



ENG-413 - IP Network Essentials for Managers

Description

A 2-day training course that will introduce participants to data networks and TCP/IP and provide an understanding of the key principles, technologies and protocols that drive the Internet and today's corporate data networks.

Objectives

- Understand the fundamental principles of data networks and how they apply to a corporate network
- Grasp the key concepts and features of TCP/IP, and their use and importance in a data network
- Understand important services delivered over a data network
- Grasp key security issues associated with data networks
- Obtain a high-level view of the optimization and troubleshooting of a corporate network

Topics

*Note: the course structure may be subject to change as trainings are updated on a regular basis.

Introduction

- Network fundamentals
- The evolution to data networks
- How the Internet is built
- Main elements and components of a corporate network

Demystifying IP terminology What is TCP/IP?

- Overview
- The TCP/IP stack and its layers
- Open Systems Interconnection (OSI) reference model
- Protocols
- What does TCP/IP do?

Data link layer of the TCP/IP stack

- Functions and importance
- Network types and topologies
- Ethernet for LANs/WLANs
 - Standard IEEE 802

Network layer of the TCP/IP stack

- Functions and importance
- Routing
- Internet Protocol (IP)
- ARP protocol
- ICMP protocol

Transport layer of the TCP/IP stack

- Functions and importance
- TCP (Transport Control Protocol)
 - Uses: FTP, HTTPftp, http>
- UDP (User Datagram Protocol)
 - Uses: DNS, DHCP and real-time traffic transport (ex. voice)dns, dhcp and real-time traffic transport (ex. voice)>
- TCP vs. UDP

Security

- Basic principles of network security
- Types of security issues in data networks
- Security mechanisms
- Firewalls and encryption

Data network applications and services

- Web browsing, e-mail, IM, VoIP, video and other services

Basics of optimizing and troubleshooting LANs/WANs

- Tools and guidelines

Target Audience

- Telecom managers who need an understanding of data networks and the Internet Protocol (IP) suite in the context of the convergence of voice and data networks and/or a VoIP implementation in their organization

Methodology

Neotelis Virtual Classroom Trainings combine real-time (live) Virtual Classroom sessions on a web-based

videoconferencing platform with an expert trainer and off-line activities in-between live sessions. Presentations, workshops, case studies, and discussions on real-life situations faced by participants, as well as videos, whiteboards, quizzes and questionnaires are all used to engage participants and enhance their learning experience.

The training material is designed to provide practical tools which can be immediately applied in a work environment, and the complete material is provided to all participants for future reference and follow-up action plans.

Access to Neotelis Virtual Classroom Trainings requires a computer, a webcam, a headset and microphone and a stable internet connection.

Location

About Neotelis

Neotelis provides training, consulting, conferences and publications to the telecommunications industry worldwide. Its team of senior experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 120 countries around the world.



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