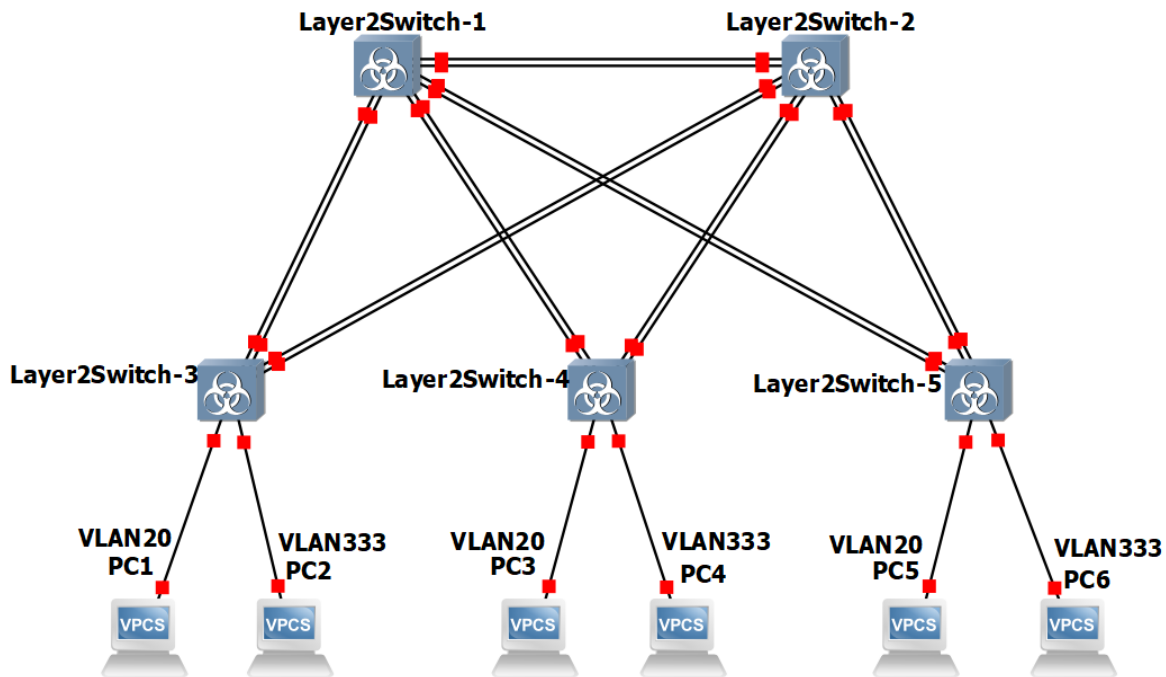


Лабораторная работа №3

Тема: Настройка виртуальной локальной сети (VLAN)

1) Для заданной на схеме schema-lab3 сети, состоящей из управляемых коммутаторов и персональных компьютеров



настроила на коммутаторах логическую топологию, используя протокол IEEE 802.1Q, для передачи пакетов VLAN333 между коммутаторами использовала Native VLAN. Для этого на каждом коммутаторе были использованы данные команды (пример для SW3):

enable

configure terminal

// Если есть подключение к PC

int gigabitEthernet 1/0

description PC1-VLAN20

switchport mode access

switchport access vlan 20

no shutdown

exit

int gigabiethernet 1/1

description PC2-VLAN333

switchport mode access

switchport access vlan 333

no shutdown

exit

int gigabiethernet 0/0

description Trunk-to-Layer2Switch-1_1

switchport mode trunk

switchport trunk native vlan 333

switchport trunk allowed vlan 20,333

no shutdown

exit

int gigabiethernet 0/1

description Trunk-to-Layer2Switch-1_2

switchport mode trunk

switchport trunk native vlan 333

switchport trunk allowed vlan 20,333

no shutdown

exit

```
int gigabiethernet 0/2  
description Trunk-to-Layer2Switch-2_1  
switchport mode trunk  
switchport trunk native vlan 333  
switchport trunk allowed vlan 20,333  
no shutdown  
exit
```

```
int gigabiethernet 0/3  
description Trunk-to-Layer2Switch-2_2  
switchport mode trunk  
switchport trunk native vlan 333  
switchport trunk allowed vlan 20,333  
no shutdown  
exit
```

2) Проверила доступность персональных компьютеров, находящихся в одинаковых VLAN и недоступность находящихся в различных.

```
PC1> ping 192.168.20.2
```

```
84 bytes from 192.168.20.2 icmp_seq=1 ttl=64 time=2.220 ms  
84 bytes from 192.168.20.2 icmp_seq=2 ttl=64 time=4.305 ms  
84 bytes from 192.168.20.2 icmp_seq=3 ttl=64 time=9.667 ms  
84 bytes from 192.168.20.2 icmp_seq=4 ttl=64 time=4.887 ms  
84 bytes from 192.168.20.2 icmp_seq=5 ttl=64 time=9.115 ms
```

```
PC1> ping 192.168.20.3
```

```
84 bytes from 192.168.20.3 icmp_seq=1 ttl=64 time=7.837 ms  
84 bytes from 192.168.20.3 icmp_seq=2 ttl=64 time=14.092 ms  
84 bytes from 192.168.20.3 icmp_seq=3 ttl=64 time=9.429 ms  
84 bytes from 192.168.20.3 icmp_seq=4 ttl=64 time=6.218 ms  
84 bytes from 192.168.20.3 icmp_seq=5 ttl=64 time=4.692 ms
```

```
PC1> ping 192.168.33.1
```

```
No gateway found
```

```
PC1> ping 192.168.33.2
```

```
No gateway found
```

```
PC1> ping 192.168.33.3
```

```
No gateway found
```

```
ping 192.168.33.2
```

```
84 bytes from 192.168.33.2 icmp_seq=1 ttl=64 time=15.022 ms  
84 bytes from 192.168.33.2 icmp_seq=2 ttl=64 time=6.991 ms  
84 bytes from 192.168.33.2 icmp_seq=3 ttl=64 time=6.582 ms  
84 bytes from 192.168.33.2 icmp_seq=4 ttl=64 time=13.142 ms  
84 bytes from 192.168.33.2 icmp_seq=5 ttl=64 time=4.693 ms
```

```
PC2> ping 192.168.33.3
```

```
84 bytes from 192.168.33.3 icmp_seq=1 ttl=64 time=9.328 ms  
84 bytes from 192.168.33.3 icmp_seq=2 ttl=64 time=12.520 ms  
84 bytes from 192.168.33.3 icmp_seq=3 ttl=64 time=2.520 ms  
84 bytes from 192.168.33.3 icmp_seq=4 ttl=64 time=12.190 ms  
84 bytes from 192.168.33.3 icmp_seq=5 ttl=64 time=11.438 ms
```

```
PC2> ping 192.168.20.1
```

```
No gateway found
```

```
PC2> ping 192.168.20.2
```

```
No gateway found
```

```
PC2> ping 192.168.20.3
```

```
No gateway found
```

```
PC3> ping 192.168.20.1
84 bytes from 192.168.20.1 icmp_seq=1 ttl=64 time=6.142 ms
84 bytes from 192.168.20.1 icmp_seq=2 ttl=64 time=7.192 ms
84 bytes from 192.168.20.1 icmp_seq=3 ttl=64 time=7.772 ms
84 bytes from 192.168.20.1 icmp_seq=4 ttl=64 time=3.658 ms
84 bytes from 192.168.20.1 icmp_seq=5 ttl=64 time=3.904 ms

PC3> ping 192.168.20.3
84 bytes from 192.168.20.3 icmp_seq=1 ttl=64 time=16.965 ms
84 bytes from 192.168.20.3 icmp_seq=2 ttl=64 time=1.474 ms
84 bytes from 192.168.20.3 icmp_seq=3 ttl=64 time=5.934 ms
84 bytes from 192.168.20.3 icmp_seq=4 ttl=64 time=7.137 ms
84 bytes from 192.168.20.3 icmp_seq=5 ttl=64 time=7.842 ms

PC3> ping 192.168.33.1
No gateway found

PC3> ping 192.168.33.2
No gateway found

PC3> ping 192.168.33.3
No gateway found
```

```
ping 192.168.33.1
84 bytes from 192.168.33.1 icmp_seq=1 ttl=64 time=9.889 ms
84 bytes from 192.168.33.1 icmp_seq=2 ttl=64 time=7.325 ms
84 bytes from 192.168.33.1 icmp_seq=3 ttl=64 time=13.748 ms
84 bytes from 192.168.33.1 icmp_seq=4 ttl=64 time=6.622 ms
84 bytes from 192.168.33.1 icmp_seq=5 ttl=64 time=7.185 ms

PC4> ping 192.168.33.3
84 bytes from 192.168.33.3 icmp_seq=1 ttl=64 time=11.931 ms
84 bytes from 192.168.33.3 icmp_seq=2 ttl=64 time=3.148 ms
84 bytes from 192.168.33.3 icmp_seq=3 ttl=64 time=7.832 ms
84 bytes from 192.168.33.3 icmp_seq=4 ttl=64 time=7.025 ms
84 bytes from 192.168.33.3 icmp_seq=5 ttl=64 time=7.163 ms

PC4> ping 192.168.20.1
No gateway found

PC4> ping 192.168.20.2
No gateway found

PC4> ping 192.168.20.3
No gateway found
```

```
PC5> ping 192.168.20.1
```

```
84 bytes from 192.168.20.1 icmp_seq=1 ttl=64 time=5.731 ms  
84 bytes from 192.168.20.1 icmp_seq=2 ttl=64 time=8.622 ms  
84 bytes from 192.168.20.1 icmp_seq=3 ttl=64 time=5.754 ms  
84 bytes from 192.168.20.1 icmp_seq=4 ttl=64 time=7.124 ms  
84 bytes from 192.168.20.1 icmp_seq=5 ttl=64 time=7.488 ms
```

```
PC5> ping 192.168.20.2
```

```
84 bytes from 192.168.20.2 icmp_seq=1 ttl=64 time=4.234 ms  
84 bytes from 192.168.20.2 icmp_seq=2 ttl=64 time=10.319 ms  
84 bytes from 192.168.20.2 icmp_seq=3 ttl=64 time=4.872 ms  
84 bytes from 192.168.20.2 icmp_seq=4 ttl=64 time=6.872 ms  
84 bytes from 192.168.20.2 icmp_seq=5 ttl=64 time=6.426 ms
```

```
PC5> ping 192.168.33.1
```

```
No gateway found
```

```
PC5> ping 192.168.33.2
```

```
No gateway found
```

```
PC5> ping 192.168.33.3
```

```
No gateway found
```

```
ping 192.168.33.1
```

```
84 bytes from 192.168.33.1 icmp_seq=1 ttl=64 time=7.071 ms  
84 bytes from 192.168.33.1 icmp_seq=2 ttl=64 time=6.297 ms  
84 bytes from 192.168.33.1 icmp_seq=3 ttl=64 time=9.156 ms  
84 bytes from 192.168.33.1 icmp_seq=4 ttl=64 time=5.160 ms  
84 bytes from 192.168.33.1 icmp_seq=5 ttl=64 time=9.307 ms
```

```
PC6> ping 192.168.33.2
```

```
84 bytes from 192.168.33.2 icmp_seq=1 ttl=64 time=6.315 ms  
84 bytes from 192.168.33.2 icmp_seq=2 ttl=64 time=3.795 ms  
84 bytes from 192.168.33.2 icmp_seq=3 ttl=64 time=7.276 ms  
84 bytes from 192.168.33.2 icmp_seq=4 ttl=64 time=6.641 ms  
84 bytes from 192.168.33.2 icmp_seq=5 ttl=64 time=13.912 ms
```

```
PC6> ping 192.168.20.1
```

```
No gateway found
```

```
PC6> ping 192.168.20.2
```

```
No gateway found
```

```
PC6> ping 192.168.20.3
```

```
No gateway found
```

3) Перехватила в WireShark пакеты с тегами и без тегов.

С тегом 20:

Wireshark capture showing STP packets. The filter is `eth.type == 0x8100`. The selected packet (No. 643) is an Ethernet II frame with a destination of PVST+ (01:00:0c:cc:cc:cd) and a source of 0c:e1:3e:79:00:02. The packet contains an 802.1Q Virtual LAN tag with a priority of 0 (Best Effort) and a length of 50. The packet is part of a Spanning Tree Protocol (STP) message.

No.	Time	Source	Destination	Protocol	Length	Info
640	479.950904	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
641	481.944643	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
642	481.950666	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
643	483.951240	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
644	483.951424	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
648	485.943885	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
649	485.949879	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
650	487.943583	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
651	487.949568	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
652	489.943282	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
653	489.949349	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
654	491.950076	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
655	491.950306	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003

Frame 643: Packet, 68 bytes on wire (544 bits), 68 bytes captured (544 bits) on interface -, id 0
Ethernet II, Src: 0c:e1:3e:79:00:02 (0c:e1:3e:79:00:02), Dst: PVST+ (01:00:0c:cc:cc:cd)
Destination: PVST+ (01:00:0c:cc:cc:cd)
Source: 0c:e1:3e:79:00:02 (0c:e1:3e:79:00:02)
Type: 802.1Q Virtual LAN (0x8100)
[Stream index: 0]
802.1Q Virtual LAN, PRI: 0, DEI: 0, ID: 20
000. = Priority: Best Effort (default) (0)
...0 = DEI: Ineligible
.... 0000 0001 0100 = ID: 20
Length: 50
Logical-Link Control
Spanning Tree Protocol

С тегом 333:

Wireshark capture showing STP packets. The filter is `eth.type == 0x8100`. The selected packet (No. 547) is an Ethernet II frame with a destination of PVST+ (01:00:0c:cc:cc:cd) and a source of 0c:e1:3e:79:00:02. The packet contains an 802.1Q Virtual LAN tag with a priority of 0 (Best Effort) and a length of 50. The packet is part of a Spanning Tree Protocol (STP) message.

No.	Time	Source	Destination	Protocol	Length	Info
540	403.957638	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
543	405.951126	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
544	405.956055	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
545	406.434614	0c:e1:3e:79:00:02	CDP/VTP/DTP/PagP/UDLD	DTP	62	Dynamic Trunk Protocol
546	407.950805	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
547	407.955732	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
548	408.179833	0c:e4:52:fc:00:00	CDP/VTP/DTP/PagP/UDLD	DTP	62	Dynamic Trunk Protocol
549	409.950491	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
550	409.955527	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
551	411.950186	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
552	411.955378	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
553	413.950303	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/20/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003
554	413.954981	0c:e1:3e:79:00:02	PVST+	STP	68	Conf. Root = 32768/333/0c:36:e4:51:00:00 Cost = 4 Port = 0x8003

Frame 547: Packet, 68 bytes on wire (544 bits), 68 bytes captured (544 bits) on interface -, id 0
Ethernet II, Src: 0c:e1:3e:79:00:02 (0c:e1:3e:79:00:02), Dst: PVST+ (01:00:0c:cc:cc:cd)
Destination: PVST+ (01:00:0c:cc:cc:cd)
Source: 0c:e1:3e:79:00:02 (0c:e1:3e:79:00:02)
Type: 802.1Q Virtual LAN (0x8100)
[Stream index: 0]
802.1Q Virtual LAN, PRI: 0, DEI: 0, ID: 333
000. = Priority: Best Effort (default) (0)
...0 = DEI: Ineligible
.... 0001 0100 1101 = ID: 333
Length: 50
Logical-Link Control
Spanning Tree Protocol

Без тега:

Захват с Standard input [Layer2Switch-1 Ethernet2 to Layer2Switch-3 Ethernet0]

Файл Правка Вид Запуск Захват Анализ Статистика Телефония Беспроводная связь Инструменты Справка

not vlan

No.	Time	Source	Destination	Protocol	Length	Info
7	4.239020	0c:e4:52:fc:00:00	CDP/VTP/DTP/PagP/UDLD	CDP	424	Device ID: Switch Port ID: GigabitEthernet0/0
8	5.340811	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply
9	5.849885	0c:e1:3e:79:00:02	0c:e1:3e:79:00:02	LOOP	60	Reply
20	15.339324	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply
21	15.848314	0c:e1:3e:79:00:02	0c:e1:3e:79:00:02	LOOP	60	Reply
34	25.338789	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply
35	25.847792	0c:e1:3e:79:00:02	0c:e1:3e:79:00:02	LOOP	60	Reply
46	35.337281	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply
47	35.846339	0c:e1:3e:79:00:02	0c:e1:3e:79:00:02	LOOP	60	Reply
58	45.336750	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply
59	45.607375	0c:e1:3e:79:00:02	CDP/VTP/DTP/PagP/UDLD	CDP	424	Device ID: Switch Port ID: GigabitEthernet0/2
60	45.844689	0c:e1:3e:79:00:02	0c:e1:3e:79:00:02	LOOP	60	Reply
71	52.292702	0c:e4:52:fc:00:00	CDP/VTP/DTP/PagP/UDLD	CDP	424	Device ID: Switch Port ID: GigabitEthernet0/0
74	55.335726	0c:e4:52:fc:00:00	0c:e4:52:fc:00:00	LOOP	60	Reply

Frame 7: Packet, 424 bytes on wire (3392 bits), 424 bytes captured (3392 bits) on interface -, id 0

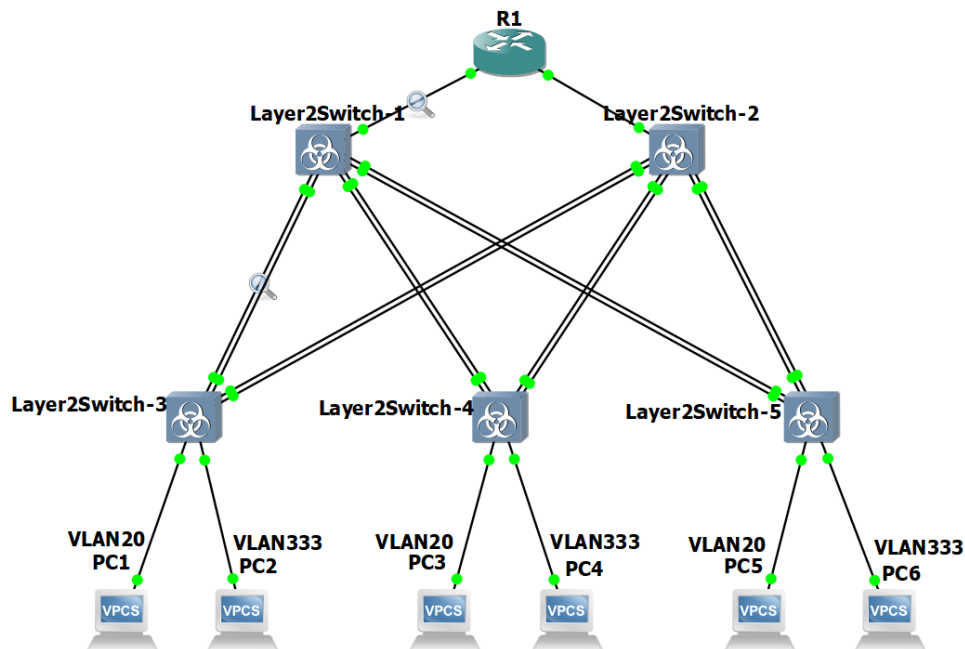
IEEE 802.3 Ethernet

- Destination: CDP/VTP/DTP/PagP/UDLD (01:00:0c:cc:cc:cc)
- Source: 0c:e4:52:fc:00:00 (0c:e4:52:fc:00:00)
- Length: 410
- [Stream index: 1]
- Logical-Link Control
- Cisco Discovery Protocol

0000 01 00 0c cc cc cc 0c e
0010 03 00 00 0c 20 00 02 b
0020 69 74 63 68 00 05 01 3
0030 53 20 53 6f 66 74 77 6
0040 5f 6c 32 20 53 6f 66 7
0050 6f 73 5f 6c 32 2d 41 4
0060 49 53 45 4b 39 2d 4d 2
0070 6e 20 31 35 2e 30 28 5
0080 36 30 35 29 46 4c 4f 5

4) Сохранила файлы конфигураций устройств в виде набора файлов с именами, соответствующими именам устройств.

5*) Добавила в схему маршрутизатор, подключенный к коммутаторам Layer2Switch1 и Layer2Switch2, настроила через него маршрутизацию между VLAN.



Проверим, что компьютеры с одинаковыми VLAN доступны.

```
ping 192.168.20.3
```

```
84 bytes from 192.168.20.3 icmp_seq=1 ttl=64 time=3.391 ms
84 bytes from 192.168.20.3 icmp_seq=2 ttl=64 time=15.061 ms
84 bytes from 192.168.20.3 icmp_seq=3 ttl=64 time=10.163 ms
84 bytes from 192.168.20.3 icmp_seq=4 ttl=64 time=7.027 ms
84 bytes from 192.168.20.3 icmp_seq=5 ttl=64 time=7.829 ms
```

```
PC1> ping 192.168.20.2
```

```
84 bytes from 192.168.20.2 icmp_seq=1 ttl=64 time=8.207 ms
84 bytes from 192.168.20.2 icmp_seq=2 ttl=64 time=1.444 ms
84 bytes from 192.168.20.2 icmp_seq=3 ttl=64 time=2.994 ms
84 bytes from 192.168.20.2 icmp_seq=4 ttl=64 time=17.766 ms
84 bytes from 192.168.20.2 icmp_seq=5 ttl=64 time=13.405 ms
```

```
ping 192.168.33.2
```

```
84 bytes from 192.168.33.2 icmp_seq=1 ttl=64 time=7.888 ms
84 bytes from 192.168.33.2 icmp_seq=2 ttl=64 time=3.211 ms
84 bytes from 192.168.33.2 icmp_seq=3 ttl=64 time=7.740 ms
84 bytes from 192.168.33.2 icmp_seq=4 ttl=64 time=8.083 ms
84 bytes from 192.168.33.2 icmp_seq=5 ttl=64 time=21.333 ms
```

```
PC2> ping 192.168.33.3
```

```
84 bytes from 192.168.33.3 icmp_seq=1 ttl=64 time=12.923 ms
84 bytes from 192.168.33.3 icmp_seq=2 ttl=64 time=9.027 ms
84 bytes from 192.168.33.3 icmp_seq=3 ttl=64 time=5.343 ms
84 bytes from 192.168.33.3 icmp_seq=4 ttl=64 time=6.583 ms
84 bytes from 192.168.33.3 icmp_seq=5 ttl=64 time=7.240 ms
```

```
ping 192.168.20.1
```

```
84 bytes from 192.168.20.1 icmp_seq=1 ttl=64 time=10.715 ms
84 bytes from 192.168.20.1 icmp_seq=2 ttl=64 time=6.904 ms
84 bytes from 192.168.20.1 icmp_seq=3 ttl=64 time=6.360 ms
84 bytes from 192.168.20.1 icmp_seq=4 ttl=64 time=6.537 ms
84 bytes from 192.168.20.1 icmp_seq=5 ttl=64 time=6.520 ms
```

```
PC3> ping 192.168.20.3
```

```
84 bytes from 192.168.20.3 icmp_seq=1 ttl=64 time=10.283 ms
84 bytes from 192.168.20.3 icmp_seq=2 ttl=64 time=6.154 ms
84 bytes from 192.168.20.3 icmp_seq=3 ttl=64 time=10.119 ms
84 bytes from 192.168.20.3 icmp_seq=4 ttl=64 time=10.397 ms
84 bytes from 192.168.20.3 icmp_seq=5 ttl=64 time=3.035 ms
```

```
ping 192.168.33.1
```

```
84 bytes from 192.168.33.1 icmp_seq=1 ttl=64 time=7.394 ms
84 bytes from 192.168.33.1 icmp_seq=2 ttl=64 time=7.512 ms
84 bytes from 192.168.33.1 icmp_seq=3 ttl=64 time=6.844 ms
84 bytes from 192.168.33.1 icmp_seq=4 ttl=64 time=15.222 ms
84 bytes from 192.168.33.1 icmp_seq=5 ttl=64 time=14.896 ms
```

```
PC4> ping 192.168.33.3
```

```
84 bytes from 192.168.33.3 icmp_seq=1 ttl=64 time=17.006 ms
84 bytes from 192.168.33.3 icmp_seq=2 ttl=64 time=5.710 ms
84 bytes from 192.168.33.3 icmp_seq=3 ttl=64 time=2.912 ms
84 bytes from 192.168.33.3 icmp_seq=4 ttl=64 time=6.543 ms
84 bytes from 192.168.33.3 icmp_seq=5 ttl=64 time=12.968 ms
```

```
ping 192.168.20.1
```

```
84 bytes from 192.168.20.1 icmp_seq=1 ttl=64 time=12.738 ms
84 bytes from 192.168.20.1 icmp_seq=2 ttl=64 time=7.767 ms
84 bytes from 192.168.20.1 icmp_seq=3 ttl=64 time=5.551 ms
84 bytes from 192.168.20.1 icmp_seq=4 ttl=64 time=8.710 ms
84 bytes from 192.168.20.1 icmp_seq=5 ttl=64 time=6.964 ms
```

```
PC5> ping 192.168.20.2
```

```
84 bytes from 192.168.20.2 icmp_seq=1 ttl=64 time=2.491 ms
84 bytes from 192.168.20.2 icmp_seq=2 ttl=64 time=5.222 ms
84 bytes from 192.168.20.2 icmp_seq=3 ttl=64 time=9.415 ms
84 bytes from 192.168.20.2 icmp_seq=4 ttl=64 time=7.737 ms
84 bytes from 192.168.20.2 icmp_seq=5 ttl=64 time=13.909 ms
```

```
ping 192.168.33.1
```

```
84 bytes from 192.168.33.1 icmp_seq=1 ttl=64 time=12.961 ms
84 bytes from 192.168.33.1 icmp_seq=2 ttl=64 time=6.720 ms
84 bytes from 192.168.33.1 icmp_seq=3 ttl=64 time=7.198 ms
84 bytes from 192.168.33.1 icmp_seq=4 ttl=64 time=7.674 ms
84 bytes from 192.168.33.1 icmp_seq=5 ttl=64 time=7.188 ms
```

```
PC6> ping 192.168.33.2
```

```
84 bytes from 192.168.33.2 icmp_seq=1 ttl=64 time=5.834 ms
84 bytes from 192.168.33.2 icmp_seq=2 ttl=64 time=6.981 ms
84 bytes from 192.168.33.2 icmp_seq=3 ttl=64 time=11.938 ms
84 bytes from 192.168.33.2 icmp_seq=4 ttl=64 time=6.733 ms
84 bytes from 192.168.33.2 icmp_seq=5 ttl=64 time=8.330 ms
```