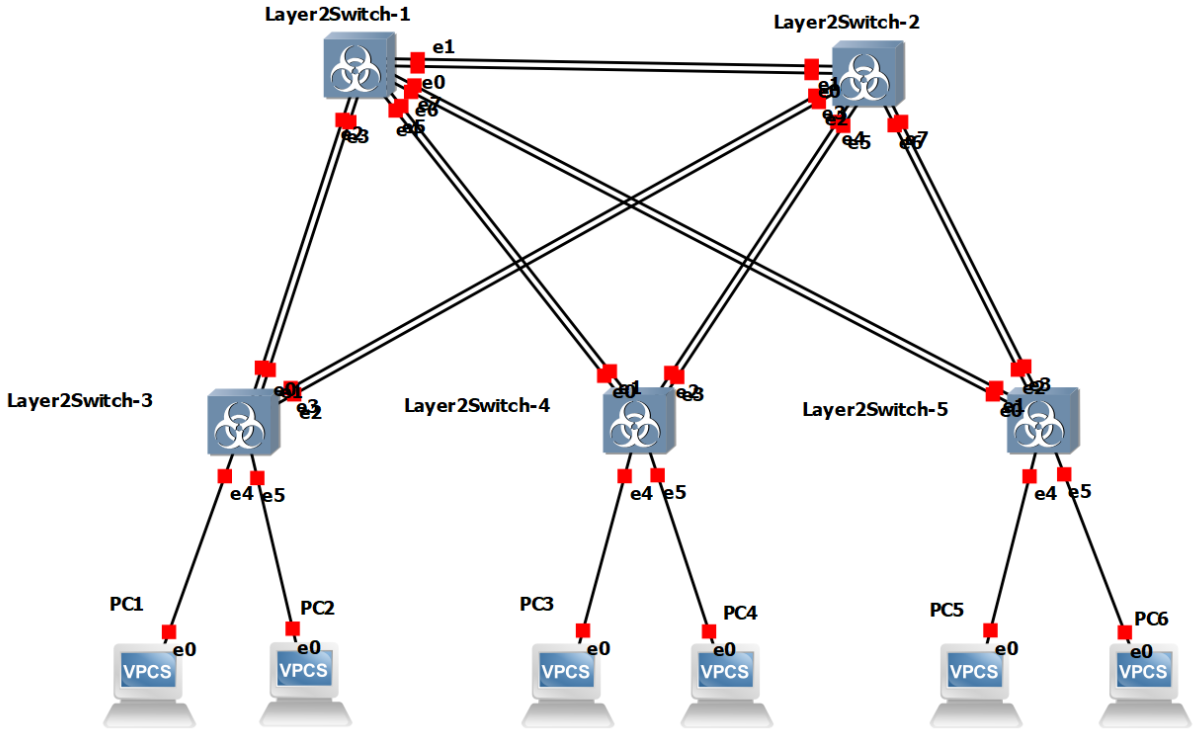
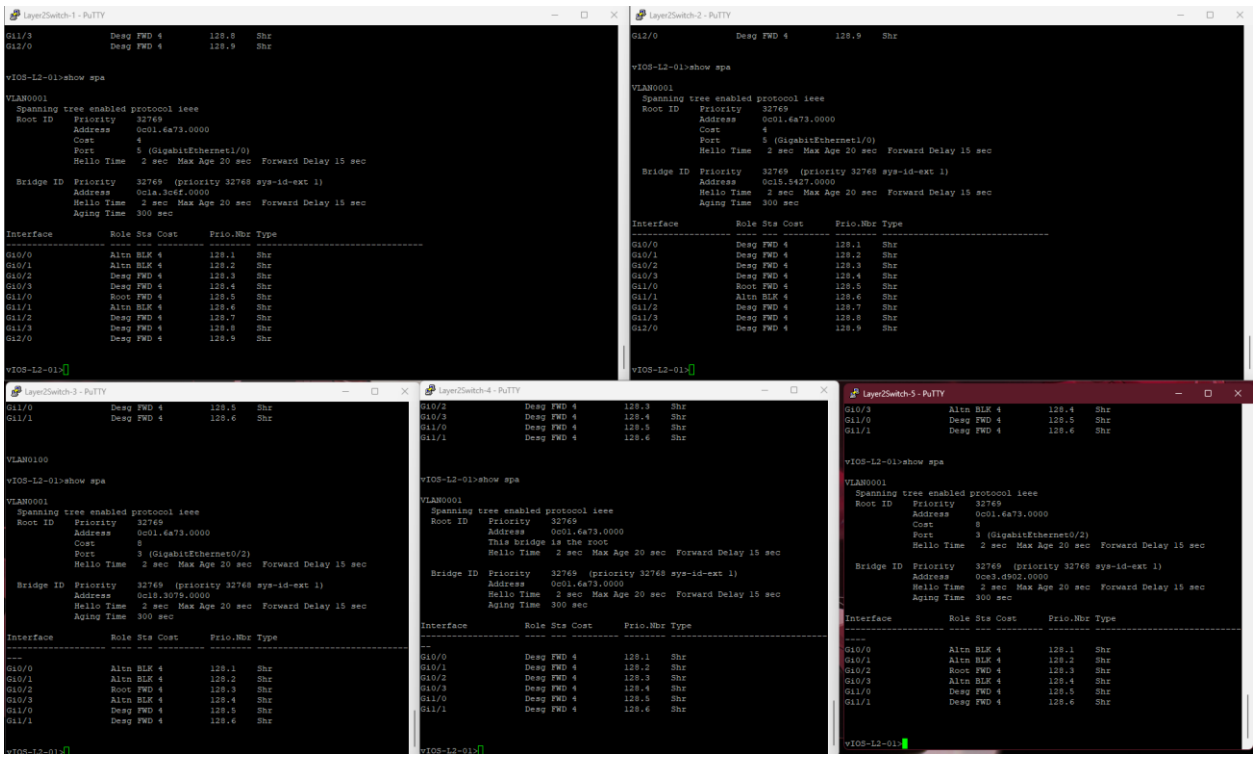


1) Для заданной на схеме сети, состоящей из управляемых коммутаторов и персональных компьютеров настроить протокол STP, назначив явно один из коммутаторов корневым настройкой приоритета

>show spa на всех коммутаторов



На первом коммутаторе:

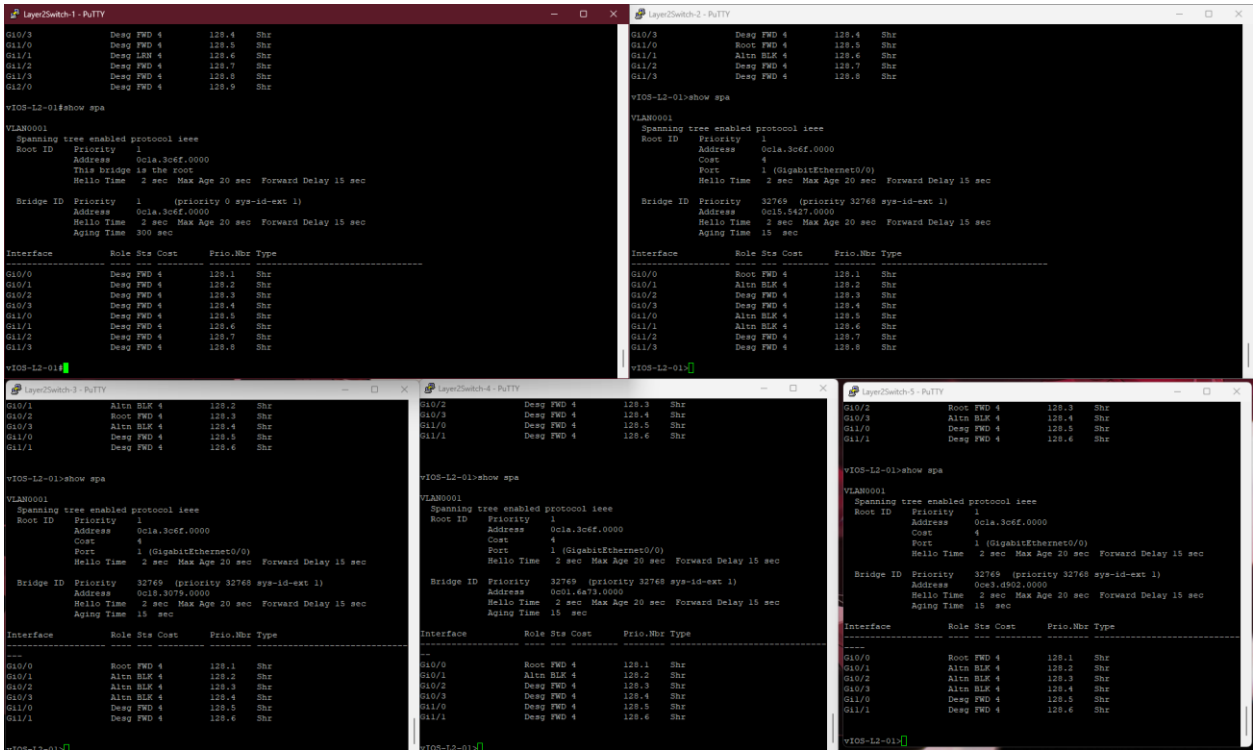
>enable

#conf t

(config)# spa vlan 1 prio 32768

(config)# end

write

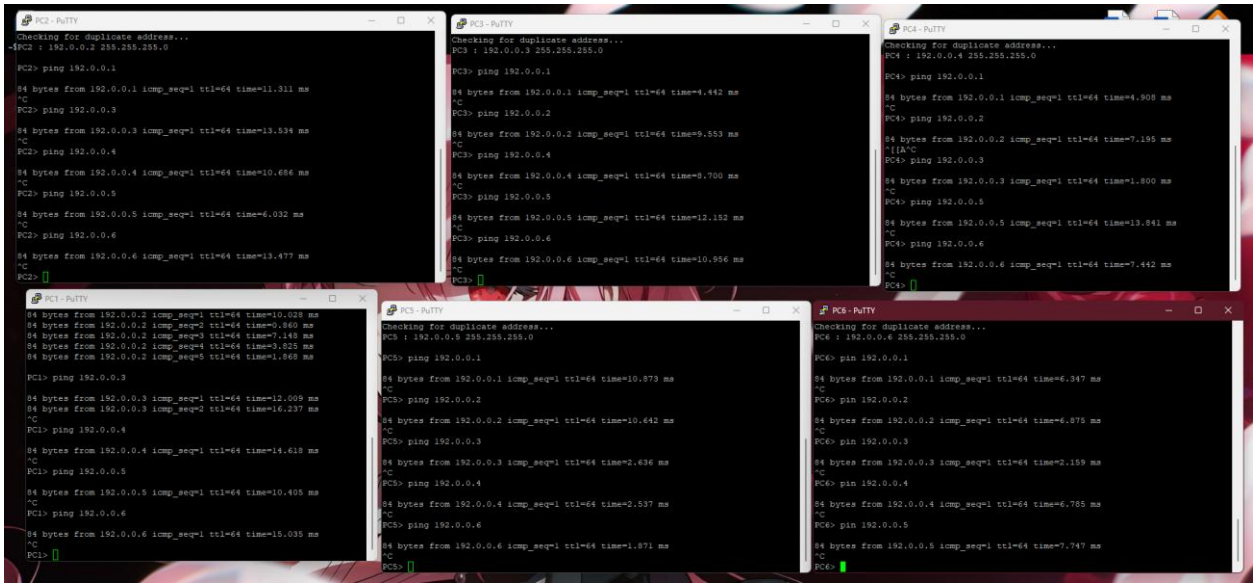


2) Проверить доступность каждого с каждым всех персональных компьютеров (VPCS), результаты запротоколировать

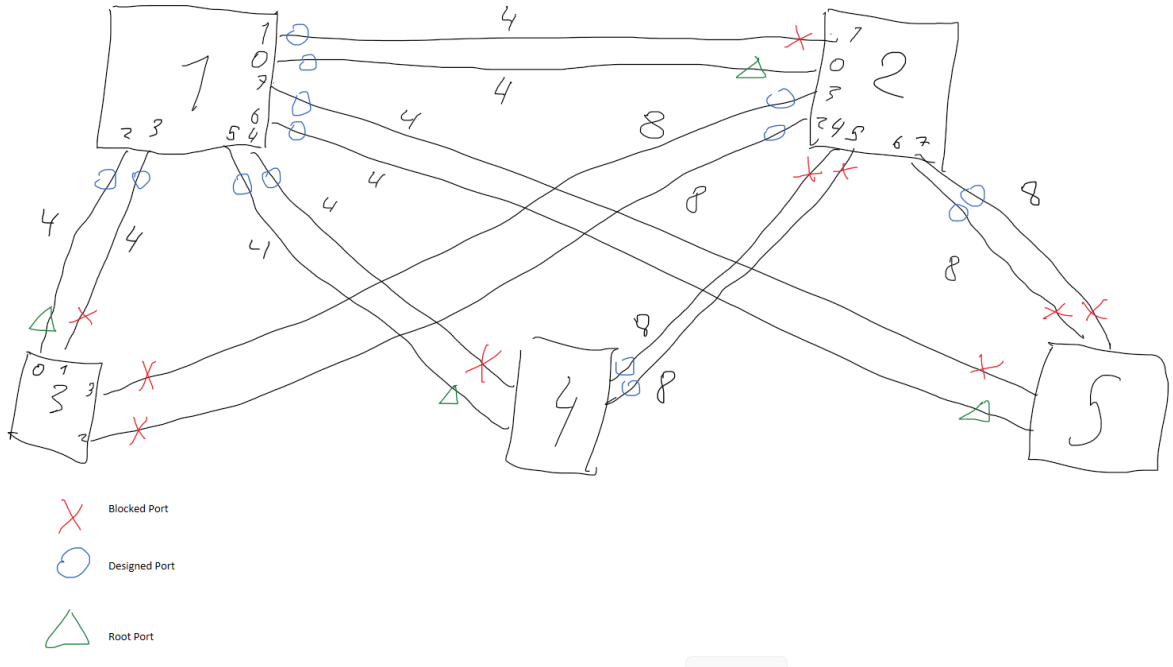
Каждому VPCs назначен ip-адрес от 192.0.0.1/24 до 192.0.0.6/24. С каждого VPC выполнено:

> ping 192.0.0.x

Где x – от 1 до 6, кроме собственного значения



3) На изображении схемы отметить BID каждого коммутатора и режимы работы портов (RP/DP/blocked) и стоимости маршрутов, результат сохранить в файл



4) При помощи wireshark отследить передачу пакетов hello от корневого коммутатора на всех линках (nb!), результаты включить в отчет

1-2

```
797 183.368039    0c:1a:3c:6f:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8002
798 184.146991    0c:15:54:27:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:15:54:27:00:00  Cost = 0  Port = 0x8002
799 184.150968    0c:15:54:27:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:15:54:27:00:00  Cost = 0  Port = 0x8002
800 184.159965    0c:15:54:27:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:15:54:27:00:00  Cost = 0  Port = 0x8002
```

1-3

```
323 74.062058    0c:1a:3c:6f:00:02    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8003
324 74.102883    0c:1a:3c:6f:00:02    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8003
325 74.111853    0c:1a:3c:6f:00:02    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8003
326 74.115881    0c:1a:3c:6f:00:02    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8003
328 74.604058    0c:18:30:79:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:18:30:79:00:00  Cost = 0  Port = 0x8001
329 74.606135    0c:18:30:79:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:18:30:79:00:00  Cost = 0  Port = 0x8001
330 74.608043    0c:18:30:79:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:18:30:79:00:00  Cost = 0  Port = 0x8001
331 75.065036    0c:1a:3c:6f:00:02    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8003
```

1-4

```
119 27.145266    0c:1a:3c:6f:00:04    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8005
121 28.000942    0c:01:6a:73:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:01:6a:73:00:00  Cost = 0  Port = 0x8001
122 28.003672    0c:01:6a:73:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:01:6a:73:00:00  Cost = 0  Port = 0x8001
123 28.007923    0c:01:6a:73:00:00    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:01:6a:73:00:00  Cost = 0  Port = 0x8001
124 28.145432    0c:1a:3c:6f:00:04    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8005
125 28.247331    0c:1a:3c:6f:00:04    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8005
126 28.256618    0c:1a:3c:6f:00:04    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8005
127 28.261309    0c:1a:3c:6f:00:04    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8005
```

1-5

```
65 15.012064    0c:1a:3c:6f:00:07    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8008
66 15.110060    0c:1a:3c:6f:00:07    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8008
67 15.118029    0c:1a:3c:6f:00:07    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8008
68 15.123051    0c:1a:3c:6f:00:07    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8008
69 16.012924    0c:1a:3c:6f:00:07    Nearest-Customer-Bridge STP    60 Conf. Root = 0/1/0c:1a:3c:6f:00:00  Cost = 0  Port = 0x8008
70 16.605597    0c:e3:d9:02:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/100/0c:e3:d9:02:00:00  Cost = 0  Port = 0x8002
71 16.607095    0c:e3:d9:02:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/200/0c:e3:d9:02:00:00  Cost = 0  Port = 0x8002
72 16.611170    0c:e3:d9:02:00:01    Nearest-Customer-Bridge STP    60 Conf. Root = 32768/300/0c:e3:d9:02:00:00  Cost = 0  Port = 0x8002
```

5) Изменить стоимость маршрута для порта RP произвольного назначенного (designated) коммутатора, повторить действия из п.3, результат сохранить в отдельный файл

На втором коммутаторе:

> ena

conf t

(config)# int gi0/0

(config-if)# spa cost 50

(confif-if)# end

write