

Introduction to TCP IP

Learn via: **Classroom / Virtual Classroom / Online**

Duration: **1 Gün**

<https://bilginc.com/tr/egitim/introduction-to-tcp-ip-2892-egitimi/>

Overview

TCPIP protokolleri hakkında genel bilgi veren bir eğitimidir. TCPIP dünyasına yeni olan kişiler için tasarlanmıştır. Bilgisayar tabanlı uygulama alıştırmaları içeren, bir eğitmen tarafından sunum şeklinde verilen bir eğitimidir.

Prerequisites

- Delegates should be familiar with MS Windows desktop and command line operation.

What You Will Learn

During this course you will:

- Be introduced to the various protocols that are covered by TCP/IP
- Learn about the development and limitations of Internet Protocol Addressing
- Learn how to plan and configure a TCP/IP based network
- Learn some of the tools used to troubleshoot TCPIP networks

Outline

Chapter 1 - Introduction

- History of TCP/IP
- Standards Bodies - The Internet
- TCP/IP Architecture
- The TCP/IP Suite
- Standards Bodies - ISO
- Open System Interconnection
- ISO OSI 7-layer model
- Layered Protocols

Chapter 2 - The Internet Protocol

- Internet Protocol
- Internet Protocol Version 4 Addressing
- Internet Protocol Routing
- IPv4 Address Classes
- Classfull IPv4 Address Ranges
- Multicast Addresses
- IPv4 Reserved Addresses
- IPv4 Address Assignment
- IPv4 Private Network Addressing
- Address Exercise
- IP Address Allocation
- Dynamic IP Address Allocation - RARP
- Dynamic IP Address Allocation - BOOTP
- Dynamic IP Address Allocation - DHCP
- Windows DHCP Commands
- The IPv4 Header
- IP Fragmentation
- IP Precedence
- Differentiated Services - DiffServ

Chapter 3 - Address Resolution

- Protocol Encapsulation with TCP/IP
- Address Resolution Protocol (ARP)
- Default Gateway
- Connecting Hosts

Chapter 4 - IP Address Limitations

- Limitations of the Classfull System
- Subnet Motivation - IP Addresses
- Subnet Extensions
- Subnetting
- Subnet Mask Application
- Defining Subnetworks
- Subnetworking in Action
- Subnet Granularity
- Subnet Mask Application
- Subnet/Supernet Calculators
- What is IPv6?

Chapter 5 - ICMP

- Internet Control Message Protocol
- PING
- PING Options
- TraceRoute
- PathPing

Chapter 6 - The Transport Layer

- TCP Concepts
- Simple Reliability
- TCP Segment
- TCP Port Numbers
- User Datagram Protocol (UDP)
- UDP Segment
- UDP versus TCP

Chapter 7 - IP Routing

- Routers and Routing
- Static Routing
- Static Routing
- Dynamic Routing
- Dynamic Routing Protocols
- Routing Information Protocol
- RIP Versions
- RIP Responses
- Open Shortest Path First
- An OSPF Network
- OSPF Costs
- Link State Algorithm
- The OSPF Hello Message
- OSPF Convergence

Chapter 8 - NAT & NAT With PAT

- Introduction
- Overview
- Network Address Translation
- Dynamic NAT with Port Address Translation
- NAT with Port Address Translation

Chapter 10 - The Domain Name System

- The Domain Name System
- The Domain Name Space
- Windows DNS Configuration
- Testing DNS

Chapter 11 - The Process Layer

- Processes
- File Transfer Protocol

- Trivial File Transfer Protocol
- Telnet
- Modern Network Management
- Simple Network Management Protocol
- Components of SNMP