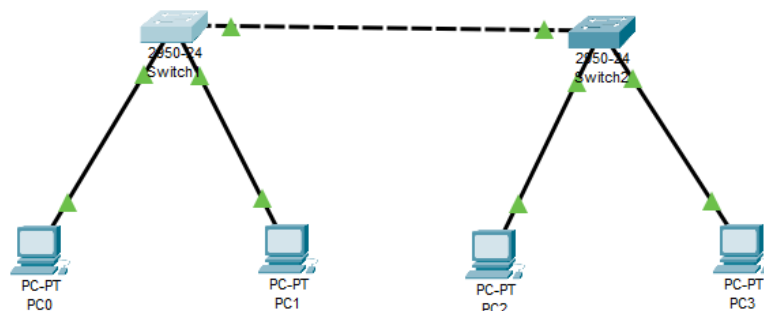# Практическая работа – Связываем VLAN с помощью роутера

1. Создаем сеть.

2. Задаем IP для устройств.

3. Настраиваем первый switch.

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa0/1
Switch(config-if)#sw ac vl 10
                              ^
% Invalid input detected at '^' marker.

Switch(config-if)#sw ac vl 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#no sh
Switch(config-if)#int fa0/2
Switch(config-if)#sw ac vl 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if)#no sh
Switch(config-if)#exit
Switch(config)#
```

4. Настраиваем второй.

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#sw ac vl 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#no sh
Switch(config-if)#int fa0/2
Switch(config-if)#sw ac vl 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if)#no sh
Switch(config-if)#exit
Switch(config)#
```

5. Настраиваем trunk порт между свичами.

```
Switch(config)#int gi0/1
Switch(config-if)#sw mode trunk
Switch(config-if)#no sh
Switch(config-if)#exitt
                    ^
% Invalid input detected at '^' marker.

Switch(config-if)#exit
```

6. Проверяем с компьютера 192.168.1.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

7. Добавляем и настраиваем роутер.

```
Router(config)#int fa0/0
Router(config-if)#ip ad 192.168.1.100 255.255.255.0
Router(config-if)#no sh

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
int fa0/1
%Invalid interface type and number
Router(config)#int fa1/0
Router(config-if)#ip ad 192.168.2.100 255.255.255.0
Router(config-if)#no sh

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
```

8. Настраиваем выход к роутеру для каждого свича.

```
Switch(config)#int fa0/3
Switch(config-if)#sw ac vl 10
Switch(config-if)#no sh
Switch(config-if)#exit
Switch(config)#
```

9. Пробуем

```
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<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
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 = 0ms, Average = 0ms

C:\>
```