



# IP Fundamentals

# IP Fundamentals (2 Days)

- Pre-Assessment Day 1
- IP Internetworking Day 1
  - Explain the application of reference models to networks.
  - Describe the purpose and basic operation of the protocols in the OSI and TCP models
  - Describe how frames are constructed.
  - Explain the function of MAC addressing at the data link layer.
  - Describe Ethernet frame forwarding and processing behavior.
  - Explain the layers of OSI Reference model
  - Describe Ethernet frame forwarding and processing behavior
  - Explain Host-to-Host Packet Delivery
- IP Addressing and Subnetting Day 1
  - Describe various fields and characteristics contained within IP
  - Differentiate between Public, Private and Special IP address ranges
  - Implement VLSM addressing
  - Classless and Classful Routing
  - Explain function of an IP gateway

# IP Fundamentals (2 Days)

## ▪ Basic Switch Configuration

Day 2

- Describe the configuration modes of Cisco IOS Software
- Describe the help facilities available in Cisco IOS Software
- Describe POST test for Cisco Switches
- Implement basic switch configuration
- Verify device configuration and network connectivity using Ping, Traceroute, Telnet, SSH.

## ▪ Hands-on Exercise

- Configure Switch Password
- Configure Login Banner
- Configure Telnet, SSH

## ▪ Network Address Translation

Day 2

- Explain the basic operation of Network Address Translation (NAT)
- Explain the basic operation of Port Address Translation (PAT)
- Use CLI to configure NAT with specific network requirements
- Troubleshoot NAT implementation issues

## ▪ Post-Assessment

Day 2