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## Cisco Voice over IP v6

**Duration: 5 Days**    **Course Code: CVOICE**

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### Overview:

CVOICE 6.0 is the first course in the Cisco Voice Professional Curriculum, a curriculum track that starts at the basics of packetised voice and builds up to a true voice professional level.

This course lays the foundation for gaining hands-on skills and significant understanding of packet telephony by presenting the technologies that are common for both Enterprise and Service Provider delegates. The course also teaches delegates 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 delegate to apply the knowledge gained in this course to their specific needs.

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### Target Audience:

This course is intended for System Engineers and Channel Partners/Resellers.

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### Objectives:

- 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
  - Choose a voice compression scheme that best suits your needs given the fundamentals of digital voice encoding
  - Describe the appropriate signalling method to deploy in a telephony system given the type of signalling: 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
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### Prerequisites:

Delegates are required to meet the following prerequisites:

- Working knowledge of LANs, WANs, and IP switching and routing is essential.
  - Basic internetworking skills taught in the ICND training course, or equivalent knowledge, are considered the minimum knowledge needed for this course. Although this is a packetised voice course, knowledge of the how's and why's of the traditional PSTN operations and technologies is required
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### Testing and Certification:

Recommended as preparation for exam(s):

- 642-432 CVOICE  
This course is part of the Cisco Professional Voice certification.
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### Follow-on-Courses:

The following courses are recommended for further study:

- CIPT -- Cisco IP Telephony
  - QOS -- Implementing Cisco Quality of Service
  - IPTT – IP Telephony Troubleshooting
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## Content:

Module 1 – Introduction to packet Voice Technologies

- Understanding Traditional Telephony
  - Understanding Packetised Telephony Networks
  - Understanding IP Telephony Applications
- Module 2 – Analog and Digital Voice Connections
- Understanding Analog Voice basics
  - Understanding Analog-to-Digital Voice Encoding
  - Understanding Signaling Systems
  - Understanding Fax and Modem over VoIP
- Module 3 – Configuring Voice Interfaces
- Configuring Voice Ports
  - Adjusting Voice Quality
- Module 4 – Voice Dial Plans
- Understanding Call Establishment Principles
  - Configuring Dial Peers
  - Understanding Special-Purpose Connections
- Module 5- Introduction to Voice over IP
- Understanding the Requirements of Voice in an IP Internetwork
  - Understanding Gateways and Their Roles
  - Encapsulating Voice in IP Packets
  - Calculating Bandwidth Requirements
  - Understanding Security Implications
- Module 6 – Voice over IP Signalling and Call Control
- Understanding the Need for Signaling and Call Control
  - Configuring H.323
  - Configuring SIP
  - Configuring MGCP
  - Comparing Call Control Models
- Module 7 – Improving and Maintaining Voice Quality
- Comparing Voice Quality Measurement Stds
  - Understanding VoIP Challenges
  - Understanding QoS and Good Design
  - Understanding Jitter
  - Understanding Delay
  - Applying QoS in the Campus
  - Understanding QoS Tools in the WAN
  - Configuring QoS in the WAN
  - Configuring CAC
  - Understanding Voice Bandwidth Engineering

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## Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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