IP Basics

IPC_114d | 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 VLANs is a must for all telecom professionals. A solid foundation in IP has become a basic job requirement in the carrier world. Starting with a brief history, the course provides a focused basic level introduction to the fundamentals of IP technology. It is a modular introductory course only on IP basics as part of the overall eLearning IP fundamentals curriculum.

Intended Audience

This course is intended for those seeking a basic level introduction to the Internet Protocol (IP).

Objectives

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

- Describe the purpose and structure of an IP address
- Describe network prefix
- Explain the purpose of CIDR Prefix
- Explain the purpose of Subnet Mask
- Describe IP Subnets
- Explain the IP header and its key fields
- Describe broadcasting in IP networks
- Describe multicasting in IP networks

Course Prerequisites

No Prerequisites

Outline

1. IP Address
1.1 IP address Structure
1.2 CIDR based IP address
1.3 IP address examples

2. IP Subnets
2.1 IP subnet definition
2.2 Subnet creation principle
2.3 Subnet creation Example

3. IP Header
3.1 IP Header fields description
3.2 Importance of TTL field in IP header

4. Multicast and Broadcast
4.1 Broadcast Operations
4.2 Multicast Operations

Putting It All Together