Diameter in LTE & IMS

Who Should Attend?

The training is targeted at engineers who want to learn about use of the Diameter in LTE and IMS networks.

Course Scope

1. LTE Introduction.
   - 3GPP Core Network Evolution.
   - EPC Architecture.
   - Protocols in EPC – overview.
2. VoLTE.
   - Circuit Switched Fallback (CSFB).
   - IMS – based.
   - VoIP Over-the-top (OTT).
   - CS over PS.
   - Road towards VoLTE – various deployment strategies.
3. IMS concept & architecture introduction.
   - IMS introduction.
   - IMS standardisation.
   - IMS architecture & functional elements.
   - IMS interfaces & signalling protocols.
4. Diameter introduction.
   - Diameter architecture.
   - Diameter agents: Relay, Proxy, Redirection & Translation.
   - Diameter message structure.
   - Diameter peers, peers association.
   - Diameter user session.
   - Diameter accounting session concept.
5. Detailed discussion on selected IMS- and LTE-related Diameter applications:
   - Cx/Dx, Sh/Dh.
   - S6a
6. Policy & Charging Control concept and architecture
   - Charging Control vs. Policy Control
   - PCC logical Architecture; PCC in roaming scenarios. Functional entities of PCC Architecture.
   - PCC Rules. Definition, content, types of PCC rules, operations over PCC rules.
7. Detailed discussion on PCC-related Diameter applications.
   - Gx, Rx.
   - S9
   - PCC signalling flow examples.
8. Q&A, open discussion.

Pre-requisites

None.

Training Structure

Three days training divided into logical sessions.

Methodology

Instructor led training, presentation, discussion. Analysis of signalling traces.