

Когда вы изменили стоимость корневого порта с 4 на 2, повлияло ли это на топологию STP?

Это не повлияло на топологию, так как уменьшалась стоимость оптимального маршрута.

Пример с изменением топологии.

Сначала все маршруты имеют стоимость 4.

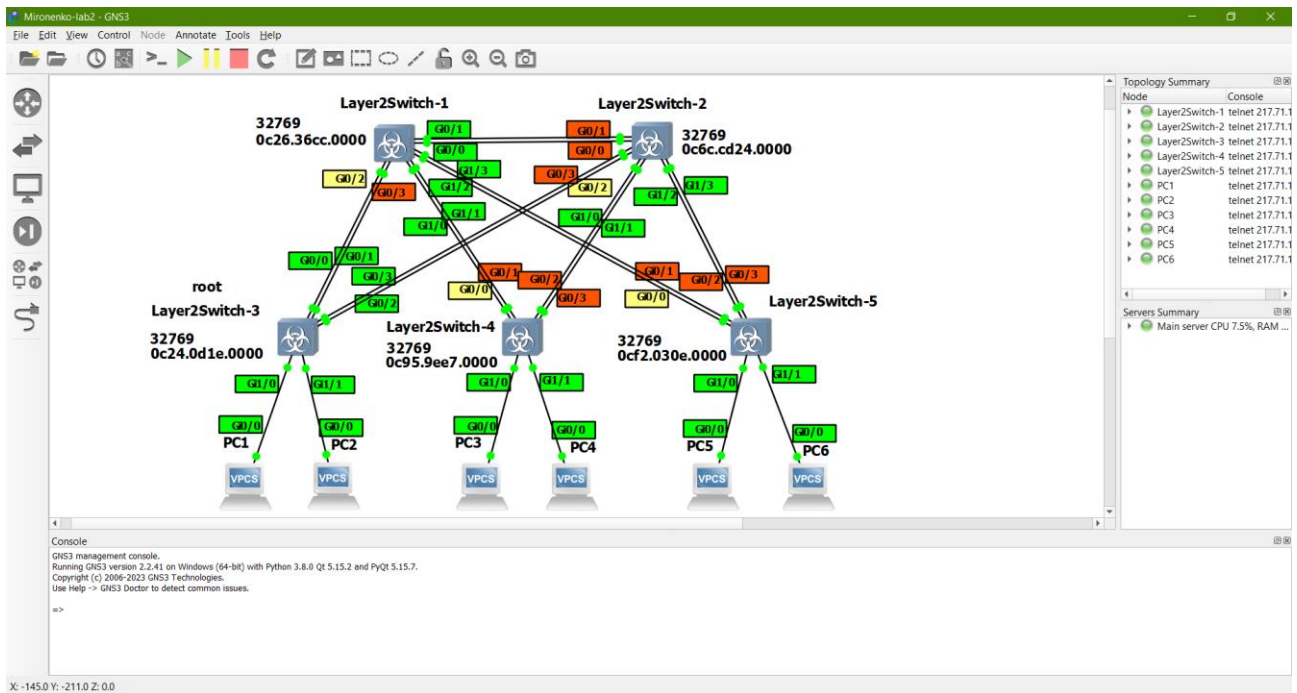


Рисунок 1 - схема до изменения

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*****
vIOS-L2-01>show span

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0c24.0d1e.0000
             Cost        4
             Port        3 (GigabitEthernet0/2)
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0c26.36cc.0000
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time   300 sec

Interface                Role Sts Cost      Prio.Nbr Type
-----
Gi0/0                    Desg FWD 4         128.1   Shr
Gi0/1                    Desg FWD 4         128.2   Shr
Gi0/2                    Root FWD 4         128.3   Shr
Gi0/3                    Altn BLK 4         128.4   Shr
Gi1/0                    Desg FWD 4         128.5   Shr
Gi1/1                    Desg FWD 4         128.6   Shr
Gi1/2                    Desg FWD 4         128.7   Shr
--More--

```

Рисунок 2 - порты 1 коммутатора

Изменим стоимость Gi 0/2 на 1 коммутаторе.

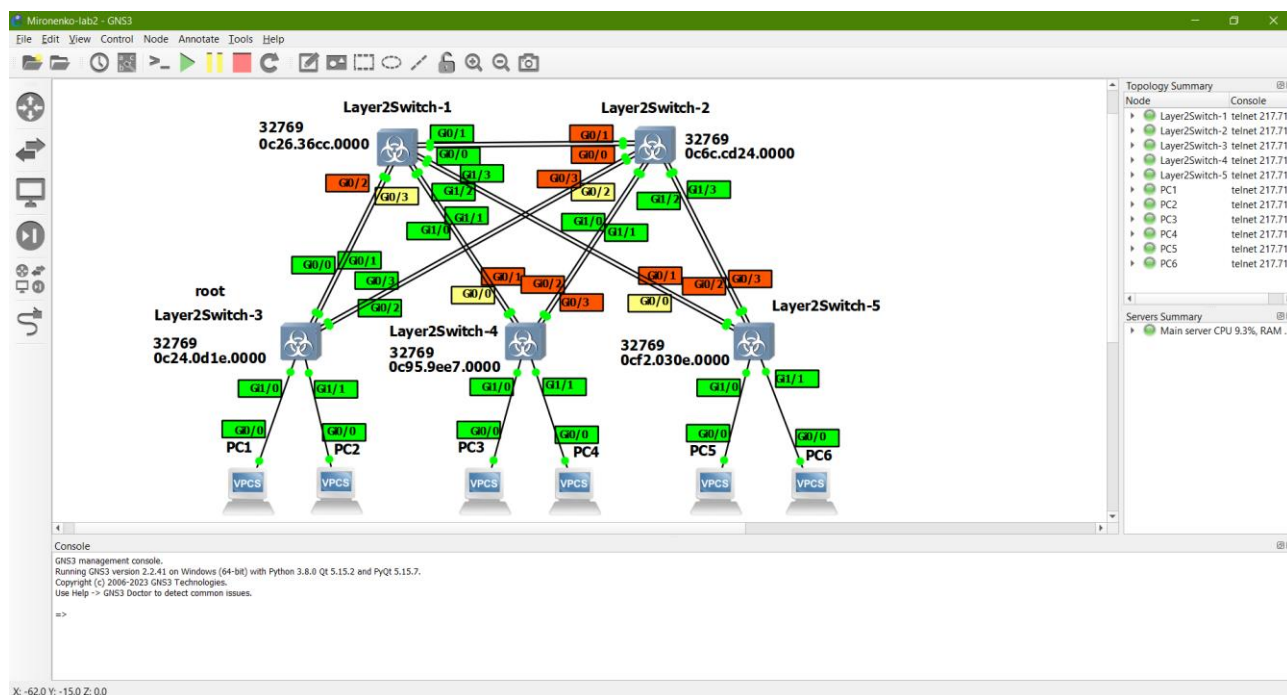


Рисунок 3 - схема после первого изменения

```

Address      0c26.36cc.0000
Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
Aging Time   15 sec

Interface    Role Sts Cost      Prio.Nbr Type
-----
Gi0/0        Desg FWD 4        128.1   Shr
Gi0/1        Desg FWD 4        128.2   Shr
Gi0/2        Altn BLK 44       128.3   Shr
Gi0/3        Root LRN 4        128.4   Shr
Gi1/0        Desg FWD 4        128.5   Shr
Gi1/1        Desg FWD 4        128.6   Shr
Gi1/2        Desg FWD 4        128.7   Shr

vIOS-L2-01#show spanning-tree

VLAN0001
Spanning tree enabled protocol ieee
Root ID      Priority    32769
              Address      0c24.0d1e.0000
              Cost        4
              Port        4 (GigabitEthernet0/3)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

Bridge ID     Priority    32769 (priority 32768 sys-id-ext 1)
              Address      0c26.36cc.0000
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time   15 sec

Interface    Role Sts Cost      Prio.Nbr Type
-----
Gi0/0        Desg FWD 4        128.1   Shr
Gi0/1        Desg FWD 4        128.2   Shr
Gi0/2        Altn BLK 44       128.3   Shr
Gi0/3        Root FWD 4        128.4   Shr
Gi1/0        Desg FWD 4        128.5   Shr
Gi1/1        Desg FWD 4        128.6   Shr
Gi1/2        Desg FWD 4        128.7   Shr
--More--

```

Рисунок 4 - порты 1 коммутатора

Открылся порт Gi 0/3. Маршрут все еще проходит через 1 коммутатор. Изменим стоимость порта Gi 0/3 на 44. Главные изменения в 5 коммутаторе. RP был у Gi 0/0, теперь у Gi 0/2.

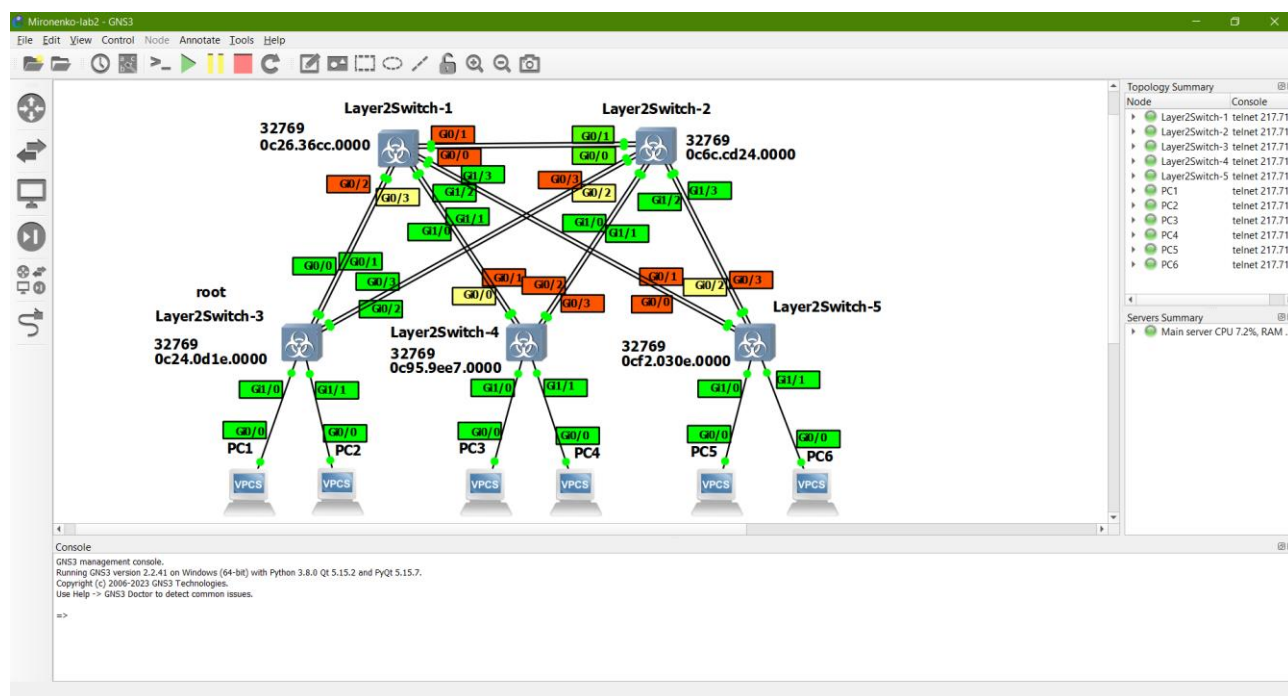


Рисунок 5 - схема после второго изменения

```

        Address      0c26.36cc.0000
        Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
        Aging Time   15  sec

Interface          Role Sts Cost          Prio.Nbr Type
-----
Gi0/0              Desg FWD 4          128.1  Shr
Gi0/1              Desg FWD 4          128.2  Shr
Gi0/2              Root LIS 44        128.3  Shr
Gi0/3              Altn BLK 44        128.4  Shr
Gi1/0              Desg FWD 4          128.5  Shr
Gi1/1              Desg FWD 4          128.6  Shr
Gi1/2              Desg FWD 4          128.7  Shr

vIOS-L2-01#show spanning-tree

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0c24.0d1e.0000
             Cost        8
             Port        1 (GigabitEthernet0/0)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0c26.36cc.0000
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  15  sec

Interface          Role Sts Cost          Prio.Nbr Type
-----
Gi0/0              Root FWD 4          128.1  Shr
Gi0/1              Altn BLK 4          128.2  Shr
Gi0/2              Altn BLK 44        128.3  Shr
Gi0/3              Altn BLK 44        128.4  Shr
Gi1/0              Desg FWD 4          128.5  Shr
Gi1/1              Desg LRN 4          128.6  Shr
Gi1/2              Desg LRN 4          128.7  Shr
--More--

```

Рисунок 6 - порты 1 коммутатора