

## Understanding Cisco Collaboration Foundations

**Duration: 5 Days**    **Course Code: CLFNDU**    **Version: 1.1**

### Overview:

The Understanding Cisco Collaboration Foundations (CLFNDU) course gives you the skills and knowledge needed to administer and support a simple, single-site Cisco® Unified Communications Manager (CM) solution with Session Initiation Protocol (SIP) gateway. The course covers initial parameters, management of devices including phones and video endpoints, management of users, and management of media resources, as well as Cisco Unified Communications solutions maintenance and troubleshooting tools. In addition, you will learn the basics of SIP dial plans including connectivity to Public Switched Telephone Network (PSTN) services, and how to use class-of-service capabilities.

This course does not lead directly to a certification exam, but it does cover foundational knowledge that can help you prepare for the professional-level collaboration courses and exams:

### Target Audience:

This course is designed for individuals looking to administer and support a simple single-site Cisco Unified Communications solution.

### Objectives:

- **After completing this course, you should be able to:**
- Define collaboration and describe the main purpose of key devices in a Cisco collaboration on-premise, hybrid, and cloud deployment model
- Configure and modify required parameters in Cisco Unified Communications Manager (CM) including service activation, enterprise parameters, CM groups, time settings, and device pool
- Deploy and troubleshoot IP phones via auto registration and manual configuration within Cisco Unified CM
- Describe the call setup and teardown process for a SIP device including codec negotiation using Session Description Protocol (SDP) and media channel setup
- Manage Cisco Unified CM user accounts (local and via Lightweight Directory Access Protocol [LDAP]) including the role/group, service profile, UC service, and credential policy
- Configure dial plan elements within a single site Cisco Unified CM deployment including Route Groups, Local Route Group, Route Lists, Route Patterns, Translation Patterns, Transforms, SIP Trunks, and SIP Route Patterns
- Configure Class of Control on Cisco Unified CM to control which devices and lines have access to services
- Configure Cisco Unified CM for Cisco Jabber and implement common endpoint features including call park, softkeys, shared lines, and pickup groups
- Deploy a simple SIP dial plan on a Cisco Integrated Service Routers (ISR) gateway to enable access to the PSTN network
- Manage Cisco UCM access to media resources available within Cisco UCM and Cisco ISR gateways
- Describe tools for reporting and maintenance including Unified Reports, Cisco Real-Time Monitoring Tool (RTMT), Disaster Recovery System (DRS), and Call Detail Records (CDRs) within Cisco Unified CM
- Describe additional considerations for deploying video endpoints in Cisco Unified CM
- Describe the integration of Cisco Unity® with Cisco Unified CM and the default call handler

### Prerequisites:

**Attendees should meet the following prerequisites:**

- Internet web browser usability knowledge and general computer usage
- Knowledge of Cisco Internetwork Operating System (Cisco IOS®) command line

### Testing and Certification

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

- There are no exams currently aligned to this course

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## Follow-on-Courses:

The following courses are recommended for further study:

- **CLCOR** - Implementing and Operating Cisco Collaboration Core Technologies
  - **CLICA** - Implementing Cisco Collaboration Applications
  - **CLACCM** - Implementing Cisco Advanced Call Control and Mobility Services
  - **CLCEI** - Implementing Cisco Collaboration Cloud and Edge Solutions
  - **CLAUTO** - Implementing Automation for Cisco Collaboration Solutions
  - **CLACCM** - Implementing Cisco Advanced Call Control and Mobility Services
  - **CLAUI** - Implementing Automation for Cisco Collaboration Solutions
  - **CLCEI** - Implementing Cisco Collaboration Cloud and Edge Solutions
  - **CLCOR** - Implementing and Operating Cisco Collaboration Core Technologies
  - **CLICA** - Implementing Cisco Collaboration Applications
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## Content:

### Define Collaboration Technology and Benefits

- Define Collaboration Benefits
- Describe On-Premises, Cloud and Hybrid Deployments
- Describe On-Premise Collaboration Deployments
- Describe Cisco's Collaboration Endpoints
- Describe Cisco's Collaboration On-Premise Call Controllers
- Describe Cisco's Collaboration On-Premise Edge Solutions
- Describe Cisco's Collaboration On-Premise Applications
- Describe Cisco's Collaboration On-Premise Conferencing Solutions
- Describe Cisco Cloud Services

### Administering Initial Parameters for Cisco Unified Communications Manager

- Understand the On-Premise Collaboration Deployment Models
- Describe the Cisco Unified CM Cluster Services
- Define Network Requirements for Collaboration
- Define Network Services for Collaboration
- Navigate Cisco Unified CM
- Explore Cisco Unified CM Groups

### Exploring Endpoints and the Registration Process

- Identify Cisco Endpoint Solutions
- Explore the Boot up Process of an Endpoint
- Describe Power Over Ethernet
- Describe IP Network Settings

### Exploring Codecs and Call Signaling

- Define Codecs
- Compare Audio Codecs
- Compare Video Codecs
- Describe the Call Setup and Teardown Process
- Describe SIP Call Signaling for Call Setup and Teardown
- Explore Media Streams at the Application Layer

### Managing Users in Cisco Unified Communication Manager

- Analyze Cisco UCM User Types and Settings
- Describe Methods for Authenticating Cisco UCM Users

### Describing a Basic Dial Plan

- Describe the Concepts of a Dial Plan and Call Routing
- Describe Elements of Call Routing
- Explore Digit Manipulation and Translation Patterns

### Describing Class of Service

- Explore the Concepts of Class of Control

### Enabling Endpoints and Features

- Configure a Cisco Jabber Endpoint in Cisco UCM
- Explore Mobility

### Describing the Cisco ISR as a Voice Gateway

- Describe Cisco Voice Gateways
- Gateway Protocols
- Describe Call Legs and Dial Peers
- Describe Digital Signaling Processors
- Explore the DSP Calculator

### Exploring Cisco Unified Communication Manager Media Resources

- Describe Cisco UCM Media Resources
- Describe Conference Bridges
- Explore Types of Conferences
- Describe Transcoders and Media Termination Points
- Describe Music on Hold

### Reporting and Maintenance

- Explore the Troubleshooting Process
- Describe Reporting and Maintenance Tools
- Describe Cisco Real-Time Monitoring Tool

### Exploring Additional Requirements for Video Endpoints

- Explore Video Endpoint Features and Operation
- Describe Collaboration Infrastructure for Video Endpoints
- Describe the Video endpoint Hardware Installation Process
- Describe Video Endpoint Settings Menus
- Describe Video Endpoint Registration
- Explore the Video Endpoint Command Line Interface
- Describe Room Recommendations for Room and Immersive Endpoints

### Describing Cisco Unity Connection

- Describe Cisco Voice Messaging Components
- Explore Cisco Unity Connection Architecture and Features
- Explore the Default System Call Handlers
- Describe End User Templates

### Labs

- Configure Cisco Unified Communications Manager Initial Parameters
- Configure the Cisco UCM Core System Settings
- Configure an Access Switch for an Endpoint
- Deploy an IP Phone Through Auto and Manual Registration
- Administer Endpoints in Cisco Unified Communications Manager
- Create a Local User Account and Configure LDAP
- Adding Users in Cisco Unified Communications Manager
- Create a Basic Dial Plan
- Explore Partitions and Call Search Spaces
- Explore Private Line Automatic Ringdown (PLAR)
- Deploy an On-Premise Cisco Jabber® Client for Windows
- Implement Common Endpoint Features
- Implement Single-Site Extension Mobility
- Configure VoIP Dial Peers
- Configure ISDN Circuits and POTS Dial Peers
- Control Access to Media Resources
- Use Reporting and Maintenance Tools
- Explore Endpoint Troubleshooting Tools
- Examine the Integration between Unity

### 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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