Implementing and Operating Cisco Data Center Core Technologies

Durée: 5 Jours   Réf de cours: DCCOR   Version: 1.3   Méthodes d'apprentissage: Classe à distance

Résumé:

The **Implementing and Operating Cisco Data Center Core Technologies** course helps you prepare for the Cisco CCNP Data Center and CCIE Data Center certifications and for advanced-level data center roles. Learn to master the skills and technologies you need to implement data center compute, LAN and SAN infrastructures. Understand the essentials of automation and security in data centers. Gain hands-on experience with deploying, securing, operating, and maintaining Cisco data center infrastructures including: Cisco MDS Switches and Cisco Nexus Switches; Cisco Unified Computing System™ (Cisco UCS®) B-Series Blade Servers, and Cisco UCS C-Series Rack Servers. **Please note that this course is a combination of Instructor-Led and Self-Paced Study - 5 days in the classroom and approx 3 days of self study. The self-study content will be provided as part of the digital courseware that you recieve at the beginning of the course and should be part of your preparation for the exam.**

This course will help you:
Gain experience implementing, securing and automating network, compute, and storage infrastructure
Gain knowledge and skills through Cisco's unique combination of lessons and hands-on practice using enterprise-grade Cisco learning technologies, data center equipment, and software
Qualify for professional and expert-level job roles in the high-demand area of enterprise-class data center environments
Prepare to take the **350-601 Implementing Cisco Data Center Core Technologies (DCCOR)** exam.

This course is worth 64 Continuing Education (CE) credits towards recertification.

Public visé:

Individuals looking for the knowledge and skills required to implement, secure and automate network, compute and storage infrastructures.

Objectifs pédagogiques:

■ **After completing this course you should be able to:**

■ Implement routing and switching protocols in Data Center environment

■ Implement overlay networks in data center

■ Introduce high-level Cisco Application Centric Infrastructure (Cisco ACI™) concepts and Cisco Virtual Machine manager (VMM) domain integration

■ Describe Cisco Cloud Service and deployment models

■ Implement Fibre Channel fabric

■ Implement Fibre Channel over Ethernet (FCoE) unified fabric

■ Implement security features in data center

■ Implement software management and infrastructure monitoring

■ Implement Cisco UCS Fabric Interconnect and Server abstraction

■ Implement SAN connectivity for Cisco Unified Computing System™ (Cisco UCS®)

■ Describe Cisco HyperFlex™ infrastructure concepts and benefits

■ Implement Cisco automation and scripting tools in data center

■ Evaluate automation and orchestration technologies

Pré-requis:

Attendees should meet the following prerequisites:

■ Familiarity with Ethernet and TCP/IP networking
■ Familiarity with SANs
■ Familiarity with Fibre Channel protocol
■ Identify products in the Cisco Data Center Nexus and Cisco MDS families

Test et certification

Recommended as preparation for the following exam:

■ 350-601 - **DCCOR -** Implementing Cisco Data Center Core Technologies
Passing this exam will provide you with the Cisco Certified Specialist - Data Center Core Certification and count towards the New CCNP Data Center Certification - To achieve the CCNP Data Center

- Understanding of Cisco Enterprise Data Center architecture
- Understanding of server system design and architecture
- Familiarity with hypervisor technologies (such as VMware)
- CCNA - Mettre en oeuvre et administrer des solutions réseaux Cisco
- DCFNDU - Comprendre les bases du Data Center Cisco

Certification you will also need a CCNP Data Center concentration.

Après cette formation, nous vous conseillons le(s) module(s) suivant(s):

In order to achieve the new CCNP Data Center Certification you will also need to pass a concentration exam the available concentrations are:

- DCACI - Mettre en oeuvre une Infrastructure Cisco ACI (Application Centric)
- DCACIA - Mettre en oeuvre une Infrastructure Cisco Application Centric - niveau avancé
- DCIT - Dépannage d'une Infrastructure Cisco Data Center
- DCAUI - Implementing Automation for Cisco Data Center Solutions
- DCID - Designing Cisco Data Center Infrastructure

Contenu:

Implementing Data Center Switching Protocols*

- Spanning Tree Protocol
- Port Channels Overview
- Virtual Port Channels Overview

Implementing First-Hop Redundancy Protocols*

- Hot Standby Router Protocol (HSRP) Overview
- Virtual Router Redundancy Protocol (VRRP) Overview

Implementing Routing in Data Center*

- Open Shortest Path First (OSPF) v2 and Open Settlement Protocol (OSP) v3
- Border Gateway Protocol

Implementing Multicast in Data Center*

- IP Multicast in Data Center Networks
- Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD)
- Multicast Distribution Trees and Routing Protocols
- IP Multicast on Cisco Nexus Switches

Implementing Data Center Overlay Protocols

- Virtual Extensible LAN

Implementing Network Infrastructure Security*

- User Accounts and Role Based Access Control (RBAC)
- Authentication, Authorization, and Accounting (AAA) and SSH on Cisco NX-OS
- Keychain Authentication
- First Hop Security
- Media Access Control Security
- Control Plane Policing

Describing Cisco Application-Centric Infrastructure

- Cisco ACI Overview, Initialization, and Discovery
- Cisco Nexus Dashboard Overview
- Cisco CLoud ACI Overview
- Cisco ACI Management
- Cisco ACI Fabric Access Policies

Describing Cisco ACI Building Blocks and VMM Domain Integration

- Tenant-Based Components
- Cisco ACI Endpoints and Endpoint Groups (EPG)
- Controlling Traffic Flow with Contracts
- Virtual Switches and Cisco ACI VMM Domains

Describing Data Center Network Infrastructure Management, Maintenance, and Operations*

- Time Synchronization
- Network Configuration Management
- Software Updates
- Network Infrastructure Monitoring

Explaining Cisco Network Assurance Concepts*

- Need for Network Assurance
- Cisco Streaming Telemetry Overview

Implementing Fibre Channel Fabric

- Fibre Channel Basics
- Virtual Storage Area Network (VSAN) Overview
- SAN Port Channels Overview
- Fibre Channel Domain Configuration Process

Implementing Storage Infrastructure Services

- Distributed Device Aliases
- Zoning
- N-Port Identifier Virtualization (NPIV) and N-Port Virtualization (NPV)
- Fibre Channel over IP
- Network Access Server (NAS) Concepts
- Storage Area Network (SAN) Design Options

Implementing FCoE Unified Fabric

- Fibre Channel over Ethernet
- Describing FCoE
- FCoE Topology Options
- FCoE Implementation

Implementing Storage Infrastructure Security*

- User Accounts and RBAC
- Authentication, Authorization, and Accounting
- Fibre Channel Port Security and Fabric Binding

Describing Data Center Storage Infrastructure Maintenance and Operations*

- Time Synchronization
- Software Installation and Upgrade
- Storage Infrastructure Monitoring

Describing Cisco UCS Server Form Factors*

- Cisco UCS B-Series Blade Servers
- Cisco UCS C-Series Rack Servers

Implementing Cisco Unified Computing

Implementing Cisco Unified Computing SAN Connectivity

- Cisco Unified Computing Storage Connectivity Options
- iSCSI Overview
- Fibre Channel Overview
- Implement FCoE

Implementing Unified Computing Security

- User Accounts and RBAC
- Options for Authentication
- Key Management

Introducing Cisco HyperFlex Systems*

- Hyperconverged and Integrated Systems Overview
- Cisco HyperFlex Solution
- Cisco HyperFlex Scalability and Robustness

Describing Data Center Unified Computing Management, Maintenance, and Operations*

- Compute Configuration Management
- Software Updates
- Infrastructure Monitoring
- Cisco Intersight™

Implementing Cisco Data Center Automation and Scripting Tools*

- Cisco NX-OS Programmability
- Scheduler Overview
- Cisco Embedded Event Manager Overview
- Open NX-OS Linux Network Architecture
- Bash Shell and Guest Shell for Cisco NX-OS
- Cisco Nexus API
- Cisco NX-OS Model-Driven Programmability
- Cisco NX-SDK

Describing Cisco Integration with Automation and Orchestration Software Platforms

- Cisco and Ansible Integration Overview
- Python in Cisco NX-OS and Cisco UCS
- HashiCorp Terraform Overview
- Cisco Application-Centric Infrastructure Automation Options

Describing Cisco Data Center Automation and Orchestration Technologies*

- Power On Auto Provisioning
- Cisco Nexus Dashboard Overview
- Cisco Nexus Dashboard Fabric Controller Overview
- Cisco UCS PowerTool

- VMM Domain EPG Association
- Cisco ACI Integration with Hypervisor Solutions

Describing Packet Flow in Data Center Network*

- Data Center Traffic Flows
- Packet Flow in Cisco Nexus Switches
- Packet Flow in Cisco ACI Fabric

Describing Cisco Cloud Service and Deployment Models*

- Cloud Architectures
- Cloud Deployment Models

Network Connectivity

- Cisco UCS Fabric Interconnect
- Cisco UCS B-Series Connectivity
- Cisco UCS C-Series Integration

Implementing Cisco Unified Computing Server Abstraction

- Identity Abstraction
- Service Profile Templates

Labs

- Discovery Lab 1: Configure Virtual Extensible LAN (VXLAN)
- Discovery Lab 1: Explore the Cisco ACI Fabric
- Discovery Lab 1: Implement Cisco ACI Access Policies and Out-of-Band Management
- Discovery Lab 1: Implement Cisco ACI Tenant Policies
- Discovery Lab 1: Integrate Cisco ACI with VMware
- Discovery Lab 1: Configure Fibre Channel
- Discovery Lab 1: Configure Device Aliases
- Discovery Lab 1: Configure Zoning
- Discovery Lab 1: Configure NPV
- Discovery Lab 1: Provision Cisco UCS Fabric Interconnect
- Discovery Lab 1: Configure Server and Uplink Ports
- Discovery Lab 1: Configure VLANs
- Discovery Lab 1: Configure Cisco UCS Server Profile Using Hardware Identities
- Discovery Lab 1: Configure Basic Identity Pools
- Discovery Lab 1: Configure a Cisco UCS Service Profile Using Pools
- Discovery Lab 1: Configure an Internet Small Computer Systems Interface (iSCSI) Service Profile
- Discovery Lab 1: Configure Cisco UCS Manager to Authenticate Users with Microsoft Active Directory
- Discovery Lab 1: Discovery Lab 1:Configure Cisco Nexus Switches with Ansible
- Discovery Lab 1: Program a Cisco Nexus Switch with Python

* These sections are self-study and can be done at your own pace after the instructor-led portion of the course.

Autres moyens pédagogiques et de suivi:

• Compétence du formateur : Les experts qui animent la formation sont des spécialistes des matières abordées et ont au minimum cinq ans d'expérience d'animation. Nos équipes ont validé à la fois leurs connaissances techniques (certifications le cas échéant) ainsi que leur compétence pédagogique.
• Suivi d'exécution : Une feuille d'émargement par demi-journée de présence est signée par tous les participants et le formateur.
• En fin de formation, le participant est invité à s'auto-évaluer sur l'atteinte des objectifs énoncés, et à répondre à un questionnaire de satisfaction qui sera ensuite étudié par nos équipes pédagogiques en vue de maintenir et d'améliorer la qualité de nos prestations.

Délais d'inscription :

• Vous pouvez vous inscrire sur l'une de nos sessions planifiées en inter-entreprises jusqu'à 5 jours ouvrés avant le début de la formation sous réserve de disponibilité de places et de labs le cas échéant.
• Votre place sera confirmée à la réception d'un devis ou """"booking form"""" signé. Vous recevrez ensuite la convocation et les modalités d'accès en présentiel ou distanciel.
• Attention, si cette formation est éligible au Compte Personnel de Formation, vous devrez respecter un délai minimum et non négociable fixé à 11 jours ouvrés avant le début de la session pour vous inscrire via moncompteformation.gouv.fr.

Accueil des bénéficiaires :

• En cas de handicap : plus d'info sur globalknowledge.fr/handicap
• Le Règlement intérieur est disponible sur globalknowledge.fr/reglement

---