

DCID

Designing Cisco Data Center Infrastructure

Platinum
Learning
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Establishment

Der Kurs vermittelt Inhalte zu Design- und Bereitstellungsoptionen für Cisco® Data Center-Lösungen und -Technologien in den Bereichen Netzwerk, Computing, Virtualisierung, Storage Area Networks, Automatisierung und Sicherheit. Sie lernen die Designpraktiken für die Cisco Unified Computing System™-Lösung (Cisco UCS®) kennen, die auf Servern der Cisco UCS B-Serie und C-Serie, Cisco UCS Manager und Cisco Unified Fabric basiert. Darüber hinaus erwerben Sie Designerfahrung mit Netzwerkverwaltungstechnologien wie Cisco UCS Manager, Cisco DCNM (Data Center Network Manager) und Cisco UCS Director. Die umfangreichen theoretischen Inhalte werden mit zahlreichen Fallbeispielen ergänzt.

Kursinhalt

- Describing High Availability on Layer 2 & Layer 3 Connectivity
- Designing Data Center Topologies
- Designing Data Center Interconnects with Cisco OTV
- Describing Locator/ID Separation Protocol
- Describing VXLAN Overlay Networks
- Describing Hardware and Device Virtualization
- Describing Cisco FEX Options
- Describing Basic Data Center Security
- Describing Advanced Data Center Security
- Describing Management and Orchestration
- Describing Storage and RAID Options
- Describing Fibre Channel Concepts & Fibre Channel Topologies
- Describing FCoE
- Describing Storage Security
- Describing SAN Management and Orchestration
- Describing Cisco UCS Servers and Use Cases
- Describing Fabric Interconnect Connectivity
- Describing Hyperconverged and Integrated Systems
- Describing Cisco UCS Manager Systemwide Parameters
- Describing Cisco UCS RBAC
- Describing Pools & Policies for Service Profiles
- Describing Network-Specific Adapters and Policies
- Describing Templates in Cisco UCS Manager
- Model-Driven Programmability

E-Book Sie erhalten die englischen Original-Unterlagen als Cisco E-Book. Bei der Cisco Digital Learning Version sind die Inhalte der Kursunterlage stattdessen in die Lernoberfläche integriert.

Zielgruppe

IT Professionals mit fünf bis acht Jahren Erfahrung:

- Data Center Engineers
- Network Designer
- Network Administratoren
- Network Engineers
- Systems Engineers
- Consulting Systems Engineers
- Technical Solutions Architects
- Server Administratoren
- Network Manager
- Cisco Integratoren oder Partner

Voraussetzungen

Sie sollten über folgende Vorkenntnisse verfügen:

- Implementierung von Rechenzentrumsnetzwerken (Local Area Network (LAN) und Storage Area Network (SAN))
- Beschreibung des Datacenter-Speichers
- Implementierung Data Center Virtualization
- Implementierung des Cisco Unified Computing-Systems (Cisco UCS)
- Implementierung Data Center Automation und Orchestration von Rechenzentren mit Schwerpunkt auf Cisco Application Centric Infrastruktur (ACI) und Cisco UCS Director
- Beschreibung von Produkten der Cisco Data Center Nexus- und Multilayer Director Switch (MDS)-Familien

Der Besuch folgender Kurse oder vergleichbare praktische Erfahrungen werden zudem empfohlen:

- Understanding Cisco Data Center Foundations (DCFNDU)
- Implementing and Administering Cisco Networking Technologies (CCNA®)
- Implementing Cisco Data Center Core Technologies (DCCOR)

Kursziel

Dieser Kurs bereitet Sie auf die Prüfung Designing Cisco Data Center Infrastructure vor, die Bestandteil der CCNP Data Center® Zertifizierung ist und zudem zu der Spezialisierung Cisco Certified Specialist - Data Center Design führt.

Bearbeitungszeit

ca. 30 Stunden

Dieser Kurs im Web



Alle tagesaktuellen Informationen und Möglichkeiten zur Bestellung finden Sie unter dem folgenden Link: www.experteach.de/go/DCID

Vormerkung

Sie können auf unserer Website einen Platz kostenlos und unverbindlich für 7 Tage reservieren. Dies geht auch telefonisch unter 06074 4868-0.

Garantierte Kurstermine

Für Ihre Planungssicherheit bieten wir stets eine große Auswahl garantierter Kurstermine an.

Ihr Kurs maßgeschneidert

Diesen Kurs können wir für Ihr Projekt exakt an Ihre Anforderungen anpassen.

Cisco Digital Learning

Diesen Kurs bieten wir auch als Cisco Digital Learning an. Diese multimodalen Schulungen beinhalten HD-Videos mit durchsuchbarem Text, Labs, Übungen und umfassende Kursunterlagen.

Cisco Digital Learning	Preise zzgl. MwSt.
6 Monate Freischaltung	€ 1.500,-

Training	Preise zzgl. MwSt.
Termine in Deutschland	5 Tage € 3.195,-
Online Training	5 Tage € 3.195,-
Termin/Kursort	Kurssprache Deutsch
10.10.-14.10.22 Frankfurt	19.12.-23.12.22 Hamburg
10.10.-14.10.22 Online	19.12.-23.12.22 Online

Stand 08.06.2022



Inhaltsverzeichnis

DCID – Designing Cisco Data Center Infrastructure

Describing High Availability on Layer 2

- Overview of Layer 2 High-Availability Mechanisms
- Virtual Port Channels
- Cisco FabricPath
- Virtual Port Channel+

Describing Layer 3 Connectivity

- First Hop Redundancy Protocols
- Improve Routing Protocol Performance and Security
- Enhance Layer 3 Scalability and Robustness

Describing Data Center Topologies

- Data Center Traffic Flows
- Cabling Challenges
- Access Layer
- Aggregation Layer
- Core Layer
- Spine-and-Leaf Topology
- Redundancy Options

Describing Data Center Interconnects with Cisco OTV

- Cisco OTV Overview
- Cisco OTV Control and Data Planes
- Failure Isolation
- Cisco OTV Features
- Optimize Cisco OTV
- Evaluate Cisco OTV

Describing Locator/ID Separation Protocol

- Locator/ID Separation Protocol
- Location Identifier Separation Protocol (LISP) Virtual Machine (VM) Mobility
- LISP Extended Subnet Mode (ESM) Multihop Mobility
- LISP VPN Virtualization

Describing VXLAN Overlay Networks

- Describe VXLAN Benefits over VLAN
- Layer 2 and Layer 3 VXLAN Overlay
- Multiprotocol Border Gateway Protocol (MP-BGP) Ethernet VPN (EVPN) Control Plane Overview
- VXLAN Data Plane

Describing Hardware and Device Virtualization

- Hardware-Based High Availability
- Device Virtualization
- Cisco UCS Hardware Virtualization
- Server Virtualization
- SAN Virtualization
- N-Port ID Virtualization

Describing Cisco FEX Options

- Cisco Adapter FEX
- Access Layer with Cisco FEX
- Cisco FEX Topologies
- Virtualization-Aware Networking
- Single Root I/O Virtualization
- Cisco FEX Evaluation

Describing Basic Data Center Security

- Threat Mitigation
- Attack and Countermeasure Examples
- Secure the Management Plane
- Protect the Control Plane
- RBAC and Authentication, Authorization, and Accounting (AAA)

Describing Advanced Data Center Security

- Cisco TrustSec in Cisco Secure Enclaves Architecture
- Cisco TrustSec Operation
- Firewalling

- Positioning the Firewall Within Data Center Networks
- Cisco Firepower® Portfolio
- Firewall Virtualization
- Design for Threat Mitigation

Describing Management and Orchestration

- Network and License Management
- Cisco UCS Manager
- Cisco UCS Director
- Cisco Intersight
- Cisco DCNM Overview

Describing Storage and RAID Options

- Position DAS in Storage Technologies
- Network-Attached Storage
- Fibre Channel, FCoE, and Internet Small Computer System Interface (iSCSI)
- Evaluate Storage Technologies

Describing Fibre Channel Concepts

- Fibre Channel Connections, Layers, and Addresses
- Fibre Channel Communication
- Virtualization in Fibre Channel SAN

Describing Fibre Channel Topologies

- SAN Parameterization
- SAN Design Options
- Choosing a Fibre Channel Design Solution

Describing FCoE

- FCoE Protocol Characteristics
- FCoE Communication
- Data Center Bridging
- FCoE Initialization Protocol
- FCoE Design Options

Describing Storage Security

- Common SAN Security Features
- Zones
- SAN Security Enhancements
- Cryptography in SAN

Describing SAN Management and Orchestration

- Cisco DCNM for SAN
- Cisco DCNM Analytics and Streaming Telemetry
- Cisco UCS Director in the SAN
- Cisco UCS Director Workflows

Describing Cisco UCS Servers and Use Cases

- Fabric Interconnects and Blade Chassis
- Cisco UCS B-Series Server Adapter Cards
- Stateless Computing
- Cisco UCS Mini

Describing Fabric Interconnect Connectivity

- Use of Fabric Interconnect Interfaces
- VLANs and VSANs in a Cisco UCS Domain
- Southbound Connections
- Northbound Connections
- Disjoint Layer 2 Networks
- Fabric Interconnect High Availability and Redundancy

Describing Hyperconverged and Integrated Systems

- Hyperconverged and Integrated Systems Overview
- Cisco HyperFlex™ Solution
- Cisco HyperFlex Scalability and Robustness
- Cisco HyperFlex Clusters
- Cluster Capacity and Multiple Clusters on One Cisco UCS Domain
- External Storage and Graphical Processing Units on Cisco HyperFlex

- Cisco HyperFlex Positioning

Describing Cisco UCS Manager Systemwide Parameters

- Cisco UCS Setup and Management
- Cisco UCS Traffic Management

Describing Cisco UCS RBAC

- Roles and Privileges
- Organizations in Cisco UCS Manager
- Locales and Effective Rights
- Authentication, Authorization, and Accounting
- Two-Factor Authentication
- Cisco UCS C-Series Servers

Describing Pools for Service Profiles

- Global and Local Pools
- Universally Unique Identifier (UUID) Suffix and Media Access Control (MAC) Address Pools
- World Wide Name (WWN) Pools
- Server and iSCSI Initiator IP Pools

Describing Policies for Service Profiles

- Global vs. Local Policies
- Storage and Basic Input/Output System (BIOS) Policies
- Boot and Scrub Policies
- Intelligent Platform Management Interface (IPMI) and Maintenance Policies

Describing Network-Specific Adapters and Policies

- LAN Connectivity Controls
- SAN Connectivity Controls
- Virtual Access Layer
- Connectivity Enhancements

Describing Templates in Cisco UCS Manager

- Cisco UCS Templates
- Service Profile Templates
- Network Templates
- Designing Data Center Automation

Model-Driven Programmability

- Cisco NX-API Overview
- Programmability Using Python
- Cisco Ansible Module
- Use the Puppet Agent

Lab Outline

- Design Virtual Port Channels
- Design First Hop Redundancy Protocol (FHRP)
- Design Routing Protocols
- Design Data Center Topology for a Customer
- Design Data Center Interconnect Using Cisco OTV
- Design Your VXLAN Network
- Create a Cisco FEX Design
- Design Management and Orchestration in a Cisco UCS Solution
- Design a Fibre Channel Network
- Design and Integrate an FCoE Solution
- Design a Secure SAN
- Design Cisco UCS Director for Storage Networking
- Design a Cisco UCS Domain and Fabric Interconnect Cabling
- Design a Cisco UCS C-Series Server Implementation
- Design Cisco UCS Fabric Interconnect Network and Storage Connectivity
- Design Systemwide Parameters in a Cisco UCS Solution
- Design an LDAP Integration with a Cisco UCS Domain
- Design Pools for Service Profiles in a Cisco UCS Solution
- Design Network-Specific Adapters and Policies in a Cisco UCS Solution



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