TCP and Transport Layer Protocols

IPC_117d | On-Demand | Transport | Express
Course Duration: 1 hour

As the communications industry transitions to wireless and wireline converged networks to support voice, video, data and mobile services over IP, a solid understanding of IP and its role in networking is essential. IP is to data transfer as what a dial tone is to a wireline telephone. A fundamental knowledge of IPv4 and IPv6 networking along with use of IP based transport protocols is a must for all telecom professionals. Understanding of TCP and other IP based transport layer protocols is an important part of building this foundation. Starting with a basic definition, the course provides a focused basic level introduction to the fundamentals of IP based transport layer protocols like TCP, UDP and SCTP.

Intended Audience

This course is intended for those seeking a basic level introduction to the IP-based transport layer protocols - TCP, UDP and SCTP.

Objectives

After completing this course, the student will be able to:

- Explain the key transport layer functions and the concept of ports
- Describe User Datagram Protocol (UDP) and Transmission Control Protocol (TCP)
- Explain how TCP provides reliable communication over IP and achieves optimal transmission
- Define the special requirements for carrying telecom signaling over IP networks
- List the key functions of Stream Control Transmission Protocol (SCTP)

Course Prerequisites

No Prerequisites

Outline

1. Overview of the Transport Layer
1.1 Functions of the Transport Layer

2. User Datagram Protocol (UDP)
2.1 Defining the UDP
2.2 UDP header details

3. Transmission Control Protocol (TCP)
3.1 TCP functionality
3.2 TCP connection setup

4. Stream Control Transport Protocol (SCTP)
4.1 Role of SCTP
4.2 Capabilities of SCTP
4.3 Unique features of SCTP

5. Summary

Putting It All together