

CCNA Routing and Switching 6.0 Bridging Scope and Sequence

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Target Audience

The Cisco CCNA® Routing and Switching 6.0 Bridging course (bridging course) is designed for Cisco Networking Academy® students currently enrolled in (or who have completed) the Cisco CCNA® Routing and Switching 5.0 curriculum (current curriculum). The bridging course, along with the current curriculum, are designed for Cisco Networking Academy® students who are seeking entry-level jobs in the ICT industry or hope to fulfill prerequisites to pursue more specialized ICT skills. Together, the bridging course and current curriculum provide an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience and career skills development.

The bridging course and current curriculum are appropriate for students at many education levels and types of institutions, including high schools, secondary schools, universities, colleges, career and technical schools, and community centers.

Target Certifications

The bridging course addresses the gap between the current curriculum and the new certifications exams. Together, the current curriculum and the bridging course prepare students for CCNA Routing and Switching certification exams including:

- Interconnecting Cisco Networking Devices Part 1 (ICND1 100-105)
- Interconnecting Cisco Networking Devices Part 2 (ICND2 200-105)
- Interconnecting Cisco Network Devices: Accelerated (CCNAX 200-125)

The ICND1 100-105 exam is associated with the Cisco Certified Entry Network Technician (CCENT®) certification and is a tangible first step in achieving an Associate-level certification. The ICND2 200-105 exam is associated with the CCNA Routing and Switching certification. The 200-125 CCNA exam is the composite exam covering the content of both the ICND1 and ICND2 exams and is associated with the CCNA Routing and Switching certification.

Curriculum Description

The bridging course and the current curriculum equips students with the knowledge and skills required to install, operate, and troubleshoot a small to medium-size enterprise branch network. This course is a hands-on, career-oriented e-learning solution that emphasizes practical experience. It is a blended curriculum with both online and classroom learning.

Various types of hands-on labs provide practical experience, including syntax checkers, interactive activities, procedural and troubleshooting labs, and Packet Tracer activities. All hands-on labs in the course can be completed on actual physical equipment or in conjunction with the NDG NETLAB solution.

Module Outline

Chapter /Section	Objectives
Introduction to Networks - Bridge Content	
1.1: Network Testing and Verification	Use common show commands and utilities to establish a relative performance baseline for the network.
1.2: Network Troubleshooting	Troubleshoot a network.
Routing & Switching Essentials - Bridge Content	
2.1: Configure Static and Default Routes	Configure static routes to enable connectivity in a small to medium-sized business network.
2.2: Device Discovery	Use discovery protocols to map a network topology.
2.3: Device Management	Configure Syslog in a small to medium-sized business network.
2.4: Device Maintenance	Maintain router and switch configuration and IOS files.
Scaling Networks - Bridge Content	
3.1: VTP, Extended VLANs, and DTP	Configure enhanced inter-switch connectivity.
3.2: Troubleshoot Multi-VLAN Issues	Troubleshoot inter-VLAN routing.
3.3: Spanning Tree Configuration	Implement PVST+ and Rapid PVST+ in a switched LAN environment.
3.4: Implement HSRP	Implement HSRP.
3.5: Troubleshoot OSPF	Troubleshoot common OSPF configuration issues in a small to medium-sized business network.
Connecting Networks - Bridge Content	
4.1: WAN Technologies Overview	Explain WAN access technologies available to small to medium-sized business networks.
4.2: VPNs	Explain how VPNs secure site-to-site and remote access connectivity.
4.3: PPPoE	Implement a Cisco router with PPPoE.
4.4: eBGP	Configure eBGP in a single-homed remote access network.
4.5: Troubleshoot ACLs	Troubleshoot ACLs.

Chapter /Section	Objectives
4.6: LAN Security	Explain how to mitigate common LAN security attacks.
4.7: SNMP	Configure SNMP to monitor network operations in a small to medium-sized business network.
4.8: Cisco Switch Port Analyzer (SPAN)	Troubleshoot a network problem using SPAN.
4.9: QoS Overview	Explain the purpose and characteristics of QoS.
4.10: QoS Mechanisms	Explain how networking devices implement QoS.
4.11: Cloud and Virtualization	Explain why cloud computing and virtualization are necessary for evolving networks.
4.12: Network Programming	Explain why network programmability is necessary for evolving networks.
4.13: Troubleshooting Scenarios	Troubleshoot end-to-end connectivity in a small to medium-sized business network, using a systematic approach.



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