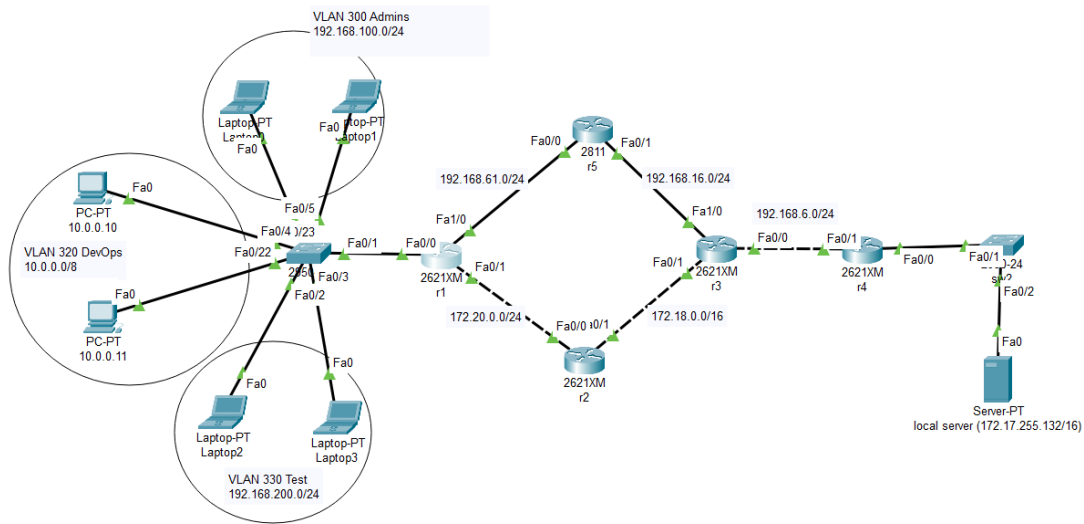


1. Настроить сеть согласно схеме в файле с помощью OSPF и VLAN. Починить неработающие линки.



2. Убедиться что трафик от компов до сервера ходит через два маршрута с помощью ESRP.

```

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:

  0  0 ms    0 ms    0 ms   192.168.100.1
  1  0 ms    0 ms    0 ms   192.168.61.2
  2  0 ms    0 ms    0 ms   172.18.0.1
  3  0 ms    0 ms    0 ms   192.168.6.2
  4  *        1 ms    1 ms   172.17.255.132

Trace complete.

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:

  0  0 ms    0 ms    0 ms   192.168.100.1
  1  0 ms    0 ms    0 ms   192.168.61.2
  2  0 ms    0 ms    0 ms   172.18.0.1
  3  0 ms    0 ms    0 ms   192.168.6.2
  4  0 ms    0 ms    0 ms   172.17.255.132

Trace complete.

C:\>
C:\>tracert 172.17.255.132
  
```

3. Скиннуть скриншот с таблицей маршрутизации с r1. Должны быть сети Connected для VLAN'ов.

```

Router>en
Router#sh ip router
^
% Invalid input detected at '^' marker.

Router#sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
        i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
        * - candidate default, U - per-user static route, o - ODR
        P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0.320
O    172.17.0.0/16 [110/4] via 192.168.61.2, 00:03:38, FastEthernet1/0
    172.20.0.0/24 [110/4] via 172.20.0.2, 00:03:38, FastEthernet0/1
O    172.18.0.0/16 [110/2] via 172.20.0.2, 00:44:37, FastEthernet0/1
    172.20.0.0/24 is subnetted, 1 subnets
C    192.168.6.0/24 [110/3] via 172.20.0.2, 00:03:38, FastEthernet0/1
O    192.168.16.0/24 [110/2] via 192.168.61.2, 00:43:50, FastEthernet1/0
C    192.168.61.0/24 is directly connected, FastEthernet1/0
C    192.168.100.0/24 is directly connected, FastEthernet0/0.300
C    192.168.200.0/24 is directly connected, FastEthernet0/0.330

Router#wr
Building configuration...
[OK]
Router#
  
```

4. Поймать трейс на любом компе, когда он пойдет через r5. Удалить один из линков на r5. Снова сделать трейс, убедиться что трафик пошел по резервному пути. Скиннуть скриншот с разными трейсами.

The network diagram shows a central router r1 connected to several VLANs and other routers. The traceroute results in the command prompt show the path of traffic from a source to 172.17.255.132.

```

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:
  0  0 ms    0 ms    0 ms    192.168.100.1
  1  0 ms    0 ms    0 ms    192.168.61.2
  2  0 ms    1 ms    0 ms    172.18.0.1
  3  0 ms    0 ms    0 ms    192.168.6.2
  4  0 ms    0 ms    0 ms    172.17.255.132
  5  0 ms    0 ms    0 ms

Trace complete.

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:
  0  0 ms    0 ms    0 ms    192.168.100.1
  1  0 ms    0 ms    0 ms    172.20.0.2
  2  0 ms    0 ms    0 ms    172.18.0.1
  3  0 ms    0 ms    0 ms    192.168.6.2
  4  0 ms    0 ms    0 ms    172.17.255.132
  5  0 ms    0 ms    0 ms

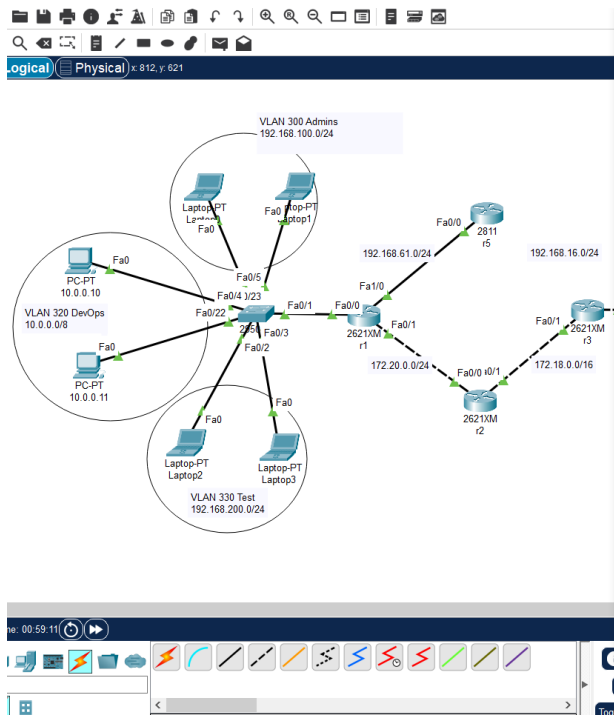
Trace complete.

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:
  0  0 ms    0 ms    0 ms    192.168.100.1
  1  0 ms    0 ms    0 ms    172.20.0.2
  2  0 ms    0 ms    0 ms    172.18.0.1
  3  0 ms    0 ms    0 ms    192.168.6.2
  4  1 ms    0 ms    0 ms    172.17.255.132
  5  1 ms    0 ms    0 ms

Trace complete.
  
```

Скиннуть еще один скриншот с изменившейся таблицей маршрутизации с r1.



```
Physical Config CLI Attributes
IOS Command Line Interface
o 172.17.0.0/16 [110/4] via 192.168.61.2, 00:03:38, FastEthernet1/0
o 172.17.0.0/16 [110/4] via 172.20.0.2, 00:03:38, FastEthernet0/1
o 172.18.0.0/16 [110/2] via 172.20.0.2, 00:44:37, FastEthernet0/1
o 172.20.0.0/24 is subnetted, 1 subnets
c 172.20.0.0 is directly connected, FastEthernet0/1
o 192.168.6.0/24 [110/3] via 192.168.61.2, 00:03:38, FastEthernet1/0
o 192.168.6.0/24 [110/3] via 172.20.0.2, 00:03:38, FastEthernet0/1
o 192.168.16.0/24 [110/2] via 192.168.61.2, 00:43:50, FastEthernet1/0
c 192.168.61.0/24 is directly connected, FastEthernet1/0
c 192.168.100.0/24 is directly connected, FastEthernet0/0.300
c 192.168.200.0/24 is directly connected, FastEthernet0/0.330

Router#wr
Building configuration...
[OK]
Router#sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

C 10.0.0.0/8 is directly connected, FastEthernet0/0.320
O 172.17.0.0/16 [110/4] via 172.20.0.2, 00:00:40, FastEthernet0/1
O 172.18.0.0/16 [110/2] via 172.20.0.2, 00:54:08, FastEthernet0/1
O 172.20.0.0/24 is subnetted, 1 subnets
C 172.20.0.0 is directly connected, FastEthernet0/1
O 192.168.6.0/24 [110/3] via 172.20.0.2, 00:00:40, FastEthernet0/1
C 192.168.61.0/24 is directly connected, FastEthernet1/0
C 192.168.100.0/24 is directly connected, FastEthernet0/0.300
C 192.168.200.0/24 is directly connected, FastEthernet0/0.330

Router#
```