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## Troubleshooting Cisco Data Center Infrastructure

**Duration: 5 Days    Course Code: DCIT**

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### Overview:

Troubleshooting Cisco Data Center Infrastructure is a skills-building course focused on the troubleshooting of LAN, SAN, Cisco Data Center Unified Fabric, Cisco Unified Computing System (UCS), and Cisco Application Centric Infrastructure (ACI). The course provides rich, hands-on experience in resolving problems on Cisco MDS switches, Cisco Nexus switches, Cisco fabric extenders (FEXs), Cisco UCS and Cisco ACI. The course is designed to help students prepare for Cisco CCNP Data Center certification and for professional-level data center roles.

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### Target Audience:

Engineers involved in the troubleshooting of LAN, SAN, Cisco Data Center Unified Fabric, Cisco Unified Computing System (UCS) and Cisco Application Centric Infrastructure (ACI).

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### Objectives:

- **After completing this course you should be able to:**
  - Troubleshoot Layer 2 technologies, such as STP, port channels, vPC, Cisco FabricPath, and FEX
  - Troubleshoot first-hop redundancy, routing, and CFS in the data center
  - Troubleshoot virtualization solutions, such as OTV, VRF, and VXLAN
  - Troubleshoot storage area networks, including Fibre Channel, FCoE, zoning, NPV, and NPIV
  - Troubleshoot data center unified computing
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### Prerequisites:

**Attendees should meet the following prerequisites:**

**Have attended or have knowledge equivalent to:**

- **DCICN** - Introducing Cisco Data Center Networking
- **DCICT** - Introducing Cisco Data Center Technologies
- **DCII** - Implementing Cisco Data Center Infrastructure
- **DCVAI** - Implementing Cisco Data Center Virtualization and Automation
- **DCUCI** - Implementing Cisco Data Center Unified Computing

### Testing and Certification

**Recommended as preparation for exam:**

- **300-180 - DCIT** - Troubleshooting Cisco Data Center Infrastructure  
This is one of four exams required for the Cisco CCNP Data Center Certification

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### Follow-on-Courses:

**Students looking to achieve their CCNP in Data Center will also require :**

- **DCUCI** - Implementing Cisco Data Center Unified Computing
  - **DCII** - Implementing Cisco Data Center Infrastructure
  - **DCVAI** - Implementing Cisco Data Center Virtualization and Automation
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## Content:

### Troubleshooting the Data Center LAN Network

- Overview of the Troubleshooting Process
- Understanding CLI Troubleshooting Tools
- Troubleshooting VLANs and Private VLANs
- Troubleshooting Port Channels and Virtual Port Channels
- Troubleshooting Cisco FabricPath
- Troubleshooting Cisco OTV
- Troubleshooting VXLAN
- Troubleshooting Platform-Specific Issues

### Troubleshooting Data Center SAN

- Troubleshooting Fibre Channel Interfaces
- Troubleshooting Fibre Channel Fabric Service
- Troubleshooting NPV Mode
- Troubleshooting FCoE
- Troubleshooting DCBX

### Troubleshooting Data Center Unified Computing

- Troubleshooting Cisco UCS B-Series Architecture and Initialization
- Troubleshooting Cisco UCS B-Series Configuration
- Troubleshooting Cisco UCS B-Series Operation
- Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity
- Troubleshooting Cisco UCS B-Series Hardware
- Troubleshooting Cisco UCS C-Series Architecture and Configuration
- Troubleshooting Cisco UCS C-Series Hardware and Firmware
- Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity
- Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration

### Troubleshooting Data Center ACI

- Exploring the Tools and Methodology of Troubleshooting

### Labs:

- Lab 1: Document the Network Baseline
- Lab 2: Troubleshoot LAN-RSTP
- Lab 3: Troubleshoot LAN-LACP
- Lab 4: Learning Lab: Troubleshoot LAN-vPC
- Lab 5: Troubleshoot LAN-FabricPath
- Lab 6: Troubleshoot LAN-OTV
- Lab 7: Troubleshoot LAN-OSPF
- Lab 8: Troubleshoot LAN-FHRP
- Lab 9: Troubleshoot LAN-VRF
- Lab 10: Troubleshoot LAN-VXLAN
- Lab 11: Troubleshoot LAN-CFS
- Lab 12: Troubleshoot LAN-FEX
- Lab 13: Troubleshoot SAN-FC Interfaces
- Lab 14: Troubleshoot SAN-FC VSANs, Zones, and Domain Services
- Lab 15: Troubleshoot SAN-NPV Mode
- Lab 16: Troubleshoot SAN-FCoE
- Lab 17: Troubleshoot SAN-DCB
- Lab 18: Troubleshoot Compute-Cisco UCS Management and Service Profile Deployment
- Lab 19: Troubleshoot Compute-Cisco UCS B-Series Server Boot from SAN
- Lab 20: Troubleshoot Compute-LAN Connectivity, Part 1
- Lab 21: Troubleshoot Compute-LAN Connectivity, Part 2
- Lab 22: Troubleshoot Compute-Failover Connectivity, Part 1
- Lab 23: Troubleshoot Compute-Failover Connectivity, Part 2
- Lab 24: Troubleshoot Compute-Cisco UCS C-Series Server Boot from SAN
- Lab 25: Troubleshoot Compute-Network Connectivity
- Lab 26: Troubleshoot ACI-Bare Metal Hosts
- Lab 27: Troubleshoot ACI-VMM
- Lab 28: Troubleshoot ACI-Contracts
- Lab 29: Troubleshoot ACI-External Layer 3
- Lab 30: Troubleshoot ACI-External Layer 2

## Further Information:

For More information, or to book your course, please Email us on:

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