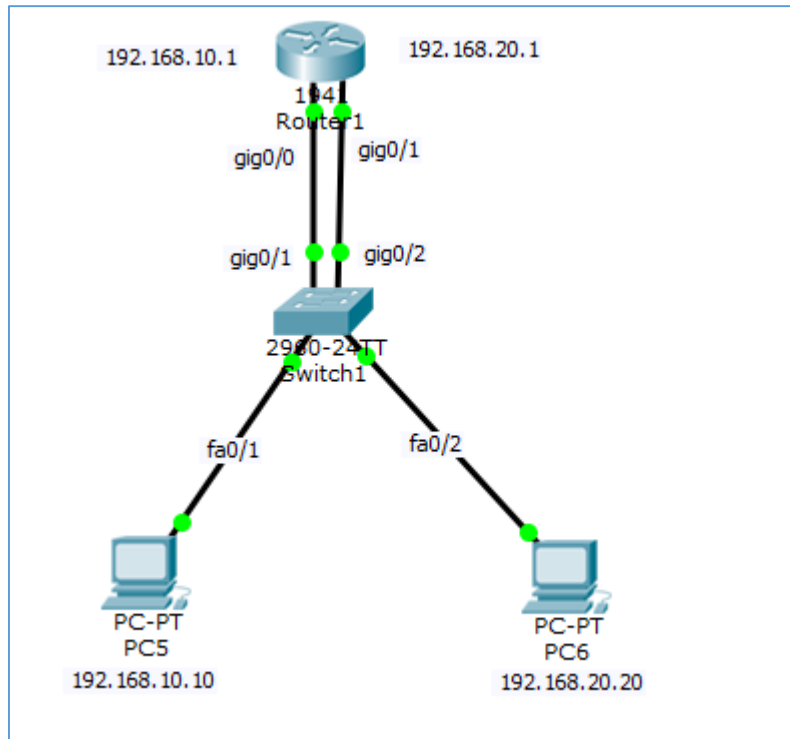## Experiment No. 09

Object: Inter VLAN Routing

Date: March 31, 2018

Configuration Figure:

Coding: *On Router*

```
Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#in
Router(config)#interface g
Router(config)#interface gigabitEthernet 0/0
Router(config-if)#ip a
Router(config-if)#ip ad
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
```

```
Router(config-if)#ex
Router(config)#

Router(config)#interface gigabitEthernet 0/1
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
ex
Router(config)#
Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```

Coding: _On Switch_

```
Switch>
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#
Switch(config)#vlan 10
Switch(config-vlan)#ex
Switch(config)#vlan 20
Switch(config-vlan)#ex
Switch(config)#
Switch(config)#interface gigabitEthernet 0/1
Switch(config-if)#switchport access vlan 10
Switch(config-if)#no shutdown
Switch(config-if)#ex
Switch(config)#
Switch(config)#interface gigabitEthernet 0/2
Switch(config-if)#switchport access vlan 20
Switch(config-if)#no shutdown
Switch(config-if)#ex
Switch(config)#
Switch(config)#
Switch(config)#in
Switch(config)#interface fa0/1
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#
Switch(config)#interface fa0/2
Switch(config-if)#switchport access vlan 20
Switch(config-if)#ex
Switch(config)#
Switch(config)#
%LINK-5-CHANGED: Interface FastEthernet0/10, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/10, changed state to down
```

Ping Test:

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time=1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=0ms TTL=255
Reply from 192.168.10.1: bytes=32 time=2ms TTL=255
Reply from 192.168.10.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

```
PC>ping 192.168.10.10

Pinging 192.168.10.10 with 32 bytes of data:

Reply from 192.168.10.10: bytes=32 time=6ms TTL=128
Reply from 192.168.10.10: bytes=32 time=6ms TTL=128
Reply from 192.168.10.10: bytes=32 time=6ms TTL=128
Reply from 192.168.10.10: bytes=32 time=45ms TTL=128

Ping statistics for 192.168.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 45ms, Average = 15ms
```

```
PC>ping 192.168.20.20

Pinging 192.168.20.20 with 32 bytes of data:

Reply from 192.168.20.20: bytes=32 time=1ms TTL=127
Reply from 192.168.20.20: bytes=32 time=0ms TTL=127
Reply from 192.168.20.20: bytes=32 time=1ms TTL=127
Reply from 192.168.20.20: bytes=32 time=0ms TTL=127

Ping statistics for 192.168.20.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
PC>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time=0ms TTL=255
Reply from 192.168.20.1: bytes=32 time=0ms TTL=255
Reply from 192.168.20.1: bytes=32 time=0ms TTL=255
Reply from 192.168.20.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```