

CLCOR

Implementing and Operating Cisco Collaboration Core Technologies

Durata: 5 gg

Descrizione

Il corso CLCOR – Implementing and Operating Cisco Collaboration Core Technologies, rappresenta il pilastro fondamentale del percorso tecnologico e di certificazione Collaboration.

Esso infatti prepara il partecipante all'esame Core della Certificazione CCNP Collaboration (Esame 350-801). In questo corso si acquisiranno le competenze necessarie per implementare le tecnologie Cisco Collaboration fondamentali, partendo dallo studio generale delle architetture fino alla gestione e amministrazione di Cisco Unified Communications Manager (CUCM) passando da MGCP gateways, i Codec, Cisco Jabber, QOS and QOS Models , Cisco VoIP Bandwidth Calculator, Toll Fraud Prevention e tanto altro.

Prerequisiti

Si consiglia la partecipazione al Corso Cisco CCNA.

Contenuti

Describing the Cisco Collaboration Solutions Architecture

- Overview of Cisco Collaboration Solutions Architecture
- Collaboration Deployment Models
- Licensing
- High Availability
- Capacity Planning
- Security Requirements
- Using Certificates
- Disaster Recovery
- Dial Plan
- IP Network Protocols
- Configure IP Network Protocols
- Codecs
- References

Exploring Call Signaling over IP Networks

- IP Phone Initialization
- Single Site On-Cluster Calling
- Single Site On-Cluster Call Setup Troubleshooting
- Describe the Call Setup and Teardown Process
- Describe SIP Call Signaling for Call Setup and Teardown
- Configure and Troubleshoot Collaboration Endpoints
- Troubleshoot Calling Issues
- Compare the Call Control Protocols
- Describe DTMF Signaling over IP Networks
- References

Integrating Cisco Unified Communications Manager LDAP

- Overview of LDAP Integration in Cisco Unified Communications Manager
- LDAP Synchronization in Cisco Unified Communications Manager
- LDAP Authentication in Cisco Unified Communications Manager
- LDAP Attribute Mapping in Cisco Unified Communications Manager
- LDAP Considerations in Cisco Unified Communications Manager
- Access Control Groups in Cisco Unified Communications Manager
- Feature Group Templates in Cisco Unified Communications Manager
- Configure and Troubleshoot LDAP Integration in Cisco Unified Communications Manager
- References

Implementing Cisco Unified Communications Manager Provisioning Features

- Overview of Provisioning Options
- Deploy an IP Phone Through Auto and Manual Registration
- Self-Provisioning Prerequisites
- Self-Provisioning Components
- Self-Provisioning Authentication Modes
- Configure Self-Provisioning
- Batch-Provisioning Tools
- Configure Batch Provisioning
- References

Exploring Codecs

- Define Codecs
- Compare Audio Codecs
- Compare Video Codecs
- Evaluate the Effects of Encryption on Codecs
- Explore the Cisco VoIP Bandwidth Calculator
- Describing Call Admission Control
- Configure Regions and Locations
- References

Describing Dial Plans and Endpoint Addressing

- Dial Plan Overview
- Dial Plan Components and Their Functions
- Endpoint Addressing
- Overview of Cisco Unified Communications Manager Call Routing
- Cisco Unified Communications Manager Call-Routing Logic
- Address Methods and Digit Analysis
- Variable-Length Patterns, Overlapping Patterns, and Urgent Priority
- Implement Endpoint Addressing and Call Routing
- References

Implementing MGCP Gateways

- Overview of MGCP Gateways
- MGCP Gateway Implementation
- Path Selection in Cisco Unified Communications Manager
- Route Groups
- Route Lists and Route Patterns
- Digit Manipulation in Cisco Unified Communications Manager

- Implement PSTN Calling Using MGCP Gateways
- References

Implementing Voice Gateways

- Overview of Dial Peers
- Configure and Troubleshoot ISDN PRI
- Examine Cisco IOS Gateway Inbound and Outbound Dial-Peer Functions
- Digit Manipulation Features on Cisco IOS Gateways
- Implement and Troubleshoot Digit Manipulation on a Cisco IOS Gateway
- Codec and DTMF-Relay Selection on Cisco IOS Gateways
- References

Implementing Path Control

- Calling Privileges Overview
- Partitions and CSSs
- Partition and CSS Considerations
- Time-of-Day Routing
- Client Matter Codes and Forced Authorization Codes
- Configure Calling Privileges
- References

Implementing Toll Fraud Prevention

- Toll Fraud Prevention Overview
- Cisco Unified Communications Manager CoS for Toll Fraud Prevention
- Implement Toll Fraud Prevention on Cisco Unified Communications Manager
- References

Implementing Globalized Call Routing

- Overview of Multisite Dial Plans
- Globalized Call Routing Overview
- Globalized Call Routing Number Formats
- Globalization of Localized Call Ingress
- Localization During Call Egress
- Implement Globalized Call Routing
- References

Implementing and Troubleshooting Media Resources in Cisco Unified Communications Manager

- Media Resources Overview in Cisco Unified Communications Manager
- Media Resource Selection and Access Control in Cisco Unified Communications Manager
- Describing the Annunciator Feature
- Describing Unicast and Multicast MOH Characteristics
- Audio and Video Conference Bridge Devices
- Audio and Video Conference Bridge Integration Options
- MTP and Transcoder Devices
- MTP and Transcoder Requirements
- References

Describing Cisco Instant Messaging and Presence

- Describe Cisco IM and Presence Features and Architecture
- Compare the Protocols XMPP and SIMPLE SIP
- Clustering

- Describe Cisco Unified Communications IM and Presence Components and Communication Flows
- References

Enabling Cisco Jabber

- Cisco Jabber Deployment Modes
- Cisco Jabber Operational Modes
- Deploy an On-Premise Cisco Jabber Client for Windows
- References

Configuring Cisco Unity Connection Integration

- Overview of Cisco Unity Connection Integration
- SIP Integration
- Typical Integration Mistakes
- Integration Considerations
- Configure the Integration Between Unity Connection and Cisco UCM
- Manage Unity Connection Users
- References

Configuring Cisco Unity Connection Call Handlers

- Call Handler Overview
- System Call Handler
- Caller Input
- Operator Call Handler
- Goodbye Call Handler
- Directory Handler
- Interview Handler
- References

Describing Collaboration Edge Architecture

- Describe Collaboration Edge (Expressway-C, -E)
- Describe Supported Services for B2B Collaboration
- Describe Prerequisites for Mobile and Remote Access
- Describe Service Discovery
- Explore Expressway Settings for MRA
- Describe Cisco Unified Border Element (CUBE)

Analyzing Quality Issues in Converged Networks

- Converged Networks
- Available Bandwidth
- Components of Network Delay
- End-to-End Delay Calculations
- Jitter
- Packet Loss

Defining QoS and QoS Models

- QoS Defined
- Network Traffic Identification
- Divide Network Traffic into Classes and Define Policies
- QoS Mechanisms
- QoS Models
- DSCP Encoding

- Expedited Forwarding and Assured Forwarding
- Class Selector

Implementing Classification and Marking

- Classification and Marking Overview
- Classification and Marking at the Network and Data Link Layers
- QoS Service Class
- Cisco Marking Recommendations
- QoS Markings in a SIP Call Flow
- MQC Classification and Marking Options
- Configure QoS

Configuring Classification and Marking on Cisco Catalyst Switches

- Campus Classification and Marking
- Overview of QoS Trust Boundaries
- Ingress QoS Models
- QoS Marking and Table Maps
- Internal DSCP
- References
- IPv6 Stateless Address Autoconfiguration Overview
- DHCPv6 Overview
- DHCPv6 Operation
- Stateless DHCPv6 Overview
- DHCPv6 Relay Agent
- Obtain IPv6 Addresses Dynamically
- Troubleshoot DHCP
- Troubleshoot IPv6 Address Assignment on Clients
- Troubleshoot DHCPv4 and DHCPv6 Issues

Introducing IPv6 First Hop Security

- Describe IPv6 Snooping
- Describe IPv6 ND Inspection
- Describe IPv6 RA Guard
- Describe DHCPv6 Guard
- Describe IPv6 Source Guard
- Describe IPv6 Destination Guard

Securing Cisco Routers

- Interpret an IPv4 ACL
- Implement an IPv4 ACL for Filtering
- Implement a Time-Based IPv4 ACL
- Interpret an IPv6 ACL
- Implement an IPv6 ACL for Filtering
- Troubleshoot Access Lists
- Troubleshoot IPv4 and IPv6 ACL Issues
- Describe Control Plane Security
- Describe Control Plane Policing
- CoPP Implementation Steps
- Describe uRPF

- uRPF Configuration Example
- Configure and Verify uRPF

Troubleshooting Infrastructure Security and Services

- Troubleshoot Network Management Protocol Issues: Lab 1
- Troubleshoot Network Management Protocol Issues: Lab 2
- AAA Overview
- AAA Configuration Using Local Database
- AAA Configuration Using a AAA Server
- Troubleshoot AAA
- SNMP
- Troubleshoot SNMP
- Syslog
- Network Management Protocols
- NetFlow
- Cisco Flexible NetFlow

Troubleshooting with DNA Center Assurance

- Need for DNA Assurance
- Cisco AI Network Analytics
- DNA Assurance Health Scores
- Using Path Trace for Troubleshooting
- Troubleshooting using DNA Assurance: Use Cases

Laboratori

- Using Certificates
- Configure IP Network Protocols
- Configure and Troubleshoot Collaboration Endpoints
- Troubleshoot Calling Issues
- Configure and Troubleshoot LDAP Integration in Cisco Unified Communications Manager
- Deploy an IP Phone Through Auto and Manual Registration
- Configure Self-Provisioning
- Configure Batch Provisioning
- Explore the Cisco VoIP Bandwidth Calculator
- Configure Regions and Locations
- Implement Endpoint Addressing and Call Routing
- Implement PSTN Calling Using MGCP Gateways
- Configure and Troubleshoot Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI)
- Examine Cisco IOS Gateway Inbound and Outbound Dial-Peer Functions
- Implement and Troubleshoot Digit Manipulation on a Cisco IOS Gateway
- Configure Calling Privileges
- Implement Toll Fraud Prevention on Cisco Unified Communications Manager (CUCM)
- Implement Globalized Call Routing
- Deploy an On-Premise Cisco Jabber Client for Windows
- Examine the Integration between Unity Connection and CUCM
- Manage Unity Connection Users
- Enterprise Application Integration (EAI): Configure QoS

Certificazioni

Corso di preparazione al conseguimento della

Certificazione Cisco CCNP Collaboration CLCOR

Esame 350-801 Parte della Certificazione Cisco CCNP Collaboration

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