

Essential Voice over WiFi

A 2 day training course



Description

This course provides a technical foundation in the use and implementation of Voice over WiFi. It covers the requirements of the IP Multimedia Subsystem, user equipment and network required to guarantee interoperable, high-quality IMS based telephony and conversational video services over WiFi access. WiFi in this context refers to a WLAN access to the EPC, via trusted and untrusted access interfaces (S2a and S2b). The IMS basic capabilities and supplementary services for telephony and real-time media negotiation, transport, and codecs. SIP messages are used to explain these topics and the necessary negotiations such as, preconditions, forking and early termination



Key outcomes

By the end of the course delegates will be able to:

- ✓ Describe the architecture of the IMS
- ✓ Describe basic SIP options
- ✓ Explain the call setup sequence of a VoWiFi call
- ✓ Explain handover to and from LTE
- ✓ Describe precondition requirements
- ✓ Describe CS handover requirements



Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning.



Details

Who will benefit? Anyone working in the field of mobile communications.

Prerequisites: Intro to data comms and networking

Duration: 2 days

Customer rating: New Course

Generic training



Generic training complements product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".

"Friendly environment with expert teaching that teaches the why before the how."
G.C. Fasthosts

Small class sizes



We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.

"Excellent course. The small class size was a great benefit..."
M.B. IBM

Hands On training



The majority of our courses use hands on sessions to reinforce the theory.

"Not many courses have practice added to it. Normally just the theoretical stuff is covered."
J.W. Vodafone

Our courseware



We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.

"Comprehensive materials that made the course easy to follow and will be used as a reference point."
V.B. Rockwell Collins

Customise your course



Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.

"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."
S.R. Qinetiq

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Course content

4G/LTE call process (VoLTE)

Overview of 4G systems
EPS Bearer requirements
Intrinsic WiFi/AAA registration/authentication
Support of generic IMS functions
SIP REGISTRATION
Authentication
Addressing
Standard 4G VoLTE call setup

Selection of Call Setup captures and possible scenarios

PSTN to LTE
PSTN to WiFi
WiFi to Mobile etc.

WiFi 6/6E deployments

QoS support in WiFi for voice services
Registration/authentication over untrusted WLANs
Alignment with the WiFi Alliance Certification programme
WiFi IP Access Network detection
WiFi IP Network selection
Non-3GPP Access Authentication & Security
Multiple PDN connections
APN considerations for SIP Signalling
ePDG for non-emergency voice
Network initiated disconnect
Mobility Management
P-CSCF Discovery

Common Functionalities

IP Version
IP Address allocation
Emergency Services
Roaming considerations

What our customers say

"Absolutely brilliant, very knowledgeable and helpful trainer would recommend to teach anyone. Kept me interested 100% of the time which is very impressive as this does not happen often, if at all!"

O. B. Network Rail

"The best technical course I've been on!"

L. W. Fujitsu Telecoms Europe

"Very well thought out and structured course. Would recommend 100%. Lots of equipment, good quality."

A.R. Unipart

"Course content is interesting. Relevant to current systems and presented well."

S.S-T. Arqiva

