RETI-B - Networking fundamentals and functioning

ITCore Networking - Teoria delle Reti - Networking

Durata:	Lingue:	Certificazione:
3 Giorni	**Italiano**	**-**

Descrizione del corso

The course is an introduction to the networking world and, particularly, to corporate networks. The course will cover networking general concepts, the main features of a network infrastructure and the main protocols.

Programma

General networking concepts

- Main components of a computer network
- Network protocol definition
- The TCP/IP protocol stack
- The ISO/OSI protocol stack

LAN network physical infrastructure

- Copper cabling for LANs
- Main typologies of optical fibers and networks

Switching

- The Ethernet protocol
- Collision domains and broadcast domains
- Switch and micro segmentation
- Basic switch configuration

The IP protocol

- IPv4 addressing structure
- Introduction to the concept of subnetting
- Public and private addressing – introduction to the concept of NAT

ITCore Group

Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com

• Introduction to the IPv6 protocol
• The ARP protocol
• Configuration of TCP/IP stack on the main operating systems (Windows, Linux)
• Basic concepts of routing, static routes and basic configuration of a router

Transport level: TCP and UDP

• Multiplexing and port numbers
• TCP vs UDP – main differences and applications
• The ICMP protocol and the network diagnostics (ping, traceroute)
• Introduction to firewall and basic configuration

Main protocols of application level

• DNS and name resolution
• DHCP
• Basic configuration of a DNS and DHCP server on Windows Server
• Electronic mail: SMTP, POP3 and IMAP
• The Web and the HTTP and HTTPS protocols