

Agenda - IP Telephony Fundamentals

Montag - 1. Tag

- 08:30 **Eintreffen der Teilnehmer im Gebäude 4 (Mensa)**
Begrüssung bei Kaffee und Gipfeli
- 09:00 -
11:00 **Vorstellung INS-HSR**
Introduction to Voice over IP
- History, Market Drivers (Business Processes, Technologies, Products, Cost etc.)
 - Sourcing Options (Build yourself, Managed Services)
 - Customer examples
 - IP Telephony Vendor Market

Pause

- 11:15 -
12:15 **Voice over IP Architecture and Building Blocks**
- Traditional Voice Review
 - The "classical" IP-Telephony Architecture / Building Blocks
 - The Microsoft Unified Communications Architecture

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- 13:30 -
14:15 **Lab Activity: Phone Usage and Services**
- Various IP Phone Functions and Usage (SIP Phone, Cisco Hard- and Soft Phones, Wireless Phones, etc.)
 - Mobility with IP-Telephony
 - Video Conferencing
- 14:15 -
14:45 **Architecture and Deployment Models**
- Single Site Deployment
 - Multi Site Deployment - Centralized Call Processing
 - Multi Site Deployment - Distributed Call Processing
 - Dial-Plans
- 14:45 -
15:15 **Introduction to IP Telephony Systems**
- Product overview (Siemens, Nortel, Cisco, Asterisk)
 - Clustering and Reliability
 - Features

Pause

- 15:30 -
16:30 **Quality of Service for Voice over IP Networks**
- Strategies to provide Quality of Service
 - In the Campus Network
 - On the Wide Area Network
- 16:30 -
17:15 **Lab Activity 2: Quality of Service**
- VoIP on a Wide Area Network with / without QoS

Dienstag - 2. Tag

- 09:00 - **Introduction to SIP**
10:30
- SIP Architecture
 - SIP Components
 - SIP Protocols
 - SIP Basic Call Flows

Pause

- 10:30 - **Introduction to H.323**
11:00
- Elements of H.323
 - H.323 Signalling
 - H.323 in a Network

- 11:05 - **Introduction to MGCP**
11:50
- Elements of MGCP
 - MGCP Signalling

- 12:00 - **Lab Activity: Comparison of Signalling Protocols**
12:30
- Sniffing and Comparing SIP, H.323 and MGCP

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- 13:30 - **The Voice over IP Business Case**
14:30
- Analysis of possible cost savings
 - Productivity gains / Possible revenue impact
 - Business case examples

- 14:35 - **Five Steps to creating Business Values with Unified Communications**
15:30
- Step 1: Implementing IP-Telephony
 - Step 2: CTI Applications

Pause

- 15:45 -
17:00
- Step 3: Presence, Instant Messaging, Collaboration
 - Step 4: Making Applications UC endpoints
 - Step 5: Changing the interface to your customers

- 17:15 **Course Feedback**