Implementing and Operating Cisco Collaboration Core Technologies

Cursusduur: 5 Dagen   Cursuscode: CLCOR   Version: 1.3

Beschrijving:

The Implementing Cisco Collaboration Core Technologies (CLCOR) course will provide you with the knowledge and skills needed to implement and deploy core collaboration and networking technologies, including infrastructure and design, protocols, codecs, and endpoints,Call Control, QoS, and additional Cisco collaboration applications.
Please note that this course is a combination of Instructor-Led and Self-Paced Study - 5 days in the classroom and approx 3 days of self study. The self-study content will be provided as part of the digital courseware that you will recieve at the beginning of the course and should be part of your preparation for the exam.

Completion of this course is worth 64 Continuing Education Credits

Doelgroep:

Engineers involved in the implementation and operation of a Cisco Collaboration solution.

Doelstelling:

- **After completing this course, you should be able to:**

- Describe the Cisco Collaboration solutions architecture.

- Compare the IP Phone signaling protocols of SIP, H323, and SCCP.

- Integrate and troubleshoot Cisco Unified Communications Manager with LDAP for user synchronization and user authentication.

- Implement Cisco Unified Communications Manager provisioning features.

- Describe the different codecs and how they are used to transform analog voice into digital streams.

- Describe a dial plan and explain call routing in Cisco Unified Communications Manager.

- Describe cloud calling using the on-premises local gateway option through Webex by Cisco.

- Configure calling privileges in Cisco Unified Communications Manager.

- Implement toll fraud prevention.

- Implement globalized call routing within a Cisco Unified Communications Manager cluster.

- Implement and troubleshoot media resources in Cisco Unified Communications Manager.

- Implement and troubleshoot Webex Calling dial plan features in a hybrid environment.

- Deploy the Webex app in a Cisco Unified Communications Manager environment and migrate from Cisco Jabber to Webex app.

- Configure and troubleshoot Cisco Unity Connection integration.

- Configure and troubleshoot Cisco Unity Connection call handlers.

- Describe how MRA is used to allow endpoints to work from outside the company.

- Analyze traffic patterns and quality issues in converged IP networks supporting voice, video, and data traffic.

- Define QoS and its models.

- Implement classification and marking.

- Configure classification and marking options on Cisco Catalyst switches.

Vereiste kennis en vaardigheden:

Attendees should meet the following prerequisites:

Examens en certificering

Recommended as preparation for the following exams:

- Basic understanding of networking technologies
- Basic understanding of voice and video
- CCNA - Implementing and Administering Cisco Solutions
- CLFNDU - Understanding Cisco Collaboration Foundations

- **350-801 CLCOR** - Implementing Cisco Collaboration Core Technologies

Students looking to obtain their CCNP Collaboartion will also need to pass a CCNP Collaboration Concentration exam. Passing the 350-801 exam will also provide the Cisco Certified Specialist - Collaboration Core certification.

Vervolgcursussen:
- CLACCM - Implementing Cisco Advanced Call Control and Mobility Services
- CLCEI - Implementing Cisco Collaboration Cloud and Edge Solutions
- CLICA - Implementing Cisco Collaboration Applications
- CLAUI - Implementing Automation for Cisco Collaboration Solutions

Cursusinhoud:

Cisco Collaboration Solutions Architecture

- Overview of Cisco Collaboration Solutions Architecture
- Collaboration Deployment Models
- Licensing
- High Availability
- Capacity Planning
- Security Requirements
- SIP OAuth on Cisco UCM
- Webex Control Hub Features
- Disaster Recovery
- Dial Plan
- IP Network Protocols
- Codecs

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
- Compare the Call Control Protocols
- Describe DTMF Signaling over IP Networks

Cisco Unified Communications Manager LDAP

- Overview of LDAP Integration in Cisco Unified Communications Manager
- Options for Importing and Synchronizing Cisco Unified Communications Manager Users in Webex
- 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
- Directory Connector

Cisco Unified Communications Manager Provisioning Features

- Overview of Provisioning Options
- Self-Provisioning Prerequisites
- Self-Provisioning Components
- Self-Provisioning Authentication Modes
- Batch-Provisioning Tools

Exploring Codecs

- Define Codecs
- Compare Audio Codecs

Calling Privileges in Cisco Unified Communications Manager

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

Toll Fraud Prevention

- Toll Fraud Prevention Overview
- Cisco Unified Communications Manager CoS for Toll Fraud Prevention

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

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

Webex Calling Dial Plan Features

- Webex Control Hub Settings
- Router Configuration
- Testing and Troubleshooting Webex Calling

Deploy Webex App

- Migrating Cisco Jabber Users with Cisco Webex Cloud-Connected UC
- Migrating Cisco Jabber Clients to Cisco Webex

Cisco Unity Connection Integration

- Overview of Cisco Unity Connection Integration
- SIP Integration
- Typcial Integration Mistakes
- Integration Considerations

Cisco Unity Connection Call Handlers

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

Collaboration Edge Architecture

- Describe Collaboration Edge (Expressway -C and Expressway -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)
- Device Onboarding Using Activation Codes

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 Indentification
- Divide Network Traffic into Classes and Define Policies
- QoS Mechanisms
- QoS Models
- DSCP Encoding
- Expedited Forwarding and Assured Forwarding
- Class Selector

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

Classification and Marking on Cisco Catalyst Switches

- Overview of QoS Trust Boundaries
- Ingress QoS Models
- QoS Marking and Table Maps

- Compare Video Codecs
- Evaluate the Effects of Encryption on Codecs
- Describing Call Admission Control

Dial Plans and Endpoint Addressing

- Dial Plan Overview
- Dal 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

Cloud Calling Hybrid Local Gateway

- Overview of Webex Calling Using Local Gateway
- Routers Used for Local Gateway
- Scenarios Using Local Gateway

- Internal DSCP

Labs

- Use 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
- Configure Regions and Locations
- Implement Endpoint Addressing and Call Routing
- Configure Calling Privileges
- Implement Toll Fraud Prevention on Cisco Unified Communications Manager
- Implement Globalized Call Routing
- Configure the Integration between Unity Connection and Cisco Unified CM
- Manage Unity Connection Users
- Configure QoS

Nadere informatie:

Neem voor nadere informatie of boekingen contact op met onze Customer Service Desk 030 - 60 89 444

info@globalknowledge.nl

www.globalknowledge.com/nl-nl/

Iepenhoeve 5, 3438 MR Nieuwegein