Implementing Cisco IP Switched Networks (642-813)

**Exam Description:** The 642-813 exam is a two-hour test with 35–45 questions. Implementing Cisco IP Switched Networks (SWITCH 642-813) is a qualifying exam for the Cisco Certified Network Professional CCNP®, and Cisco Certified Design Professional CCDP® certifications. The SWITCH 642-813 exam will certify that the successful candidate has important knowledge and skills necessary to plan, configure and verify the implementation of complex enterprise switching solutions using Cisco’s Campus Enterprise Architecture. The SWITCH exam also covers secure integration of VLANs, WLANs, voice and video into campus networks. The exam is closed book and no outside reference materials are allowed.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. In order to better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

50% 1.0 Implement VLAN Based Solution, Given a Network Design and a Set of Requirements

1.1 Determine network resources needed for implementing a VLAN based solution on a network
1.2 Create a VLAN based implementation plan
1.3 Create a VLAN based verification plan
1.4 Configure switch-to-switch connectivity for the VLAN based solution
1.5 Configure loop prevention for the VLAN based solution
1.6 Verify EIGRP solution was implemented properly using show and debug commands

12% 2.0 Implement a Security Extension of a Layer 2 Solution, Given a Network Design and a Set of Requirements

2.1 Determine network resources needed for implementing a Security solution
2.2 Create a implementation plan for the Security solution
2.3 Create a verification plan for the Security solution
2.4 Configure port security features
2.5 Configure general switch security features
2.6 Configure private VLANs
2.7 Configure VA CL and PACL
2.8 Verify the Security based solution was implemented properly using show and debug commands
2.9 Document results of Security implementation and verification

14% 3.0 Implement Switch Based Layer 3 Services, Given a Network Design and a Set of Requirements

3.1 Determine network resources needed for implementing a Switch based Layer 3 solution
3.2 Create an implementation plan for the Switch based Layer 3 solution
3.3 Create a verification plan for the Switch based Layer 3 solution
3.4 Configure routing interfaces
3.5 Configure Layer 3 Security
3.6 Verify the Switch based Layer 3 solution was implemented properly using show and debug commands
3.7 Document results of Switch based Layer 3 implementation and verification

5%  
4.0 Prepare Infrastructure to Support Advanced Services
4.1 Implement a wireless extension of a Layer 2 solution
4.2 Implement a VoIP support solution
4.3 Implement video support solution

19%  
5.0 Implement High Availability, Given a Network Design and a Set of Requirements
5.1 Determine network resources needed for implementing High Availability on a network
5.2 Create a High Availability implementation plan
5.3 Create a High Availability verification plan
5.4 Implement first hop redundancy protocols
5.5 Implement switch supervisor redundancy
5.6 Verify High Availability solution was implemented properly using show and debug commands
5.7 Document results of High Availability implementation and verification