

IST254C : Switching, Routing, and Wireless Essentials

Topics covered include but are not limited to implementation of virtual local area networks (VLANs), configuration and troubleshooting of inter-VLAN routing, configuration of dynamic host configuration protocol (DHCP) on networking devices utilizing IPv4 and IPv6, and the purpose and evolution of spanning tree protocol (STP). An introduction etherchannel is also included. Students will learn about wireless LAN concepts and configurations as well as routing protocols. A grade of C or higher must be achieved to continue to the next Cisco C3 Course.

Credits 3

Lab/Practicum/Clinical Hours 2

Lecture Hours 2

Learning Outcomes

- Configure VLANs and Inter-VLAN routing applying security best practices.
- Troubleshooting Inter-VLAN routing on layer 3 devices.
- Configure redundancy on a switched network using STP and EtherChannel.
- Troubleshoot EtherChannel on switched networks.
- Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols.
- Configure dynamic address allocation in IPv6 networks.
- Configure WLANs using a WLC and L2 security best practices.
- Configure switch security to mitigate LAN attacks.
- Configure IPv4 and IPv6 static routing on routers.