

CISCO CCNA CLOUD

Understanding Cisco Cloud Fundamentals and Introducing Cisco Cloud Administration (CCNACL)

Our Learning Exclusive

- Custom exam prep software and materials
- Exam delivery in classroom with 98% success
- Course specific thinQtank® Learning publications to promote fun exciting learning
- Extended hours of training including immersive hands-on exercises
- WE DO NOT "TEACH THE TEST" We always deliver valuable hands-on experience
- Receive all reading material and study guides when you register
- All courses taught by CCIE expert instructors

Course Duration

- Seven days of instructor-led training
- 60% lecture, 40% hands-on labs

Prerequisites

- Understand network fundamentals — routing, switching, VLAN
- Understand compute fundamentals — servers, operating systems
- Understand storage fundamentals — basics of FC, FCoE, VSAN

Target Audience

- Cloud Engineers
- Technical Administrators
- Cloud Infrastructure Architects
- Anyone wishing to attain CCNA Cloud certifications

Exam Information

- 210-451 – Understanding Cisco Cloud Fundamentals (CLDFND)
- 210-455 – Introducing Cisco Cloud Administration (CLDADM)

Delivery Methods

- Instructor-Led Training
- Immersive Live-Online Training
- On-Site and Custom Delivery

Exclusive Tools and Learning Package

- Additional 10 hours of remote lab access
- Custom video recordings with even more in-depth learning of course topics
- Customized practice exam software
- Digital courseware
- Retake any or all portions of the course as many times as you like in person or live on-line for 24 months
- Six months mentoring access to CCIE engineers after completing the course

Course Overview

thinQtank® Learning is offering a unique seven-day training camp in which students can receive the Cisco CCNA Cloud certification in one week. As with all of our Cisco Training Experiences – exams are delivered in the classroom.

The CCNA Cloud certification is a job role focused certification and training program that helps Cloud engineers, Cloud Administrators, and Network Engineers to develop, advance, and validate their cloud skill set, and enables them to help their IT organization meet changing business demands from technology transitions.

With a CCNA Cloud certification, you will obtain the skills to perform entry-level provisioning and support of Cisco cloud solutions. Learn from the only company that has an end-to-end Cloud and Intercloud story.

The Understanding Cisco Cloud Fundamentals portion of the course is designed to provide students with the necessary knowledge, skills and abilities (KSA) to perform foundational tasks related to Cloud computing. It teaches the characteristics and deployment models of a Cloud network. Upon course completion, students will be able to:

- Describe common cloud characteristics
- Describe and Identify the cloud service models
- Describe and Compare cloud deployment models
- Identify cloud deployment decision factors
- Identify and Illustrate key features of UCS
- Define server virtualization

The Introducing Cisco Cloud Administration (CLDADM) portion of the course is designed to help students prepare for the CCNA Cloud certification. This course is designed to provide students with the necessary knowledge and skills to perform the essentials of Cloud administration and operations. The management software applications covered in this course include:

- Cisco UCS Director
- Cisco Prime Service Catalog
- Virtual Application Container Services

After completing the course, students will be able to:

- Identify components of the Cisco Cloud management software solution
- Understand the fundamentals of Cloud infrastructure administration
- Describe reporting and charge-back

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CLDFND Course Objectives

Upon course completion, you will be able to:

- Describe common cloud characteristics
- Describe and Identify the cloud service models
- Describe and Compare cloud deployment models
- Identify cloud deployment decision factors
- Identify and Illustrate key features of UCS
- Define server virtualization
- Describe network architectures for the data center
- Identify infrastructure virtualization
- Analyze and Identify storage provisioning concepts
- Describe and Compare the difference between all the storage access technologies
- Describe and Compare various reference architectures for converged infrastructure

CLDADM Course Objectives

Upon course completion, you will be able to:

- Identify the components of the Cisco Cloud management software solution
- Understand the fundamentals of Cloud infrastructure administration
- Describe reporting and charge-back
- Provision Clouds using pre-configured templates
- Perform Cloud management, monitoring and remediation

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CLDFND Course Modules

- 1** Introduction to Cloud Computing
- Cloud Computing Overview
 - Cisco Cloud Computing Evolution
 - Business Needs for Cloud Computing
 - Cloud Computing Characteristics
 - "As a service" models of cloud computing
 - Infrastructure
 - Platform
 - Software
 - Anything
 - Compare the different cloud deployment models
 - Describe the components of the Cisco Intercloud Fabric solution

- 2** Cloud Networking
- Cisco Data Center Network architecture and components
 - Traditional Isolated LAN and SAN Networks
 - Cisco Unified Fabric Fundamentals
 - Basic components of virtual networking
 - Traditional Network Access Layer
 - VM Network Access Layer
 - Standard vSwitch
 - Distributed Virtual Switches
 - Standard vSwitch Challenges
 - Cisco Nexus 1000V Series components and benefits
 - Integration of Cisco Nexus 1000V Series
 - Cisco VSUM
 - Virtual Networking Service Appliances
 - Basic concepts of software defined networking
 - Basic concepts of the Cisco ACI Solution

- 3** Cloud Storage
- Block- and File-Based Storage Characteristics
 - SCSI protocol
 - Fibre channel protocol
 - FCoE protocol transporting options
 - iSCSI protocol overview
 - Network-Attached storage protocols
 - Thick and thin provisioning methods
 - Object storage principles
 - Fibre channel topologies and established communications
 - NAS topologies and established communications
 - Features of the Cisco MDS Fibre Channel switches

- 4** Cloud Compute
- Cisco UCS C-Series product family
 - Cisco UCS B-Series product family
 - Cisco UCS Manager provision blades
 - UCS Service Profiles
 - Service profile policies
 - Describing resource pools
 - Virtual LAN and SAN adapters
 - Service profile templates
 - Cisco UCS manager and central
 - Virtualization
 - Windows and Linux operating system functions
 - Traditional server deployments
 - Server virtualization
 - Hypervisor responsibilities
 - VMware vSphere suite
 - Microsoft Hyper-V virtualization
 - Citrix XenServer virtualization
 - KVM virtualization

- 5** Cloud Automation and Reference Architectures
- Components and benefits of reference architectures
 - FlexPod components and benefits
 - VCE components and benefits
 - VSPEX components and benefits
 - Hitachi data systems UCP select components and benefits
 - Differences between cloud automation and management platforms
 - Operations and Management Challenges
 - Automation and Management Solutions
 - Cisco UCS Director Infrastructure Management and Orchestration Features
 - Cisco IAC and Cisco PSC
 - OpenStack Cloud Infrastructure Solutions

- L** Labs and Demonstrations
- Examine Cisco Intercloud Fabric Director
 - Validate VSAN and Zoning
 - Validate FLOGI and FCNS
 - Explore the Cisco UCS Manager GUI
 - Review Cisco UCS B-Series Configuration
 - Deploy VMware ESXi Server on Cisco UCS Blade
 - Connect ESXi Server to FC LUN on the Cisco UCS Invicta Storage
 - Deploy the Cisco Nexus 1000V Switch with VSUM
 - Examine the Cisco Prime Network Services Controller
 - Deploy Cisco Virtual Security Gateway
 - Deploy Cisco ASA 1000V Cloud Firewall

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CLDADM Course Modules

1 Cisco Cloud Technologies Overview

- Cloud environments
 - Types
 - Private
 - Public
 - Hybrid
 - Providers
- Server virtual infrastructure
- Hypervisors in relation to hosts
- Virtualization and networking
- UCS Director
 - Orchestrator
 - Catalog
 - Deployment models
- Cisco Cloud solutions

2 Cisco Cloud Administration

- Portal administration of UCS Director
 - Users, groups, and RBAC configurations
 - VLAN creation
 - Firewall
 - Datastores
 - Workflow via service catalog
- VM operations in UCS Director
- Migrations, resizing, snapshots
- Cisco PSC Services
 - Configuration of service names and icons
 - Order permissions: RBAC
 - PSC architecture

3 Cisco Cloud Provisioning

- Template deployment process
- Managing service profile templates from Cisco UCS Director
- Application containers
 - Deployment overview
 - Basic support operations
 - Application policy infrastructure controller (APIC) support
- VACS container topology and deployment methodology

4 Cloud Systems Management and Monitoring

- Identify ongoing issues
- Alerts
- Create monitoring dashboards
- Customize monitoring dashboards
- UCS Director reports
- Resource limits for different tenants
- Budgets for different tenants
- UCS performance manager capacity planning
- UCS performance manager bandwidth monitoring
- Host groups facilitation of dynamic monitoring

5 Cloud Remediation

- Configuring serviceability options in Cisco UCS Director
 - Syslog
 - NTP
 - DNS
 - DHCP
 - SMTP
- Interpreting logs in Cisco UCS Director
- Database backups and restoration

L Labs and Demonstrations

- Explore Cisco UCS Director Portal and Register Virtual and Physical Components
- Explore Cisco UCS Director Portal Administration Tasks
- Explore Cisco UCS Director VM Operation Tasks Using Predefined Workflow
- Explore Cisco PSC
- Explore VM, Cisco UCS, and Server Templates in Cisco UCS Director
- Explore Application Container Tasks Defining Two-Tier Application Container
- Explore Cisco UCS Director Monitoring Capabilities
- Explore Cisco UCS Director Built-In Reports
- Explore Monitoring Dashboards in Cisco UCS Director and Generate a Top-N Report
- Explore Charge-Back Reporting Capabilities of Cisco UCS Director
- Enable Serviceability Options in Cisco UCS Director
- Explore Logs in Cisco UCS Director
- Back Up Cisco UCS Director Configuration to a Backup Server

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