

## Implementing Cisco Collaboration Conferencing

**Duration: 5 Days**    **Course Code: CLCNF**    **Version: 1.1**    **Delivery Method: Company Event**

### Overview:

The Implementing Cisco Collaboration Conferencing (CLCNF) course focuses on Cisco® on-premises conferencing architecture and solutions. You will gain the knowledge and skills required to design and implement common conferencing deployment scenarios of Cisco Meeting Server, its integration with call control features such as Cisco Unified Communications Manager and Cisco Expressway, and other Cisco collaboration conferencing devices.

This course offers lessons and hands-on labs to prepare you for the **300-825 Implementing Cisco Collaboration Conferencing (CLCNF)** exam.

This class will help you:

Learn how to configure and troubleshoot on-premises conferencing solutions with Cisco Meeting Server.

Integrate on-premises conferencing solutions with other collaboration components to meet the needs of modern-day workplaces.

**This course is worth 40 Continuing Education (CE) Credits**

### Target Audience:

Engineers involved in the installation, configuration, maintenance and troubleshooting of Cisco Meeting Server, Cisco Meeting Manager and Cisco TMS.

### Objectives:

■ **After completing this course you should be able to:**

- Describe the Cisco conferencing architecture including cloud, hybrid, and on-premises conferencing
- Describe the physical deployment options and deployment models for Cisco Meeting Server, including Cisco Meeting Server 1000, 2000, and virtual machine
- Configure a Cisco Meeting Server single combined deployment for Web-Real Time Communications (WebRTC) endpoints within the enterprise
- Use APIs and the Cisco Meeting Server API Guide to configure profiles using Postman and the Webadmin API tool
- Configure a scalable and resilient deployment of Cisco Meeting Server with three servers for WebRTC endpoints within the enterprise
- Configure a scalable and resilient deployment of Cisco Meeting Server to support standard Session Initiation Protocol (SIP) and WebRTC connectivity outside the enterprise

- Configure a scalable and resilient deployment of Cisco Meeting Server to support recording and streaming of conferences
- Configure Cisco Unified Communications Manager and Cisco Meeting Server to support Rendezvous, Scheduled, and Ad-hoc conferencing for Cisco Unified CM registered endpoints
- Configure Cisco Meeting Server to integrate with a preconfigured on-premise Microsoft Skype for Business installation
- Install Cisco TelePresence Management Suite (Cisco TMS) and Cisco TelePresence Management Suite for Microsoft Exchange (Cisco TMSXE) on a single Microsoft Windows 2012 server and connect to an existing SQL environment
- Install and integrate Cisco Meeting Management with Cisco TMS and Cisco Meeting Server
- Set up and manage a scheduled conference with Cisco TMS and Cisco Meeting Management
- Capture and analyze logs from Cisco Meeting Server and Cisco Meeting Manager to diagnose faults, including a SIP connection error

### Prerequisites:

**Attendees should meet the following prerequisites:**

- Adding and managing devices and users in Cisco Unified CM
- SIP signaling fundamentals
- Video endpoint operation and configuration

### Testing and Certification

**Recommended as preparation for the following exams:**

- **300-825** - Implementing Cisco Collaboration Conferencing

- Management of media resources in Cisco Unified CM
  - Familiarity with Cisco Expressway ideal but not required
  - Familiarity with APIs ideal but not required
  - CLFNDU - Understanding Cisco Collaboration Foundations
  - CLCOR - Implementing and Operating Cisco Collaboration Core Technologies
  - CLCEI - Implementing Cisco Collaboration Cloud and Edge Solutions
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## Content:

### Describing Cisco Conferencing Architecture

- Cisco Conferencing Introduction
- Cisco Meeting Server Conferencing Features and Benefits
- Cisco Meeting Server Internal Architecture and Call Flow
- Cisco Meeting Server External Architecture and Call Flow
- Cisco Cloud Conferencing Features and Benefits
- Cisco Webex Conferencing Architecture
- Cisco Webex Hybrid Conferencing Features and Benefits
- Cisco Webex Hybrid Conferencing Architecture

### Configuring a Single Combined Deployment

- Encryption
- Authentication
- Cisco Meeting Server Certificates
- Cisco Meeting Server Services

### Installing Cisco Meeting Server

- Cisco Meeting Server Physical Deployment Options
- Cisco Meeting Server Deployment Models
- Cisco Meeting Server 1000 Installation
- Cisco Meeting Server Licensing

### Using APIs with Cisco Meeting Server

- API Introduction
- Cisco Meeting Server API Introduction
- Cisco Meeting Server Profiles

### Configuring a Cisco Meeting Server Scalable and Resilient Deployment

- Cisco Meeting Server Scalable and Resilient Architecture
- Prerequisites for Cisco Meeting Server Scalable and Resilient Architecture
- Multi-SAN Certificates
- Clustered Databases for Cisco Meeting Server
- Clustered Cisco Meeting Server Call Bridge
- Distributed Spaces for Cisco Meeting Server
- LDAP Configuration for Cisco Meeting Server Clusters
- Cisco Meeting Server Web Bridge Redundancy
- Cisco Meeting Server Load-Balancing Overview
- Cisco Meeting Server Load-Balancing Configuration

### Configuring Business to Business (B2B) and WebRTC Firewall Traversal Connectivity for Cisco Meeting Server

- STUN and TURN
- Interactive Connectivity Establishment (ICE)
- Cisco Meeting Server WebRTC Architecture
- Dial Plan Rules in Cisco Meeting Server
- Business to Business (B2B) Architecture and Call Flows for Cisco Meeting Server

### Configuring Recording and Streaming with Cisco Meeting Server

- Cisco Meeting Server Recording Capabilities
- Cisco Meeting Server Recording Deployments and Configuration
- Cisco Meeting Server Streaming Capabilities
- Cisco Meeting Server Streaming Deployments and Configuration
- Configuring Cisco Meeting Server Streaming

### Troubleshooting Cisco Meeting Server

- Troubleshooting Cisco Meeting Server Issues
- Additional Troubleshooting Tools in Cisco Meeting Server
- Tools for Troubleshooting Call Connectivity Issues in Cisco Meeting Server

### Integrating Cisco Meeting Server with Cisco Unified CM

- Cisco Meeting Server SIP Integration with Cisco Unified CM
- Cisco Meeting Server as a Cisco Unified CM Conference Resource

### Integrating Cisco Meeting Server with Microsoft Skype for Business

- On-Premise Architecture and Call Flow: Direct
- On-Premise Architecture and Call Flow: Indirect
- Integration with Lync Conferences
- Certificates and Microsoft Integration
- Cloud Connectivity Architecture

### Installing and Operating Cisco TMS and Cisco TMSXE

- Benefits of Cisco Telepresence Management Suite
- Cisco TMS Architecture
- Cisco TMSXE Architecture

### Installing and Integrating Cisco Meeting Management

- Cisco Meeting Management Overview
- Cisco Meeting Management Architecture

### Labs

- Discovery Lab 1: Cisco Meeting Server Initial Configuration
- Discovery Lab 2: Cisco Meeting Server Single Combined Deployment
- Discovery Lab 3: Install a Cisco Meeting Server Virtual Machine
- Discovery Lab 4: Using Postman with Cisco Meeting Server
- Discovery Lab 5: Using Cisco Meeting Server Webadmin API Tool
- Discovery Lab 6: Cluster Cisco Meeting Server Databases
- Discovery Lab 7: Cluster Cisco Meeting Server Call Bridges
- Discovery Lab 8: Configure Cisco Meeting Server Distributed Spaces and Active Directory
- Discovery Lab 9: Configure Cisco Meeting Server Scalable and Resilient Web Bridges
- Discovery Lab 10: Configure External WebRTC Connectivity for Cisco Meeting Server
- Discovery Lab 11: Configure External B2B Connectivity for Cisco Meeting Server
- Discovery Lab 12: Configure Cisco Meeting Server Recording
- Discovery Lab 13: Capture Log Files in Cisco Meeting Server
- Discovery Lab 14: Troubleshoot Cisco Meeting Server
- Discovery Lab 15: Configure Cisco Meeting Server Integration with Cisco Unified CM Using a SIP Trunk
- Discovery Lab 16: Configure Cisco Meeting Server Integration with Cisco Unified CM as a Conference Resource
- Discovery Lab 17: Install, Upgrade, and Maintain Cisco TMS and TMSXE
- Discovery Lab 18: Configure Cisco TMS for Scheduled Conferences
- Discovery Lab 19: Manage Endpoints in Cisco TMS Part 1
- Discovery Lab 20: Manage Endpoints in Cisco TMS Part 2
- Discovery Lab 21: Install Cisco Meeting Management Virtual Machine

- Discovery Lab 22: Integrate Cisco Meeting Management
- Discovery Lab 23: Manage Conferences in Cisco TMS and Cisco Meeting Management
- Discovery Lab 24: Specific Lab Issues

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### Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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