Лабораторная работа №4

• Настройка на коммутаторах логической топологии используя протокол IEEE 802.1Q

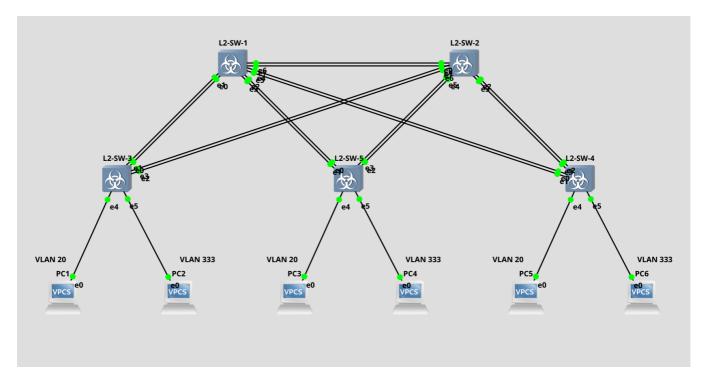
o L2-SW-1, L2-SW-2

```
vlan 20
name VLAN20
vlan 333
name VLAN333
int range g0/0-3
{\it switchport\ trunk\ encapsulation\ dot 1q}
switchport trunk native vlan 333
switchport mode trunk
no shut
exit
int range g1/0-3
switchport trunk encapsulation dot1q
switchport trunk native vlan 333
switchport mode trunk
no shut
exit
spanning-tree vlan 20,333 root primary / secondary
```

L2-SW-3, L2-SW-4, L2-SW-5

```
vlan 20
name VLAN20
vlan 333
name VLAN333
exit
int range g0/0-3
shut
switchport trunk encapsulation dot1q
switchport trunk native vlan 333
switchport mode trunk
no shut
exit
int g1/0
shut
switchport mode access
switchport access vlan 20
no shut
exit
int g1/1
shut
switchport mode access
switchport access vlan 333
no shut
exit
```

• Схема сети



• Проверка доступности персональных компьютеров

- o PC1
 - To PC2

```
PC1> ping 192.168.1.2
host (192.168.1.2) not reachable
```

■ To PC3

```
PC1> ping 192.168.2.1

84 bytes from 192.168.2.1 icmp_seq=1 ttl=64 time=15.722 ms

84 bytes from 192.168.2.1 icmp_seq=2 ttl=64 time=6.837 ms

84 bytes from 192.168.2.1 icmp_seq=3 ttl=64 time=7.954 ms

84 bytes from 192.168.2.1 icmp_seq=4 ttl=64 time=3.898 ms

84 bytes from 192.168.2.1 icmp_seq=5 ttl=64 time=1.948 ms
```

■ To PC4

```
PC1> ping 192.168.2.2
host (192.168.2.2) not reachable
```

■ To PC5

```
PC1> ping 192.168.3.1

84 bytes from 192.168.3.1 icmp_seq=1 ttl=64 time=9.198 ms

84 bytes from 192.168.3.1 icmp_seq=2 ttl=64 time=5.519 ms

84 bytes from 192.168.3.1 icmp_seq=3 ttl=64 time=7.122 ms

84 bytes from 192.168.3.1 icmp_seq=4 ttl=64 time=7.295 ms

84 bytes from 192.168.3.1 icmp_seq=5 ttl=64 time=7.409 ms
```

■ To PC6

```
PC1> ping 192.168.3.2
host (192.168.3.2) not reachable
```

- o PC2
 - To PC3

```
PC2> ping 192.168.2.1
host (192.168.2.1) not reachable
```

■ To PC4

```
PC2> ping 192.168.2.2

84 bytes from 192.168.2.2 icmp_seq=1 ttl=64 time=6.300 ms

84 bytes from 192.168.2.2 icmp_seq=2 ttl=64 time=7.769 ms

84 bytes from 192.168.2.2 icmp_seq=3 ttl=64 time=6.838 ms

84 bytes from 192.168.2.2 icmp_seq=4 ttl=64 time=6.340 ms

84 bytes from 192.168.2.2 icmp_seq=5 ttl=64 time=7.459 ms
```

■ To PC5

```
PC2> ping 192.168.3.1
host (192.168.3.1) not reachable
```

■ To PC6

```
PC2> ping 192.168.3.2

84 bytes from 192.168.3.2 icmp_seq=1 ttl=64 time=10.107 ms

84 bytes from 192.168.3.2 icmp_seq=2 ttl=64 time=7.374 ms

84 bytes from 192.168.3.2 icmp_seq=3 ttl=64 time=5.063 ms

84 bytes from 192.168.3.2 icmp_seq=4 ttl=64 time=7.512 ms

84 bytes from 192.168.3.2 icmp_seq=5 ttl=64 time=13.720 ms
```

o PC3

■ To PC4

```
PC3> ping 192.168.2.2
host (192.168.2.2) not reachable
```

■ To PC5

```
PC3> ping 192.168.3.1

84 bytes from 192.168.3.1 icmp_seq=1 ttl=64 time=12.363 ms

84 bytes from 192.168.3.1 icmp_seq=2 ttl=64 time=6.695 ms

84 bytes from 192.168.3.1 icmp_seq=3 ttl=64 time=6.125 ms

84 bytes from 192.168.3.1 icmp_seq=4 ttl=64 time=5.094 ms

84 bytes from 192.168.3.1 icmp_seq=5 ttl=64 time=6.932 ms
```

■ To PC6

```
PC3> ping 192.168.3.2
host (192.168.3.2) not reachable
```

o PC4

■ To PC5

```
PC4> ping 192.168.3.1
host (192.168.3.1) not reachable
```

■ To PC6

```
PC4> ping 192.168.3.2

84 bytes from 192.168.3.2 icmp_seq=1 ttl=64 time=4.335 ms

84 bytes from 192.168.3.2 icmp_seq=2 ttl=64 time=6.939 ms

84 bytes from 192.168.3.2 icmp_seq=3 ttl=64 time=4.280 ms

84 bytes from 192.168.3.2 icmp_seq=4 ttl=64 time=3.755 ms

84 bytes from 192.168.3.2 icmp_seq=5 ttl=64 time=6.591 ms
```

o PC5

■ To PC6

```
PC5> ping 192.168.3.2
host (192.168.3.2) not reachable
```