Telecoms & Tech Academy

COURSE DESCRIPTION
VOICE OVER LTE (VOLTE)

Format:
Face to Face, Live on Web

Duration:
2 Days, 4 x 3 Hours

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COURSE SUMMARY

HIGHLIGHTS

- **Highly focused and in-depth training from the experts - including relevant updates from OVUM's extensive research team**

- **Trainers and programme directors that are experts, industry experienced, and highly accomplished training professionals**

- **Training outcomes and competency development designed to meet your specific requirements**

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"The trainer was passionate and exhumes a broad knowledge of the subject matter.

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COURSE SUMMARY

Voice and voice related services for next generation mobile broadband services such as LTE will be managed and delivered over IP based networks. This programme will cover all aspect of IMS and its capabilities in respect of delivering voice services via the LTE network.

The crucial elements of LTE architecture, bearers and QoS are outlined as well the structure and protocol of the IMS. The course participant will learn about the identities and configurations required for the UE and LTE core and IMS in order to provision the LTE voice service.

CS Fallback is an important interim service and this programme will discuss the network requirements to support the fallback solution in both the UE procedure and core network. Interworking between IMS voice and CS voice and various mobility scenarios will also be covered.

Full end-to-end LTE and IMS signalling procedures will be examined, including initial attach and registration, bearer and QoS control and SIP/SDP interaction for various call and non-call related situations.

OUTCOMES & COMPETENCY DEVELOPMENT

Participants will develop or be able to:

- An overall comprehension of all strategic and technical issues concerning the implementation of voice over LTE

- Contribute much more effectively to strategic discussions related to the deployment of voice services within LTE

- Evaluate implementation options for VoLTE and CS Fallback solutions

- Fully understand the LTE and IMS signalling procedures for a variety of call scenarios

- Fully understand the QoS and bearer implications for VoLTE

- An understanding of VoLTE performance and capacity

- Confidence to discuss potential issues regarding VoLTE, CSFB implementation

- Make decisions on technology implementation and procurement that are commercially viable, minimise risk, and in line with the strategy and goals of the wider organization.

Book online
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Book via email
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COURSE CONTENTS

LTE AND IMS, ARCHITECTURE AND PROTOCOLS

- LTE RAN and Radio Interface
- EPC Elements, Interfaces and Protocols
- IMS Elements, Interfaces and Protocols
- LTE Bearers,
    - QoS and Scheduling
- IP Address Allocation
- LTE and IMS Identities
- Call Procedures Overview
- CS Fallback
    - Fallback Principles
    - Fallback Architectural Requirements
    - Fallback to GSM
    - Fallback to UMTS
- IMS and Services
    - Service Provisioning Overview
    - Enforcement and Allowed Services
    - Service Triggering Information
    - Application Server Selection
    - Application Server Behaviour

VOLTE CHARGING AND BILLING

- Review of the high-level billing architecture
- Charging models and requirements
- 3GPP specifications relating to charging
- Online and offline charging functions
- Credit management triggers
- Termination actions
- Flow-based charging concept and SDF charging examples
- Charging rules
- Gating and QoS control
- SDF detection
- Bearer service establishment, modification and termination procedures (online and offline)
- The IMS and charging

VOLTE SIGNALLING

- Device configuration and Subscription
- EPS Attach and Default Bearer Activation
- IMS Registration/De-Registration
- IMS VoIP Session
- SIP Invite and SDP
- Media Negotiation
- Media Resource Reservation and Policy Control
- Session Release
- Voice Continuity
    - PS-PS Inter-System Handover
    - SR-VCC
- IMS Emergency Session
    - Emergency Registration
    - Emergency Session

VOLTE SERVICES

- MMTEL Service Definition
- MMTEL Architecture
- Supplementary Services
- Messaging
    - Session Based Messaging
    - Interworking with SMS
    - SMS over IP

VOLTE MOBILITY

- Mobility Options
    - Handovers
    - Fallback
- SRVCC Architecture
- SRVCC Operation and Signalling
- CSFB Architecture
- CS Operation and Signalling

VOLTE ROAMING

- Typical Interconnect Model
- UE - IMS connectivity Options
- VoLTE Interconnection Options
- IMS Interworking
- IPX Services and Interfaces
- Signalling for VoLTE Roaming

About Telecoms & Tech Academy

Telecoms & Tech Academy, part of Informa Tech is a leading training partner to the telecoms, media and technology (TMT) industries, having trained more than 30,000 professionals and 500 businesses globally.

We were borne out of the telecoms industry and understand the challenges the sector has been facing. Our training portfolio continues to evolve to help address new and emerging skills gaps faced by telecoms & tech businesses.

Our In-Company Solutions

Expert insight, delivered in a format to suit your needs, to enhance knowledge and drive performance in your team. Our learning & development consultants will work closely with your team to establish your unique business needs and define success measurements.

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