



Who Should Attend?

This course is intended for technical mobile network staff and their management who are planning on introducing IMS/RCS/RCSe services in their companies.

Course Scope

1. Introduction.
 - IP Multimedia Subsystem (IMS).
 - 3GPP R5: Network Architecture.
2. IMS Nodes and Example Procedures.
 - Call Session Control Function (CSCF).
 - P-CSCF, I-CSCF, S-CSCF.
 - HSS & SLF.
 - SLF & HSS Message.
 - Flow Media Resource Function (MRF).
 - MRF Message Flow.
 - MGCF & MGW.
 - IMS to GSTN Call Setup.
 - Breakout Gateway Control Function.
 - BGCF Message Flow.
 - Application Servers (ASs).
 - Subscription to Event in AS.
 - PCC:
 - Policy and Charging Control (R6).
 - Policy and Charging Control (R7).
 - Policy and Charging Control (R8).
 - PCC Message Flow.
3. IMS Protocols.
 - Session Initiation Protocol (SIP) & Session Description Protocol (SDP):
 - Session Initiation Protocol (SIP) Session Description Protocol (SDP).
 - SIP – Multimedia Session Set-up.
 - P-CSCF Discovery.
 - IMS Registration.
 - IMS Session Set-up (MO).
 - Authorization of QoS Resources.
 - IDs of IP Multimedia Flows.
 - SIP Forking.
 - MEGACO.
 - H.248/MEGACO.
 - H.248 Message Media Gateway (MGW).
 - H.248 Message Flow.
 - DIAMETER.
 - DIAMETER Base Protocol.
 - DIAMETER Client/Server.
4. Rich Communications Suite (RCS).



- Introduction to Rich Communications Suite (RCS).
 - RCS Services.
 - Rich Communications Suite (RCS).
 - Release 1.
 - Enhanced Address Book (EAB).
 - Enriched Call.
 - Enhanced Messaging.
 - File Transfer.
 - Release 2.
 - Broadband Access To RCS.
 - Services of a Multiple-Device Environment.
 - Network Address Book (NAB).
 - Release 3 and its enhancements.
 - Release 4 and its enhancements.
 - Voice-over LTE (VoLTE).
 - RCS-e/Joyn.
 - Release 5 and beyond.
 - IP Voice and Video Call.
 - Geolocation.
5. RCS Technical Realisations.
- RCS Network Architecture.
 - RCS Device Mode and Client Types.
 - Configuration and Provisioning.
 - Capability Discovery.
 - SIP OPTIONS.
 - Presence.
 - Multi-Device Support.
 - XDM Handling.
6. RCS Services.
- Messaging Service.
 - Pager Mode.
 - Large Message Mode.
 - Interworking with Legacy Messaging.
 - File Transfer Service.
 - Content Sharing Services.
 - Social Presence Service.
 - Presence Architecture.
 - Presence Network Architecture.
 - Presence Message Flow.
 - IP-Based Voice and Video Services.
 - Geolocation.

Course Objectives

This course gives the participants a thorough knowledge of IMS architecture, signalling procedures, and services, paying special attention to the solutions selected by GSMA RCS



Releases.

Prerequisites

The participants should have general technical knowledge about IP networks and packet bearer services in 3GPP mobile systems.

Duration

Three-day training divided into logical sessions.

Methodology

Instructor-led training.