

# Implementing Cisco IP Switched Networks (SWITCH)

This course is a component of the Cisco CCNP Routing and Switching curriculum designed to help delegates to configure, and verify the implementation of complex enterprise switching solutions for campus environments using the Cisco Enterprise Campus Architecture.



*Experts in Networking*

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This course is for network professionals who will need to correctly implement switch-based solutions given a network design using Cisco IOS services and features. Course content provides a firm understanding of how to manage switches in an enterprise campus environment. Training reinforces instruction by providing delegates with hands-on labs using live equipment.

## Pre-requisites

- ICND1
- ICND2

Course	Course Objectives
<p><b>Implementing Cisco IP Switched Networks (SWITCH)</b></p> <p>This course forms part of the following Cisco certifications:</p> <p><b>CCNP</b> (<i>Cisco Certified Network Professional</i>) <b>CCDP</b> (<i>Cisco Certified Design Professional</i>)</p> <p><u>Certification</u> Required topics are covered for the Cisco exam: <b>642-813 SWITCH</b></p> <p><u>Duration</u> 4 days</p>	<p>Upon completion of this course, the delegate will be able to:</p> <ul style="list-style-type: none"><li>• Analyze campus network designs</li><li>• Implement VLANs in a network campus</li><li>• Implement spanning tree</li><li>• Implement inter-VLAN routing in a campus network</li><li>• Implement a highly available network</li><li>• Implement high-availability technologies and techniques using multilayer switches in a campus environment</li><li>• Implement security features in a switched network</li><li>• Integrate WLANs into a campus network</li><li>• Accommodate voice and video in campus networks</li></ul>

## Course Content

### **Analyzing Campus Network Designs**

- Enterprise Campus Architecture
- Cisco Lifecycle Services and Network Implementation

### **Implementing VLANs in Campus Networks**

- Applying Best Practices for VLAN Topologies
- Configuring Private VLANs (PVLANS)
- Configuring Link Aggregation with EtherChannel

### **Implementing Spanning Tree**

- Spanning Tree Protocol (STP) Enhancements
- STP Stability Mechanisms

### **Implementing Inter-VLAN Routing**

- Routing Between VLANs
- Deploying Multilayer Switching with Cisco Express Forwarding

### **Implementing a Highly Available Network**

- High Availability
- Implementing High Availability
- Implementing Network Monitoring

### **Implementing Layer 3 High Availability**

- Configuring Layer 3 Redundancy with HSRP
- Configuring Layer 3 Redundancy with VRRP and GLBP

### **Minimizing Service Loss and Data Theft in a Campus Network**

- Switch Security Issues
- Protecting Against VLAN Attacks
- Protecting Against Spoofing Attacks
- Securing Network Services

### **Accommodating Voice and Video in Campus Networks**

- Planning for Support of Voice in a Campus Network
- Integrating and Verifying VoIP in a Campus Infrastructure
- Working with Specialists to Accommodate Voice and Video on Campus Switches

### **Integrating Wireless LANs into a Campus Network**

- Comparing WLANs with Campus Networks
- Assessing the Impact of WLANs on Campus Networks
- Preparing the Campus Infrastructure for WLANs