Interconnecting Cisco Networking Devices (CCNA), Part 1 of 5: Scalable Networks

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 1 in 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 starts with making sure you understand how VLAN's work. Next, it covers layer 2 networking as well as redundant paths and spanning trees It finishes up by looking at redundancy at layer 3 with routers as well as HSRP and gateway load balancing.

Course outline:

Troubleshoot VLAN Connectivity
- Introduction
- Overview of VLANs
- How to create a VLAN
- How to create a VLAN Continued
- What Is a Trunk
- How to Configure a Trunk
- How to Configure a Trunk Continued
- DTP
- VLAN Troubleshooting
- Destination MAC Addresses and VLANs
- VLAN Troubleshooting Continued
- Troubleshooting Trunks
- Troubleshooting Trunks Continued
- Summary
- Summary

Building Redundant Switched Topologies
- Introduction
- Problems with Redundant Topologies
- How Spanning-Tree Works
- How Spanning-Tree Works Continued
- STP Problems
- PVST+
- PVST+ Continued
- Changing the Bridge ID
- Reviewing the STP Topology
- Reviewing the STP Topology Continued
- What if STP Fails Continued
- What if STP Fails?
- PortFast and BPDU Guard
- PortFast and BPDU Guard Continued
- Summary
- Summary

Improve Redundant Switched Topologies
- Introduction
- What Is EtherChannel
- EtherChannel Protocols
- EtherChannel Protocols Continued
- PAgP
- LACP
- How to Configue EtherChannel
- How to Configure EtherChannel Continued
- Verify EtherChannel
- Verify EtherChannel Continued
- Summary
- Summary

Spanning Tree and Trunking Demo
- Introduction
- Demo: Spanning Tree
- Demo: show span
- Demo: Influencing Traffic
- Demo: Portfast
- Demo: EtherChannel
- Demo: Add Port Channels
- Layer 3 Redundancy
- Demo: Trunking
- Demo: VTP
- Demo: VTP Continued
- Summary

Understanding Layer 3 Redundancy
- Introduction
- Why Have Default Gateway Redundancy
- Default Gateway Redundancy
- Default Gateway Redundancy Continued
- FHRP
- HSRP
- HSRP Continued
- HSRP Failover
- HSRP Configuration
- The HSRP Protocol
- Show Standby
- Active and Standby Routers
- HSRP Track Interface
- HSRP Load Balancing
- Gateway Load Balancing Protocol
- QoS
- QoS Continued
- QoS Configuration
- QoS Options
- Marking
- Queuing Methods
- Congestion Avoidance
- Summary
- Summary