

CCIE Routing & Switching Advanced Troubleshooting Bootcamp

Lab 1 Solutions

Lab 1 Trouble Ticket Solutions

Trouble Ticket 1– SW3 Fa0/24 is an access port in an incorrect VLAN. It should be in VLAN 423.

```
SW3:
interface FastEthernet0/24
no switchport access vlan 432
switchport access vlan 423
```

Trouble Ticket 2 – member ports of Port-Channel interface 48 on SW1 and SW4 are configured as dynamic auto.

```
SW1:
interface FastEthernet0/19
switchport trunk encapsulation dot1q
switchport mode trunk
!
interface FastEthernet0/20
switchport trunk encapsulation dot1q
switchport mode trunk
```

```
SW4:
interface FastEthernet0/13
switchport trunk encapsulation dot1q
switchport mode trunk
!
interface FastEthernet0/14
switchport trunk encapsulation dot1q
switchport mode trunk
```

Trouble Ticket 3 – there is a mismatch of EtherChannel negotiation protocols between SW3 and SW4. Also, the IP address on Po12 on SW4 is misconfigured.

```
SW3:
interface FastEthernet0/20
channel-group 12 mode on
!
interface FastEthernet0/21
channel-group 12 mode on
```

```
SW4:  
interface Port-channel12  
ip address 178.1.12.10 255.255.255.0
```

Trouble Ticket 4 – there is a VTP password of CISCO configured on SW3.

```
SW3:  
no vtp password CISCO
```

Trouble Ticket 5 – configure SW4 as the primary root and ensure RootGuard is enabled on all trunk links.

```
SW4:  
spanning-tree vlan 1-4092 root primary  
!  
!  
interface Port-channel48  
  spanning-tree guard root  
!  
interface FastEthernet0/6  
  spanning-tree guard root  
!  
interface FastEthernet0/19  
  spanning-tree guard root
```

Trouble Ticket 6 – issue the switchport nonegotiate command on all trunks ports in the topology.

```
SW1:
interface Port-channel48
  switchport nonegotiate
!
interface FastEthernet0/16
  switchport nonegotiate
!
interface FastEthernet0/17
  switchport nonegotiate
!
interface FastEthernet0/18
  switchport nonegotiate
!
interface FastEthernet0/19
  switchport nonegotiate
!
interface FastEthernet0/20
  switchport nonegotiate
```

```
SW2:
interface FastEthernet0/6
  switchport nonegotiate
!
interface FastEthernet0/16
  switchport nonegotiate
!
interface FastEthernet0/17
  switchport nonegotiate
!
interface FastEthernet0/18
  switchport nonegotiate
```

```
SW3:
interface FastEthernet0/19
  switchport nonegotiate
```

```
SW4:
interface Port-channel48
  switchport nonegotiate
!
interface FastEthernet0/13
  switchport nonegotiate
!
interface FastEthernet0/14
  switchport nonegotiate
!
interface FastEthernet0/19
  switchport nonegotiate
```

Trouble Ticket 7 – the spokes are misconfigured to send redundant broadcast traffic. R4 has a misconfigured Frame Map statement.

```
R4:
interface Serial0/0/0
  no frame-relay map ip 178.1.145.4 403 broadcast
  frame-relay map ip 178.1.145.5 403
```

```
R5:
interface Serial0/0/0
  no frame-relay map ip 178.1.145.4 503 broadcast
  frame-relay map ip 178.1.145.4 503
```

Trouble Ticket 8 – split horizon is causing EIGRP updates not to propagate between the spoke devices (R4 and R5).

```
R3:
no ip split-horizon eigrp 101
```

Trouble Ticket 9 – point-to-point subinterfaces lack frame-relay interface-dlci statements, and the multipoint Frame subinterface on R2 lacks a Frame map statement.

```
R1:
interface Serial0/0.1 point-to-point
  frame-relay interface-dlci 102

R2:
interface Serial0/0.13 multipoint
  frame-relay map ip 178.1.203.3 213 broadcast
!
interface Serial0/0.21 point-to-point
  frame-relay interface-dlci 201

R3:
interface Serial1/1.312 point-to-point
  frame-relay interface-dlci 312
```

Trouble Ticket 10 – incorrect OPSF network types are configured on R2 and R1.

```
R1:
router ospf 1
  no neighbor 178.1.201.2
!
interface Serial0/0.1 point-to-point
  no ip ospf network non-broadcast

R2:
router ospf 1
  no neighbor 178.1.203.3
!
interface Serial0/0.13 multipoint
  ip ospf network point-to-point
```

Trouble Ticket 11 – area 11 is disconnected from area 0. An NSSA area separates these two areas. Tunnel area 0 to area 11.

```
R1:
interface Tunnel10
 ip address 178.1.10.1 255.255.255.0
 tunnel source 178.1.201.1
 tunnel destination 178.1.203.3
!
router ospf 1
 network 178.1.10.1 0.0.0.0 area 0
```

```
R3:
interface Tunnel10
 ip address 178.1.10.3 255.255.255.0
 tunnel source 178.1.203.3
 tunnel destination 178.1.201.1
!
router ospf 1
 network 178.1.10.3 0.0.0.0 area 0
```

Trouble Ticket 12 – R3 must be configured for the redistribution of E1 type routes. Mutual redistribution of EIGRP and OSPF should occur on R2.

```
R2:
router eigrp 10
 redistribute ospf 1 metric 1 1 1 1 1
!
router ospf 1
 redistribute eigrp 10 metric 2000 subnets
```

```
R3:
router ospf 1
 redistribute eigrp 101 metric 2000 metric-type 1 subnets
```