

# Course : Asterisk, configuration and implementation

*Practical course - 3d - 21h00 - Ref. ASX*

*Price : 2020 € E.T.*

The Asterisk open source software is a new building block in the development of telephony over IP (ToIP) and its integration into Information Systems. This training course will teach you how to install, configure and implement Asterisk and all its components.

## Teaching objectives

At the end of the training, the participant will be able to:

- ✓ SIP network architecture
- ✓ Integrating a VoIP solution into an enterprise infrastructure
- ✓ Setting up an Asterisk-based IP telephony server
- ✓ Knowing the services offered by a Telephony server
- ✓ Interconnecting a hybrid TDMoIP (TDM over IP) solution

## Intended audience

System and network administrators, engineers and network architects to master the deployment of a ToIP platform based on the Asterisk IPBX.

## Prerequisites

Good knowledge of systems and networks.

## Practical details

### Hands-on work

Implementation of a functional IP telephony platform based on the Asterisk IPBX.

## Course schedule

### PARTICIPANTS

System and network administrators, engineers and network architects to master the deployment of a ToIP platform based on the Asterisk IPBX.

### PREREQUISITES

Good knowledge of systems and networks.

### TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

### ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

## 1 Introduction and issues

- Telephony terminology and associated infrastructures.
- VoIP and telephony integration.
- A brief overview of VoIP architectures.
- The players: equipment manufacturers, standardization, regulation, operators and service providers.

## 2 SIP: architecture, protocols and components

- SIP protocols and associated messages.
- Message decoding (MIME format).
- SDP, RTP and RTCP protocols.
- Proxy, localization, registration.
- Coding and codec.

## 3 Asterisk PBX and IPBX

- Basic principles and architecture of a PABX.
- Integrating IPBXs into ToIP solutions.
- Background, location and distribution of Asterisk.
- Asterisk architecture and components.
- Asterisk operating principles.
- The main Asterisk configuration files.
- Asterisk configuration examples.
- Principles of numbering plans and interworking.

## 4 Installing and configuring Asterisk

- Installation and configuration of the Unix support platform.
- Asterisk installation and configuration.
- Softphone and Hardphone installation and configuration.
- Basic configuration for SIP-based calls.
- Making SIP calls.
- Codec configuration.
- Implementation of call forwarding voicemail services.
- Traffic analysis to control exchanges between the various components.

## 5 Asterisk telephony services and deployment

- Advanced Asterisk configuration.
- Interworking between several IPBXs.
- Installation of FXS and FXO boards.
- Interference with the fixed network.
- Traffic analysis to control exchanges between the various components.

## 6 Analysis and outlook for Asterisk-based services

- Understanding NAT issues and implementation.
- Platform testing tools.
- Integration of Asterisk with standard Web services.
- Asterisk platform security.

### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@orsys.fr](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## Dates and locations

### REMOTE CLASS

2026 : 23 Nov.