

VoLTE

Course Description

Mobile Operators are looking ahead towards future architecture, standards, technology and applications for the Core Networks.

This advanced training is focusing on future coming technologies, systems and platforms. Already existing and implemented legacy systems will not be particularly high-lighted, but rather more briefly discussed and mentioned in order to be able to present the new technologies in a well-established and understood context.

The below listed topics will be discussed and analyzed as they emerge in during the course of the training. Furthermore, advice will be provided on specific solutions and decisions to be made.

Content

LTE SYSTEM OVERVIEW AND SERVICE CAPABILITIES

RE-DESIGNING THE CS MOBILE TELEPHONY FOR LTE

- Basic IMS principles
- ICS, IMS Core systems
- Interworking with existing CS telephony
- UE and network requirements
- USIM support for IMS based services

RE-DESIGNING SMS INTO SIMPLE INSTANT MESSAGING, IM

- Pager and Session modes of operation
- Deferred messaging
- Interworking with existing SMS services

VoLTE IMPLEMENTATION IN LTE

- Voice over LTE access using VoLTE
- System architecture of VoLTE



- UE and network requirements
- 3GPP roadmap and changes Release to Release 8 – 12, How to handle the increasing complexity with more functional entities and relationships being added. Challenges/Problems and suggested Solutions.
- Future migration of 2G/3G telephony to IMS implementation, MSC-IMSproxy or other solutions.
- UE integrations, will the UEs support be there fully?
- Roaming scenarios PS only and VoLTE, National and International roaming.
- Roaming internationally VoLTE or CSFB first coming years, billing/accounting.
- National roaming in Green field/MVNO for 2G/3G resp. VoLTE
- eSRVCC and SRVCC

- DRA Diameter Routing Agent. What is the functionality? What is the Pro/Con having DRA. Is it likely to generally be part of VoLTE implementations?
- PCC (PCRF etc) Process and tasks performed in PCRF function, SPGW and P-CSCF for establishment of dedicated bearers.
- SPR/HSS, Common data with CS Core with HLR as Front-End. Cx and Sh interfaces and usage. Limitations in standard VoLTE updates and CS updates.
- Usage of U-SIM or I-SIM. Pro/Con. Requirement of I-SIM?

Target audience

Target audience is core network engineers, project managers and network architects.

Pre-requisites

The participants should have basic LTE knowledge

Course length

2 days

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