Next Generation Network Architecture

Who Should Attend

The 4 day NGN-Next Generation Network training course is developed for telecom professionals working with project and product management, hardware and software development, system engineering, testing and verification, network planning and operations engineering.

Course Content

1. NGN Concept & Architecture introduction.
   a) IMS introduction. Network & services evolution brought by IMS.
   b) New network elements.
2. Protocols in Core Network:
   a) 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.
      - Brief overview of other US'a: M2UA - MTP2 User Adaptation Layer & M2PA - MTP2 User Peer2Peer
   b) H.248 MEGACO Protocol. Interworking between MG and MGCF.
   c) BICC - Bearer Independent Call Control Protocol.
      - Includes also description of IPBCP, APM, SDP.
   d) SIP - Session Initiation Protocols.
      - SIP main architecture,
      - SIP components (servers and clients) and their functions: SIP user agents (AU client and server),
      - SIP servers: proxy (statefull and stateless), redirect, 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, media negotiation via SDP.
      - SIP security,
      - General SIP message flow examples
   e) SIP-I

Course Objectives

Course participants will understand reason behind choosing IP as a bearer in future telecom networks. They will also get detailed knowledge on NGN architecture and protocols used, including Sigtran, SIP & Megaco .

Training Structure

Four day training divided into logical sessions.

Methodology

Instructor led training.