

Course Code: 100490

Learn to diagnose LAN, SAN, Cisco Data Center Unified Fabric, Cisco Unified Computing System and Cisco Application-Centric Infrastructure.

You will learn methodologies and tools to identify issues that may occur in data center network architecture. You will get extensive hands-on practice troubleshooting installation, configuration and interconnectivity issues on Cisco MDS switches, Cisco Nexus switches, Cisco Fabric Extenders (FEXs), Cisco UCS, Cisco ACI, and more. This course helps prepare you to take the exam, Troubleshooting Cisco Data Center Infrastructure (300-615 DCIT), which leads to CCNP Data Center and the Cisco Certified Specialist - Data Center Operations certifications.

This course is eligible for 50 Continuing Education Credits (ILT & ELT Modality).

What You'll Learn

This course will help you:

- Learn how to deploy and troubleshoot various components of Cisco data center infrastructure to support performance, resiliency, scalability needs
- 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-level job roles

After taking this course, you should be able to:

- 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; port channels and virtual port channels; OTV; and VXLAN
- Describe troubleshooting of routing protocols such as OSPF, EIGRP, and PIM.
- 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, and 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 troubleshoot related issues
- Describe Cisco UCS B-Series Blade Server operation and troubleshoot related issues
- Describe 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 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, scripting tools, and programmability

Who Needs to Attend

- Network designers
- Network administrators
- Network engineers
- System engineers
- Consulting systems engineers
- Technical solutions architects
- Server administrators
- Network managers
- Cisco integrators and partners

Prerequisites

To fully benefit from this course, you should have the following knowledge and skills:

- Configure, secure, and maintain LAN and SAN based on Cisco Nexus and MDS switches
- Configure, secure, and maintain Cisco Unified Computing System
- Configure, secure, and maintain Cisco ACI



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CLASSROOM LIVE

\$5,940 CAD

5 Day

Classroom Live Outline

- Describing the Troubleshooting Process
- Understanding CLI Troubleshooting Tools
 - Ping, Pong, and Traceroute
 - Debugging, Event History, and System Monitoring
 - SPAN and Encapsulated Remote SPAN

 - Logging

 - SNMP, Cisco EEM, and RMON
- Troubleshooting VLANs and PVLANs
- Troubleshooting Port Channels and Virtual Port Channels
 - □ Port Channel Overview
- Troubleshooting Cisco OTV

 - M HSRP Isolation Between Data Centers Using Cisco OTV
- Troubleshooting VXLAN

- ∇XLAN Troubleshooting
- Troubleshooting Routing and High-Availability Protocols
- Troubleshooting Platform-Specific Issues
- Troubleshooting Fibre Channel Interfaces
 - ∏ Fibre Channel Overview
- Troubleshooting Fibre Channel Fabric Services
- Troubleshooting NPV Mode
- Troubleshooting Cisco UCS Architecture and Initialization

- Troubleshooting Cisco UCS Configuration
- Troubleshooting Cisco UCS B-Series Servers
- Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

 - □ Use SPAN for Troubleshooting
- Troubleshooting Cisco UCS C-Series Servers

 - ▼ Troubleshoot the Cisco UCS C-Series VIC Module and Connectivity to Cisco IMC
- Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration
- Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

 - Atomic Counters, Faults, and Health Scores

 - ∏ Packet Flow Through Cisco ACI Fabric

- Troubleshoot Automation and Scripting Tools
- Troubleshooting Programmability

Classroom Live Labs

- 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
- Troubleshoot NPV Mode
- Troubleshoot FCoE
- Troubleshoot DCB
- Troubleshoot Cisco UCS Management and Service Profile Deployment
- Troubleshoot Cisco UCS C-Series Server LAN Connectivity
- Troubleshoot Cisco UCS C-Series Server Boot from the Fibre Channel LUN
- Troubleshoot Cisco UCS C-Series Server iSCSI Boot
- Troubleshoot Cisco UCS C-Series Server Management Connectivity
- 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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VIRTUAL CLASSROOM LIVE

\$5,940 CAD

5 Day

Virtual Classroom Live Outline

- Describing the Troubleshooting Process
- Understanding CLI Troubleshooting Tools
 - ∏ Ping, Pong, and Traceroute
 - Debugging, Event History, and System Monitoring
 - SPAN and Encapsulated Remote SPAN

 - Logging

 - SNMP, Cisco EEM, and RMON
- Troubleshooting VLANs and PVLANs

 - ▼ VLANs and SVIs on Cisco Nexus Series Switches
 - $\overline{\mathbb{N}}$ Troubleshoot VLANs, PVLANs, and SVIs
- Troubleshooting Port Channels and Virtual Port Channels
 - □ Port Channel Overview

 - □ Common vPC Issues
- Troubleshooting Cisco OTV

 - M HSRP Isolation Between Data Centers Using Cisco OTV
- Troubleshooting VXLAN

- ∇XLAN Troubleshooting
- Troubleshooting Routing and High-Availability Protocols
- Troubleshooting Platform-Specific Issues
- Troubleshooting Fibre Channel Interfaces
 - ∏ Fibre Channel Overview
- Troubleshooting Fibre Channel Fabric Services
- Troubleshooting NPV Mode
- Troubleshooting Cisco UCS Architecture and Initialization

- Troubleshooting Cisco UCS Configuration
- Troubleshooting Cisco UCS B-Series Servers
- Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

 - □ Use SPAN for Troubleshooting
- Troubleshooting Cisco UCS C-Series Servers

 - ▼ Troubleshoot the Cisco UCS C-Series VIC Module and Connectivity to Cisco IMC
- Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration
- Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

 - Atomic Counters, Faults, and Health Scores

 - ∏ Packet Flow Through Cisco ACI Fabric

- Troubleshoot Automation and Scripting Tools
- Troubleshooting Programmability

Virtual Classroom Live Labs

- 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 Cisco UCS C-Series Server Management Connectivity
- 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

Aug 4 - 8, 2025 | 8:30 AM - 4:30 PM EDT

Nov 10 - 14, 2025 | 8:30 AM - 4:30 PM EST

Jan 5 - 9, 2026 | 8:30 AM - 4:30 PM EST



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ON-DEMAND

\$1,998 CAD

On-Demand Outline

- Describing the Troubleshooting Process

 - 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

 - Logging

 - SNMP, Cisco EEM, and RMON
- Troubleshooting VLANs and PVLANs

 - ▼ VLANs and SVIs on Cisco Nexus Series Switches
 - $\overline{\mathbb{N}}$ Troubleshoot VLANs, PVLANs, and SVIs
- Troubleshooting Port Channels and Virtual Port Channels
 - □ Port Channel Overview
- Troubleshooting Cisco OTV

 - M HSRP Isolation Between Data Centers Using Cisco OTV
- Troubleshooting VXLAN

- ∇XLAN Troubleshooting
- Troubleshooting Routing and High-Availability Protocols
- Troubleshooting Platform-Specific Issues
- Troubleshooting Fibre Channel Interfaces
 - ∏ Fibre Channel Overview
- Troubleshooting Fibre Channel Fabric Services
- Troubleshooting NPV Mode
- Troubleshooting Cisco UCS Architecture and Initialization

- Troubleshooting Cisco UCS Configuration
- Troubleshooting Cisco UCS B-Series Servers
- Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

 - □ Use SPAN for Troubleshooting
- Troubleshooting Cisco UCS C-Series Servers

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- Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

 - Atomic Counters, Faults, and Health Scores

 - ∏ Packet Flow Through Cisco ACI Fabric

- Troubleshoot Automation and Scripting Tools
- Troubleshooting Programmability



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PRIVATE GROUP TRAINING

5 Day

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