

Das Training vermittelt Ihnen Kenntnisse und Fähigkeiten zur Fehlerbehebung in LANs, SANs, Cisco Unified Fabric, Cisco Unified Computing System (Cisco UCS) und Cisco Application-Centric Infrastructure (Cisco ACI). Sie lernen Methoden und Werkzeuge kennen, um Probleme zu identifizieren und zu beheben, die in der Netzwerkarchitektur von Rechenzentren auftreten können. Sie führen umfangreiche praktische Übungen bei der Lösung von Problemen mit Cisco Multilayer Director Switch (MDS) Switches, Cisco Nexus Switches, Cisco Fabric Extenders (FEXs), Cisco UCS, Cisco ACI und mehr durch.

Kursinhalt

- Describe how to troubleshoot the data center network
- Describe the troubleshooting tools and methodologies that are available from the CLI and are used to identify and resolve issues in a Cisco Data Center network architecture
- Identify and resolve issues that are related to VLANs and PVLANs
- Identify and resolve issues that are related to port channels and virtual port channels
- Identify and resolve issues that are related to VXLAN
- Describe troubleshooting of routing and high-availability protocols
- Describe troubleshooting of the LAN security features
- Identify and resolve issues that are related to a single device
- Identify and resolve issues that are related to Fibre Channel interface operation
- Identify and resolve Fibre Channel switching issues when the Cisco NX-OS Software is used in switched mode
- Identify and resolve issues that are related to Fibre Channel switching when a Cisco NX-OS switch is used in NPV mode
- Identify and resolve issues that are related to FIP and FCoE, including FCoE performance
- Describe Cisco UCS architecture, initial setup, tools, and service aids that are available for Cisco UCS troubleshooting and interpretation of the output
- Describe Cisco UCS configuration and troubleshooting
- Describe Cisco UCS B-Series Blade Server operation and troubleshoot related issues
- Describe Cisco UCS B-Series LAN, SAN, and Fibre Channel operations, including in-depth troubleshooting procedures
- Describe Cisco IMC tools for validating performance and facilitating data-gathering activities for Cisco UCS C-Series server troubleshooting, and the troubleshooting approach for hardware and firmware failures
- Define the proper procedures for configuring Cisco UCS C-Series LAN and SAN connectivity, avoiding issues with the VIC, and troubleshooting connectivity issues
- Troubleshoot Cisco UCS C-Series server integration with Cisco UCS Manager
- Identify the tools, protocols, and methods to effectively troubleshoot Cisco ACI
- Describe how to troubleshoot automation and scripting tools
- Describe how to troubleshoot 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

Dieser Kurs richtet sich an Administratoren und Techniker, die ihr Wissen im Bereich Data Center mit Kenntnissen im Troubleshooting ausbauen wollen.

- Network Designer
- Network Administrator
- Network Engineer
- Systems Engineer
- Data Center Engineer
- Consulting Systems Engineer
- Technical Solutions Architect
- Cisco Integrators/Partners
- Server Administrator
- Network Manager

Voraussetzungen

Sie sollten über folgende Vorkenntnisse verfügen:

- Konfiguration, Absicherung und Wartung von LAN und SAN auf Basis von Cisco Nexus- und MDS-Switches.
- Konfiguration, Absicherung und Wartung des Cisco Unified Computing Systems
- Konfiguration, Absicherung und Wartung von Cisco ACIs

Die folgenden Cisco Schulungen können Ihnen helfen, diese Voraussetzungen zu erfüllen:

- Implementing and Administering Cisco Solutions (CCNA)
- Understanding Cisco Data Center Foundations (DCFNDU)
- Implementing and Operating Cisco Data Center Core Technologies (DCCOR)
- Implementing Cisco Application Centric Infrastructure (DCACI)
- Implementing Cisco NX-OS Switches and Fabrics in the Data Center (DCNX)
- Introducing Cisco Unified Computing System (DCIUCS)
- Configuring Cisco Unified Computing System (DCCUCS)

Kursziel

Dieser Kurs bereitet Sie auf die Prüfung Troubleshooting Cisco Data Center Infrastructure vor, die Bestandteil der CCNP Data Center® Zertifizierung ist und zudem zu der Spezialisierung Cisco Certified Specialist - Data Center Operations 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/DCIT

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 & Cisco U.

Die multimodalen Schulungen der Cisco Digital Learning Library beinhalten referenzgeführte HD-Videos mit hinterlegtem durchsuchbarem Text und Untertiteln, Übungen, Labs und erklärenden Text sowie Grafiken. Das Angebot stellen wir Ihnen über unser Lernportal myExperTeach zur Verfügung. Der Zugriff auf die Kurse steht ab der Freischaltung für einen Zeitraum von sechs Monaten zur Verfügung. Bei Paketen (Cisco U.) beträgt dieser Zeitraum zwölf Monate.

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

Training		Preise zzgl. MwSt.	
Termin in Deutschland	5 Tage	€ 3.795,-	
Online Training	5 Tage	€ 3.795,-	
Termin/Kursort		Kursprache Deutsch	
25.11.-29.11.24	Hamburg	25.11.-29.11.24	Online

Stand 23.04.2024



Inhaltsverzeichnis

DCIT – Troubleshooting Cisco Data Center Infrastructure

Section 1: Describing the Troubleshooting Process

Objectives

- Describe how to troubleshoot the data center network
- This lesson includes these topics:

- Troubleshooting Overview
- Troubleshooting Overview and Issue Identification
- Summary

Section 2: Understanding CLI Troubleshooting Tools

Objectives

- Describe the troubleshooting tools and methodologies that are available from the CLI and are used to identify and resolve issues in a Cisco Data Center network architecture
- This lesson includes these topics:

- Ping, Pong, and Traceroute
- Debugging, Event History, and System Monitoring
- SPAN and Encapsulated Remote SPAN
- Ethalyzer, ELAM, and Data Plane Sampling Capture
- Logging
- Cisco Generic Online Diagnostics
- SNMP, Cisco EEM, and RMON
- Discovery 1: Document the Network Baseline
- Task 1: Examine the LAN and SAN Network Topology
- Task 2: Examine the Cisco UCS Manager GUI and Cisco UCS C-Series Rack Server
- Task 3: Examine the Cisco ACI

Section 3: Troubleshooting VLANs and PVLANS

Objectives

- Identify and resolve issues that are related to VLANs and PVLANS
- This lesson includes these topics:

- Troubleshooting VTP
- Troubleshooting Layer 2 Issues
- VLANs and SVIs on Cisco Nexus Series Switches
- Troubleshooting VLANs, PVLANS, and SVIs
- Troubleshooting Private VLANs
- Troubleshooting Rapid PVST+
- Discovery 2: Troubleshoot Rapid PVST+
- Task 1: Examine the LAN Network Topology
- Task 2: Examine the STP Information
- Task 3: Troubleshoot STP Configuration

Section 4: Troubleshooting Port Channels and Virtual Port Channels

Objectives

- Identify and resolve issues that are related to port channels and virtual port channels
- This lesson includes these topics:

- Port Channel Overview
- vPC Overview
- Troubleshooting vPCs
- Common vPC Issues
- Discovery 3: Troubleshoot LACP
- Discovery 4: Troubleshoot vPC

Section 5: Troubleshooting VXLAN

Objectives

- Identify and resolve issues that are related to VXLAN
- This lesson includes these topics:

- VXLAN Overlay Features
- VXLAN MP-BGP Ethernet VPN
- Common VXLAN Issues
- Troubleshooting VXLAN
- Discovery 5: Troubleshoot VXLAN

Section 6: Troubleshooting Routing and High-Availability Protocols

Objectives

- Describe troubleshooting of routing and high-availability protocols
- This lesson includes these topics:

- Troubleshooting Basic Routing Issues
- Troubleshooting OSPFv2 and OSPFv3
- Troubleshooting EIGRP
- Discovery 6: Troubleshoot OSPF
- Troubleshooting PIM
- Troubleshooting FHRP
- Discovery 7: Troubleshoot FHRP
- Task 1: Troubleshoot HSRP
- Task 2: Troubleshoot VRRP

Section 7: Troubleshooting Data Center LAN Security

Objectives

- Describe troubleshooting of the LAN security features

This lesson includes these topics:

- Troubleshooting AAA and RBAC
- Troubleshooting First-Hop Security
- Troubleshooting ACLs

Section 8: Troubleshooting Platform-Specific Issues

- Cisco Fabric Services Overview
- Troubleshooting Cisco Fabric Services
- Discovery 8: Troubleshoot Cisco Fabric Services
- Troubleshooting Configuration Profiles
- Common VDC Issues
- Troubleshooting VDC
- Troubleshooting VRF
- Discovery 9: Troubleshoot VRF
- Cisco FEX Troubleshooting
- Discovery 10: Troubleshoot Cisco FEX
- Troubleshooting Cisco ISSU

Section 9: Troubleshooting Fibre Channel Interfaces

Objectives

- Identify and resolve issues that are related to Fibre Channel interface operation
- This lesson includes these topics:

- Fibre Channel Overview
- Troubleshooting Fibre Channel Interfaces and Device Registration
- Discovery 11: Troubleshoot Fibre Channel Interfaces
- Troubleshooting Fibre Channel Port Channels
- Troubleshooting Port Security and Fabric Binding

Section 10: Troubleshooting Fibre Channel Fabric Services

Objectives

- Identify and resolve Fibre Channel switching issues when the Cisco NX-OS Software is used in switched mode
- This lesson includes these topics:

- Troubleshooting VSANs
- Troubleshooting Fibre Channel Domain and Name Services
- Troubleshooting Zoning and Fabric Merges
- Troubleshooting Cisco Fabric Services
- Discovery 12: Troubleshoot Fibre Channel VSANs, Zones, and Domain Services

Section 11: Troubleshooting NPV Mode

Objectives

- Identify and resolve issues that are related to Fibre Channel switching when a Cisco NX-OS switch is used in NPV mode
- This lesson includes these topics:

- NPIV and NPV Overview
- Troubleshooting NPV Mode
- Discovery 13: Troubleshoot NPV Mode

Section 12: Troubleshooting FCoE

Objectives

- Identify and resolve issues that are related to FIP and FCoE, including FCoE performance
- This lesson includes these topics:

- FCoE and FIP Overview
- Troubleshooting FIP
- Discovery 14: Troubleshoot FCoE
- Troubleshooting FCoE- and QoS-Related Issues
- Troubleshooting DCB
- Troubleshooting PFC
- Discovery 15: Troubleshoot DCB

Section 13: Troubleshooting Cisco UCS Architecture and Initialization

Objectives

- Describe Cisco UCS architecture, initial setup, tools and service aids available for Cisco UCS troubleshooting and interpretation of the output
- This lesson includes these topics:

- Troubleshooting Fabric Interconnects in Standalone and Cluster Mode
- Troubleshooting Cisco UCS Management Access
- Troubleshooting Cisco UCS Manager CLI
- Troubleshooting Cisco UCS with Embedded Tools
- Troubleshooting Cisco UCS Hardware Discovery
- Cisco Intersight Overview
- Cisco Nexus Dashboard Overview

Section 14: Troubleshooting Cisco UCS Configuration

Objectives

- Describe Cisco UCS configuration and troubleshooting
- This lesson includes these topics:

- Stateless Computing

- Troubleshooting Service Profile Association Issues Due to Unavailable Addresses
- Other Service Profile Association Issues
- Cisco UCS Manageability
- Troubleshooting Authentication Failures
- Discovery 16: Troubleshoot Cisco UCS Management and Service Profile Deployment

Section 15: Troubleshooting Cisco UCS B-Series Servers

Objectives

- Describe Cisco UCS B-Series server operation and troubleshoot related issues
- This lesson includes these topics:

- Troubleshooting Cisco UCS B-Series Blade Server
- Troubleshooting Firmware Upgrade and Operating System Drivers
- Troubleshooting Remote Access
- Troubleshooting Server Hardware

Section 16: Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

Objectives

- Describe Cisco UCS B-Series LAN, SAN, and Fibre Channel operations, including in-depth troubleshooting procedures
- This lesson includes these topics:

- Troubleshooting Link-Level Issues
- Troubleshooting Connectivity Issues for Specific Servers
- Troubleshooting Intermittent Connectivity
- Troubleshooting Disjoint Layer 2 Networks
- Troubleshooting Redundant Connectivity
- Troubleshooting Cisco UCS B-Series SAN Connectivity
- Troubleshooting Directly Attached Storage
- Troubleshooting Server Boot from SAN and ISCSI
- Using SPAN for Troubleshooting
- Analyzing Packet Flow

Section 17: Troubleshooting Cisco UCS C-Series Servers

Objectives

- Describe Cisco IMC tools for validating performance and facilitating data-gathering activities for Cisco UCS C-Series server troubleshooting, and the troubleshooting approach for hardware and firmware failures
- This lesson includes these topics:

- Troubleshooting Cisco UCS C-Series Initialization and Cisco IMC
- Troubleshooting Cisco UCS C-Series Hardware and Firmware

Section 18: Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity

Objectives

- Define the proper procedures for configuring Cisco UCS C-Series LAN and SAN connectivity, avoiding issues with the VIC, and troubleshooting connectivity issues
- This lesson includes these topics:

- Troubleshooting the Cisco UCS C-Series VIC Module and Connectivity to Cisco IMC
- Troubleshooting Cisco UCS C-Series LAN Connectivity
- Discovery 17: Troubleshoot Cisco UCS C-Series Server LAN Connectivity
- Troubleshooting Cisco UCS C-Series SAN Connectivity
- Using SPAN to Capture Cisco UCS C-Series Server Traffic
- Discovery 18: Troubleshoot Cisco UCS C-Series Server Boot from the Fibre Channel LUN
- Troubleshooting Cisco UCS C-Series ISCSI Boot

Section 19: Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration

Objectives

- Troubleshoot Cisco UCS C-Series server integration with Cisco UCS Manager
- This lesson includes these topics:

- Integrating Cisco UCS C-Series Servers with Cisco UCS Manager
- Discovery 19: Troubleshoot Cisco UCS C-Series Server Management Connectivity
- Troubleshooting FEX Discovery and VIC Issues

Section 20: Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

Objectives

- Identify the tools, protocols, and methods to effectively troubleshoot Cisco ACI
- This lesson includes these topics:

- Troubleshooting the Fabric Discovery Process
- Traditional Troubleshooting Methods in Cisco ACI
- Atomic Counters, Faults, and Health Scores
- Troubleshooting Tenant-Based Policies
- Packet Flow Through the Cisco ACI Fabric
- Troubleshooting AAA and RBAC
- Discovery 20: Troubleshoot Cisco ACI Integration with VMware vCenter
- Discovery 21: Troubleshoot Contracts in Cisco ACI
- Discovery 22: Troubleshoot Cisco ACI External Layer 3 Connectivity
- Task 1: Troubleshoot External OSPF Routing
- Task 2: Troubleshoot External BGP Routing
- Discovery 23: Troubleshoot Cisco ACI External Layer 2 Connectivity
- Task 1: Troubleshoot External Layer 2 Extension of an EPG

