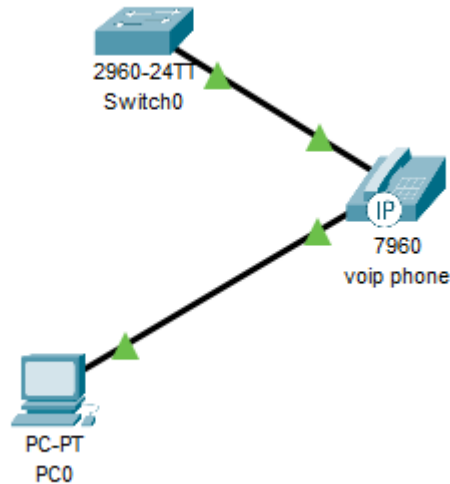


8. You have a Cisco switch and a VoIP phone that needs to be placed in a voice VLAN (VLAN 20). The data for the PC should remain in a separate VLAN (VLAN 10). Configure the switch port to support both voice and data traffic.

Network Topology :



Configuring VLANs on the switch :

Creating VLANs for voice and Data on switch :-

```
Switch>enable
Switch#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name DataVlan
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name VoiceVlan
Switch(config-vlan)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#switchport voice vlan 20
Switch(config-if)#spanning-tree portfast
%Warning: portfast should only be enabled on ports connected to a single
host. Connecting hubs, concentrators, switches, bridges, etc... to this
interface when portfast is enabled, can cause temporary bridging loops.
Use with CAUTION

%Portfast has been configured on FastEthernet0/2 but will only
have effect when the interface is in a non-trunking mode.
Switch(config-if)#exit
Switch(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
```

Configuring the Switch port (fa0/2) for voice and data traffic :

Assign VLAN 10 to the PC & VLAN 20 to the VoIP Phone

~~Switch#configure terminal~~

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#vlan 10

Switch(config-vlan)#name DataVlan

Switch(config-vlan)#exit

Switch(config)#vlan 20

Switch(config-vlan)#name VoiceVlan

Switch(config-vlan)#exit

Switch(config)#interface FastEthernet0/2

Switch(config-if)#switchport mode access

Switch(config-if)#switchport access vlan 10

Switch(config-if)#switchport voice vlan 20

Switch(config-if)#spanning-tree portfast

Verifying the VLAN configuration :

Switch#show vlan brief

VLAN	Name	Status	Ports
1	default	active	Fa0/1, Fa0/3, Fa0/4, Fa0/5 Fa0/6, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20, Fa0/21 Fa0/22, Fa0/23, Fa0/24, Gig0/1 Gig0/2
10	DataVlan	active	Fa0/2
20	VoiceVlan	active	Fa0/2
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

Switch#show interfaces FastEthernet 0/2 switchport

Name: Fa0/2

Switchport: Enabled

Administrative Mode: static access

Operational Mode: static access

Administrative Trunking Encapsulation: dot1q

Operational Trunking Encapsulation: native

Negotiation of Trunking: Off

Access Mode VLAN: 10 (DataVlan)

Trunking Native Mode VLAN: 1 (default)

Voice VLAN: 20

Administrative private-vlan host-association: none

Administrative private-vlan mapping: none

Administrative private-vlan trunk native VLAN: none

Administrative private-vlan trunk encapsulation: dot1q

Administrative private-vlan trunk normal VLANs: none

Administrative private-vlan trunk private VLANs: none

Operational private-vlan: none

Trunking VLANs Enabled: All

Pruning VLANs Enabled: 2-1001

Capture Mode Disabled

Capture VLANs Allowed: ALL

Protected: false

Unknown unicast blocked: disabled

Unknown multicast blocked: disabled

In the above both DataVlan and VoiceVlan both are ACTIVE .