

# Computer networking for non-IT people

Hands-on course of 2 days - 14h

Ref.: REN - Price 2024: €1 660 (excl. taxes)

## TEACHING METHODS

Active learning suitable for non-IT-experts, based on examples, demonstrations, experience-sharing, real cases, and an evaluation of what was learned from the training.

Discussions, experience-sharing, demonstrations, tutorials, and real cases.

## THE PROGRAMME

last updated: 01/2018

### 1) Introduction

- The backbone network and bricks of the IS.
- Different components and their roles.
- Users and their needs.

### 2) Types of networks

- LAN, MAN, and WAN.
- The client/server model.

### 3) Connectivity options.

- Twisted pair cables.
- Optical fiber.
- Wireless technology.

### 4) Local area networks (LAN)

- The network card. MAC addressing.
- How Ethernet works, CSMA/CD.
- Possible speeds.
- Wireless local area networks (802.11x).

*Hands-on work* : Setting up a local area network with switches and workstations.

### 5) The TCP/IP protocol

- The notion of a protocol. Principles of TCP/IP.
- Architecture and standardization. Communication.
- IP addressing. Broadcasting and multicasting.
- Overview of TCP and UDP. Concept of port numbers.

*Hands-on work* : Configuring the IP address and subnet mask on a workstation. Sharing data.

### 6) WAN networks

- Why and when to use a WAN.
- The new Ethernet MAN infrastructure.
- Overview of xDSL technology (ADSL/SDSL).

#### 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.

#### 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.

## 7) Routers

- Why and when to use a router.
- Overview of routing mechanisms.
- Concept of the routing protocols RIP and OSPF.
- port and network address translation (NAT/PAT).

*Hands-on work* : Simulating a WAN network. Configuring the default gateway for a workstation.

## 8) Application services

- DNS: Role and benefits. Notion of a domain.
- Overview of DHCP. Example usage.
- Internet, HTTP, and FTP messaging. VoIP.
- From voice to telephony.

*Hands-on work* : Configuring workstations in DHCP. Transferring a file with FTP. Configuring a DNS server.

# DATES

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## REMOTE CLASS

2024 : 13 Jun, 16 Sep, 28 Nov