

IP Basics

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

What You Can Expect

- Self-Paced Duration: 1 HOUR

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