

# CVOICE v8.0 - Implementing Cisco Voice Communications and QoS (Part of the CCNP Voice certification track)



## Course Outline

### **Module 1: Introduction to Voice Gateways**

- Lesson 1: Understanding Cisco Unified Communications Networks and the Role of Gateways
- Lesson 2: Examining Gateway Call Routing and Call Legs
- Lesson 3: Configuring Gateway Voice Ports
- Lesson 4: Understanding DSP Functionality, Codecs, and Codec Complexity

### **Module 2: VoIP Call Legs**

- Lesson 1: Examining VoIP Call Legs and VoIP Media Transmission
- Lesson 2: Explaining H.323 Signaling Protocol
- Lesson 3: Explaining SIP Signaling Protocol
- Lesson 4: Explaining MGCP Signaling Protocol
- Lesson 5: Describing Requirements for VoIP Call Legs
- Lesson 6: Configuring VoIP Call Legs

### **Module 3: Cisco Unified Communications Manager Express Endpoints Implementation**

- Lesson 1: Introducing Cisco Unified Communications Manager Express
- Lesson 2: Examining Cisco Unified Communications Manager Express Endpoint Requirements
- Lesson 3: Configuring Cisco Unified Communications Manager Express Endpoints

### **Module 4: Dial Plan Implementation**

- Lesson 1: Introducing Call Routing

Lesson 2: Understanding Dial Plans  
Lesson 3: Describing Digit Manipulation  
Lesson 4: Configuring Path Selection  
Lesson 5: Configuring Calling Privileges

## **Module 5: Gatekeeper and Cisco Unified Border Element Implementation**

Lesson 1: Understanding Gatekeepers  
Lesson 2: Examining Cisco Unified Border Element

## **Module 6: Quality of Service**

Lesson 1: Introducing QoS  
Lesson 2: Understanding QoS Mechanisms and Models  
Lesson 3: Explaining Classification, Marking, and Link Efficiency Mechanisms  
Lesson 4: Managing Congestion and Rate Limiting  
Lesson 6: Understanding Cisco AutoQoS

## **Lab Outline**

Lab 1-1: Configuring Voice Ports  
Lab 1-2: Configuring DSPs  
Lab 2-1: Configuring VoIP Call Legs  
Lab 3-1: Configuring Cisco Unified Communications Manager Express to Support Endpoints  
Lab 4-1: Implementing Digit Manipulation  
Lab 4-2: Implementing Path Selection  
Lab 4-3: Implementing Calling Privileges  
Lab 5-1: Implementing Gatekeepers  
Lab 5-2: Implementing Cisco Unified Border Element  
Lab 6-1: Implementing QoS Using Cisco AutoQoS and Manual Configuration