

Chapter 7 Reading Organizer pg. 6-10

7.1.4.5. Explain the biggest distinction between classful and classless routing protocols.

7.1.4.5. Classful routing protocols create problems in discontinuous networks. Explain what a discontinuous network is.

7.1.4.6. Classless IPv4 routing protocols all include the subnet mask information with the network address in routing updates. They also support VLSM and CIDR. List these IPv4 protocols.

- a.
- b.
- c.
- d.

7.1.4.6. Why are all IPv6 routing protocols are considered classless?

7.1.4.7. What characteristics can routing protocols can be compared on?

- a.
- b.
- c.
- d.
- e.

7.1.4.7. Based on the curriculum fill in the blanks comparing the routing protocols.

	Distance Vector				Link State	
	RIPv1	RIPv2	IGRP	EIGRP	OSPF	IS-IS
Speed Convergence						
Scalability - Size of Network						
Use of VLSM						
Resource Usage						
Implementation and Maintenance						

7.1.4.8. What is the purpose of a routing metric?

7.2 Distance Vector Dynamic Routing

7.2.1.1. How often does RIP send out routing updates?

7.2.1.3. Identify the routing protocol description that best matches the distance vector routing protocol description.

Term	distance vector Routing Protocol Description
<input type="text"/>	A timing process where updates are sent to neighboring routers at regular intervals.
<input type="text"/>	A process where neighbor routers receive network updates at a specific network address.
<input type="text"/>	Process which calculates the best paths to networks.
<input type="text"/>	EIGRP and IGRP use this algorithm process as developed by Cisco.
<input type="text"/>	RIP uses this algorithm process.
<input type="text"/>	Describes routers which share a link and the same routing protocol.

7.2.2.1. What are the key characteristics of RIPv1?

a.

b.

c.

7.2.2.1. List and explain the improvements introduced in RIPv2.

a. _____ –

b. _____ –

c. _____ –

d. _____ –

7.2.2.1. In 1997, the IPv6 enabled version of RIP was released. RIPv6 is based on RIPv2. What is its hop count and administrative distance?

a. Hop Count _____

b. Administrative distance _____

7.2.2.2. List the design characteristics the Interior Gateway Routing Protocol (IGRP) was developed with.

a.

b.

7.2.2.2. How often are IGRP routing updates broadcast by default?

7.2.2.2. List the differences introduced in EIGRP.

- a.
- b.
- c.
- d.
- e.

7.3 RIP and RIPng Routing

7.3.1.1. What command is used to set up RIP on a router?

7.3.1.2. What command is used to enable RIP routing for the 192.168.1.0 network?

7.3.1.3. What does the *show ip protocols* command display?

7.3.1.3. What does the *show ip route* command display?

7.3.1.4. If a router is running RIPv1 and it receives a RIPv2 message, how does it interpret the RIPv2 message?

7.3.1.4. What command is required after the *router rip* command is issued to force a router to run RIPv2?

7.3.1.5. What happens on a router running RIPv2 if automatic summarization is disabled?

7.3.1.6. Sending out unneeded updates on a LAN impacts the network in what ways?

- a.
- b.
- c.

7.3.1.6. What router configuration command can be used to prevent the transmission of routing updates through a router interface, but still allow that network to be advertised to other routers?

7.3.1.6. Which routing protocols support the `passive-interface` command?

7.3.2.1. To enable an IPv6 router to forward IPv6 packets, what command must be configured?

7.3.2.1. Unlike RIPv2, RIPv6 is enabled on an _____ and not in router configuration mode.

7.3.2.2. The `show ipv6 protocols` command does not provide the same amount of information as its IPv4 counterpart. What does it confirm?

- a.
- b.

7.3.2.2. What does the `show ipv6 route` command display?

7.4 Link-State Dynamic Routing

7.4.1.1. Link-state routing protocols are also known as _____ protocols.

7.4.1.1. What are the two IPv4 link-state routing protocols?

- a.
- b.

62. The shortest path between two routers is not necessarily the path with the least number of hops. What does this mean?

7.4.2.1. All routers in a topology will complete the same generic link-state routing process to reach a state of convergence. Explain each step.

- 1.
- 2.
- 3.
- 4.
- 5.

