

## SIP (Session Initiation Protocol) for IMS

New EPC (Evolved Packet Core) call control is based on SIP (Session Initiation Protocol) and SDP (Session Description Protocol). "SIP for IMS" course focuses on signalling in IMS network. During the course registering and services request voice and video call, sending pictures, sharing pictures, short messages and chats are presented in details.

Training method	Duration	Level
Lecture	1 day	Intermediate

### Target audience

The course is intended for experienced network engineers, network tuning staff, EPC protocol stack developers, and anyone with network experience, who needs deep technical knowledge on functionality of EPC.

### Training contents

- **Introduction**  
(IMS/RCS standard, joyn, architecture, signalling, IMS network services),
- **Core Network**  
(IP access, 2G, 3G, LTE, WiFi to IMS),
- **IMS & IPX**  
(IMS architecture, nodes, client addressing, registration, access to the service, multidevice, HSS, DNS/ENUM, number portability, Carrier ENUM, roaming),
- **SIP & SDP**  
(registration procedure, call setup, proxy, forwarding, SIP protocol & service data SDP, SIP frame, RTP frame, RTCP),
- **Traffic cases**  
(SIP messages for user registration & SIP session),
- **SMS**  
(IP-SM-GW, user registration, incoming/outgoing messages),
- **Security**  
(AKA 3GPP, IMS AKA, GAA, GBA, BSF, SSC),
- **Emergency call**  
(categories, numbers, URN, Emergency Call setup, domain selection, architecture),
- **Charging**  
(architecture and charging for access to services).

### Prerequisites

General IMS/RCS technology knowledge.