



UCAD - UC Architecture and Design v8.0

Code: 5758

5 days

Course Overview

Avoid design disasters by exploring the breadth of technical issues involved in designing modern Unified Communications (UC) networks. Once you apply a consistent set of analytical tools, best practices, and design methodology to the complex set of requirements and problems involved in these systems, the full potential for a stable, scalable, and feature-rich UC system can be realized.

This course consists of both lecture and self-study components. Our virtual classroom course challenges you to apply the design skills learned in the lecture to your own networks and projects. Each day consists of a four-hour lecture followed by flexible self-study time. Each morning begins with a question-and-answer period to follow-up on previous self-study exercises.

Who Needs To Attend

- Network architects and engineers
- System engineers

Course Details

Topics Include

- Components that comprise a complete Cisco UC solution
- Size and position products
- Products and features required in the LAN environment to support UC call control
- Based on existing telephony and data statistics:
 - Calculate the WAN bandwidth requirements to support VoIP calls
 - Size the voice gateway
 - Size and locate the media resources
- Size and locate Cisco UC call agents in CUCM v8.x
- Design a proper dial plan
- Issues that impact E911 requirements
- Voice network component security

Course Outline

1. UC Architecture Overview

- Cisco UC Features
- Cisco Unified Messaging Components
- Mobility and Presence
- Conferencing Products
- Contact Center
- Management Tools
- Cisco UC Security

2. Designing the LAN for Cisco UC Call Control

- Campus Evolution and Cisco UC
- Connecting IP Phones
- Designing High Availability at the Data Link and Network Layers
- LAN QOS for Cisco UC
- Designing the LAN Access Layer for Cisco UC
- Designing the LAN Distribution Layer for Cisco UC
- Designing the Core Layer for Cisco UC

3. Designing the WAN for Cisco UC Call Control

- Provisioning Bandwidth
- Designing WAN QOS for Cisco UC
- Sizing and Selecting Voice Gateways
- Designing Media Resources

4. Designing Cisco UC Call Control

- Sizing and Positioning Cisco UC Call Control
- Designing the Dial Plan
- Emergency Services
- Designing a Secure Cisco UC Solution
- SPAN Engineering Requirements

Prerequisites

- TDM Telephony