Administering Cisco Data Center Unified Computing System with Intersight

Duration: 4 Days **Course Code: N1_DCUCAI** **Version: 6.0**

Overview:

DCUCAI, Administering Cisco Data Center Unified Computing System with Intersight is a 4-day instructor-led course. In this Cisco UCS server training course, you will become experienced with the administration and troubleshooting of Cisco Unified Computing System (UCS) X-Series, B-Series, C-Series, next-gen UCS servers including using Cisco Intersight SaaS for UCS management. This custom-built Cisco UCS training class was developed by EnterOne 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 Intersight SaaS as the primary interface to manage UCS Infrastructure.

Using real-world scenarios and examples, this Cisco training course will explore the components of the UCS-X, B-Series Blades, C-Series Rack Mount, and cover next-gen solutions such as C4500. Intersight SaaS provides a day-to-day administrative single interface for managing UCS infrastructure. Learn to access Intersight, claim devices, run UCSM commands from Intersight, Firmware Upgrades, and other functions.

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Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

The primary audience for this course is as follows:

- Systems Administrators and Engineers

- Technical Solutions Architects

- Systems Integrators

- Channel Partners

- Value-Added Resellers

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
- Claiming resources in Intersight
- Managing UCS domains in Intersight
- Describe the Intersight support for C-Series standalone and UCS managed architectures
- Understand the process for upgrading B-Series and
- C-Series Firmware with Intersight
- Administering service profiles, pools, and policies with Intersight running UCS natively
- 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 how to get started with Intersight programmability

Prerequisites:

Testing and Certification

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

- N/A

Follow-on-Courses:

- None recommended

Content:

Course Outlines

Module 1: UCS Infrastructure Components with Intersight and IMM

Objective: Gain comprehensive knowledge of Cisco UCS components and management through Intersight and IMM transition tools.

- Lesson 1: Reviewing the Cisco UCS Product Line, Use Cases, and Components
- Lesson 2: Introduction to Cisco Intersight and IMM Best Practices
- Lesson 3: Exploring Cisco UCS Intersight User Interfaces with IMM Integration
- Lesson 4: Cisco UCS Intersight Management Framework and IMM Features
- Lesson 5: UCS Intersight Use Cases in IMM Environments
- Lesson 6: UCS Intersight Deployment Options with IMM Considerations

Module 2: Administering Cisco Servers with Intersight and Automation Tools

Objective: Master administration of Cisco X-Series servers using Intersight and integrate with automation tools.

- Lesson 1: Cisco UCS Servers and Components
- Lesson 2: Intersight RBAC, Organizations, and Active Directory Integration
- Lesson 3: Configuring Compute Node Network Connectivity with Intersight
- Lesson 4: Creating Identity and Resource Pools
- Lesson 5: Creating Intersight Server Profiles
- Lesson 6: Creating Templates and Cloning Server Profiles
- Lesson 7: Managing Server Profiles
- Lesson 8: Operating System Installation Options and Workflow
- Lesson 9: Upgrading UCS X/C-Series Firmware
- Lesson 10: Troubleshooting Cisco UCS X-Series Configuration
- Lesson 11: Troubleshooting Cisco UCS B-Series Operation

Module 3: Intersight Orchestration and Programmability with ICO

Objective: Explore orchestration and programmability in Intersight, including ICO, Terraform, PowerShell, Python, and Ansible.

- Lesson 1: Intersight Orchestrator: Mastering Workflow Automation in UCS

Module 6: Intersight Orchestration and Programmability with ICO and Scripting Tools

Objective: Learn Intersight orchestration and programmability using ICO, Terraform, PowerShell, and Python for enhanced UCS management.

- Lesson 1: Mastering Intersight Orchestrator and Workflow Designer for UCS Automation
- Lesson 2: Utilizing REST API with Intersight for Enhanced UCS Management
- Lesson 3: Python Scripting for Advanced Intersight Operations
- Lesson 4: Integrating UCS with Ansible in the Intersight Environment
- Lesson 5: Deploying the Intersight Terraform Provider for Infrastructure as Code
- Lesson 6: ICO Integration Strategies with Terraform and PowerShell in UCS Management

Module 7: Advanced Intersight UCS Operations with AI and IMM

Objective: Learn the intricacies of firmware operations in Cisco UCS-X using Intersight, including managing firmware bundles and standalone firmware management.

- Lesson 1: Intersight Platform Firmware Operations Overview
- Lesson 2: Intersight Firmware Bundles
- Lesson 3: Cisco Stand-Alone Firmware Management

Lab Outlines

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

Lab 0: Connecting to the Lab Environment

- Basics of accessing and setting up the lab environment for Intersight and IMM exercises.

Lab 1: Exploring Cisco Intersight Interface

- Familiarize with the Intersight dashboard and basic navigation.

Lab 2: Setting Up IMM in Cisco Intersight

- Implement IMM and understand its role in

Lab 5: Cisco UCS X-Series Configuration with Intersight

- Deploy and configure the UCS X-Series using Intersight, focusing on IMM features.

Lab 6: Designing LAN and SAN Connectivity for UCS

- Set up and validate LAN and SAN connectivity configurations in a UCS environment.

Lab 7: Managing UCS-X in IMM Mode

- Configure and manage UCS-X in IMM mode, including server profiles and policies.

Lab 8: Firmware Management in Cisco UCS-X with Intersight

- Perform firmware updates in UCS-X using Intersight, applying IMM methodologies.

Lab 9: Utilizing Intersight Workload Optimizer (IWO)

- Explore and apply the Intersight Workload Optimizer in UCS management scenarios.

Lab 10: Orchestrating Workflows with Intersight Cloud Orchestrator (ICO)

- Create and manage workflows in ICO, utilizing Terraform and Ansible for automation..

Lab 11: Implementing Automation with Intersight API and Ansible

- Introduce the use of Ansible playbooks for automation in UCS with Nutanix. Provide examples where Ansible can simplify repetitive tasks.

Lab 12: Objective: Using the Intersight API for Automation Tasks, Focusing on Python Scripting

- Focus on Python scripting to use the Intersight API for automation, providing use cases such as deploying a Nutanix cluster or performing health check

Lab 13: Troubleshooting Connectivity and Performance in Intersight-Managed UCS Environments

- Techniques for diagnosing and resolving connectivity and performance issues in UCS environments managed by Intersight, with an emphasis on IMM and ICO tools.

- Lesson 2: Navigating the Workflow Designer in Cisco Intersight
- Lesson 3: Harnessing the Power of REST API with Intersight
- Lesson 4: Python Scripting for Enhanced UCS Management
- Lesson 5: Seamless Ansible Integration in the Intersight Environment
- Lesson 6: Utilizing Terraform Provider for Efficient Intersight Operations
- Lesson 7: ICO Integration: Bridging Intersight with Terraform and PowerShell

Module 4: Administering UCS Management Tools with IMM and Automation Integrations

Objective: Master administration of UCS tools using IMM best practices and automation via PowerShell and Terraform.

- Lesson 1: UCS Management Ecosystem Overview with IMM Best Practices
- Lesson 2: Intersight UCS Element Managers UI Launch
- Lesson 3: Inserting infrastructure calls via the Intersight Framework with PowerShell and Terraform

Module 5: Operating Intersight with Advanced Security and Automation

Objective: Gain proficiency in managing Cisco UCS using Intersight, focusing on advanced security, IMM integration, and system monitoring.

- Lesson 1: Setting up Intersight SaaS and On-Prem Appliance with IMM Integration
- End Host Mode, VLAN Configuration in UCS Manager
- Lesson 2: Implementing Security (PCI/HIPPA) Connectors with IMM Compliance
- Lesson 3: Connected TAC and Proactive Support with Smart Call Home in IMM Environments
- Lesson 4: Advanced Monitoring, Fault Reporting, and Server Actions in Intersight
- Lesson 5: Server HCL, CVE, Contract Status Management using IMM
- Lesson 6: Firmware Upgrades with Automated IMM Processes
- Lesson 7: Standalone Management for UCS C-Series with Intersight and IMM Insights

UCS management.

Lab 3: Implementing and Troubleshooting RBAC using the Intersight API

- Setting up role-based access control and integrating with Active Directory using IMM best practices.

Lab 4: Nutanix Integration in Cisco UCS

- Configure and manage Nutanix solutions within a Cisco UCS setup.

Lab 14: AI-Powered Systems Management

- Hands-on lab with scenarios for implementing AI-driven forecasting and optimization.
- Using Intersight and IMM to manage a simulated data center environment.

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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