



## Voice over IP Architectures and Processes

(2 days)



### To Register

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## COURSE OBJECTIVES

With the ever-increasing market acceptance and deployment of VoIP solutions it is now critical for organizations to understand the benefits, challenges and skills required to successfully deploy this vital new technology. Voice over IP has been proven to reduce telephony costs and provide unique opportunities for integrating voice and data and by completing this course participants will be able to:

- ✓ Understand how to use a data packet network to provide wide area voice communications.
- ✓ Understand the role of each component of the network.
- ✓ Understand the transmission process of a voice signal over an IP network.
- ✓ Discuss the challenges related to the convergence of voice and data networks.
- ✓ Identify critical issues to consider in the planning stages of the implementation of a VoIP network.

## INTENDED AUDIENCE

This course is valuable for anyone interested in the migration of voice traffic to new or existing data networks : Project managers, technical sales, customer configuration analysts, help desk technicians (level 1), technical staff (level 1), IP network and VPN providers, telco companies, hardware and infrastructure manufacturers, IT professionals, consultants.

## PRE-REQUISITES

The participant should have attended the «IP, Process and Services» training or have a basic understanding of IP networks.



## METHODOLOGY

This course uses a more innovative approach to traditional training through the use of simulation. Following instruction of the basic concepts and fundamentals, participants are then asked to role play the various components of an IP phone network and to carry out the steps of a voice call over an IP network. Through observations, immediate feedback and group discussions, participants will have mastered course content and objectives.



## COURSE DESCRIPTION

- Voice vs. data
  - ⇒ Voice and video signals characteristics
  - ⇒ Voice network functionalities
  - ⇒ Voice signal transmission
    - Encoding
    - Supervision and signaling
- Data networks
  - ⇒ Asynchronous transfer mode
  - ⇒ IP networks characteristics
- Carrying voice over an IP network
  - ⇒ Constraints and solutions
  - ⇒ The challenges
  - ⇒ Architectures, protocols and components
    - Standardization organizations
    - SIP and SDP
      - User agent, proxy server, location server
    - H.323
      - Gateway and Gatekeeper
      - RAS, H.225 and H.245
    - MGCP and Megaco
    - Inter-domains protocols
- Voice transmission over an IP network
  - ⇒ Digitization, compression
  - ⇒ Fragmentation and encapsulation



- ⇒ Performance criteria's
  - Packets size
  - Delay and jitter
  - RTP, RTCP
  - Priority queuing and QoS
- VoIP: A good decision?
  - ⇒ What are the business triggers?
  - ⇒ Implementation and migration
  - ⇒ Costs, management and security issues
  - ⇒ Products and applications

## PRICE

For price information, please contact us at [iptraining@argilon.com](mailto:iptraining@argilon.com)

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