

# Interconnecting Cisco Networking Devices (CCNA), Part 2 of 5: Troubleshoot Connectivity

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**Meet the expert:** As a certified Microsoft Instructor, Ken has focused his career on various security aspects of computer and network technology since the early 1980s. He has offered a wide variety of IT training and high level consulting projects for Fortune 500 companies globally. Through the course of his extensive career, he has taught a full line of Microsoft, CompTIA, Cisco, and other high level IT Security curricula.

**Prerequisites:** This is part 2 of the series

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**Course description:** The Interconnecting Cisco Networking Devices Part 2 (ICND2) is the exam associated with the Cisco Certified Network Associate certification. This course is about how to troubleshoot basic connectivity problems. IT will cover the OSI layer of physical connectivity, paths taken and traffic expectations as well as routing protocols. Could a connectivity problem be incorrect host information or name resolution? Perhaps it's a DNS issue or a misconfigured Access Control List. This course discusses way of find out just what could be happening, which ways traffic an be blocked and what corrections can be taken to resolve it.

## Course outline:

### Troubleshoot IPv4 Connectivity

- Introduction
- Troubleshooting End-to-End
- Troubleshooting End-to-End Continued
- Verify End-to-End Connectivity
- Verify End-to-End Connectivity Continued
- Ping
- Traceroute
- Ping and Traceroute on Switches
- Telnet
- PC Host-Based ARP
- Show MAC Address Table
- End-to-End Connectivity
- Path Verification
- Speed Mismatch
- Using Show Interface
- What Is the Current Desired Path
- Codes to Know
- Default Gateway Problems
- Default Gateway Problems Continued
- DNS Issues
- DNS Issues Continued
- Resolution Mapping with Ping
- ACL Issues
- ACL Issues Continued
- Correct the ACL

- Permitting Telnet
- Summary

### Troubleshoot IPv6 Connectivity

- Introduction
- IPv6 Address Types
- Private Addresses
- IPv6 Address Types Continued
- How to Troubleshoot IPv6 Connectivity
- Physical Connectivity
- Verify End-to-End Connectivity
- Verify End-to-End Connectivity Continued
- Using Telnet
- Show Neighbor
- Show IPv6 Neighbors
- Identifying the Path
- Default Gateway Problems
- DNS Problems
- DNS Problems Continued
- ACL Problems
- ACL Problems Continued
- Summary
- Summary

### Implementing EIGRP

- Introduction
- Routing by Rumor
- Administrative Distance
- EIGRP Features
- EIGRP Path Selection

- EIGRP Path Selection Continued
- The EIGRP Metric
- The EIGRP Metric Continued
- Configuring EIGRP
- Verify Neighbors
- Verify EIGRP
- Verify EIGRP Continued
- EIGRP Load Balancing
- Summary
- Summary

### Implementing EIGRP for IPv6

- Introduction
- Demo: Troubleshooting EIGRP
- Demo: OSPF
- EIGRP for IPv6
- Demo: EIGRP for IPv6
- Demo: EIGRP Routes
- Demo: Headquarters and Peers
- Supporting Multiple Protocols
- EIGRP Commands for Configuration
- EIGRP Commands for Configuration Continued
- Verify Interface and Neighbors
- Verify the Toplogy Table
- Summary
- Summary

### Troubleshooting EIGRP

- Introduction
- EIGRP Troubleshooting Components

- Troubleshooting EIGRP Neighbors
- Troubleshooting EIGRP Neighbors Continued
- EIGRP AS Mismatch
- Serial Interfaces on the Link
- Passive Interfaces
- EIGRP Routing Table Troubleshooting
- EIGRP Routing Table Troubleshooting Continued
- Summary
- Summary