CLDINF: Implementing and Troubleshooting the Cisco Cloud Infrastructure

Course ID #: 1575-985-ZZ-W

Hours: 35

Course Content

Course Description:

Implementing and Troubleshooting the Cisco Cloud Infrastructure (CLDINF) v1.0 is a newly created five-day instructor-led training designed to prepare you with the knowledge and hands-on experience to implement and troubleshooting Cisco cloud infrastructure. The hands-on labs give you the knowledge to configure various cloud infrastructure components, such as Cisco Unified Computing System (UCS), Cisco UCS Director (UCSD), Cisco UCS Director Bare Metal Agent (BMA), Cisco MDS switches, Cisco Nexus 5500 Series switches, Cisco Nexus Cisco Nexus 1000v and Cisco Cloud Services Router (CSR).

At Course Completion:

Upon completing this course, you will be able to:
* Describe major components of the cloud infrastructure
* Implement and troubleshoot the computing component in the cloud
* Implement and troubleshoot the storage component in the cloud
* Implement and troubleshoot the network component in the cloud
* Troubleshoot cloud environments that consist of multiple components

Target Student:

This course is intended for:
* Data Center Engineers
* Cloud Architects
* Infrastructure Engineers
* Technical Administrators

Prerequisites:

* Understanding Cisco Cloud Fundamentals (CLDFND)
* Introducing Cisco Cloud Administration (CLDADM)

Deliver Method:

This course is delivered through a mix of instructor-led training (ILT) and hands-on labs.

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Topics:

Module 1: Cloud Infrastructure Overview
- Components
- Characteristics
- Fabric extender benefits
- Nexus 5k, 7k and 9k series switches
- MDS
- Cisco NX-OS
- Architecture
- Features
- System resiliency
- Extensibility
- Security
- Efficiency
- Virtualization
- Cisco UCS
- Portfolio
- Network equipment
- C-series rack servers
- M-series
- Invicta
- Manager
- Central
- Director
- Performance manager
- FCoE protocol and characteristics
- Server virtualization
- VM benefits
- Hyper-V
- Cloud management platforms
- Hypervisor on server set up

Module 2: Cloud Infrastructure Computing Component
- Deploy hypervisors
- Lights-out management network
- UCS cloud platform implementation
- Service profile network configuration
- LAN and SAN separation
- Server boot policies
- Troubleshooting methodology
- UCS tools
- Compute infrastructure troubleshooting scenarios
- Service profiles
- Boot policies

Module 3: Cloud Infrastructure Storage Component
- Cloud storage implementation
- Storage types
- Considerations
- SAN protocols
- Virtual SANs
- Zoning modes
- Zoning configuration
- Provisioning storage space
- Storage access configuration
- Fibre channel storage
- iSCSI
- SAN/iSCSI boot
- NAS-based
- Access rights, file and folder permissions
- Storage infrastructure troubleshooting methodology
- Storage troubleshooting scenarios

Module 4: Cloud Infrastructure Network Component
- Virtual device context (VDC) overview
- VDC with VLANs and VRFs
- FCoE VDC
- Port channels
- VXLAN
- Architecture

- Packet format
- Tunnel endpoint
- Gateway
- Unicast packet flow
- Broadcast, unknown unicast and multicast flow
- VMware standard vSwitch
- Nexus 1000V
- VSM-to-VEM communication
- Hypervisor VTEP implementation
- UCS network configuration elements
- MAC pool
- Network policy
- iSCSI vNICs

- Server management
- Network infrastructure troubleshooting methodology

Module 5: Troubleshoot Multiple Components

- Multiple components troubleshooting scenarios
- Storage provisioning using UCS director workflows troubleshooting
- VM provisioning troubleshooting