

Advance Switching

- Unit 1: Introduction Cisco Networking
 - Ethernet Technology
 - Switching Architecture
 - Switching Tables
- Unit 2: Campus Network Design
 - Introduction to Campus Network Design
- Unit 3: VLANs and Trunking
 - Introduction to VLANs (Virtual LAN)
 - How to configure VLANs
 - Static MAC Address Table Entry
 - 802.1Q Encapsulation
 - How to configure a trunk between switches
 - DTP (Dynamic Trunking Protocol) Negotiation
 - How to change the Native VLAN
 - VTP (VLAN Trunking Protocol)
 - VTP Version 3
 - Protected Port
- Unit 4: Spanning-Tree
 - Introduction to Spanning-Tree
 - Spanning-Tree Cost Calculation
 - PVST (Per VLAN Spanning Tree)
 - Spanning-Tree Port States
 - Spanning-Tree TCN (Topology Change Notification)
 - Spanning-Tree Portfast
 - Spanning-Tree UplinkFast
 - Spanning-Tree Backbone Fast
 - Rapid Spanning-Tree (RSTP)
 - Rapid Spanning-Tree Configuration

- MST (Multiple Spanning-Tree)
- Unit 5: Spanning-Tree Toolkit
 - Spanning-Tree BPDUGuard
 - Spanning-Tree BPDUFilter
 - Spanning-Tree RootGuard
 - Spanning-Tree LoopGuard and UDLD
- Unit 6: Etherchannel
 - Introduction to Etherchannel
 - Layer 3 Etherchannel
- Unit 7: Switch Virtualization
 - Introduction to Switch Virtualization
 - Stackwise
 - VSS (Virtual Switching System)
- Unit 8: Inter-VLAN Routing
 - Routing between VLANs
 - CEF (Cisco Express Forwarding)
 - Unicast Flooding due to Asymmetric Routing
- Unit 9: Gateway Redundancy
 - Introduction to Gateway Redundancy
 - Hot Standby Routing Protocol
 - Virtual Router Redundancy Protocol
 - Gateway Load Balancing Protocol
 - IP SLA (Service-Level Agreement) on Cisco IOS
 - Reliable Static Routing with IP SLA
- Unit 10: Switch Security
 - Port Security
 - AAA and 802.1X Authentication
 - AAA Authentication on Cisco Switch
 - VLAN Access-List (VACL)
 - Storm-Control

- VLAN Hopping
 - DHCP Snooping
 - ARP Poisoning
 - DAI (Dynamic ARP Inspection)
- Unit 11: Network Management
 - How to configure DHCP Server on Cisco IOS
 - Cisco IOS DHCP Relay Agent
 - SPAN / RSPAN
 - SDM Templates
 - Cisco IOS Syslog Messages
 - Introduction to SNMP
 - How to configure SNMPv2 on Cisco IOS Router
 - How to configure SNMPv3 on Cisco IOS Router