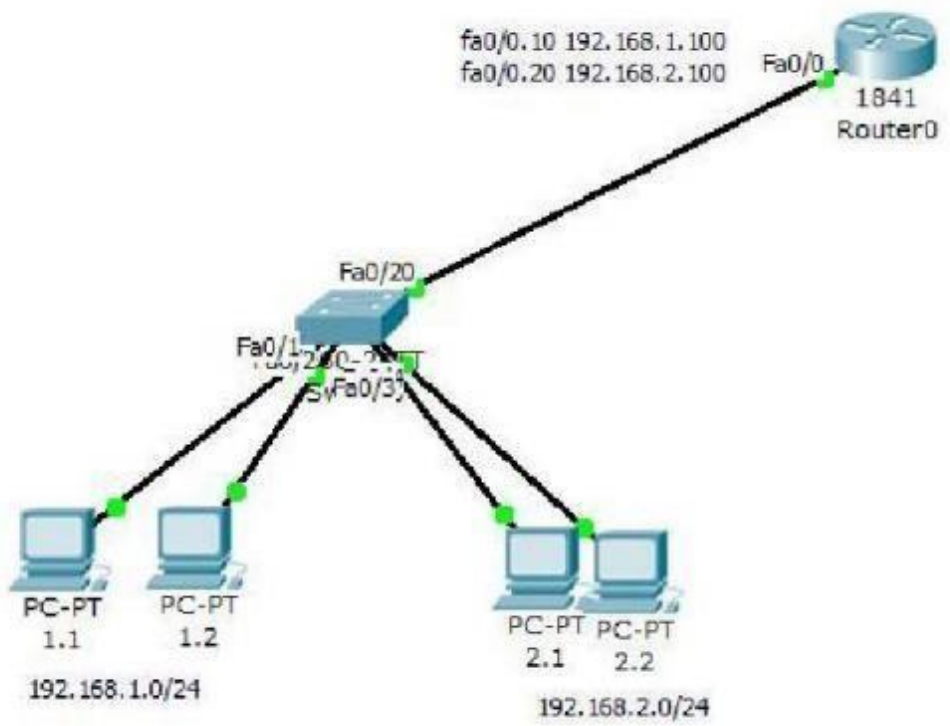
RRJETAT E KOMPJUTERAVE 1

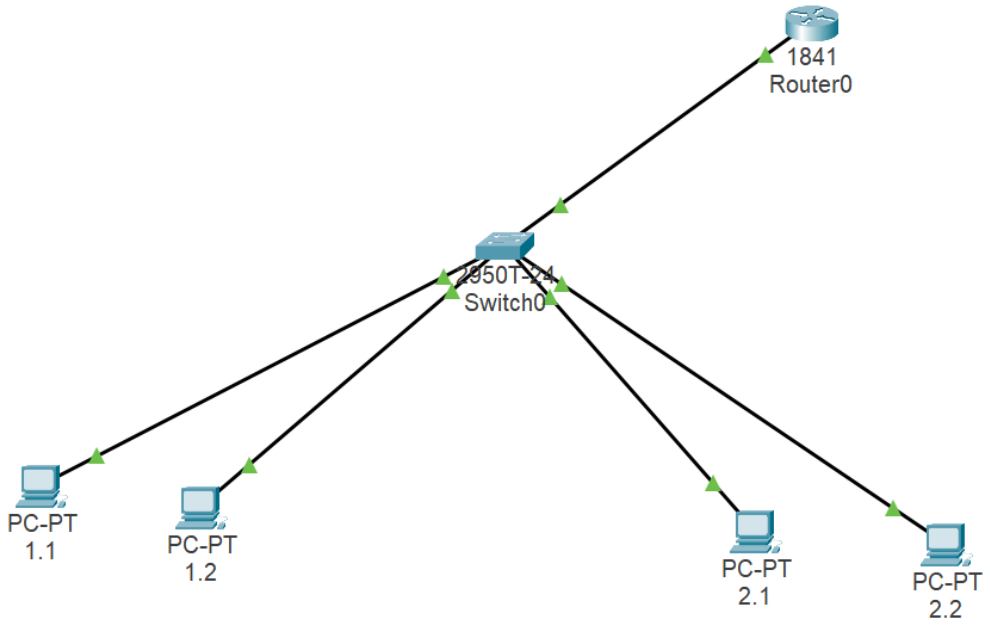
LAB 10

Tema: Konfigurimi i VLAN (Virtual Local Area Network) dhe rrugezimi Inter-VLAN per nje Rrjet



A) Create VLAN and shift the ports
B) Configure on switch fa0/ 20 as trunk port
C) Create sub intrefaces on router port fa0/ 0
D) Verify connectivity between VLANs (ping 192.168.1.1 ---192.168.2.1)

Skema e krijuar ne Packtet Tracer



A) Create VLAN and shift the ports.
B) Configure on switch fa0/ 20 as trunk port

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#
Switch(config)#
Switch(config)#vlan 10
Switch(config-vlan)#name VLAN10
Switch(config-vlan)#EXEexit
Switch(config)#vlan 20
Switch(config-vlan)#name VLAN20
Switch(config-vlan)#exit
Switch(config)#ini
Switch(config)#interface FastEthernet0/1
Switch(config-if)#interface range f0/1-2
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface range f0/3-4
Switch(config-if-range)# switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#interface f0/20
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

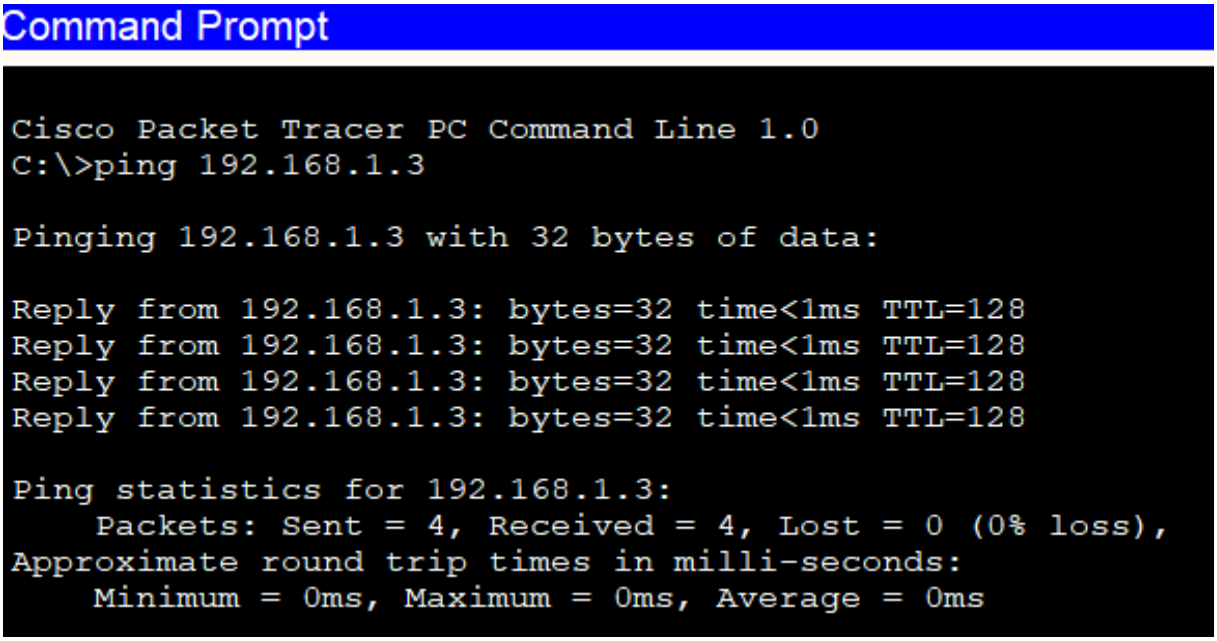
Tek Switch , konfigurojmë rrjetet VLAN si në figurë. Kemi 2 rrjeta VLAN që i kam quajtur VLAN10 dhe VLAN20 të cilët përcaktojnë rrjetat e PC si në figuré.

C) Create sub interfaces on router port fa0/ 0

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface f0/0.10
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip address 192.168.1.100 255.255.255.0
Router(config-subif)#exit
Router(config)#interface f0/0.20
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip address 192.168.2.100 255.255.255.0
Router(config-subif)#exit
Router(config)#interface f0/0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.10, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/0.20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.20, changed state to up

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

Këtu kemi përcaktuar sub interfaces te Router si f0/0.10 dhe f0/0.20.

A) Verify connectivity between VLANs (ping 192.168.1.1 ---192.168.2.1)



```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=5ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time=1ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 1ms

C:\>
```

Këtu kam bere ping prej PC 1.1 ne adresat 192.168.2.2 dhe 192.168.1.3.

Kam marre IP e mëposhtme per PC dhe router

```
Device Name: Router0
Device Model: 1841
Hostname: Router

Port                Link   VLAN   IP Address          IPv6 Address                              MAC Address
FastEthernet0/0     Up     --     <not set>           <not set>                                 0050.0F89.3501
FastEthernet0/0.10  Up     --     192.168.1.100/24    <not set>                                 0050.0F89.3501
FastEthernet0/0.20  Up     --     192.168.2.100/24    <not set>                                 0050.0F89.3501
FastEthernet0/1     Down   --     <not set>           <not set>                                 0050.0F89.3502
Vlan1               Down   1      <not set>           <not set>                                 0060.700E.AC89

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router0
```

```
Device Name: 1.1
Device Model: PC-PT

Port            Link   IP Address         IPv6 Address                              MAC Address
FastEthernet0   Up     192.168.1.2/24     <not set>                                 0040.0B3B.11AB
Bluetooth       Down   <not set>          <not set>                                 000A.41ED.CE1E

Gateway: 192.168.1.100
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > PC0
```

```
Device Name: 1.2
Device Model: PC-PT

Port            Link   IP Address         IPv6 Address                              MAC Address
FastEthernet0   Up     192.168.1.3/24     <not set>                                 000C.8564.C5B3
Bluetooth       Down   <not set>          <not set>                                 000C.85E8.71B4

Gateway: 192.168.1.100
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > PC1
```

```
Device Name: 2.1
Device Model: PC-PT

Port            Link   IP Address         IPv6 Address                              MAC Address
FastEthernet0   Up     192.168.2.2/24     <not set>                                 0002.4AA8.8697
Bluetooth       Down   <not set>          <not set>                                 00D0.D34C.D811

Gateway: 192.168.2.100
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > PC2
```

```
Device Name: 2.2
Device Model: PC-PT

Port            Link   IP Address         IPv6 Address                              MAC Address
FastEthernet0   Up     192.168.2.3/24     <not set>                                 00D0.5869.2144
Bluetooth       Down   <not set>          <not set>                                 00D0.FFB8.A5EA

Gateway: 192.168.2.100
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > PC3
```

```
Device Name: Switch0
Device Model: 2950T-24
Hostname: Switch

Port                 Link   VLAN   IP Address          MAC Address
FastEthernet0/1      Up     10     --                  0006.2A60.8701
FastEthernet0/2      Up     10     --                  0006.2A60.8702
FastEthernet0/3      Up     20     --                  0006.2A60.8703
FastEthernet0/4      Up     20     --                  0006.2A60.8704
FastEthernet0/5      Down   --     --                  0006.2A60.8705
FastEthernet0/6      Down   --     --                  0006.2A60.8706
FastEthernet0/7      Down   --     --                  0006.2A60.8707
FastEthernet0/8      Down   --     --                  0006.2A60.8708
FastEthernet0/9      Down   --     --                  0006.2A60.8709
FastEthernet0/10     Down   --     --                  0006.2A60.870A
FastEthernet0/11     Down   --     --                  0006.2A60.870B
FastEthernet0/12     Down   --     --                  0006.2A60.870C
FastEthernet0/13     Down   --     --                  0006.2A60.870D
FastEthernet0/14     Down   --     --                  0006.2A60.870E
FastEthernet0/15     Down   --     --                  0006.2A60.870F
FastEthernet0/16     Down   --     --                  0006.2A60.8710
FastEthernet0/17     Down   --     --                  0006.2A60.8711
FastEthernet0/18     Down   --     --                  0006.2A60.8712
FastEthernet0/19     Down   --     --                  0006.2A60.8713
FastEthernet0/20     Up     --     --                  0006.2A60.8714
FastEthernet0/21     Down   --     --                  0006.2A60.8715
FastEthernet0/22     Down   --     --                  0006.2A60.8716
FastEthernet0/23     Down   --     --                  0006.2A60.8717
FastEthernet0/24     Down   --     --                  0006.2A60.8718
GigabitEthernet0/1   Down   1      --                  0006.2A60.8719
GigabitEthernet0/2   Down   1      --                  0006.2A60.871A
Vlan1                Down   1      <not set>           0030.A3E8.3D22

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch0
```