

CCNA1

Best Practice for Access Port

```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#no cdp enable
Switch(config-if)#spanning-tree portfast
Switch(config-if)#spanning-tree bpduguard enable
```

Allow vlans and assign native vlan on a Trunk

```
Switch(config)# interface fa0/1
Switch(config-if)# switchport mode trunk
Switch(config-if)# switchport trunk native vlan 10
Switch(config-if)# switchport trunk allowed vlan 10,20
```

Setting IP Addresses on Vlan

```
Switch(config)#interface vlan1
Switch(config-if)#ip address 192.168.1.5 255.255.255.0
Switch(config-if)#exit
```

Switch Protocols

Trunking Protocol(Language)
ISL(Inter-Switch Link - Cisco proprietary)
802.1q(dot1q-IEEE Standard)

DTP(Dynamic Trunking Protocol)-Negotiates trunking
-Do you want to be TRUNK?-

Mode:Dynamic Desirable
Dynamic Auto

VTP(VLAN Trunking Protocol)-Replicates vlans

STP(Spanning Tree Protocol)-Prevents loops
CST
PVST
Rapid-PVST
MST

VTP(VLAN Trunking Protocol)

```
Switch(config)#vtp mode server
Switch(config)#vtp mode client
Switch(config)#vtp mode transparent
Switch(config)#vtp domain CCNA
Switch(config)#vtp password 123
```

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```
Switch#show vtp status --> Shows general info about VTP config
```

By default, all switches are in Server mode

----- STP election process -----

1. Root Bridge
 - *Lowest BID
2. Root Port
 - *Fastest to Root Bridge
3. Designated Port
 - *All port in Root Bridge is DP
 - *One DP per segment/link
4. Block Port
 - *Rest

----- Configuring the Root Switch -----

```
Switch(config)#spanning-tree vlan 10 priority 0
```

----- Configuring Rapid STP -----

```
Switch(config)#spanning-tree mode rapid-pvst
```

----- Switch Port Security -----

```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport port-security
Switch(config-if)#switchport port-security maximum 1
Switch(config-if)#switchport port-security violation shutdown
Switch(config-if)#switchport port-security mac-address sticky
```

```
Switch#clear port-security sticky interface fa0/1
```