



Who Should Attend?

This training is targeted at engineers who want learn about EPC/LTE.

Course Scope

1. LTE Introduction.
 - 3GPP Core Network Evolution.
 - EPC Architecture.
 - Protocols in EPC – overview.
 - LTE Radio Interface (quick concept introduction):
 - Radio Interface Architecture & Principles.
 - Radio Resource Management.
 - E-UTRAN Mobility.
 - Roaming in LTE (conceptual view):
 - Home-routed traffic.
 - Local traffic breakout.
2. VoLTE (optional).
 - Circuit Switched Fallback (CSFB).
 - IMS – based.
 - VoIP over-the-top (OTT).
 - CS over PS.
 - Road towards VoLTE – various deployment strategies.
3. Signalling Protocols in EPC.
 - NAS Protocol & Procedures.
 - S1AP Protocol & Procedures.
 - GTP Protocol & Procedures.
 - S6a Protocols & Procedures (optional: Introduction to Diameter).
4. Policy & Charging Architecture.
 - Introduction to Content-based Charging and Policy Enforcement.
 - Online and Offline Charging.
 - PCC Architecture.
 - Roaming Aspects in PCC Enforcement.
 - Gx, Rx, Gy Diameter Applications & Procedures.
5. Q&A and open discussion.

Course Objectives

The training covers complete EPS architecture and various aspects of LTE & EPC signalling, including roaming aspects. The participants' theoretical knowledge will be enhanced through analysis and understanding of real-network traces.

Prerequisites



The participants should have a general knowledge of GSM/UMTS network functionality.

Training Structure

Four-day training divided into logical sessions. In addition, we strongly recommend that you put your theoretical training into practice with one more day of additional workshops - a perfect way to verify your just-acquired knowledge in real case analyses. These workshops are recommended for on-site trainings when access to monitoring of relevant interfaces can be granted.

Methodology

Instructor-led training, presentation, and group discussion, including analysis of signalling traces.