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Dr. Suppan International Institute

Dr. Suppan International Institute b.v. is an international training and educational organization located in the Netherlands.

In Germany the company is represented through ComConsult Akademie, one of the market leaders in network training and education in Germany, and ComConsult Technologie Information GmbH, a leading testing and information company in the field of network technologies.

Dr. Suppan International Institute b.v. offers courses and inhouse training about in network technologies in Western Europe, mainly in the Netherlands, Belgium and Luxembourg. These courses are conducted in English, and the complete course materials is written in English.

The company was founded in 1999 by Dr. Jürgen Suppan, an internationally well-known specialist in networking technologies. The courses offered by Dr. Suppan International Institute are based on the latest state of technology, closely oriented towards the practical needs of practise and strictly vendor independent. All trainers have had several years of networking experience in different types of environments, covering the complete range of networking technologies as applied in companies from the small to the very large. In Germany, where the company has been active since 1989, more than 80% of the top 500 German companies are regular and long-term customers of Dr. Suppan International Institute b.v., with more than 3000 course and congress participants in a year.

If you are interested in these courses, please use the following contact form or send an email to drsuppan@comconsult-akademie.de

Local Area Networks for Entry-Level Users

I'm interested in this course, let's make a date.

First Name

Last Name

Organization

Position

Address

State/Province

Zip, Postal Code

Country/Region

Phone

Fax

E-Mail

Signature

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Local Area Networks for Entry-Level Users

5-day-course



Motivation

Local area networks must be considered as among the most important and decisive technologies of the coming years. All modern, successful and economical data processing architectures of the future will be predicated upon the availability of efficient networks. Knowledge of their basic functional principles, their range of performance capabilities, but also of their shortcomings thus constitutes an elementary building block of one's professional qualifications.

Target audience, objectives

This intensive seminar is intended for novice network users and offers a solid foundation for successful entry into the everyday world of networks. This seminar seeks to impart, in compact form within the space of 5 days and in a competent and vendor-neutral manner, the fundamental structural and functional principles of local area networks. Both the necessary theoretical background and its implications for the practical operation of networks are discussed. Through numerous case studies the participant will receive a great deal of information that can be put directly to practical use. The seminar reflects the latest technological state of the art and provides a solid basis for one's everyday professional activities in the field of networks.

In this seminar you will learn

- to understand the principles according to which networks function
- how such basic technologies as Ethernet, Fast-Ethernet, Gigabit Ethernet, FDDI, Token Ring, and ATM work and what their advantages and disadvantages are
- to understand the systematic use of bridges, routers, and switches in structuring networks
- to master the configuration of a structured, future-oriented cabling system
- case studies for small, medium-size and large network solutions

Topics

Necessary performance spectrum of local area networks

- application areas • typical applications
- performance requirements broken down by data type, capacity, delay, reservability
- expected developments in performance needs in coming years

Fundamental principles of network communications

- basic communication sequence between network stations
- functional configuration of end systems for communications within a network
- ISO reference model
- the significance of physical and logical addresses

Traditional network technologies: Ethernet, Token Ring, FDDI

- functional principles of IEEE 802.3 CSMA/CD, IEEE 802.5 Token Ring and ANSI X3T9 FDDI
- differences between IEEE 802.3 CSMA/CD and Ethernet 2.0 and their operational implications
- technological advantages and disadvantages to consider when configuring networks
- assessment, redundancy capability, and scalability

Typical applications of the traditional Ethernet and Token Ring network technologies

- from simple networks to business networks
- planning methods
- products and how they function
- hub technologies
- differences between the products of different manufacturers
- typical pitfalls and how to avoid them

Structured, future-oriented cabling solutions

- cable alternatives: coaxial, twisted pair, fiber optic cable
- classifying the quality of twisted pair solutions according to Category 5, 6, 7, ISO and DIN norms
- practical benchmarks for working with coax, twisted pair and fiber optic cable
- configuring a structured cabling system on the basis of simple rules
- the effects of structural decisions on the overall cost of a solution

Structuring networks with bridges, routers, switches

- how bridges, routers, and switches function
- advantages and disadvantages of the various technologies
- methodical and needs-oriented configuration of a network architecture
- typical mistakes and how to avoid them

Sample Project

- joint planning of a sample network for a business with typical communications requirements (intensive exercise, up to a full day in duration)

Overview of new network technologies

- overview of Fast Ethernet, Gigabit Ethernet, ATM, and Frame Switching for basic understanding

TCP/IP

- application of the de facto communications standard TCP/IP
- building blocks of a TCP/IP solution
- performance characteristics
- configuration of an IP address concept
- security hazards

Case examples

- many short and not-so-short case examples to illustrate everything from the functioning of networks to the design of business networks

Each of the topics mentioned above will be accompanied by case examples of practical relevance, with many recommendations and experience-based suggestions that may be put to immediate use

Sample products: The seminar will be accompanied with a small but representative demo-network for demonstrating typical network products (hubs, bridges, routers, switch end devices, servers, analyzers, SNMP management systems) and their configuration

Instructors

Dipl.-Ing. Hartmut Kell, Dipl.-Ing. Harald Krause