CCNA 640-802 Bible - Configure,Verify and Troubleshoot EIGRP
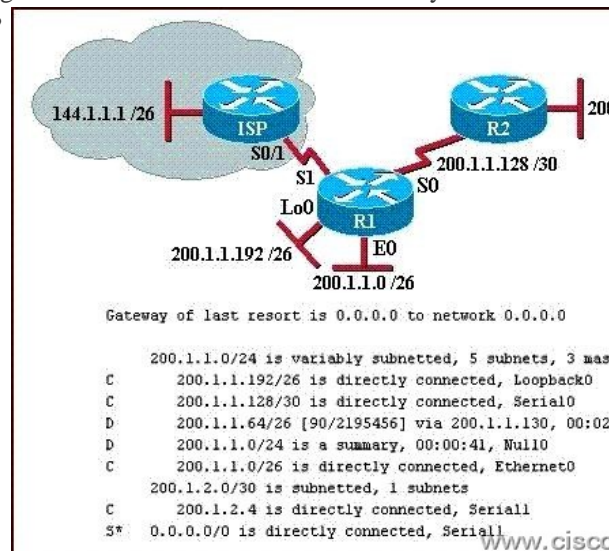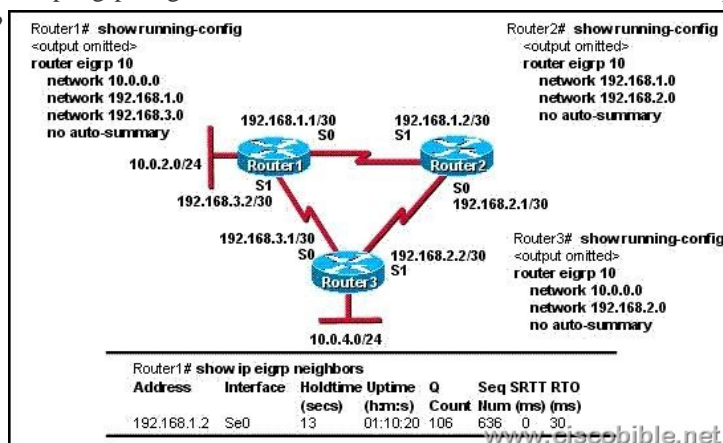
1. Which statements are true about EIGRP successor routes? (Choose two.) A:A successor route is used by EIGRP to forward traffic to a destination. B:Successor routes are saved in the topology table to be used if the primary route fails. C:Successor routes are flagged as "active" in the routing table. D:A successor route may be backed up by a feasible successor route. E:Successor routes are stored in the neighbor table following the discovery process.   **Correct Answers: A, D** Explanation: The following are some terms relating to EIGRP: 1. Feasible Distance: The lowest calculated metric to each destination 2. Feasibility Condition: A condition that is met if a neighbor's advertised distance to a destination is lower that the router's Feasible Distance to that same destination. 3. Successor: The neighbor that has been selected as the next hop for a given destination based on the Feasibility Condition. 2. What can be determined from the router output shown in the graphic?


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Gateway of last resort is 0.0.0.0 to network 0.0.0.0

     200.1.1.0/24 is variably subnetted, 5 subnets, 3 mas
C       200.1.1.192/26 is directly connected, Loopback0
C       200.1.1.128/30 is directly connected, Serial0
D       200.1.1.64/26 [90/2195456] via 200.1.1.130, 00:02
D       200.1.1.0/24 is a summary, 00:00:41, Null0
C       200.1.1.0/26 is directly connected, Ethernet0
     200.1.2.0/30 is subnetted, 1 subnets
C       200.1.2.4 is directly connected, Serial1
S*   0.0.0.0/0 is directly connected, Serial1
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A: 200.1.1.64 is a default route. B: The output shows that there are three default routes. C: The output came from router R2. D: The output came from a router that has four physical interfaces. E: EIGRP is in use in this network. **Correct Answers: E** Explanation: In the routing table the "D" letter marks the route learned from EIGRP routing protocol. Based on the routing table above, there are 4 directly connected IP interfaces, 2 EIGRP learned routes (which means that EIGRP is in use on this network) and a static default route was also configured. 3. IP addresses and routing for the network are configured as shown in the exhibit. The network administrator issues the show ip eigrp neighbors command from Router1 and receives the output shown below the topology. Which statement is true?

A: It is normal for Router1 to show one active neighbor at a time to prevent routing loops. B: Routing is not completely configured on Router3. C: The IP addresses are not configured properly on the Router1 and Router3 interfaces. D: The no auto-summary command configured on the routers prevents Router1 and Router2 from forming a neighbor relationship. **Correct Answers: B** Explanation: The Router3 is connected to three different networks: 192.168.3.1/30, 192.168.2.2/30, and 10.0.4.0/24 but only 10.0.4.0 and 192.168.2.0 are being advertised via EIGRP. In Router3, the "network 192.168.3.0" command should be placed under the EIGRP 10 process. 4. Refer to the exhibit. Why does RouterA show multiple unequal cost paths to network 192.168.81.0/24?
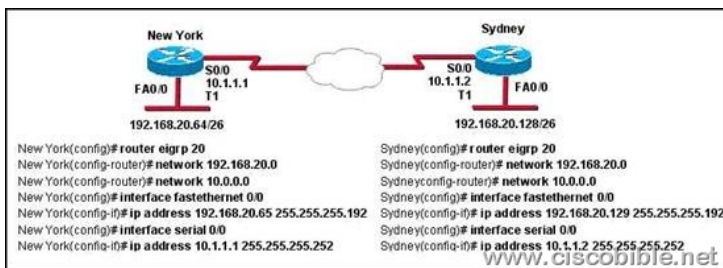
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RouterA# show ip eigrp topology
IP-EIGRP Topology Table for AS(109)/ID(192.168.80.28)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 192.168.90.0 255.255.255.0, 2 successors, FD is 0
       via 192.168.80.28 (46251776/46226176), Ethernet0
       via 192.168.81.28 (46251776/46226176), Ethernet1
       via 192.168.80.31 (46277376/46251776), Serial0
P 192.168.81.0 255.255.255.0, 1 successors, FD is 307200
       via Connected, Ethernet1
       via 192.168.81.28 (307200/281600), Ethernet1
       via 192.168.80.28 (307200/281600), Ethernet0
       via 192.168.80.31 (332800/307200), Serial0
```

A: A variance was configured for EIGRP autonomous system 109. B: The EIGRP topology table displays all routes to a destination. C: The EIGRP topology table shows only backup routes to a destination. D: Multiple floating static routes were configured to network 192.168.81.0 via interface Serial0. **Correct Answers: B** 5. Why has the network shown in the exhibit failed to converge?

A: The no auto-summary command needs to be applied to the routers. B: The network numbers have not been properly configured on the routers. C: The subnet masks for the network numbers have not been properly configured. D: The autonomous system number has not been properly configured. E: The bandwidth values have not been properly configured on the serial interfaces. **Correct Answers: A** Explanation: To restore the default behavior of automatic summarization of subnet routes into network-level routes, use the auto-summary command in router configuration mode. To disable this function and transmit subprefix routing information across classful network boundaries, use the no form of this command. Without disabling auto summarization, each router will advertise the 192.168.20.0/24 route, and the specific /26 networks will not be known.