

CVOICE - Cisco Voice Over IP

Course Description:

CVOICE lays the foundation for gaining hand-on skills and significant understanding of packet telephony by presenting the technologies that are common for both Enterprise and Service Provider students. The course also teaches students how to use the available Cisco tools to find the information needed to accomplish their everyday tasks. Since no two networks are alike, this approach enables a student to apply the knowledge gained in this course to their specific needs.

Who Should Attend:

Customers, Channel Partners/Resellers, Employees

Prerequisites:

Successful completion of Cisco Voice Fundamentals or prior experience and knowledge of traditional PSTN operations, requirements of Voice over IP, and a basic understanding of VoIP benefits. In addition, to fully comprehend the concepts and technologies taught in this course, a working knowledge of LANs, WANs, and IP switching and routing is essential. Basic internetworking skills taught in the Interconnecting Cisco Network Devices training course, or equivalent knowledge, is considered the minimum knowledge needed for this course.

Course Objectives:

After completing this course, students will be able to:

- Identify the components, processes, and features of traditional telephony networks that provide end-to-end call functionality
- Describe two methods of call control used on voice and data networks and provide one example of a protocol for each
- List at least five components or capabilities that are required to provide integrated voice and data services in campus LAN, enterprise, and service provider environments
- Select the appropriate analog voice connection to a Cisco device given the types of analog connections and their susceptibility to line quality problems
- Choose a voice compression scheme that best suits your needs given the fundamentals of digital voice encoding
- Describe the appropriate signaling method to deploy in a telephony system given the type of signaling: between PBXs; between PBXs and central offices; or specialized, such as ISDN
- Implement an effective method of transporting fax and modem traffic over a Voice over IP network given the standard implementations of fax and the methods used to transport modem traffic

Course Modules:

Introducing Voice Over IP
Voip Network Technologies
VoIP Network Architectures
Building Scalable Dial Plans
Calculating Bandwidth Requirements
Allocating Bandwidth for Voice and Data Traffic
Considering Security in VoIP Networks
Configuring Voice Networks
Configuring Voice Ports
Adjusting Voice Interface Settings
Configuring Dial Peers
Configuring Voice Port Connections
VoIP Signaling and Call Control
Introducing Signaling and Call Control

Introducing H.323
Deploying and Configuring H.323
Configuring SIP
Configuring MGCP
Comparing Call Control Models
Improving and Maintaining Voice Quality
Designing for Optimal Voice Quality
Implementing CAC