

LTE Basic Signalling Procedures

COURSE OUTLINE



COURSE DETAILS

Training Objective: By the end of the course, the participants will understand the basic signaling procedures in LTE.

Duration of Training: 1 Days

Max Number of Participants: 15

Prerequisite: General knowledge of mobile communication networks.

Module List Detailed

Module 1: LTE Overview

Topics discussed in this module are listed below:

- LTE MOTIVATION
- LTE REQUIREMENTS
- LTE KEY FEATURES
- LTE ADVANCED

Module 2: LTE Architecture

Topics discussed in this module are listed below:

- SYSTEM ARCHITECTURE EVOLUTION (SAE)
- NETWORK ELEMENTS
- BASIC ARCHITECTURE INTERFACES AND PROTOCOLS
- ROAMING ARCHITECTURE INTERFACES AND PROTOCOLS
- LTE AND 2G/3G INTERWORKING ARCHITECTURE
- LTE AND NON-2G/3G INTERWORKING ARCHITECTURE

Module 3: Signaling Procedures

Topics discussed in this module are listed below:

LTE/SAE Mobility Areas

- Tracking Area Overlapping
- Tracking Areas: MME Pooling

UE IDENTITIES

- IMSI
- Global Unique Temporary UE Identity (GUTI) S-TMSI

MOBILITY MANAGEMENT

- EPS Mobility Management (EMM) States
- EPS Connection Management (ECM)
- States EMM & ECM States Transitions

LTE/SAE BEARER

- EPS Bearer Architecture
 - Bearer Establishment triggers
 - Default Bearer
 - Bearer QoS Awareness
 - Bearer QoS Parameters
 - Bearer Usage Example

LTE/SAE PROCEDURES

- Attach Procedure
- Detach Procedure
- S1 Release Procedure
- Service Request
- Tracking Area Update Procedure
- Dedicated Bearer Activation
- LTE Handover
- EPS Authentication and Key Agreement (AKA)