ENG-400 - Introduction to Data Networks & TCP/IP for Non-Technical Staff

Description

A 1-day Training Program to provide participants with an overview of data networks and TCP/IP. This Training Program describes the essential components that drive the Internet and today's corporate networks.

Prerequisite

No prerequisite is required for this Training Program.

Objectives

- Describe the fundamental principles of data networks
- Explain, in layman's terms, how the Ethernet protocol functions
- Identify the features of the IP and of the transport protocols that work in conjunction with it
- Define, at a high level, the components of a data network and how information travels through it
- Present an overview of data network services and applications, such as web browsing, e-mail, file transfer, Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP)
- Provide a summary description of key related technologies, such as Digital Subscriber Line (DSL), Dense Wavelength Division Multiplexing (DWDM) and MultiProtocol Label Switching (MPLS)

Topics

Introduction

- Evolution to data networks
- Bits and bytes: using 0s and 1s
- Concept of a datagram
- Network types and topologies

Data networks

- Open Systems Interconnection (OSI) model and Transmission Control Protocol (TCP)/IP stack
- Relating the models to systems we understand
- Demystifying all the acronyms
- Encapsulation and decapsulation
- Ethernet: the de facto Local Area Network (LAN) standard
- Collision domains and the evolution to switching
- Features of IP and of the transport protocols that work in conjunction with it
- Main elements and components
- How the internet is built
- A typical corporate network

Data network applications and services

- Web browsing
- E-mail
- File transfer
- Other applications such as Instant Messaging (IM), Voice over IP (VoIP) and Internet Protocol Television (IPTV)
- Internet phone book: DNS
- Address and parameter provider: DHCP

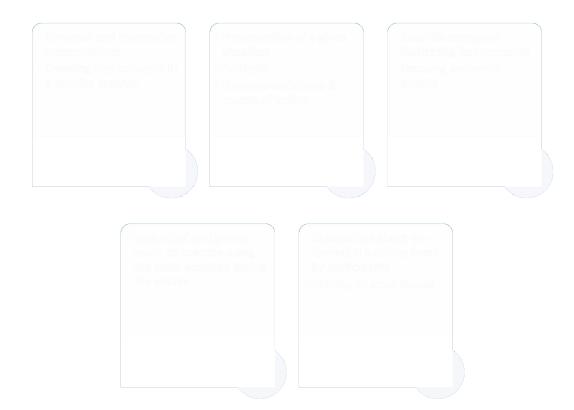**Other technologies worth noting**

- DSL
- Synchronous Optical NETwork (SONET) and DWDM
- MPLS

Target Audience

- Non-technical personnel in sales, customer care or any other role interested in understanding the fundamentals of data networks and the Internet Protocol (IP) suite
- Managers or executives looking to complement their skill-set by gaining a better understanding of IP data network fundamentals
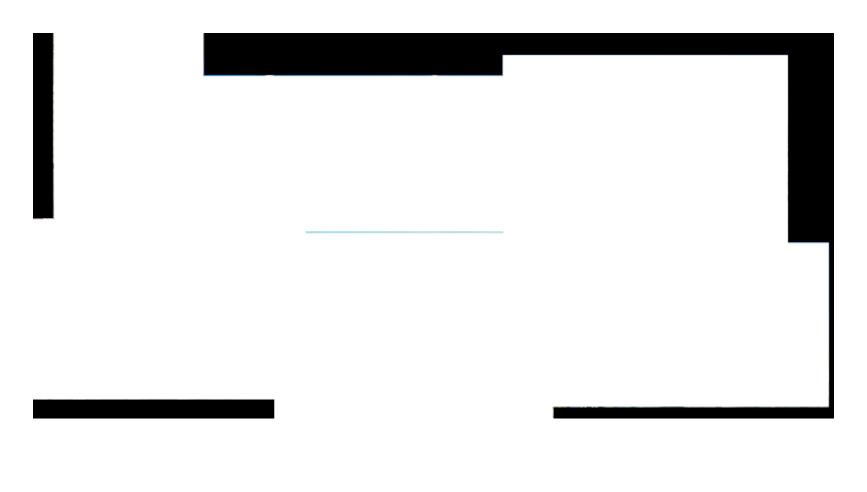
Methodology

A combination of engaging activities and dynamic presentations to stimulate and maximize participants' learning.

- Dynamic and interactive presentations
- Covering key concepts in a concise manner

- Presentation of a given situation
- Analysis
- Recommending a course of action

- Real-life examples illustrating key concepts
- Focusing on recent events

- Individual and group work to practice using the tools acquired during the course

- Discussions about on-the-job situations faced by participants
- Sharing of experiences

Location

A selection of Neotelis' training courses is held in various cities around the world. Please contact us at training@neotelis.com for the complete Yearly Training Calendar.

Neotelis can also deliver in-house sessions of this course specifically for your organization. Please contact us at training@neotelis.com for more information and a Proposal.

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.