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Best Practice for Access Port

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```
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
```

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Allow vlans and assign native vlan on a Trunk

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```
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
```

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Setting IP Addresses on Vlan

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

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Switch Protocols

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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

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VTP(VLAN Trunking Protocol)

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```
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
```

## CCNA1

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