# CCNA(640-802) Lab? EIGRP Troubleshooting

After adding P4S2 router, no routing updates are being exchanged between P4S1 and the new location. All other inter connectivity and Internet access for the existing locations of the company are working properly.

The task is to identify the fault(s) and correct the router configuration to provide full connectivity between the routers.

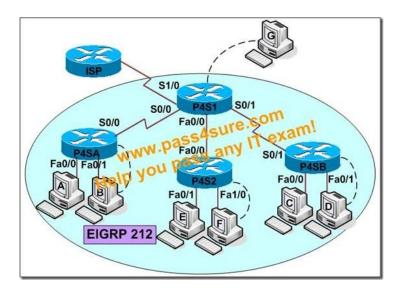
Access to the router CLI can be gained by clicking on the appropriate host.

All passwords on all routers are cisco.

IP addresses are listed in the chart below.

P4S1	P4S2
Fa0/0 - 192.168.77.33	Fa0/0 - 192.168.77.34
S1/0 - 198.0.18.6	Fa1/0 - 192.168.60.81
S0/1 - 192.168.60.25	Fa0/1 - 192.168.60.65
www.pass4	sure.com
P4SA	P4SB
Fa0/0 - 192.168.60.97	Fa0/0 - 192.168.60.129
Fa0/1 - 192.168.60.113	Fa0/1 - 192.168.60.145
S0/0 - 192.168.36.14	S0/1 - 192.168.60.26

Click that host-G, complete the configration of the router in the pop-up CLI



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P4SA# show run

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interface FastEthernet0/0
ip address 192.168.60.97 255.255.255.240
interface FastEthernet0/1
ip address 192.168.60.113 255.255.255.240
interface Serial0/0
Ip address 192.168.36.14 255.255.255.252
Clockrate 64000
router eigrp 212
Network 192.168.36.0
Network 192.168.60.0
No auto-summary
P4SA# show ip route
192.168.36.0/30 is subnetted, 1 subnets
C 192.168.36.12 is directly connected, Serial0/0
192.168.60.0/24 is variably subnetted, 5 subnets, 2 masks
C 192.168.60.96/28 is directly connected, FastEthernet0/0
C 192.168.60.112/28 is directly connected, FastEthernet0/1
D 192.168.60.128/28 [ 90/21026560 ] via 192.168.36.13, 00:00:57, Serial0/0
D 192.168.60.144/28 [ 90/21026560 ] via 192.168.36.13, 00:00:57, Serial0/0
D 192.168.60.24/30 [ 90/21026560 ] via 192.168.36.13, 00:00:57, Serial0/0
D* 198.0.18.0 [ 90/21024000 ] via 192.168.36.13, 00:00:57, Serial0/0
```

P4S2# show run interface FastEthernet0/0 ip address 192.168.77.34 255.255.255.252 interface FastEtherner0/1 ip address 192.168.60.65 255.255.255.240 interface FastEthernet1/0 ip address 192.168.60.81 255.255.255.240 router eigrp 22 network 192.168.60.0 network 192.168.77.0 no auto-summary P4S2# show ip route 192.168.60.0/28 is subnetted, 2 subnets C 192.168.60.80 is directly connected, FastEthernet1/0 C 192.168.60.64 is directly connected, FastEthernet0/1 192.168.77.0/30 is subnetted, 1 subnets

C 192.168.77.32 is directly connected, FastEthernet0/0 P4SB# show run interface FastEthernet0/0 ip address 192.168.60.129 255.255.255.240 interface FastEthernet0/1 ip address 192.168.60.145 255.255.255.240 interface Serial0/1 ip address 192.168.60.26 255.255.255.252 router eigrp 212 network 192.168.60.0 network 192.168.60.0 P4SB# show ip route 192.168.60.0/24 is variably subnetted, 5 subnets, 2 masks C 192.168.60.24/30 is directly connected, Serial0/1 C 192.168.60.128/28 is directly connected, FastEthernet0/0 C 192.168.60.144/28 is directly connected, FastEthernet0/1 D 192.168.60.96/28 [ 90/21026560 ] via 192.168.60.25, 00:00:57, Serial0/1 D 192.168.60.112/28 [ 90/21026560 ] via 192.168.60.25, 00:00:57, Serial0/1 192.168.36.0/30 is subnetted, 1 subnets D 192.168.36.12 [ 90/21026560 ] via 192.168.60.25, 00:00:57, Serial0/1

D\* 198.0.18.0 [ 90/21024000 ] via 192.168.60.25, 00:00:57, Serial0/1

\* P4S1# show run interface FastEthernet0/0 ip address 192.168.77.33 255.255.255.252 interface Serial 1/0 ip address 198.0.18.6 255.255.255.0 interface Serial0/0 ip address 192.168.36.13 255.255.255.252 clockrate 64000 interface Serial0/1 ip address 192.168.60.25 255.255.255.252 clockrate 64000 router eigrp 212 network 192.168.36.0 network 192.168.60.0 network 192.168.85.0 network 198.0.18.0

no auto-summary ip classless ip default-network 198.0.18.0 ip route 0.0.0.0 0.0.0.0 198.0.18.5 ip http server P4S1# sh ip route 192.168.36.0/30 is subnetted, 1 subnets C 192.168.36.12 is directly connected, Serial0/0 192.168.60.0/24 is variably subnetted, 5 subnets, 2 masks C 192.168.60.24/30 is directly connected, Serial0/1 D 192.168.60.128/28 [ 90/21026560 ] via 192.168.60.26, 00:00:57, Serial0/1 D 192.168.60.144/28 [ 90/21026560 ] via 192.168.60.26, 00:00:57, Serial0/1 D 192.168.60.96/28 [ 90/21026560 ] via 192.168.36.14, 00:00:57, Serial0/0 192.168.77.0/30 is subnetted, 1 subnets C 192.168.77.32 is directly connected, FastEthernet0/0 C 198.0.18.0/24 is directly connected, Serial1/0

#### **Explanation:**

\*S 0.0.0.0 via 198.0.18.5

#### Step1:

Identify the faults in configuration on P4S1 and P4S2. As the SIM specifies all other inter connectivity and internet access for the existing locations of the company are working properly.

Routing Protocols used in the SIM is EIGRP with AS 212 as provided by exhibit.

Faults Identified:

Wrong AS (EIGRP 22) provided at P4S2 (New router)

P4S1 does not advertise the new network between P4S1 and P4S2 into EIGRP.

We need to correct the above two configuration mistakes to have full connectivity

#### Step2: Correcting the EIGRP AS to 212

Wrong AS (EIGRP 22) provided at P4S2 (New router)

All routers that want to exchange routes within EIGRP needs to be in same Autonomous System.

Step 2.1:

First we need to remove the current wrong EIGRP AS 22 from Router P4S2

Click on Host-F to get CLI of P4S2

P4S2>enable

Password: cisco (Provided by SIM Q)

P4S2#conf t P4S2(conf)#

Step 2.2:

Removing the wrong EIGRP routing process with AS 22

P4S2(conf)#no router eigrp 22

The above statement removes all the EIGRP configuration configured for AS 22.

Step 2.3:

Adding the correct EIGRP configuration

Start the EIGRP routing process with AS 212

P4S2(conf)#router eigrp 212

Step 2.4:

Advertise the directly connected networks into EIGRP on P4S2

Fa 0/0 - 192.168.77.34

Fa 1/0 - 192.168.60.81

Fa 0/1 - 192.168.60.65

P4S2(config-router)#network 192.168.60.0

### P4S2(config-router)#network 192.168.77.0

P4S2(config-router)#no auto-summary

P4S2(config-router)#end

Step 2.5:

Important save the changes made to router P4S2

P4S2#copy run start

Step 3:

P4S1 does not advertise the new network between P4S1 and P4S2 into EIGRP.

## Click on Host-G to get CLI of P4S1

The network 192.168.77.0 is used between P4S1 Fa0/0 - P4S2 Fa 0/0

This network needs to be advertise into EIGRP routing process at P4S1

P4S1>enable

Password: cisco (Provided by SIM Q)

P4S1#conf t

P4S1(conf)#

Step 3.1:

Enter EIGRP routing process for AS 212

P4S1(conf)#router eigrp 212

Step 3.2:

The network 192.168.77.0 is used between P4S1 Fa0/0 - P4S2 Fa 0/0 . Advertise this network into EIGRP

P4S1(config-router)#network 192.168.77.0

P4S1(config-router)#end

Step 3.3:

Important save the changes made to router **P4S1** P4S1#copy run start
Verification:
From **P4S2** CLI
ping P4S1 Serial 1/0 IP address 198.0.18.6
P4S2#ping 198.0.18.6

A successful ping shows the new P4S2 will have full connectivity with other routers.

## That is all, hope to helpful for you. Best Luck for ur CCNA 640-802 Exam.

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