Current Technologies
Computer Learning Centers

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Installing and Configuring Cisco Cube/Gateways (ICCC) V1.0

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6210 Central Ave, Portage IN

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www.ctclc.com

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Course Duration

3 Days

Course Price

$3,895.00
40 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

In this 3-day Cisco Course, students will learn how to deploy Voice Gateways/CUBE and setup Cisco Unified Communication Manager (CUCM) to deploy SIP Trunking.
The course starts out with an overview of Cisco gateways and their uses. Next, students learn about MGCP and SIP and how to implement each protocol. Students will then learn how to use Cisco CUBE to connect CUCM, Gateways and Service Providers together. This course details how to connect a Cisco environment to a Service Provider using a Cisco CUBE.

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How you will benefit

This class will help you:

- Connect a Cisco environment to a Service Provider using a Cisco CUBE
- Deploy Voice Gateways/CUBE and setup Cisco Unified Communication Manager (CUCM) to deploy SIP Trunking
- Implement each MGCP and SIP protocol
- Use Cisco CUBE to connect CUCM, Gateways and Service Providers together

Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The job roles best suited to the material in this course are:

- Network Video Engineer
- Voice / UC / Collaboration / Communications Engineer
- Collaboration Tools Engineer
- Collaboration Sales / Systems Engineer

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Objectives

Upon completing this course, the student will be able to meet these objectives:

- Configuring Gateway Voice Ports
- SIP Protocols
- Configuring VoIP Call Legs
- Implementing a Dial Plan
- Configuring Cisco Unified Communication Manager 11.x
- Deploying Cisco VCUBE
- Implementing Cisco Unified Border Element
- High Availability on ISR G2, ISR 4k, and ASR
- Security on Cisco Unified Border Element
- Monitoring and Troubleshooting on Cisco Unified Border Element

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Course Outline

Module 0: Introduction

- Lesson 1: Introductions
- Lesson 2: SIP Trunking

Module 1: Introduction to Voice Gateways

- Lesson 1: Gateways
- Lesson 2: Gateway Call Routing Components
- Lesson 3: Dial Peer Matching
- Lesson 4: Introduction to Voice Gateways
- Lesson 5: Digital Signal Processors
- Lesson 6: Codec Complexity
- Lesson 7: Configuring DSPs

Module 2: Gateway Dial Plans

- Lesson 1: VoIP Overview
- Lesson 2: SIP Signaling Protocol
- Lesson 3: SIP Addressing
- Lesson 4: Codecs in SIP
- Lesson 5: Configuring Basic SIP
- Lesson 6: Configuring SIP ISDN Support
- Lesson 7: Customizing SIP Gateways
- Lesson 8: Verifying SIP Gateways
- Lesson 9: Audio Clarity Requirements

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Course Outline

Module 3: Cisco Unified Communication Manager (CUCM)

- Lesson 1: Configuring CUCM for Gateways and Trunks
- Lesson 2: SIP Trunk Configuration

Module 4: Configuring Cisco Unified Border Element (CUBE)

- Lesson 1: What Does a Session Border Controller (SBC) Do?
- Lesson 2: CUBE Call Flow
- Lesson 3: CUBE Dial-Peers Call Routing
- Lesson 4: CUBE Advanced Call Routing
- Lesson 5: Media Manipulation
- Lesson 6: External/PSTN Call Recording
- Lesson 7: Call Admission Control
- Lesson 8: Multiple Non-Authenticated SIP Trunks on a CUBE
- Lesson 9: Multiple Authenticated/Registered SIP Trunks on a CUBE

Module 5: Configuring High Availability

- Lesson 1: High Availability
- Lesson 2: MMoH

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Course Outline

Module 6: Security

- Lesson 1: CUBE Security
- Lesson 2: SIP TLS Support with SRTP

Module 7: Monitoring and Troubleshooting

- Lesson 1: Monitoring and Troubleshooting Cisco Cube
- Lesson 2: SIP Profile Test Tool
- Lesson 3: Troubleshooting
- Lesson 4: Serviceability

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Lab Outline

Lab 0: Connect to Lab

Lab 1: Verify Cisco Unified Communications Manager Initial Settings

Lab 2: Deploying Endpoints and Users

Lab 3: Connecting Enterprise Network to SIP Trunk Provider

Lab 4: Configure SIP Gateway for CUBE1

Lab 5: Configure SIP Gateway for CUBE2

Lab 6: Configure SIP Normalization on both CUBE1 and CUBE 2

Lab 7: Configure Call Admission Control

Lab 8: Configurable SIP Error codes

Lab 9: Destination Dial-peer Group and Inbound SIP Profiles

Lab 10: Multiple E164 Pattern matching under the same dial-peer

Lab 11: Destination Server Group

Lab 12: CUBE Redundancy

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