# Course : Network Management with SNMP

*Practical course - 3d - 21h00 - Ref. SNM*
*Price : 1980 € E.T.*

## Course schedule

**1**  **Introduction to network management**

- Network monitoring and management.
- Architectural model for network management.
- Heterogeneous systems and networks.
- IETF approach vs. OSI approach.

**2**  **Simple Network Management version 1**

- Architectural model, management data representation, SNMP verbs.
- SNMP agent, SNMP supervisor, SNMP proxy.
- MIB : Management Information Base.
- SMI : Structure of Management Information.
- ASN.1 : Abstract Syntax Notation 1.
- MIB management rules.
- Scalar versus tabular data.

### Hands-on work
Using basic command line tools to query an SNMP agent. Using Net-SNMP Open Source software. Analyzing data encoding. Comparison of Get and Get-next verbs. Using a graphical MIB Browser.

**3**  **SNMPv2c**

- Performance and security requirements for SNMPv2.
- Supervisor to supervisor communication.
- Using Get-Bulk and Infom Request.
- New TrapV2 message.
- Understanding new MIB and agent developement.
- Understanding SNMP traps and notifications.

### Hands-on work
Using Get-Bulk messages. Using Trap, TrapV2, and Inform Request messages.

## PARTICIPANTS

## PREREQUISITES

## 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.

## 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.

## ( 4 )  Security with SNMPv3

- New requirements for SNMPv3.
- New architectural model and terms.
- Authentication and privacy with SNMPv3.
- Notions of SNMP Users and Views.

### Hands-on work

SNMPv3 agent configuration. Implementing authentication and privacy on Linux and Cisco routers and switches. Implementing users and views. Analyzing authentication and privacy.

## ( 5 )  Extending agent capabilities

- Extending agent capabilities.
- Definign new MIBs.
- Using RMON for remote monitoring.
- Using SNMP proxies.

### Hands-on work

Net-SNMP agent extension. Analyzing Microsoft agent extension DLLs.

## Dates and locations

**PARIS LA DÉFENSE**
2026 : 10 June, 7 Sep., 9 Dec.