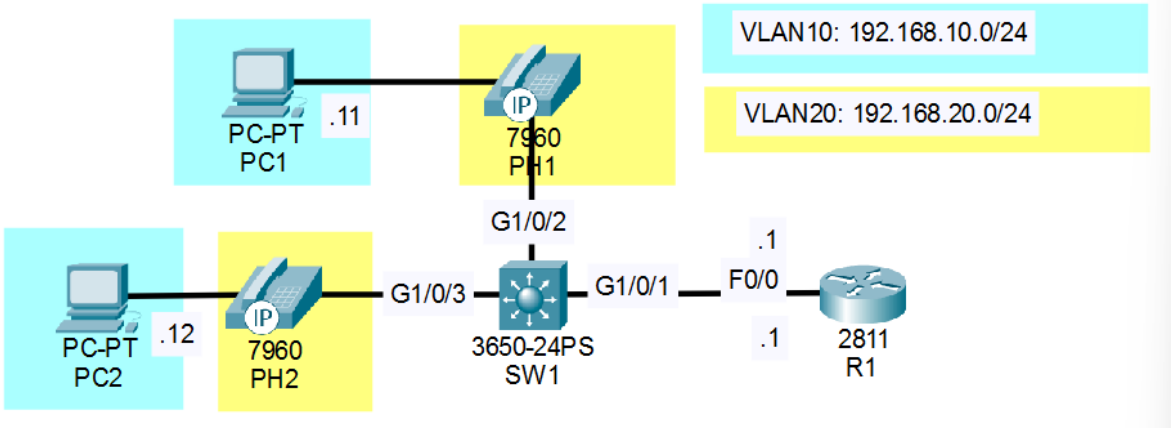
Network Topology:



Telephony configurations (not relevant to the CCNA) have been pre-configured on R1

Instructions and actions:

1. Configure SW1's interfaces in the appropriate VLANs.
   SW1 CLI:

```
SW1(config-if-range)#do sh vlan br

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
1    default                           active    Gig1/0/4, Gig1/0/5,
Gig1/0/6, Gig1/0/7
                                                 Gig1/0/8, Gig1/0/9,
Gig1/0/10, Gig1/0/11
                                                 Gig1/0/12, Gig1/0/13,
Gig1/0/14, Gig1/0/15
                                                 Gig1/0/16, Gig1/0/17,
Gig1/0/18, Gig1/0/19
                                                 Gig1/0/20, Gig1/0/21,
Gig1/0/22, Gig1/0/23
                                                 Gig1/0/24, Gig1/1/1,
Gig1/1/2, Gig1/1/3
                                                 Gig1/1/4
10   VLAN0010                          active    Gig1/0/2, Gig1/0/3
20   VLAN0020                          active    Gig1/0/2, Gig1/0/3
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
```

2. Configure ROAS for the connection between SW1 and R1.
   Configured using R1 CLI:

```
R1#sh ip int br
Interface              IP-Address      OK? Method Status
Protocol
FastEthernet0/0        unassigned      YES unset  up                    up
FastEthernet0/0.10     192.168.10.1    YES manual up                    up
FastEthernet0/0.20     192.168.20.1    YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively down
down
Vlan1                  unassigned      YES unset  administratively down
down
```

3. Ping from PC2 to PC1:

```
C:\>ping 192.168.10.11

Pinging 192.168.10.11 with 32 bytes of data:

Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

4. Call from PH2 to PH1:

Observed in simulation mode:

The voice traffic from PH2 to PH1 was tagged in the VLAN ID (20 here), but the data traffic was untagged.