

Course Name: CIT v5.0 (Cisco Internetwork Troubleshooting)

Course Code: 5200

Course Overview: This 5-day, Authorized Cisco course explores methods for effectively and efficiently troubleshooting problems with Cisco router and Catalyst switch internetworks. You will learn to diagnose and solve problems at the data link, network, and application layers in both Ethernet and WAN networks. You will utilize troubleshooting tools live on the classroom network.

Fourteen hands-on labs comprised of Catalyst 2950 layer 2 switches, Catalyst 3550 layer 3 switches, and Cisco 1760 routers provide real world scenarios including resolving network issues received in the form of trouble tickets. This equipment-intensive class is the most comprehensive troubleshooting course available.

Course Length: 5 days

Who should attend:

- Anyone responsible for troubleshooting internetworks based on Cisco routers and switches.

You will learn:

- Network discovery and documentation
- End-system discovery and documentation
- Analyzing traffic flow using IOS tools
- Creating a network baseline
- Problem solving methodology
- Cisco IOS diagnostic commands
- Troubleshooting the physical and data-link layers, including Ethernet, Frame Relay, and T1 problems
- Troubleshooting Catalyst switch problems
- Troubleshooting network layer problems, including EIGRP, OSPF, and BGP
- Troubleshooting application layer problems

Prerequisites:

- BCMSN (Building Cisco Multilayer Switched Networks v2.2)
- BCMSN v2.0 (Building Cisco Remote Access Networks)
- ISCW (Implementing Secure Converged Wide Area Networks)
- BCMSN (Building Cisco Multilayer Switched Networks v3.0)

Course Fee: Call for quote

Customizable: No

Course Content:

Establishing a Baseline

- Creating Network Configuration Documentation
- Components of a Network Configuration Table
- Components of a Topology Diagram
- Discovering Network Configuration on a Router or Multilayer Switch
- Discovering Network Configuration on a Layer 2 Switch

Creating End-System Network Configuration Documentation

- Components of an End-System Configuration Table
- Components of an End-System Topology Diagram
- Commands and Applications Used to Discover End-System Network Configuration

Determining an Effective Troubleshooting Strategy

- Applying a Layered Model to a Network
- Comparing Layered Network Models
- The Encapsulated Data Flow Process
- The Layers of a Logical Model
- Describing a General Troubleshooting Process
- General Troubleshooting Processes
- Gathering Symptoms
- Isolating Problems
- Correcting Problems
- Gathering Symptoms
- Network Symptoms
- User Symptoms
- End-System Symptoms
- Selecting a Troubleshooting Approach
- The Bottom-Up Approach
- The Top-Down Approach
- The Divide-and-Conquer Approach

Resolving Problems at the Physical and Data Link Layers

- Identifying Physical Layer and Data Link Layer Symptoms
- Cisco IOS Commands
- Windows Commands
- Unix Commands
- Isolating Problems
- Serial Interface
- Frame Relay
- Ethernet
- FastEthernet

Resolving Problems at the Network Layer

- Common Symptoms of Network Layer Problems
- IOS Commands for Network Layer Troubleshooting

- General Commands
- ARP-Related Commands
- Routing Table Commands
- Interface-Related Commands
- BGP-Related Commands
- Traffic-Related Commands
- Access List-Related Commands
- Windows and Unix Commands for Network Layer Troubleshooting
- Case Study
- Identifying Support Resources

Resolving Problems at the Transport and Application Layers

- Common Symptoms of Transport Layer Problems
- Common Symptoms of Application Layer Problems
- IOS Commands for Transport and Application Layer Troubleshooting
- General Commands
- Name Resolution Commands
- Policy-Related Commands
- File Management Commands
- DHCP-Related Commands
- SNMP- and NTP-Related Commands
- Testing Network Applications With Telnet
- Windows and Unix Commands for Transport and Application Layer
- Case Study