

SIP Fundamentals – 2 days

CONTENTS

This two days course will help you to thoroughly understand all the issues of using and building a Voice over IP Network. We will cover the reasons for using the VoIP technology and we will cover the fundamental of the signalling protocol SIP. SIP is certainly an extensible protocol but all the details are moved to the course SIP Advanced. Already in this course you will get the fundamentals and a good view into SIP and a good understanding regarding its possibilities. After this training the students will understand the basic mechanisms of SIP they will also get a good platform for further studies into SIP, such as the course SIP Advanced.

TARGET AUDIENCE

The target group for this course is project managers, IT-managers, telecom responsible staff, testers, developers and implementors. The course is a good platform for people that want to study SIP in more depth that is provided in the SIP Advanced course.

PREREQUISITES

Basic knowledge of data and telecommunication, of the TCP/IP and of Voice over IP.

EXERCISES

This is a theoretical training with practical exercises.

NOTE: This course is not delivered with the FoldOut methodology.

VoIP Signalling Overview

- Brief repetition of VoIP issues
- The new concept
- Real-time IP
- Functional components

The Beginning of SIP

- What is SIP
- Overview and purpose
- History & heritage

SIP – basics

- SIP components
- SIP proxy
- User agent
- Location service
- DNS
- Basic functionality
- Methods and responses
- Call setup
- Registration

Call Details

- Proxy
- Redirect
- More headers

- SIP and SDP

Under the Hood

- Requests & responses
- Options
- Forking
- Transactions and dialogs
- Call routing
- Using DNS

Services and Security

- Service creation possibilities
- SIP CGI and CPL
- More SIP methods & headers
- 3rd party call control
- SIP event system
- Instant messaging and presence

Classical Telephony Using SIP

- Interworking SIP and PSTN
- Using phone numbers
- Tel URI
- ENUM
- Telecom signalling and SIP (ISUP)
- SIP-T
- SIP-I
- IP Multimedia Subsystem, IMS

Summary and Future