

DCUCSBC

Administering Cisco Data Center Unified Computing System with Intersight and Programmability

Duration: 5 Days

Course Overview:

DCUCSBC, Administering Cisco Data Center Unified Computing System with Intersight and Programmability is a 5-day instructor-led boot camp training course. In this Cisco UCS server training, you will become experienced with the administration and troubleshooting of Cisco Unified Computing System (UCS) B-Series and C-Series servers including using Cisco Intersight for UCS management. This custom-built Cisco UCS training class was developed by NterOne using the best lessons from all available Cisco server courses to maximize the learning experience for individuals who want to focus on day-to-day administration using Cisco UCS Manager or Intersight as the primary interface.

Using real-world scenarios and examples, this Cisco training course will explore all the components of the UCS B-Series and C-Series solutions from a day-to-day administrative point of view. Learn C-Series standalone, C-Series under UCS Manager, B-Series administration, troubleshooting, and management tools used to support

basic UCS and multi-cluster support with UCS Central, as well as using Cisco Intersight for UCS and Hyperflex operations and management.

Learners will also begin using programmability with Cisco Intersight to enhance the management and operation of their Cisco UCS and HyperFlex infrastructure. This training will demonstrate how programmability on Cisco compute platforms has evolved and how Cisco Intersight always-on cloud-based management can simplify UCS infrastructure management on a global scale by leveraging the Intersight Open API and developer tools.

Prerequisites:

The knowledge and skills that the learner should have before attending this course are as follows:

- Basic knowledge of Cisco routing and switching
- Basic knowledge of Cisco Unified Computing Systems
- Basic knowledge of servers and storage
- Familiarity with Cisco UCS and Hyperflex



Who Should Attend:

The primary audience for this course is as follows:

- Systems administrators and engineers
- Technical solutions architects
- Systems integrators
- Channel partners
- Value-added resellers



Course Objectives:

Upon completing this course, the learner will be able to meet these overall objectives:

- Understand the B-Series and C-Series product line similarities and differences
- Describe the Intersight support for C-Series standalone and UCS managed architectures
- Describe Cisco Intersight and how it can be used to manage UCS and Hyperflex
- Understand the process for upgrading B-Series and C-Series Firmware with UCSM and Intersight
- Administering service profiles, pools, and policies with UCSM and Intersight
- Understanding RBAC with Active Directory integration
- Administering backup and restores in UCS Manager
- Learn and discuss the various management tools for Cisco UCS including Intersight
- Perform basic troubleshooting of B-Series and C-Series in normal operations with UCSM and Intersight
- Describe the Intersight REST API, Object Model, and Intersight Managed Objects
- Demonstrate how to use Intersight developer tools
- Understand how to use Postman to interact with the Intersight API
- Use Python to manage UCS/HX operations with the Intersight API
- Demonstrate how to use Ansible to automate deployments with Intersight
- Deploy UCS/HX infrastructure using Terraform



Course Outline:

Module 1: UCS Infrastructure Components with Intersight

- Cisco UCS Product Line, Use Cases, and Components
- Introducing Cisco Intersight
- Describing Cisco UCS C-Series Servers

Module 2: Administering Cisco UCS with Intersight

- Managing Virtual Resources
- Configuring Compute Node LAN Connectivity
- Configuring Compute Node SAN Connectivity
- Creating Identity and Resource Pools
- Creating Service Profiles
- Creating Service Profile Templates and Cloning Service Profiles
- Managing Service Profiles
- Troubleshooting Cisco UCS B-Series Configuration
- Troubleshooting Cisco UCS B-Series Operation
- Backing Up & Restoring the Cisco UCS Manager Database
- Managing and Upgrading Cisco UCS B-Series Firmware

Module 3: Administering UCS Management Tools with Intersight

- Describing Cisco UCS User Interfaces
- Exploring Intersight User Interfaces
- Describing Cisco UCS Management Framework & Features
- Describing Cisco UCS Hyperflex
- Getting Started with Intersight Programmability

Module 4: Examining the Intersight Object Model and API tools

- Understanding Managed Objects in Intersight
- Using the REST API Browser to test resources and methods and run results
- Intersight Developer tools

Course Outline (cont.):

Module 5: Interacting with the Intersight REST API using Postman

- Using the Postman collection repo
- Configuring environment variables
- Intersight Collection Postman How-To
- Understanding request headers
- Why use a pre-request script?
- Request examples for managing UCS and HX in Intersight

Module 6: Using Python to manage operations with the Intersight REST API

- Using the Intersight Python SDK
- How to Generate API Keys and Secrets
- looking at the contents of the rest-API repository
- Leveraging Python examples with Intersight
- Running and validating python requests on Intersight

Module 7: Managing and automating Intersight with Ansible

- Installing Ansible and the UCS Python SDK
- Installing the UCS and UCSM Ansible Collections
- Configure and run UCS Ansible Playbooks
- Install the Intersight Ansible Collection
- Configure and run Intersight Ansible Playbooks
- Intersight Automated Hyperflex Deployment with Ansible How-To

Module 8: Deploying UCS infrastructure with Intersight and Terraform

- Terraform Workflow Overview
- How to Install GO and Terraform
- Intersight Terraform Provider requirements and config
- Terraform configuration files
- How to Initialize Terraform
- Create and configure Terraform Resources
- Running Terraform Apply to configure UCS infrastructure in Intersight



Lab Outline:

Labs are designed to assure learners a whole practical experience, through the following practical activities:

- Connecting to the Lab Environment
- Explore the Cisco UCS GUI and CLI Environment
- Explore the Cisco Intersight Dashboard and claim devices
- Create Users, Groups, Roles and Organizations in Intersight
- Provision Identity and Resource Pools in UCSM
- Provision Mobile Service Profiles from Updating Templates
- Backup and Restore Cisco UCS Manager Database Objects
- Configure Logging in Cisco Intersight
- Create LAN and SAN Network Policies in Intersight
- Build a Server Profile and deploy to a UCS blade from Intersight
- Using Intersight to upgrade Firmware
- Install an OS from Intersight
- Using Rest API to Query UCSM Objects in Intersight
- Examining the Intersight Object Model and API tools
- Interacting with the Intersight REST API using Postman
- Using Python to manage operations with the Intersight REST API
- Managing and automating Intersight with Ansible
- Deploying UCS infrastructure with Intersight and Terraform