

CIS 154C : CISCO VLAN AND WAN TECHNOLOGIES

Transcript title

Cisco Scaling and WAN Networks

Credits

4

Grading mode

Standard letter grades

Total contact hours

50

Lecture hours

30

Other hours

20

Prerequisites

CIS 152C.

Course Description

Third of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Scaling and Connecting Networks implements the Cisco Academy online curricula, CCNA 5.0, Scaling Networks and Connecting Networks. Students explore WAN technologies such as FrameRelay, PPP, and PPPoE, enhanced switching technologies, Etherchannel, multi-area OSPF and EIGRP, and network monitoring with Syslog, SNMP, and NetFlow. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

Course learning outcomes

1. Describe the functions of each of the three levels of the hierarchical network design model, the principles of hierarchical network design, and the concept of a converged network.
2. Configure a switch for operation in a network designed to support voice, video, and data transmissions.
3. Configure VLANs on the switches in a network topology.
4. Configure inter-VLAN routing on a router to enable communication between end-user devices on separate VLANs.
5. Configure point to point protocol (PPP) encapsulation.
6. Configure a basic Frame Relay permanent virtual circuit (PVC), including configuring and troubleshooting Frame Relay on a router serial interface and configuring a static Frame Relay map.
7. Configure extended access control lists (ACL) in a medium-size enterprise branch office network, including configuring extended ACLs and named ACLs, configuring filters, verifying and monitoring ACLs, and troubleshooting extended ACL issues.