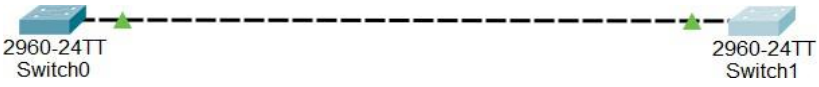
Practical 3

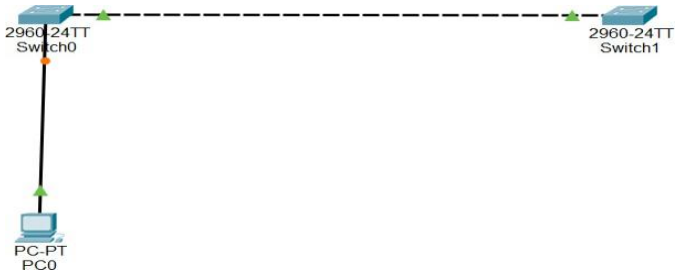
Aim : Implement SPAN Technologies (Switch Port Analyzer)

What is SPAN?

→ Cisco developed the Switched Port Analyzer (SPAN) feature to facilitate the capturing of packets. SPAN is supported on most Cisco switch platforms. SPAN works by copying the traffic from one or more source ports. The copy is then sent out a SPAN destination port. The destination port will often be connected to a host running packet analyzing software, such as Wireshark. Because SPAN only makes a copy of traffic, the source traffic is never affected. SPAN is an out-of-band process. In addition to troubleshooting network issues and performance, SPAN is useful for intrusion detection systems (IDS) and application monitoring platforms. SPAN is often referred to as port mirroring

Steps 1 : Build and Configure network





Step 2 : Configure Switch and vlan and add vlan port on s1

```
Switch>
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#vlan 10
S1(config-vlan)#name HR
S1(config-vlan)#vlan 20
S1(config-vlan)#name Accounts
S1(config-vlan)#vlan 30
S1(config-vlan)#name Developer
S1(config-vlan)#end
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#vlan brief
     ^
% Invalid input detected at '^' marker.

S1#sh vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, 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   HR                               active
20   Accounts                         active
30   Developer                        active
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
S1#
```

```
S1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#interfa
S1(config)#interface range f0/1-4
S1(config-if-range)#switch
S1(config-if-range)#switchport mode
S1(config-if-range)#switchport mode ?
  access    Set trunking mode to ACCESS unconditionally
  dynamic   Set trunking mode to dynamically negotiate access or trunk mode
  trunk     Set trunking mode to TRUNK unconditionally
S1(config-if-range)#switchport mode access ?
  <cr>
S1(config-if-range)#switchport mode access vlan 10
                                          ^
% Invalid input detected at '^' marker.

S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport mode access vlan 10
                                          ^
% Invalid input detected at '^' marker.

S1(config-if-range)#switchport access vlan 10
S1(config-if-range)#inter
S1(config-if-range)#interfac
S1(config-if-range)#interface range f0/11-24
S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport access vlan 20
S1(config-if-range)#interface range f0/5-0
                    ^
% Invalid input detected at '^' marker.

S1(config-if-range)#exit
```

```
% Invalid input detected at     marker.

S1(config)#interface range f0/5-6
S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport access vlan 30
S1(config-if-range)#exit
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#sh vlan b

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/7, Fa0/8, Fa0/9, Fa0/10
                                                 Gig0/1, Gig0/2
10   HR                                active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
20   Accounts                          active    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
30   Developer                         active    Fa0/5, Fa0/6
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
S1#
```

Step 3 : Configure SPAN :

```
Switch#sh run
Building configuration...

Current configuration : 1158 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
```

```
Swit
Sess
----
Type                        rocai session


Destination Ports           Gig0/2
    xncaøsuia ion           Native
          ingress           Disabled

Swit
Swit
Sess
----
Type                        rocai session

    ax ooiø
    œx oniø                 some

       out                  None
    œx o iø                 None

Destination Ports           Gig0/2
    Encapsulation           Native
          Ingress           oisauiea
Filter VLANs                None
```