

CISC-13 - DCIT - TROUBLESHOOTING CISCO DATA CENTER INFRASTRUCTURE V7.2

Categoria: **Cisco**

INFORMAZIONI SUL CORSO



Durata:
5 Giorni



Categoria:
Cisco



Qualifica Istruttore:
**Cisco Certified
Instructor**



Dedicato a:
Professionista IT



Produttore:
Cisco

OBIETTIVI

After completing this course you should be able to:

- Describe how to troubleshoot the data center network
- Describe the troubleshooting tools and methodologies available from the Command-Line Interface (CLI) that are used to identify and resolve issues in a Cisco data center network architecture
- Identify and resolve issues that are related to: Virtual LANs (VLANs) and private VLANs (PVLANS); port channels and virtual port channels; and Virtual Extensible LAN (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 and in N-Port Virtualization (NPV) mode
- Identify and resolve issues that are related to Fibre Channel switching when a Cisco NX-OS switch is used in NPV mode
- 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 UCS B-Series LAN, SAN, and Fibre Channel operations, including in-depth troubleshooting procedures
- Describe Cisco Integrated Management Controller (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, troubleshooting connectivity issues
- Troubleshooting Cisco UCS C-Series server integration with Cisco UCS Manager
- Describe Cisco Intersight characteristics
- Explore the Cisco Nexus Dashboard platform
- Explain Cisco Nexus Dashboard cluster connectivity and installation procedures
- Identify the tools, protocols, and methods to effectively troubleshoot Cisco ACI
- Describe how to troubleshoot automation and programmability tools
- Understand functionality provided by the on-box tooling on the Cisco Nexus series switches and implement

simple solutions to improve daily operations

- Describe the use of Python and Ansible to leverage the NX-API to implement and verify configuration state using modern workflows

PREREQUISITI

Attendees should meet the following prerequisites:

- 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

Recommended prerequisites:

- CCNA - Implementing and Administering Cisco Solutions
- DCFNDU - Understanding Cisco Data Center Foundations
- DCCOR - Implementing and Operating Cisco Data Center Core Technologies

CONTENUTI

Describing the Troubleshooting Process

- Troubleshooting Overview
- Troubleshooting Overview and Issue Identification

Understanding CLI Troubleshooting Tools

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

Troubleshooting VLANs and PVLANS

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

Troubleshooting Port Channels and Virtual Port Channels

- Port Channel Overview
- vPC Overview
- Troubleshooting vPCs
- Common vPC Issues

Troubleshooting VXLAN

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

- TroubleshootingVXLAN

Troubleshooting Routing and High-Availability Protocols

- Troubleshooting Basic Routing Issues
- Troubleshooting OSPFv2 and OSPFv3
- Troubleshooting EIGRP
- Troubleshooting PIM
- Troubleshooting FHRP

Troubleshooting Data Center LAN Security

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

Troubleshooting Platform-Specific Issues

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

Troubleshooting Fibre Channel Interfaces

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

Troubleshooting Fibre Channel Fabric Services

- Troubleshooting VSANs
- Troubleshooting Fibre Channel Domain and Name Services
- Distributed Device Aliases
- Troubleshooting Zoning and Fabric Merges
- Troubleshooting Cisco Fabric Services

Troubleshooting NPV Mode

- NPV and NPV Overview
- Troubleshooting NPV Mode

Troubleshooting Cisco UCS Architecture and Initialization

- Troubleshooting Fabric Interconnect 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

Troubleshooting Cisco UCS Configuration

- Stateless Computing
- Troubleshooting Service Profile Association Issues Due to Unavailable Addresses
- Cisco UCS Manageability
- Troubleshooting Authentication Failures

Troubleshooting Cisco UCS B-Series Servers

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

Troubleshooting Cisco UCS B-Series LAN and SAN Connectivity

- 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
- Use SPAN for Troubleshooting
- Analyzing Packet Flow

Troubleshooting Cisco UCS C-Series Servers

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

Troubleshooting Cisco UCS C-Series LAN and SAN Connectivity

- Troubleshooting the Cisco UCS C-Series VIC Module and Connectivity to Cisco IMC
- Troubleshooting Cisco UCS C-Series LAN Connectivity
- Troubleshooting Cisco UCS C-Series SAN Connectivity
- Using SPAN to Capture Cisco UCS C-Series Server Traffic
- Troubleshooting Cisco UCS C-Series iSCSI Boot

Troubleshooting Cisco UCS C-Series and Cisco UCS Manager Integration

- Integrating Cisco UCS C-Series Servers with Cisco UCS Manager
- Troubleshooting FEX Discovery and VIC Issues

Cisco Intersight Overview

- Cisco Intersight
- Cisco Intersight Architecture
- Flexible Deployment Models
- Cisco Intersight Security
- Cisco Intersight Authentication Options
- Setup Cisco Intersight SaaS Account
- Cisco Intersight Role-Based Access Control
- Connected Cisco Technical Assistance Center
- Cisco Intersight Tagging
- Cisco Intersight Dashboard, Inventory and Faults

- Firmware Management
- Hardware Compatibility List (HCL) Feature
- Best Practices for Updating Firmware using Cisco Intersight
- Cisco Intersight Managed Operating System Installation
- Context Launch and KVM

Cisco Nexus Dashboard Overview

- The Need for Day-2 Operations Tools
- Cisco Nexus Dashboard Insights Application Use Cases
- Cisco Nexus Dashboard Orchestrator Application Use Cases
- Cisco Nexus Dashboard Fabric Controller Application Use Cases
- Cisco Nexus dashboard Data Broker Application Use Cases
- Physical and Virtual Cisco Nexus Dashboard Platforms
- Cisco Nexus Dashboard Cluster Node Roles
- Deployment and Placement of Nodes Across Sites
- Cisco Nexus Dashboard One-View
- Cisco Nexus Dashboard Software Stack

Cisco Nexus Dashboard Connectivity and Installation

- Cisco Nexus Dashboard Logical Network Connectivity
- Physical Cisco Nexus Dashboard Cluster Connection
- IP Pools for Services Configuration
- Connection Mode Comparison
- Cisco Nexus Dashboard Installation Procedures
- User Interface Bootcamp
- Node Registration
- Connection to Cisco Intersight
- Onboarding Sites

Exploring the Tools and Methodologies for Troubleshooting Cisco ACI

- 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
- Troubleshoot AAA and RBAC

Troubleshooting Automation and Programmability Tools

- Troubleshooting the Cisco NX-OS Scheduler
- Troubleshooting REST API, JSON, and XML Encodings
- Cisco NX-OS Programmability

On-Box Programmability and Automation with Cisco NX-OS

- Working with Cisco NX-OS Bash
- Linux Containers and Guest Shell
- Python API
- Embedded Event Manager
- Docker Containers on Cisco NX-OS

Off-Box Programmability and Automation with Cisco NX-OS

- NX-API Enhancement
- Model-Driven Programmability on Cisco NX-OS
- Ansible for Cisco NX-OS
- Introduction to Terraform
- Utilization of Terraform
- Terraform for Cisco NX-OS

Labs

- Discovery Lab 1: Document the Network Baseline
- Discovery Lab 2: Troubleshoot Rapid PVST+
- Discovery Lab 3: Troubleshoot LACP
- Discovery Lab 4: Troubleshoot vPC
- Discovery Lab 5: Troubleshoot VXLAN
- Discovery Lab 6: Troubleshoot OSPF
- Discovery Lab 7: Troubleshoot FHRP
- Discovery Lab 8: Troubleshoot Cisco Fabric Services
- Discovery Lab 9: Troubleshoot VRF
- Discovery Lab 10: Troubleshoot Cisco Fibre Channel Interfaces
- Discovery Lab 11: Troubleshoot Fibre Channel VSANs, Zones, and Domain Services
- Discovery Lab 12 Troubleshoot NPV Mode
- Discovery Lab 13: Troubleshoot Cisco UCS Management and Service Profile Deployment
- Discovery Lab 14: Troubleshoot Cisco UCS C-Series Server LAN Connectivity
- Discovery Lab 15: Troubleshoot Cisco UCS C-Series Server Boot from the Fibre Channel LUN
- Discovery Lab 16: Troubleshoot Cisco UCS C-Series Server Management Connectivity
- Discovery Lab 17: Troubleshoot Cisco ACI Integration with VMware vCenter
- Discovery Lab 18 Troubleshoot Contracts in Cisco ACI
- Discovery Lab 19: Troubleshoot Cisco ACI External Layer 3 Connectivity
- Discovery Lab 20: Troubleshoot Cisco ACI External Layer 2 Connectivity

INFO

Esame: 300-615 - Troubleshooting Cisco Data Center Infrastructure

Materiale didattico: Materiale didattico ufficiale Cisco in formato digitale

Costo materiale didattico: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)