



Who Should Attend?

The course was developed for telecom professionals who work with project and product management, hardware and software development, system engineering, testing and verification, network planning, and operations engineering.

Course Scope

1. Introduction to NGN Concept and Architecture.
 - IMS Introduction; IMS Network and Services Evolution.
 - New Network Elements.
2. Protocols in Core Network:
 - SIGTRAN - SS7 over IP: Introduction, Architecture, Basic Information about Network Dimensioning.
 - SCTP - Stream Control Transport Protocol.
 - M3UA - MTP3 User Adaptation Layer.
 - SUA - SCCP User Adaptation Layer.
 - A Brief Overview of other UAs: M2UA - MTP2 User Adaptation Layer and M2PA - MTP2 User Peer-to-Peer.
 - H.248 MEGACO Protocol. Interworking between MG and MGCF.
 - BICC - Bearer Independent Call Control Protocol.
 - Includes description of IPBCP, APM, SDP.
 - SIP - Session Initiation Protocol; SIP Main Architecture,
 - SIP Components (Servers and Clients) and their Functions; SIP User Agents (AU Client and Server),
 - SIP Servers: Proxies (stateful and stateless), Redirect, and Registrar,
 - SIP Location Servers,
 - SIP Gateways,
 - SIP Message Structure,
 - SIP Requests and Response Codes,
 - SIP Supporting IETF Protocols (SAP, SDP),
 - SIP Sessions: Session Setup, Proxying and Redirecting Requests, Address Resolution, and Media Negotiation via SDP.
 - SIP Security,
 - Examples of SIP message flow.
 - SIP-I.

Course Objectives

During this course, participants will learn the reasons for choosing IP as the bearer in future Telecom networks. They will also get detailed knowledge of NGN architecture and the protocols used, including Sigtran, SIP & Megaco.

Training Structure

Four-day training divided into logical sessions.



Methodology

Instructor-led training.