

# **CCNP**

# **SWITCH**



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## **1.0 Layer 2 Technologies**

### **1.1 Configure and verify switch administration**

- 1.1.a SDM templates**
- 1.1.b Managing MAC address table**
- 1.1.c Troubleshoot Err-disable recovery**

### **1.2 Configure and verify Layer 2 protocols**

- 1.2.a CDP, LLDP**
- 1.2.b UDLL**

### **1.3 Configure and verify VLANs**

- 1.3.a Access ports**
- 1.3.b VLAN database**
- 1.3.c Normal, extended VLAN, voice VLAN**

### **1.4 Configure and verify trunking**

- 1.4.a VTPv1, VTPv2, VTPv3, VTP pruning**
- 1.4.b dot1Q**
- 1.4.c Native VLAN**
- 1.4.d Manual pruning**

### **1.5 Configure and verify EtherChannels**

- 1.5.a LACP, PAgP, manual**
- 1.5.b Layer 2, Layer 3**
- 1.5.c Load balancing**
- 1.5.d EtherChannel misconfiguration guard**

### **1.6 Configure and verify spanning tree**

- 1.6.a PVST+, RPVST+, MST**
- 1.6.b Switch priority, port priority, path cost, STP timers**
- 1.6.c PortFast, BPDUguard, BPDUfilter**
- 1.6.d Loopguard and Rootguard**



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**1.7 Configure and verify other LAN switching technologies**

**1.7.a SPAN, RSPAN**

**1.8 Describe chassis virtualization and aggregation technologies**

**1.8.a Stackwise**

## **2.0 Infrastructure Security**

**2.1 Configure and verify switch security features**

**2.1.a DHCP snooping**

**2.1.b IP Source Guard**

**2.1.c Dynamic ARP inspection**

**2.1.d Port security**

**2.1.e Private VLAN**

**2.1.f Storm control**

**2.2 Describe device security using Cisco IOS AAA with TACACS+ and RADIUS**

**2.2.a AAA with TACACS+ and RADIUS**

**2.2.b Local privilege authorization fallback**

## **3.0 Infrastructure Services**

**3.1 Configure and verify first-hop redundancy protocols**

**3.1.a HSRP**

**3.1.b VRRP**

**3.1.c GLBP**



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