SW-1(root-bridge):

```
vIOS-L2-01>en
vIOS-L2-01#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
vIOS-L2-01(config)#spanning-tree vlan 1 root primary
vIOS-L2-01(config)#exit
vIOS-L2-01#show
*Dec 11 04:14:49.253: %SYS-5-CONFIG_I: Configured from console by consolespannin
vIOS-L2-01#show spanning-tree vlan 1

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0c0d.fabf.0000
             This bridge is the root
             Hello Time   2 sec  Max Age 20 sec   Forward Delay 15 sec

  Bridge ID  Priority    24577  (priority 24576 sys-id-ext 1)
             Address     0c0d.fabf.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 LRN 4         128.1    Shr
Gi0/1               Desg LRN 4         128.2    Shr
Gi0/2               Desg LRN 4         128.3    Shr
Gi0/3               Desg LRN 4         128.4    Shr
Gi1/0               Desg LRN 4         128.5    Shr
Gi1/1               Desg LRN 4         128.6    Shr
Gi1/2               Desg LRN 4         128.7    Shr
Gi1/3               Desg LRN 4         128.8    Shr
Gi2/0               Desg FWD 4         128.9    Shr
```

SW-2(second root bridge):

```
vIOS-L2-01>en
vIOS-L2-01#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
vIOS-L2-01(config)#spanning-tree vlan 1 root secondary
vIOS-L2-01(config)#exit
vIOS-L2-01#show spanni
*Dec 11 04:16:24.531: %SYS-5-CONFIG_I: Configured from console by console
vIOS-L2-01#show spanning-tree

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0c0d.fabf.0000
             Cost        4
             Port        1 (GigabitEthernet0/0)
             Hello Time   2 sec  Max Age 20 sec   Forward Delay 15 sec

  Bridge ID  Priority    28673  (priority 28672 sys-id-ext 1)
             Address     0c49.0812.0000
             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               Root FWD 4         128.1    Shr
Gi0/1               Altn BLK 4         128.2    Shr
Gi0/2               Desg FWD 4         128.3    Shr
Gi0/3               Desg 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
Gi1/3               Desg FWD 4         128.8    Shr
Gi2/0               Desg FWD 4         128.9    Shr
```

SW-3:

```
vIOS-L2-01>show spanning-tree vlan 1

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0c0d.fabf.0000
             Cost        4
             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     0c1a.4256.0000
             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              Root FWD 4         128.1    Shr
Gi0/1              Altn BLK 4         128.2    Shr
Gi0/2              Altn BLK 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
```

SW-4:

```
vIOS-L2-01>show spanning-tree vlan 1

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0c0d.fabf.0000
             Cost        4
             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     0c35.6d8b.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              Root FWD 4         128.1    Shr
Gi0/1              Altn BLK 4         128.2    Shr
Gi0/2              Altn BLK 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
```

SW-5:

```
vIOS-L2-01>show spanning-tree vlan 1

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0c0d.fabf.0000
             Cost        4
             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     0c9a.e45a.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              Root FWD 4         128.1    Shr
Gi0/1              Altn BLK 4         128.2    Shr
Gi0/2              Altn BLK 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
```

PC1:

```
PC1> show ip

NAME        : PC1[1]
IP/MASK     : 192.168.1.1/24
GATEWAY     : 0.0.0.0
DNS         :
MAC         : 00:50:79:66:68:03
LPORT       : 20112
RHOST:PORT  : 127.0.0.1:20113
MTU         : 1500

PC1> ping 192.168.1.2

84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=0.706 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=6.409 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=3.588 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=2.026 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=7.712 ms

PC1> ping 192.168.1.3

84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=11.876 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=16.193 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=5.657 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=9.033 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=13.335 ms

PC1> ping 192.168.1.4

84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=8.947 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=2.837 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=12.354 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=13.024 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=5.781 ms

PC1> ping 192.168.1.5

84 bytes from 192.168.1.5 icmp_seq=1 ttl=64 time=13.541 ms
84 bytes from 192.168.1.5 icmp_seq=2 ttl=64 time=8.592 ms
84 bytes from 192.168.1.5 icmp_seq=3 ttl=64 time=2.435 ms
84 bytes from 192.168.1.5 icmp_seq=4 ttl=64 time=3.585 ms
84 bytes from 192.168.1.5 icmp_seq=5 ttl=64 time=5.906 ms

PC1> ping 192.168.1.6

84 bytes from 192.168.1.6 icmp_seq=1 ttl=64 time=9.207 ms
84 bytes from 192.168.1.6 icmp_seq=2 ttl=64 time=6.405 ms
84 bytes from 192.168.1.6 icmp_seq=3 ttl=64 time=7.569 ms
84 bytes from 192.168.1.6 icmp_seq=4 ttl=64 time=8.856 ms
84 bytes from 192.168.1.6 icmp_seq=5 ttl=64 time=3.813 ms
```

PC2:

```
PC2> show ip

NAME         : PC2[1]
IP/MASK      : 192.168.1.2/24
GATEWAY      : 0.0.0.0
DNS          :
MAC          : 00:50:79:66:68:05
LPORT        : 20114
RHOST:PORT   : 127.0.0.1:20115
MTU          : 1500

PC2> ping 192.168.1.1

84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=16.195 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=0.508 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=0.598 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=4.305 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=6.924 ms

PC2> ping 192.168.1.3

84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=15.257 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=1.200 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=4.780 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=6.294 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=10.187 ms

PC2> ping 192.168.1.4

84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=9.478 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=10.583 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=7.243 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=5.715 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=7.862 ms

PC2> ping 192.168.1.5

84 bytes from 192.168.1.5 icmp_seq=1 ttl=64 time=7.371 ms
84 bytes from 192.168.1.5 icmp_seq=2 ttl=64 time=8.104 ms
84 bytes from 192.168.1.5 icmp_seq=3 ttl=64 time=15.321 ms
84 bytes from 192.168.1.5 icmp_seq=4 ttl=64 time=1.652 ms
84 bytes from 192.168.1.5 icmp_seq=5 ttl=64 time=2.084 ms

PC2> ping 192.168.1.6

84 bytes from 192.168.1.6 icmp_seq=1 ttl=64 time=11.647 ms
84 bytes from 192.168.1.6 icmp_seq=2 ttl=64 time=8.053 ms
84 bytes from 192.168.1.6 icmp_seq=3 ttl=64 time=13.616 ms
84 bytes from 192.168.1.6 icmp_seq=4 ttl=64 time=9.428 ms
84 bytes from 192.168.1.6 icmp_seq=5 ttl=64 time=5.476 ms
```

PC3:

```
PC3> show ip

NAME         : PC3[1]
IP/MASK      : 192.168.1.3/24
GATEWAY      : 0.0.0.0
DNS          :
MAC          : 00:50:79:66:68:04
LPORT        : 20116
RHOST:PORT   : 127.0.0.1:20117
MTU          : 1500

PC3> ping 192.168.1.1

84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=7.513 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=2.476 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=3.215 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=14.803 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=8.788 ms

PC3> ping 192.168.1.2

84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=17.287 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=7.051 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=7.285 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=7.651 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=5.646 ms

PC3> ping 192.168.1.4

84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=8.258 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=0.972 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=5.392 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=1.428 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=0.622 ms

PC3> ping 192.168.1.5

84 bytes from 192.168.1.5 icmp_seq=1 ttl=64 time=11.936 ms
84 bytes from 192.168.1.5 icmp_seq=2 ttl=64 time=5.016 ms
84 bytes from 192.168.1.5 icmp_seq=3 ttl=64 time=13.246 ms
84 bytes from 192.168.1.5 icmp_seq=4 ttl=64 time=5.374 ms
84 bytes from 192.168.1.5 icmp_seq=5 ttl=64 time=6.632 ms

PC3> ping 192.168.1.6

84 bytes from 192.168.1.6 icmp_seq=1 ttl=64 time=21.208 ms
84 bytes from 192.168.1.6 icmp_seq=2 ttl=64 time=6.532 ms
84 bytes from 192.168.1.6 icmp_seq=3 ttl=64 time=6.067 ms
84 bytes from 192.168.1.6 icmp_seq=4 ttl=64 time=5.880 ms
84 bytes from 192.168.1.6 icmp_seq=5 ttl=64 time=5.918 ms
```

PC4:

```
PC4> show ip

NAME         : PC4[1]
IP/MASK      : 192.168.1.4/24
GATEWAY      : 0.0.0.0
DNS          :
MAC          : 00:50:79:66:68:01
LPORT        : 20118
RHOST:PORT   : 127.0.0.1:20119
MTU          : 1500

PC4> ping 192.168.1.1

84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=5.013 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=6.192 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=6.861 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=7.434 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=16.324 ms

PC4> ping 192.168.1.2

84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=2.709 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=3.267 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=6.663 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=14.493 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=15.689 ms

PC4> ping 192.168.1.3

84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=1.322 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=5.056 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=6.536 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=0.574 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=0.636 ms

PC4> ping 192.168.1.5

84 bytes from 192.168.1.5 icmp_seq=1 ttl=64 time=15.015 ms
84 bytes from 192.168.1.5 icmp_seq=2 ttl=64 time=4.426 ms
84 bytes from 192.168.1.5 icmp_seq=3 ttl=64 time=8.167 ms
84 bytes from 192.168.1.5 icmp_seq=4 ttl=64 time=9.829 ms
84 bytes from 192.168.1.5 icmp_seq=5 ttl=64 time=13.728 ms

PC4> ping 192.168.1.6

84 bytes from 192.168.1.6 icmp_seq=1 ttl=64 time=14.758 ms
84 bytes from 192.168.1.6 icmp_seq=2 ttl=64 time=7.023 ms
84 bytes from 192.168.1.6 icmp_seq=3 ttl=64 time=7.285 ms
84 bytes from 192.168.1.6 icmp_seq=4 ttl=64 time=15.672 ms
84 bytes from 192.168.1.6 icmp_seq=5 ttl=64 time=7.332 ms
```

PC5:

```
PC5> show ip

NAME         : PC5[1]
IP/MASK      : 192.168.1.5/24
GATEWAY      : 0.0.0.0
DNS          :
MAC          : 00:50:79:66:68:00
LPORT        : 20120
RHOST:PORT   : 127.0.0.1:20121
MTU          : 1500

PC5> ping 192.168.1.1

84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=17.242 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=7.229 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=15.885 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=7.473 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=2.972 ms

PC5> ping 192.168.1.2

84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=8.120 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=7.150 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=3.455 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=11.403 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=10.032 ms

PC5> ping 192.168.1.3

84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=8.053 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=13.548 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=5.240 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=3.239 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=7.263 ms

PC5> ping 192.168.1.4

84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=8.905 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=6.724 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=20.046 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=7.838 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=10.593 ms

PC5> ping 192.168.1.6

84 bytes from 192.168.1.6 icmp_seq=1 ttl=64 time=9.136 ms
84 bytes from 192.168.1.6 icmp_seq=2 ttl=64 time=0.757 ms
84 bytes from 192.168.1.6 icmp_seq=3 ttl=64 time=5.936 ms
84 bytes from 192.168.1.6 icmp_seq=4 ttl=64 time=0.780 ms
84 bytes from 192.168.1.6 icmp_seq=5 ttl=64 time=2.050 ms
```

PC6:

```
PC6> show ip

NAME          : PC6[1]
IP/MASK       : 192.168.1.6/24
GATEWAY       : 0.0.0.0
DNS           :
MAC           : 00:50:79:66:68:02
LPORT         : 20122
RHOST:PORT    : 127.0.0.1:20123
MTU           : 1500

PC6> ping 192.168.1.1

84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=10.647 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=6.299 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=13.649 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=8.951 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=14.186 ms

PC6> ping 192.168.1.2

84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=9.146 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=5.178 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=10.253 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=12.757 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=15.217 ms

PC6> ping 192.168.1.3

84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=4.076 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=3.993 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=11.457 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=7.094 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=7.397 ms

PC6> ping 192.168.1.4

84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=11.565 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=2.746 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=7.793 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=11.769 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=6.825 ms

PC6> ping 192.168.1.5

84 bytes from 192.168.1.5 icmp_seq=1 ttl=64 time=4.941 ms
84 bytes from 192.168.1.5 icmp_seq=2 ttl=64 time=2.349 ms
84 bytes from 192.168.1.5 icmp_seq=3 ttl=64 time=4.151 ms
84 bytes from 192.168.1.5 icmp_seq=4 ttl=64 time=7.697 ms
84 bytes from 192.168.1.5 icmp_seq=5 ttl=64 time=6.939 ms
```
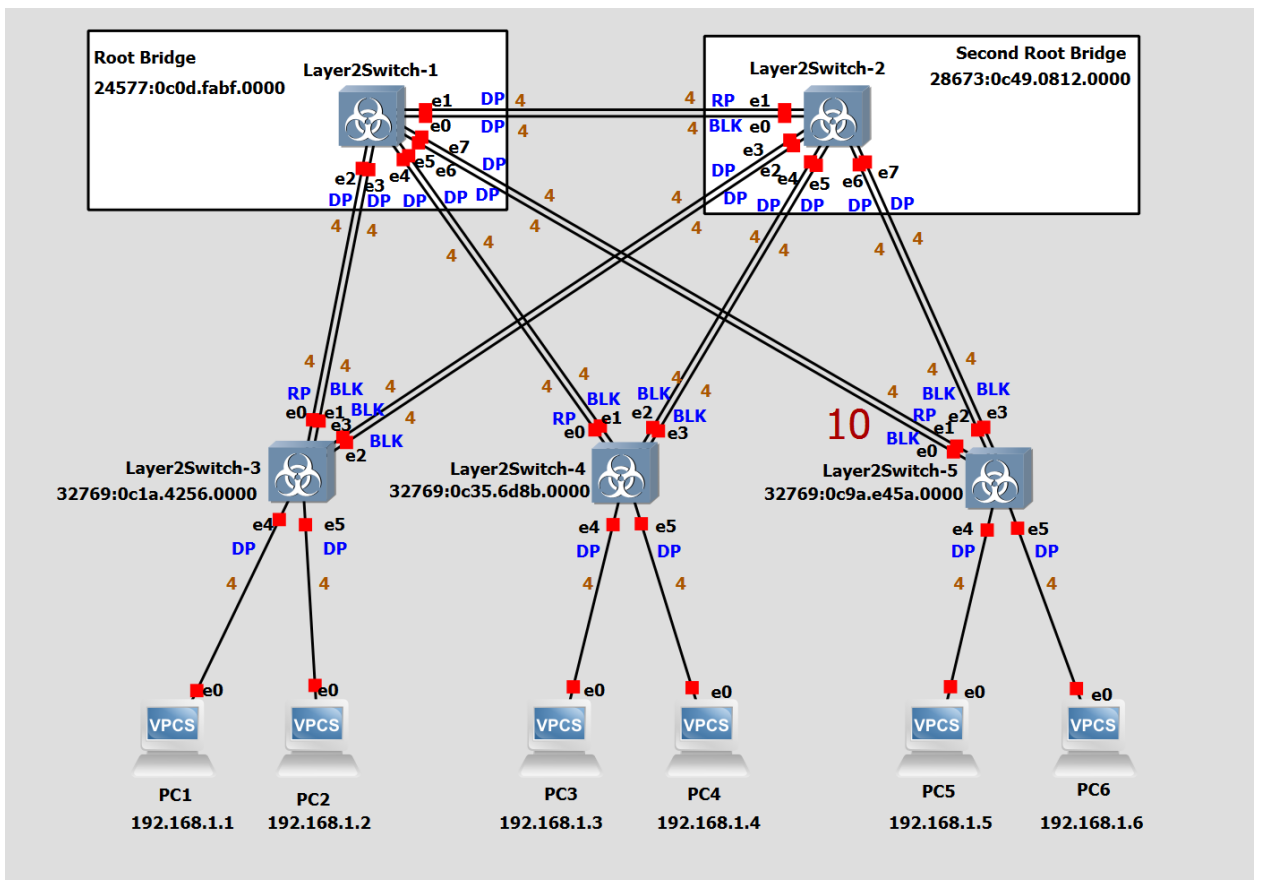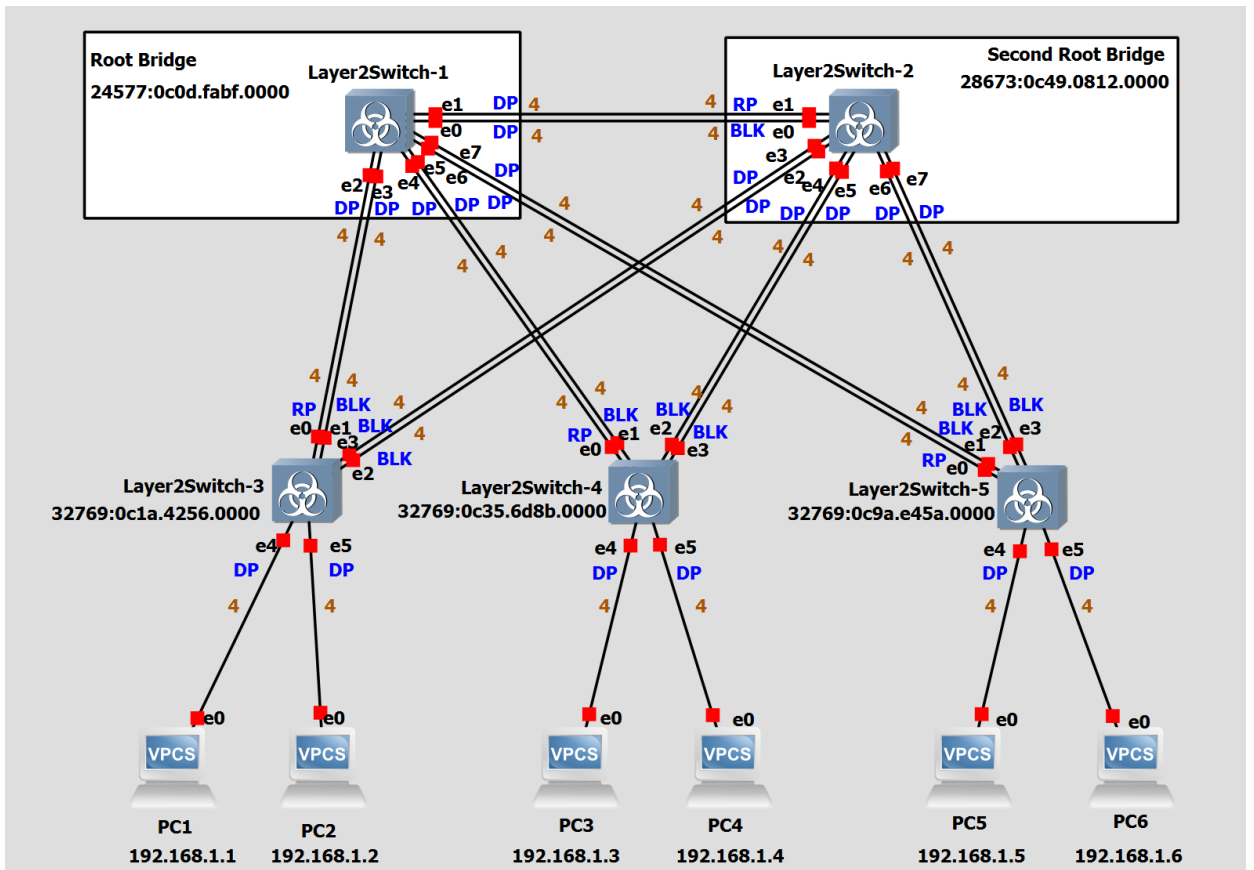
Root Bridge
24577:0c0d.fabf.0000

Layer2Switch-1

Second Root Bridge
28673:0c49.0812.0000

Layer2Switch-2

e1 DP 4   4 RP e1
e0 DP   BLK e0
e7   e3
e2 e3 e4 e5 e6   e2 e4 e5 e6 e7
DP DP DP DP DP   DP DP DP DP DP

4 4 4 4 4 4 4 4 4

RP BLK   BLK BLK   BLK BLK
e0 e1   e0 e1 e2 e3   e0 e1 e2 e3
e3 BLK   RP   BLK RP
e2

Layer2Switch-3
32769:0c1a.4256.0000

Layer2Switch-4
32769:0c35.6d8b.0000

Layer2Switch-5
32769:0c9a.e45a.0000

e4 DP e5 DP   e4 DP e5 DP   e4 DP e5 DP
4 4   4 4   4 4

e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS

PC1   PC2   PC3   PC4   PC5   PC6
192.168.1.1 192.168.1.2 192.168.1.3 192.168.1.4 192.168.1.5 192.168.1.6

Root Bridge
24577:0c0d.fabf.0000

Layer2Switch-1

Second Root Bridge
28673:0c49.0812.0000

Layer2Switch-2

e1 DP 4   4 RP e1
e0 DP   BLK e0
e7   e3
e2 e3 e4 e5 e6   e2 e4 e5 e6 e7
DP DP DP DP DP   DP DP DP DP

4 4 4 4 4 4 4 4

RP BLK   BLK BLK   BLK BLK
e0 e1   e0 e1 e2 e3   e0 e1 e2 e3
e3 BLK   RP   RP
e2   BLK

10

Layer2Switch-3
32769:0c1a.4256.0000

Layer2Switch-4
32769:0c35.6d8b.0000

Layer2Switch-5
32769:0c9a.e45a.0000

e4 DP e5 DP   e4 DP e5 DP   e4 DP e5 DP
4 4   4 4   4 4

e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS   e0 VPCS

PC1   PC2   PC3   PC4   PC5   PC6
192.168.1.1 192.168.1.2 192.168.1.3 192.168.1.4 192.168.1.5 192.168.1.6

Brigde root рассылает пакеты Hello

215 71.564758   0c:0d:fa:bf:00:04   Spanning-tree-(fo… STP   60 Conf. TC + Root = 24576/1/0c:0d:fa:bf:00:00 Cost = 0 Port = 0x8005
216 71.565024   0c:0d:fa:bf:00:04   Spanning-tree-(fo… STP   60 Conf. TC + Root = 32768/100/0c:0d:fa:bf:00:00 Cost = 0 Port = 0x8005
217 71.565247   0c:0d:fa:bf:00:04   Spanning-tree-(fo… STP   60 Conf. TC + Root = 32768/200/0c:0d:fa:bf:00:00 Cost = 0 Port = 0x8005
218 71.565456   0c:0d:fa:bf:00:04   Spanning-tree-(fo… STP   60 Conf. TC + Root = 32768/300/0c:0d:fa:bf:00:00 Cost = 0 Port = 0x8005

> Frame 212: 60 bytes on wire (480 bits), 60 bytes captured (480 bits)
> Ethernet II, Src: 0c:35:6d:8b:00:00 (0c:35:6d:8b:00:00), Dst: Spanning-tree-(for-l
> 802.1Q Virtual LAN, PRI: 0, DEI: 0, ID: 200
∨ Logical-Link Control
  > DSAP: Spanning Tree BPDU (0x42)
  > SSAP: Spanning Tree BPDU (0x42)
  > Control field: U, func=UI (0x03)
∨ Spanning Tree Protocol
    Protocol Identifier: Spanning Tree Protocol (0x0000)
    Protocol Version Identifier: Spanning Tree (0)
    BPDU Type: Configuration (0x00)
    BPDU flags: 0x01, Topology Change
    Root Identifier: 32768 / 200 / 0c:35:6d:8b:00:00
    Root Path Cost: 0
  > Bridge Identifier: 32768 / 200 / 0c:35:6d:8b:00:00
    Port identifier: 0x8001
    Message Age: 0
    Max Age: 20
    Hello Time: 2
    Forward Delay: 15

```
0000  01 80 c2 00 00 00 0c 35  6d 8b 00 00 81 00 00 c8   ·····5 m·····
0010  00 26 42 42 03 00 00 00  00 01 80 c8 0c 35 6d 8b   ·&BB········5m·
0020  00 00 00 00 00 00 80 c8  0c 35 6d 8b 00 00 80 01   ········5m··
0030  00 00 14 00 02 00 0f 00  00 00 00 00               ···· ····
```

```
vIOS-L2-01>en
vIOS-L2-01#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
vIOS-L2-01(config)#interface gi0/0
vIOS-L2-01(config-if)#spanning-tree cost 10
vIOS-L2-01(config-if)#exit
vIOS-L2-01(config)#exit
vIOS-L2-01#show spanning-tree vlan 1

VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0cd1.593c.0000
             Cost        4
             Port        2 (GigabitEthernet0/1)
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769  (priority 32768 sys-id-ext 1)
             Address     0cf9.1e7b.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               Altn BLK 10        128.1    Shr
Gi0/1               Root FWD 4         128.2    Shr
Gi0/2               Altn BLK 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
```