
Lesson 2 - Cisco UCS SAN Connectivity
  - UCS Manager Storage Features
  - FC Ports on Cisco UCS Fabric Interconnects
  - VSANs in the Cisco UCS Manager
  - N Port Identifier Virtualization (NPIV) and UCS FC
  - End-Host Mode
  - Fiber Channel Switching Mode
  - Multipath IO

Module 4: Cisco UCS Firmware Management
- Cisco UCS Software Packages
- Upgrading Cisco UCS B-Series Firmware
- Direct Firmware Upgrades of Cisco IMC, IOM, and Mezzanine Adapters
- Firmware Updates Using a Service Profile
- Hardware Capability Catalogs
- Supported Operating Systems and Boot Options

Module 5: Cisco UCS Manager Backup and Restore Operations
- Supported Backup Types, Functions and Import and Disaster Recovery Restore Operations
- Backup Creation, Execution, and Scheduling
- Configuring an Import Job to Restore the AAA User Database
- Configuring Cisco UCS Fabric Interconnects for a Disaster Recovery Restore Operation
Course Content

Module 6: Cisco UCS Manager Logging and Monitoring
- Fault Management System and Fault Severity Levels
- Tracking Administrative Changes in the Cisco UCS
- Cisco UCS Manager Audit Log
- Cisco UCS Manager Operations Subject to FSM Validation
- Logging Options
- System Event Log and Log Policies
- Smart Call Home Feature
- Logs, Events, and Faults

Module 7: Cisco UCS Management Overview
- Cisco UCS Manager
- Cisco UCS Central
- Cisco IMC Supervisor
- Cisco HyperFlex
- Cisco UCS Director
- Cisco UCS runs on Intel XEON Processor
- UCS Management Summarization
- Introducing Cisco Intersight
  Demo: UCS Director 6.5

Module 8: What is Cisco Intersight
- Cisco Intersight Overview
- Why Cisco Intersight
- Cisco Intersight Licensing
- Cisco Intersight Key Components
  Demo: Cisco Intersight

Module 9: Cisco Intersight—Setup and User Management
- Prerequisites
- How to Access Cisco Intersight
- User Addition and RBAC
- Cisco Intersight Security
- Cisco Intersight GUI Walkthrough

Module 10: Cisco Intersight-Administration and Operations
- Device Integration to Cisco Intersight
- License Activation
- Unified Administration
- Unified Operations
- Server Policies and Profiles – Cisco Intersight Essentials

Module 11: Cisco Intersight API
- Cisco UCS Management Ecosystem
- Cisco Intersight Extensible Architecture

Labs: UCS
- Lab 1: Exploring a UCS Manager Domain
- Lab 2: Creating UCS Manager Global Pools and Policies
- Lab 3: Configuring Network Objects
- Lab 4: Configuring Logical Storage Objects
- Lab 5: UCS Manager Service Profile Operations
- Lab 6: Role-Based Access Control, Security, and Active Directory–Based Authentication on Cisco UCS

Labs: Intersight
- Lab 7: Accessing Cisco Intersight Portal
- Lab 8: Introduction to Cisco Intersight GUI
- Lab 9: User Management -RBAC
- Lab 10: Claim/ Add and Unclaim/ Delete Devices in Cisco Intersight
- Lab 11: Manage UCSM
- Lab 12: Managing Cisco UCS C-Series Server (M5)

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