

**Module Title : Interconnecting Cisco Networking Devices, Part 2 (ICND2) 3.0**

**Duration : 5 days**

## Prerequisites

Before taking the ICND2 course, learners should be familiar with:

- Understanding network fundamentals
- Implementing local area networks
- Implementing Internet connectivity
- Managing network devices
- Securing network devices
- Implementing basic IPv6 connectivity

## Course Content

This course will students with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. It will ensure that students understand and are ready to deploy the latest shifts in technologies and solutions as follows: • understanding of Quality of Service (QoS) elements and their applicability • how virtualized and cloud services will interact and impact enterprise networks • an overview of network programmability and the related controller types and tools that are available to support software defined network architectures A full suite of labs have been developed using the virtual IOS environment with flexible topologies that reinforce concepts with hands-on, guided discovery and challenge labs that align to each lesson module. Upon completing this course, you will be able to meet these objectives:

- Operate a medium-sized LAN with multiple switches supporting VLANs, trunking, switch stacking, chassis aggregation and spanning tree protocols
- Troubleshoot IP connectivity
- Configure and troubleshoot EIGRP and OSPF in IPv4 and IPv6 environments
- Define characteristics, functions and components of a WAN
- Describe SNMP, Syslog, and manage Cisco device configurations, IOS images and licenses
- Understand QoS, virtualization and cloud services, and network programmability related to WAN, access and core segments.

## Course Outline

**Module 1: Implementing Scalable Medium-Sized Networks (Day1 09:00 – 17:00)**

- Troubleshooting Vlan Connectivity
- Building Redundant Switched Topologies
- Improving Redundant Switched Topologies with Etherchannel
- Understanding Layer 3 Redundancy

#### **Module 2: Troubleshooting Basic Connectivity (Day2 09:00 – 15:30)**

- Troubleshooting IPv4 Network Connectivity
- Troubleshooting IPv6 Network Connectivity

#### **Module 3: Implementing EIGRP Based Solution (Day2 15:45 – 17:00, Day3 09:00 – 12:30)**

- Implementing EIGRP
- Implementing EIGRP for IPv6
- Troubleshooting EIGRP

#### **Module 4: Summary Challenge (Day3 13:30 – 15:30)**

- Implementing and Troubleshooting Scalable Medium Sized Network 1
- Implementing and Troubleshooting Scalable Medium Sized Network 2

#### **Module 5: Implement a Scalable OSPF Based Solution (Day3 15:45 – 17:00, Day4 09:00 – 12:30)**

- Understanding OSPF
- Implementing Multiarea OSPF IPv4
- Implementing OSPFv3 for IPv6
- Troubleshooting Multiarea OSPF

#### **Module 6: Wide Area Network (Day4 13:30 – 17:00, Day5 09:00 – 10:30)**

- Understanding WAN Technologies
- Understanding Point-to-Point Protocol
- Configuring GRE Tunnel
- Configuring Single Homed EBGp

#### **Module 7: Network Device Management (Day5 10:45 – 12:30)**

- Implementing Basic Network Device Management and Security
- Evolution of Intelligent Network
- Introducing QoS



### Module 8: Summary Challenge (Day5 14:30 – 17:00)

- Implementing and Troubleshooting Scalable Multiarea Network 1
- Implementing and Troubleshooting Scalable Multiarea Network 2

### Who Should Attend

- Channel Partners
- Customers
- Employees