
Cisco® Troubleshooting Cisco® Data Center Infrastructure v7.0 (DCIT)

Overview

The Troubleshooting Cisco Data Center Infrastructure (DCIT) v7.0 course shows you how to troubleshoot LAN, SAN, Cisco® Data Center Unified Fabric, Cisco Unified Computing System™ (Cisco UCS®), and Cisco Application-Centric Infrastructure (Cisco ACI®). 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 Multilayer Director Switch (MDS) switches, Cisco Nexus® switches, Cisco Fabric Extenders (FEXs), Cisco UCS, Cisco ACI, and more. This course helps prepare you to take the exam: 300-615 Troubleshooting Cisco Data Center Infrastructure (DCIT)

Prerequisite Comments

It is recommended, but not required, to have the following skills and knowledge before attending this course:
Configure, secure, and maintain LANs and SANs based on Cisco Nexus and MDS switches
Configure, secure, and maintain Cisco UCS
Configure, secure, and maintain Cisco ACI

Target Audience

Network Administrator
Network Engineer
Systems Engineer
Consulting Systems Engineer
Cisco Integrators/Partners

Course Objectives

Upon completion of this course, you will be able to:

- Outline the troubleshooting process, and highlight which questions to ask
- 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 related to VLANs and PVLANS
- Identify and resolve issues related to port channels and virtual port channels
- Identify and resolve issues related to Cisco FabricPath
- Identify and resolve issues related to OTV
- Identify and resolve issues related to VXLAN
- Identify and resolve issues related to LISP
- Describe troubleshooting of routing protocols, such as OSPF, ISIS, and PIM.
- Describe troubleshooting of the AAA and RBAC
- Identify and resolve issues related to a single device
- Identify and resolve issues related to Fibre Channel interface operation
- Identify and resolve issues related to Fibre Channel switching when the Cisco NX-OS software switch is used in switched mode (vs. NPV mode)
- Identify and resolve issues related to Fibre Channel switching when the NX-OS switch is used in N Port Virtualization (NPV) mode
- Identify and resolve issues 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 operation and troubleshoot related issues
Describe LAN, SAN and Fibre Channel operations, including in depth troubleshooting procedures
Describe Cisco IMC utilities to validate performance and facilitate data-gathering activities for Cisco UCS C-Series troubleshooting, as well troubleshooting approach to hardware and firmware failures
Define proper procedures to configure LAN and SAN connectivity and avoid issues with the P81E virtual interface card (VIC)
Troubleshoot integration of Cisco UCS C-Series servers with Cisco UCS Manager
Identify tools, protocols and methods to effectively troubleshoot Cisco ACI

Course Outline

1 - 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 LISP
Troubleshooting Routing Protocols
Troubleshooting Data Center LAN Security
Troubleshooting Platform-Specific Issues

2 - Troubleshooting Data Center SAN

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

3 - Troubleshooting Data Center Unified Computing

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
Troubleshooting Cisco UCS C-Series Servers
Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity
Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration

4 - Troubleshooting Data Center ACI

Exploring the Tools and Methodology of Troubleshooting Cisco ACI