

Questions

1. What metric components does EIGRP use by default?
 - A. Bandwidth
 - B. Bandwidth and Delay
 - C. Bandwidth, Delay, and Reliability
 - D. Bandwidth, Delay, Reliability, Load, and MTU

2. Identify the IPv4 multicast address used to communicate just with OSPF Designated Routers (DRs) and Backup Designated Routers (BDRs).
 - A. 224.0.0.10
 - B. 224.0.0.5
 - C. 224.0.0.9
 - D. 224.0.0.6

3. Which of the following router interface encapsulations will, by default, cause an interface to use an OSPF Network Type of Point-to-Point?
 - A. Frame-Relay
 - B. HDLC
 - C. Ethernet
 - D. All interfaces use an OSPF Network Type of Broadcast, by default. However, it that be administratively changed.

4. What OSPF configuration option prevents a router interface from sending OSPF Hello messages, while still participating in an OSPF process?
 - A. Stub Area
 - B. NSSA
 - C. Passive Interface
 - D. Totally Stubby Area

5. What configuration feature can prevent a route known to an OSPF Link State Database from being injected into a router's IP routing table?
 - A. Filter List
 - B. Redistribution

- C. Access Control List
- D. Distribute List

6. OSPF can perform route summarization on an ASBR or on an ABR. What command is used to summarize routes on an ASBR?

- A. summary-address
- B. route-map
- C. area range
- D. area stub

7. What command must be entered in Cisco IOS before OSPFv3 can route IPv6 networks?

- A. ipv6 cef
- B. ipv6 enable
- C. ipv6 unicast-routing
- D. IPv6 routing is enabled by default.

8. What command would you enter to create an OSPF routing process numbered "1" for OSPFv3 using an Address Families configuration?

- A. ipv6 router ospf 1
- B. ipv6 router ospfv3 1
- C. router ospfv3 1
- D. router ipv6 ospf 1

Questions and Answers

1. What metric components does EIGRP use by default?

- A. Bandwidth
- B. Bandwidth and Delay
- C. Bandwidth, Delay, and Reliability
- D. Bandwidth, Delay, Reliability, Load, and MTU

Answer: B

Explanation: EIGRP's metric calculation can consider Bandwidth, Delay, Reliability, and Load, with MTU used as a tie breaker if the calculation is the same for two paths. However, the calculation uses K Values to determine how influential the various metric components are in the final metric value. By default, three K Values are set to 0, resulting in only Bandwidth and Delay being used in a default metric calculation.

Video Reference: 3.2.1 OSPF Compared to EIGRP

2. Identify the IPv4 multicast address used to communicate just with OSPF Designated Routers (DRs) and Backup Designated Routers (BDRs).

- A. 224.0.0.10
- B. 224.0.0.5
- C. 224.0.0.9
- D. 224.0.0.6

Answer: D

Explanation: 224.0.0.10 is the IPv4 multicast group used to communicate with EIGRP routers. 224.0.0.5 is used to communicate with all OSPF routers. 224.0.0.9 is used to communicate with RIPv2 routers. 224.0.0.6 is used to communicate with OSPF DR and BDR routers.

Video Reference: 3.2.2 Review of OSPF Neighbor Formation

3. Which of the following router interface encapsulations will, by default, cause an interface to use an OSPF Network Type of Point-to-Point?

- A. Frame-Relay
- B. HDLC
- C. Ethernet
- D. All interfaces use an OSPF Network Type of Broadcast, by default. However, it that be administratively changed.

Answer: B

Explanation: An OSPF Network Type of Point-to-Point is the default OSPF Network Type on a non-Frame Relay serial interface. Therefore, an interface encapsulation type of HDLC or PPP on a serial interface will result in that interface having a default OSPF Network Type of Point-to-Point. Any type of Ethernet interface has a default OSPF Network Type of Broadcast.

Video Reference: 3.2.3 Review of OSPF Network Types

4. What OSPF configuration option prevents a router interface from sending OSPF Hello messages, while still participating in an OSPF process?
- A. Stub Area
 - B. NSSA
 - C. Passive Interface
 - D. Totally Stubby Area

Answer: C

Explanation: A Passive Interface is an interface that participates in an OSPF routing process without sending Hello messages. This type of interface might be appropriate for an interface connecting out to endpoints but no other OSPF-speaking routers. Having such an interface be a Passive Interface would allow that network be advertised by OSPF to neighboring routers without sending unnecessary Hello messages and also prevent a malicious user from adding an OSPF-speaking router to that interface's network and forming an unwanted OSPF adjacency.

Video Reference: 3.2.4 Multi-Area OSPFv2 Configuration

5. What configuration feature can prevent a route known to an OSPF Link State Database from being injected into a router's IP routing table?
- A. Filter List
 - B. Redistribution
 - C. Access Control List
 - D. Distribute List

Answer: D

Explanation: OSPF route filtering can occur in one of three locations: (1) Routes can be filtered at an ASBR as they're about to be redistributed into OSPF, which is accomplished as part of the redistribution configuration. (2) Routes can be filtered at an ABR as they're about to be advertised into a different area, which is accomplished using a Filter List. (3) Routes can be filtered as they're about to be injected into a router's IP routing table from an OSPF Link State Database, which is accomplished using a Distribute List.

Video Reference: 3.2.6 OSPF Route Filtering

6. OSPF can perform route summarization on an ASBR or on an ABR. What command is used to summarize routes on an ASBR?
- A. summary-address
 - B. route-map
 - C. area range
 - D. area stub

Answer: A

Explanation: OSPF route summarization can be performed on an Autonomous System Boundary Router (ASBR) as routes are being redistributed into OSPF from another autonomous system. This is accomplished using the “summary-address” command. Additionally, OSPF can perform route summarization on an Area Border Router (ABR) as routes are being advertised from one OSPF area into another OSPF area. This is accomplished using the “area range” command.

Video Reference: 3.2.8 OSPF Route Summarization

7. What command must be entered in Cisco IOS before OSPFv3 can route IPv6 networks?
- A. ipv6 cef
 - B. ipv6 enable
 - C. ipv6 unicast-routing
 - D. IPv6 routing is enabled by default.

Answer: C

Explanation: Interestingly, IPv6 routing is not enabled by default in Cisco IOS. Therefore, before routing IPv6 unicast networks, using routing protocols such as RIPng, OSPFv3, or EIGRP for IPv6, you need to enter the “ipv6 unicast-routing” command in global configuration mode. While the “ipv6 cef” command can improve performance, by enabling Cisco Express Forwarding (CEF) for IPv6 routing decisions, it isn’t a required command for IPv6 routing.

Video Reference: 3.2.9 OSPFv3 Traditional Configuration

8. What command would you enter to create an OSPF routing process numbered “1” for OSPFv3 using an Address Families configuration?
- A. ipv6 router ospf 1
 - B. ipv6 router ospfv3 1
 - C. router ospfv3 1
 - D. router ipv6 ospf 1

Answer: C

Explanation: Using the traditional configuration approach for OSPFv3, you create an OSPFv3 routing process numbered “1” using the “ipv6 router ospf 1” command. However, with the

Address Families approach to OSPFv3 configuration, you instead use the “router ospfv3 1” command. The Address Families configuration approach to OSPFv3 allows you to configure routing for both IPv4 and IPv6 under a single hierarchical configuration.

Video Reference: 3.2.11 OSPFv3 Address Families Configuration