

CISC-13 - DCIT 7.0 - TROUBLESHOOTING CISCO DATA CENTER INFRASTRUCTURE 7.0

Categoria: Cisco

INFORMAZIONI SUL CORSO



Durata:
5 Giorni



Categoria:
Cisco



Qualifica Istruttore:
Cisco Certified
Network Associate



Dedicato a:
Professionista IT



Produttore:
Cisco

OBIETTIVI

After taking this course, you should be able to:

- Describe how to troubleshoot the data center network, 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; Overlay Transport Virtualization (OTV); and Virtual Extensible LAN (VXLAN)
- Describe troubleshooting of routing protocols such as Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Protocol-Independent Multicast (PIM), and 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 over Ethernet (FCoE) and FCoE Initialization Protocol (FIP), 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, 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 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 LAN and SAN connectivity, avoiding issues with the VIC, troubleshooting connectivity issues and 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

PREREQUISITI

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
- Configuring Cisco Unified Computing System (DCCUCS)

CONTENUTI

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
- Switched Port Analyzer (SPAN) and Encapsulated Remote SPAN
- Ethanalyzer, Embedded Logic Analyzer Module (ELAM), and Data Plane Sampling Capture
- Logging
- Cisco Generic Online Diagnostics
- Simple Network Management Protocol (SNMP), Cisco Embedded Event Manager (EEM), and Remote Network Monitor (RMON)

Troubleshooting VLANs and PVLANS

- Troubleshoot VLAN Trunking Protocol (VTP)
- Troubleshoot Layer 2 Issues
- VLANs and Switched Virtual Interfaces (SVIs) on Cisco Nexus Series Switches
- Troubleshoot VLANs, PVLANS, and SVIs
- Troubleshoot Rapid Per VLAN Spanning Tree+ (PVST+)

Troubleshooting Port Channels and Virtual Port Channels

- Port Channel Overview
- Virtual Port Channel (vPC) Overview
- Troubleshoot vPCs
- Common vPC Issues

Troubleshooting Cisco Overlay Transport Virtualization (OTV)

- Cisco OTV Features
- Common Cisco OTV Issues
- Cisco OTV Troubleshooting
- Hot Standby Routing Protocol (HSRP) Isolation Between Data Centers Using Cisco OTV

Troubleshooting Virtual Extensible LAN (VXLAN)

- VXLAN Overlay Features
- VXLAN Multiprotocol Border Gateway Protocol (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 First Hop Redundancy Protocol (FHRP)

Troubleshoot Data Center LAN Security

- Troubleshoot Authentication, Authorization, and Accounting (AAA) and Role-Based Access Control (RBAC)
- Troubleshoot First-Hop Security
- Troubleshoot Control Plane Policing (CoPP)
- Troubleshoot Access Control Lists (ACLs)

Troubleshooting Platform-Specific Issues

- Cisco Fabric Services Overview
- Troubleshoot Cisco Fabric Services
- Configure and Troubleshoot Configuration Profiles
- Common Virtual Device Contexts (VDC) Issues
- Troubleshoot VDC
- Troubleshoot Virtual Routing and Forwarding (VRF)
- Cisco FEX Troubleshooting
- Troubleshoot Cisco In-Service Software Upgrade (ISSU)

Troubleshooting Fibre Channel Interfaces

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

Troubleshooting Fibre Channel Fabric Services

- Troubleshoot Virtual Storage Area Networks (VSANs)
- Troubleshoot Fibre Channel Domain and Name Services
- Troubleshoot Zoning and Fabric Merges
- Troubleshoot Cisco Fabric Services

Troubleshooting NPV Mode

- N-Port ID Virtualization (NPV) and NPV Overview
- Troubleshoot NPV Mode

Troubleshooting FCoE

- FCoE and FIP Overview
- Troubleshoot FIP
- Troubleshoot FCoE- and QoS-Related Issues
- Troubleshoot Data Center Bridging (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 Due to Unavailable Addresses
- Other Service Profile Association Issues
- Cisco UCS Manageability
- Troubleshoot Authentication Failures

Troubleshooting Cisco UCS B-Series Servers

- Troubleshoot Cisco UCS B-Series Blade Server
- Troubleshoot Firmware Upgrade and 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 Logical Unit Number 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 Internetwork Operating System (IOS) EEM
- Troubleshoot the Cisco NX-OS Scheduler

Troubleshooting Programmability

- Troubleshoot Bash Shell and Guest Shell for NX-OS
- Troubleshoot Representational State Transfer (REST) API, JavaScript Object Notation (JSON), and Extensible Markup Language (XML) Encodings

Lab outline

- Designing Enterprise Connectivity
- Designing an Enterprise Network with BGP Internet Connectivity
- Designing an Enterprise Campus LAN
- Designing Resilient Enterprise WAN
- Designing QoS in an Enterprise Network
- Designing an Enterprise IPv6 Network

INFO

Esame: 300-615 - Troubleshooting Cisco Data Center Infrastructure

Manuale: Materiale didattico ufficiale Cisco in formato digitale

Prezzo manuale: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)