



SIP - Architecture

Längd: 2 Days Kurskod: GKSIP1

Sammanfattning:

This two-day course covers the essentials of the protocol and provides a sound understanding of the basics. During the class, students will also configure a SIP network and analyze actual calls made in class. For students that desire an advanced understanding of the protocol, the SIP II class immediately follows this class with no overlap of material.

Målgrupp:

Technical personnel, technical managers, engineers

Målsättning:

- This course is a technical introduction to SIP and is intended to foster an understanding of the operation and architecture of the SIP protocol.
 - This course explains how SIP works and where it architecturally fits in telecom systems. This course also teaches how SIP interoperates with existing telecom technology.
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Förkunskaper:

Basic computer skills, basic understanding of telecom, IP networking knowledge is helpful, but not necessary

Innehåll:

1. SIP Introduction

- Circuit vs. Packet Concepts
- Circuit-Based Bearer Channel vs. Packet-Based Bearer Channel (DS0 vs. RTP)
- SS7/ISDN vs. SIP, MEGACO
- The IMS Universal Network Design Goal:
- VoIP Protocols Comparison
- History of SIP

2. IP Routing and Switching Overview

- IP Routing
- Ethernet Essentials

3. TCP and UDP Essentials

- How VoIP uses TCP
- How VoIP uses UDP

4. SIP Architecture

- The SIP Architecture
- UA, Proxy, Redirect, and Forking
- The SIP Dialog
- Multimedia Architecture
- RTP/RTCP
- SDP
- Methods
- REGISTER
- INVITE and ACK
- UPDATE
- OPTIONS
- CANCEL
- REFER
- SUBSCRIBE and NOTIFY
- MESSAGE
- BYE
- SIP Responses
- 1xx Informational
- 2xx Final
- 3xx Redirection
- 4xx Client Error
- 5xx Server Error
- 6xx Global Failure

5. SIP Basic Call Flow

- Registration
- Normal Call
- Busy Call
- Vacant number
- Abandoned Call
- Call Forward
- Basic IMS Call Flow
- HAND-ON LABs
 - 1 Configure PCs and Build an IP network
 - 2 Learn how to use Wireshark
 - 3 Configure the SIPURA ATA
 - 4 Configure the ONDO SIP Proxy
 - 5 Perform Basic Call traces
- SIP REGISTER without authentication
- Simple SIP Call without INVITE authentication
- Busy call
- Vacant Number (Call a number that does not exist)
- Abandoned Call (Hang up on an unanswered call)
- Call Forward Immediate

Övrig information:

För mer information eller kursbokning, vänligen kontakta oss på telefon. 020-73 73 73

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