

همراه با اعطاء مدرک معتبر
همراه با حمایت فنی رایگان از طریق ایمیل



Edition 2014

مالتی مدیای 642-813 CCNP SWITCH

به زبان فارسی (۲ CD – ۲۲ ساعت)

این ۲ CD شامل:

✓ ۱۵ بخش آموزشی با بیش از ۸۲ درس (۲۰۰ مطلب) به زبان انگلیسی و تشریح فارسی

✓ ۷ بخش پوشش مطالب از طریق ۳۵ سناریوی فنی برای مرور

✓ Utilities DVD شامل:

✓ ۲۰ لابراتوار عملی شرکت سیسکو (همراه با ۶ ساعت آموزش اضافه)

✓ ابزارهای نرم افزاری ، E-book های مربوطه و Whitepaper های سیسکو

System Requirements

- Windows XP with SP2
- 512 MB RAM
- CD-ROM or DVD
- 1024 * 768 High Resolution Video Card & Monitor

CCNP SWITCH 642-813 (22 Hours)

Chapter-1 Enterprise Campus Network Design

- 1.1 IIN & SONA
- 1.2 Campus Network
- 1.3 Enterprise Model
- 1.4 Nonhierarchical Network Devices
 - Layer-2 Switching, Layer-3 Routing**
 - Multilayer Switching, Configuration Interfaces**

Chapter-2 Switch Operation

- 2.1 Layer-2 Switch Operation
 - Transparent Bridging, Layer-2 Frame Path**
- 2.2 Multi Layer Switch Operation
 - Types of Multilayer Switching, Layer-3 Packet Path**
 - Multilayer Switching Exceptions**
- 2.3 Switching Tables
 - CAM, TCAM**
- 2.4 Troubleshooting Switching Tables

Chapter-3 Switch Port Configuration

- 3.1 Ethernet Concepts
 - Ethernet 10 Mbps, Fast Ethernet, Full-Duplex**
 - Gigabit Ethernet, 10-Gigabit Ethernet**
- 3.2 Connecting Switches and Devices

Ethernet and Gigabit Port Cables and Connectors

- 3.3 Switch Port Configuration
 - Ports to Configure, Port Speed, Port Duplex Mode**
 - Error Conditions, Troubleshooting Port Connectivity**

Chapter-4 VLANs and Trunks

- 4.1 VLANs
 - Advantages, Containment of Broadcasts**
- 4.2 VLAN Implementations
 - End-to-End vs. Local VLANs**
- 4.3 VLAN Assignment
 - Dynamic, Static, Creating and Deleting VLANs**
 - Ports Association, Verification, Troubleshooting**
- 4.4 Trunks & Frame Tagging
 - Frame Tagging**
- 4.5 VLAN Tagging Mechanisms
 - ISL, 802.1Q**
- 4.6 Native VLANs
- 4.7 VLAN Ranges, Mapping & Services
- 4.8 Dynamic Trunk Protocol
- 4.9 Configuring, Verifying & Troubleshooting Trunk Connections

Chapter-5 VLAN Trunk Protocol

- 5.1 VLAN Trunk Protocol (VTP)
**Advantages, Management Domain, Modes
Messages, Message Types, Versions, Pruning**
- 5.2 Configuring, Verifying and Troubleshooting VTP

Chapter-6 Switch Port Aggregation with EtherChannel

- 6.1 EtherChannels, PAgP/LACP Protocols
Operation, PAgP & LACP Protocols, Guidelines
- 6.2 EtherChannel Configuration
Load Balancing, Verification

Chapter-7 Implementing STP

- 7.1 Transparent Bridging
Forwarding & Filtering, Learning, Loops
- 7.2 Spanning Tree Protocol (STP)
BPDU, STP Advantages
- 7.3 STP Components & Operation
Bridge identifiers, Port priorities, Path Costs
- 7.4 STP Algorithm
**Root Switch, Root Ports, Designated Switches Ports
Bridging Loops, Port States, Convergence Issues**
- 7.5 Types of STP
CST, PVST, PVST+

- 7.6 Configuring and Verifying STP
 - Enabling and Disabling STP, Path Selections**
 - Port Cost, Port Priority, Verification**

Chapter-8 Enhancements to STP

- 8.1 Cisco Enhancements to STP
 - PortFast, UplinkFast, BackboneFast**
 - BDPU Guard, BDPU Filtering**
- 8.2 Rapid STP
 - BDPUs, Port States, Port Roles**
 - Edge Port & Link Type, Topology Changes**
- 8.3 Multiple Spanning Tree
 - Regions, Internal Spanning Tree**
 - MST Configuration and Verification**
- 8.4 Other STP Enhancements
 - BPDU Skewing, Root Guard**
 - ULD, Loop Guard**
- 8.5 Troubleshooting Tips & Debug Commands

Chapter-9 Multilayer Switching

- 9.1 Routing Considerations
 - Client End Station and Route Processor Issues**
- 9.2 Configuring Routing between VLANs
 - Internal Route Processor, Switch Interfaces**

- 9.3 Routing Configuration on a Switch
 - External RP, Traditional Router Setup**
- 9.4 Router on a Stick Setup
 - Verifying your Router Configuration**
- 9.5 Multi Layer Switching (MLS) Overview
 - Processor & ASIC, NetFlow-based Switching**
 - Centralized, Distributed, Topology based Switching**
- 9.6 MLS using CEF
 - MLS Limitations, CEF Tables**
 - CEF Operation, Load Balancing**
- 9.7 CEF Example
 - Configuration, Verification, Troubleshooting**

Chapter-10 Layer-3 High Availability

- 10.1 HSRP Part I
 - HSRP, HSRP Operation, Types of RPs**
- 10.2 HSRP Part II
 - HSRP Multicast Messages, HSRP States**
- 10.3 Configuring HSRP
 - Configuration, Interface Tracking, Verification**
- 10.4 VRRP
- 10.5 VRRP Commands
- 10.6 GLBP Operation and Load Balancing
- 10.7 Redundancy with Switch Chassis Part I
 - Redundant Switch Supervisors, RPR+, SSO**
 - Redundancy Mode, Supervisor Synchronization**

- 10.8 Redundancy with Switch Chassis Part II
Non-Stop Forwarding, Power Supplies

Chapter-11 Integrating Wireless LANs

- 11.1 WLAN Overview
- 11.2 802.11 Standards
802.11b, 802.11a, 802.11h
- 11.3 Cisco's Unified Wireless Solution
- 11.4 Split MAC Architecture
MESH and LWAPP, AWPP
- 11.5 Wireless Security
Open Access, SSIDs, WEP, MAC Address Authentication
WPA, WPA 2 Pre-Shared Key, Cisco Unified Wireless Security
- 11.6 WLAN QoS
Implementation, Configuration
- 11.7 WLAN Security Issues
802.1x and EAP Authentication Protocols
Encryption and Authentication on LAPs
- 11.8 WLAN Management
Cisco Unified Wireless Networks
CiscoWorks, Cisco Wireless Control System
- 11.9 Configuring Switch Ports for WLAN Use
Autonomous APs, LAPs, WLCs

Chapter-12 IP Telephony

- 12.1 Power Over Ethernet (PoE)
- 12.2 Configuring & Verifying PoE
- 12.3 Voice VLANs
- 12.4 Voice QoS
- 12.5 Diffserve QoS
- 12.6 Implementing QoS for Voice
- 12.7 AutoQoS
- 12.8 Verifying Voice QoS

Chapter-13 Securing Switch Access

- 13.1 Switch Security
- 13.2 Authentication, Authorization & Accounting (AAA)
- 13.3 Switch Port Security
- 13.4 Port-based Authentication with 802.1X
- 13.5 Mitigating Spoofing Attacks
 - DHCP Snooping, IP Source Guard**
 - Dynamic ARP Inspection**

Chapter-14 Securing with VLANs

- 14.1 VLAN ACLs
- 14.2 Private VLANs (PVLAN)
- 14.3 PVLAN Configuration
- 14.4 Securing VLAN Trunks
 - Switch Spoofing, VLAN Hopping**

Chapter-15 Configuring DHCP

- 15.1 Using DHCP with a Multilayer Switch
- 15.2 DHCP Overview and Addressing
- 15.3 Configuring DHCP
- 15.4 IP Helper Address & DHCP Relay Services
- 15.5 DHCP Verification Commands
- 15.6 DHCP Examples

Review Scenarios

- **VLANs** **Scenarios**
- **Spanning Tree Protocols** **Scenarios**
- **Inter-VLAN Routing** **Scenarios**
- **Gateway Redundancy** **Scenarios**
- **Wireless LANs** **Scenarios**
- **Switch Security** **Scenarios**
- **Voice** **Scenarios**

Cisco LAN Switching Video Mentor (6 Hours)

- Lab 1. **Interface Configuration**
- Lab 2. **Setting Up VLANs**
- Lab 3. **Setting Up Trunk Links**
- Lab 4. **Using the VLAN Trunking Protocol (VTP)**
- Lab 5: **Working with the Spanning Tree Protocol (STP)**
- Lab 6: **STP Topology Changes**
- Lab 7: **Leveraging Rapid PVST+**
- Lab8: **Scaling STP with Multiple Spanning Tree (MST)**
- Lab9: **Protecting the STP Topology**
- Lab 10: **Scaling Bandwidth with EtherChannel**
- Lab 11: **Setting Up Multilayer Switching**
- Lab 12: **First Hop Redundancy with HSRP**
- Lab 13: **First Hop Redundancy with GLBP**
- Lab 14: **Private VLANs**
- Lab 15: **Using Access Control Lists (ACLs) to Control Traffic**
- Lab 16: **Using Port Security**
- Lab 17: **Preventing Spoofing Attacks**
- Lab 18: **Quality of Service, Part 1**
- Lab 19: **Quality of Service, Part 2**
- Lab 20: **Monitoring Traffic**

Ebooks

- [CCNP Switch 642-813 Guide](#)
- [CCNP Switch Student Guides Volumes 1, 2](#)
- [CCNP Switch Portable Command Guide](#)

Tools

- [ASDM](#)
- [Cisco Network Assistant](#)
- [IP Subnet Calculator](#)
- [Packet Tracer 5.3](#)
- [SDM](#)
- [Subnet10](#)
- [Wildcard Calculator](#)

Cisco Whitepapers

- [List of 12 Key Cisco Switch related Whitepapers](#)