



IP Networking for Security: Basic Networking Course Outline
Course Time: 1 hour

Course Description

In this course, we will begin by defining what a network is, show you the various ways a network can be constructed and, in general terms, how data is sent from one point to another.

When you complete this course, you should be able to do the following:

- Identify the various network classifications,
- Describe common network topologies,
- Differentiate the key protocols used on an Ethernet network,
- Dissect IP addresses and identify the two versions, and
- Compare and contrast the commonly used network operating systems.

Course Outline

- What IS a network?
- Network Classifications
 - PAN/HAN
 - LAN
 - WAN
 - CAN/MAN
 - SAN
- Network topologies
 - Point-to-Point
 - Bus
 - Ring
 - Star
 - Extended Star
 - Tree
 - Mesh
 - Partially Connected Mesh
 - Hybrid
- Basic Administration Network Models
 - Peer-to-peer
 - Client/Server
- Network Protocols
 - What is a protocol?
 - Common Protocols – Overview
 - Common Protocols
 - Ethernet
 - Ethernet
 - Fast Ethernet
 - Gigabit Ethernet
 - Collisions – CSMA/CD
 - TCP/IP Overview
 - TCP
 - IP
 - IP Addresses
 - UDP
 - IP Addresses
 - IPv4 and IPv6 Overview
 - IPv4 Address Basics
 - Interpreting IPv4 Addresses
 - IPv6 Address Basics
 - Interpreting IPv6 Addresses

- Communications
 - IP Packet Structure Overview
 - IPv4 Packet Structure
 - IPv6 Packet Structure
 - Reassembly
- Network Operating Systems
 - Windows Server
 - UNIX
 - Linux
 - BSD
 - Mac OS