

The training provides you with knowledge and skills for troubleshooting LANs, SANs, Cisco Unified Fabric, Cisco Unified Computing System (Cisco UCS) and Cisco Application-Centric Infrastructure (Cisco ACI). You will learn methods and tools to identify and troubleshoot problems that can occur in data center network architecture. You will perform extensive hands-on exercises in solving problems with Cisco Multilayer Director Switch (MDS) switches, Cisco Nexus switches, Cisco Fabric Extenders (FEXs), Cisco UCS, Cisco ACI and more.

### Course Contents

- 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
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**E-Book** You will receive the original course documentation from Cisco in English language as a Cisco E-Book. In the Cisco Digital Learning Version, the content of the courseware is integrated into the learning interface instead.

### Target Group

This course is aimed at administrators and technicians who want to expand their knowledge of data centers with troubleshooting skills.

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

### Prerequisites

You should have the following prior knowledge:

- Configuration, protection and maintenance of LAN and SAN based on Cisco Nexus and MDS switches
- Configuration, protection and maintenance of the Cisco Unified Computing System
- Configuration, protection and maintenance of Cisco ACIs

The following Cisco training courses can help you meet these requirements:

- 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)

### Course Target

This course prepares you for the Troubleshooting Cisco Data Center Infrastructure exam, which is part of the CCNP Data Center® certification and also leads to the Cisco Certified Specialist - Data Center Operations specialization.

**Processing time**  
approx. 30 hours

### This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

[www.expertech-training.com/go/DCIT](http://www.expertech-training.com/go/DCIT)

### Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in a non-committal manner. This can also be done by phone under +49 6074/4868-0.

### Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

### Your Tailor-Made Course!

We can precisely customize this course to your project and the corresponding requirements.

### Cisco Digital Learning

This course is available in the Cisco Digital Learning Library. These recently developed, multi-modal training events include HD videos moderated by lecturers with stored searchable text and subtitles, as well as exercises, labs, and explanatory text and graphics. We provide this offer to you via our myExpertech learning portal. Effective of the activation of the account, access to the courses will be granted for a duration of 6 months. In the case of packet solutions (Cisco Digital Learning Subscriptions), this time period will amount to 12 months.

Cisco Digital Learning	Prices, excl. of V.A.T.
365 Tage Freischaltung (Version 6.2)	€ 1,500

Training	Prices, excl. of V.A.T.
<b>Classes in Germany</b>	<b>5 Days € 3,795</b>
<b>Online Training</b>	<b>5 Days € 3,795</b>
<b>Date/course venue</b>	<b>Course language German</b> 
14/07-18/07/25 	12/01-16/01/26 
14/07-18/07/25 	12/01-16/01/26 

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## DCIT – Troubleshooting Cisco Data Center Infrastructure

### Describing the Troubleshooting Process

- Troubleshooting Overview
- Narrow Down the Cause of the Problem

### Understanding CLI Troubleshooting Tools

- Ping, Pong, and Traceroute
- Debugging, Event History, and System Monitoring
- SPAN and Encapsulated Remote SPAN
- Ethalyzer and Data Plane Sampling Capture
- Logging
- Cisco Generic Online Diagnostics
- SNMP, Cisco EEM, and RMON

### Troubleshooting VLANs and PVLANS

- Troubleshoot VTP
- Troubleshoot Layer 2 Issues
- VLANs and SVIs on Cisco Nexus Series Switches
- Troubleshoot VLANs, PVLANS, and SVIs
- Troubleshoot Rapid PVST+

### Troubleshooting Port Channels and Virtual Port Channels

- Port Channel Overview
- vPC Overview
- Common vPC Issues

### Troubleshooting Cisco OTV

- Cisco OTV Features
- Common Cisco OTV Issues
- Cisco OTV Troubleshooting
- HSRP Isolation Between Data Centers Using Cisco OTV

### Troubleshooting VXLAN

- VXLAN Overlay Features
- VXLAN MP-BGP Ethernet VPN
- Common VXLAN Issues
- VXLAN Troubleshooting

### Troubleshooting Routing and High-Availability Protocols

- Troubleshoot Basic Routing Issues
- Troubleshoot OSPFv2 and OSPFv3
- Troubleshoot EIGRP
- Troubleshoot PIM
- Troubleshoot FHRP
- Troubleshoot Data Center LAN Security
- Troubleshoot AAA and RBAC
- Troubleshoot First-Hop Security
- Troubleshoot CoPP
- Troubleshoot ACLs

### Troubleshooting Platform-Specific Issues

- Cisco Fabric Services Overview
- Troubleshoot Cisco Fabric Services
- Configure and Troubleshoot Configuration Profiles
- Common VDC Issues
- Troubleshoot VDC
- Troubleshoot VRF
- Cisco FEX Troubleshooting
- Troubleshoot Cisco ISSU

### Troubleshooting Fibre Channel Interfaces

- Fibre Channel Overview
- Troubleshoot Fibre Channel Interfaces and Device Registration
- Troubleshoot SAN Port Channels
- Troubleshoot Port Security and Fabric Binding

### Troubleshooting Fibre Channel Fabric Services

- Troubleshoot VSANs
- Troubleshoot Fibre Channel Domain and Name Services
- Troubleshoot Zoning and Fabric Merges
- Troubleshoot Cisco Fabric Services

### Troubleshooting NPV Mode

- NPV and NPV Overview
- Troubleshoot NPV Mode

### Troubleshooting FCoE

- FCoE and FIP Overview
- Troubleshoot FIP
- Troubleshoot FCoE- and QoS-Related Issues
- Troubleshoot DCB

### Troubleshooting Cisco UCS Architecture and Initialization

- Troubleshoot Fabric Interconnect in Standalone and Cluster Mode
- Troubleshoot Cisco UCS Management Access
- Troubleshoot Cisco UCS Manager CLI
- Troubleshoot Cisco UCS with Embedded Tools
- Troubleshoot Cisco UCS Hardware Discovery

### Troubleshooting Cisco UCS Configuration

- Stateless Computing
- Troubleshoot Service Profile Association Issues
- Cisco UCS Manageability
- Troubleshoot Authentication Failures

### Troubleshooting Cisco UCS B-Series Servers

- Troubleshoot Cisco UCS B-Series Server Boot
- Troubleshoot Operating System Drivers
- Troubleshoot Remote Access
- Troubleshoot Server Hardware

### Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

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

### Troubleshooting Cisco UCS C-Series Servers

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

### Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity

- Troubleshoot the Cisco UCS C-Series VIC Module and Connectivity

to Cisco IMC

- Troubleshoot Cisco UCS C-Series LAN Connectivity
- Troubleshoot Cisco UCS C-Series SAN Connectivity
- Use SPAN to Capture Cisco UCS C-Series Server Traffic
- Troubleshoot Cisco UCS C-Series Boot from the Fibre Channel LUN
- Troubleshoot Cisco UCS C-Series iSCSI Boot

### Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration

- Integrate Cisco UCS C-Series Servers with Cisco UCS Manager
- Troubleshoot FEX Discovery and VIC Issues

### Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

- Troubleshoot the Fabric Discovery Process
- Traditional Troubleshooting Methods in Cisco ACI
- Atomic Counters, Faults, and Health Scores
- Troubleshoot Tenant-Based Policies
- Packet Flow Through Cisco ACI Fabric
- Troubleshoot AAA and RBAC

### Troubleshoot Automation and Scripting Tools

- Troubleshoot Cisco IOS EEM
- Troubleshoot the Cisco NX-OS Scheduler

### Troubleshooting Programmability

- Troubleshoot Bash Shell and Guest Shell for NX-OS
- Troubleshoot REST API, JSON, and XML Encodings

### Lab Outline

- Document the Network Baseline
- Troubleshoot Rapid PVST+
- Troubleshoot LACP
- Troubleshoot vPC
- Troubleshoot OTV
- Troubleshoot VXLAN
- Troubleshoot OSPF
- Troubleshoot FHRP
- Troubleshoot Cisco Fabric Services
- Troubleshoot VRF
- Troubleshoot Cisco FEX
- Troubleshoot Fibre Channel Interfaces
- Troubleshoot Fibre Channel VSANs, Zones, and Domain Services
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- Troubleshoot FCoE
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- Troubleshoot Cisco UCS Management and Service Profile Deployment
- Troubleshoot Cisco UCS C-Series Server LAN Connectivity
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- Troubleshoot Cisco UCS C-Series Server iSCSI Boot
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- Troubleshoot Bare-Metal Hosts Connectivity Through Cisco ACI
- Troubleshoot Cisco ACI Integration with VMware vCenter
- Troubleshoot Contracts in Cisco ACI
- Troubleshoot Cisco ACI External Layer 3 Connectivity
- Troubleshoot Cisco ACI External Layer 2 Connectivity



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