Exam Report: 7.1.3 Practice Questions

Date: 10/16/2019 12:32:50 am
Time Spent: 6:00

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## Overall Performance

Your Score: 67%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

## Individual Responses

**Question 1:** Correct

When multiple routes to a destination exist, what is used to select the best possible route?

- Autonomous system number
- Metric
- Exterior gateway protocol
- Distance vector

### Explanation

Routers use metric values to identify the distance, or cost, to a destination network. The metric is used by the routing protocol to identify and select the best route to the destination when multiple routes exist. The metric can be calculated based on hop count, bandwidth, or link cost.

The Exterior Gateway Protocol is a routing protocol that routes traffic between autonomous systems. The distance vector is a routing protocol that defines how routers update and share routing information. An autonomous system number is a unique number used to identify an autonomous system.

### References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm *NP15_ROUTING_PROTOCOLS_01]

**Question 2:** Correct

What information does the *next hop* entry in a routing table identify?

- The last router in the path to the destination network.
- The number of routers that the packet must go through to reach the destination network.
- The first router in the path to the destination network.
- A backup router that is used to forward packets addressed to unknown networks.

### Explanation

The next hop router is the first (or next) router in the path to the destination network. Each router looks at the destination network in the packet, then consults the routing table to identify the next hop router to the destination network.

The *hop count* identifies the number of routers in the path to the destination network. A default gateway router is a router that is used for packets sent to external networks. Most

routers do not have a default gateway setting, but instead use a default route setting, which identifies a next hop router for all unknown networks.

## References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm NP09_1-6 #MCS1]

**Question 3:** Correct

A router is connected to network 192.168.1.0/24 and network 192.168.2.0/24. The router is configured to use RIP and has learned of networks 192.168.3.0/24 and 192.168.4.0/24. The router is also configured with a static route of 0.0.0.0 with a mask of 0.0.0.0.

The router receives a packet addressed to network 10.1.0.0/16. What will the router do with the packet?

- Send the packet out both of its directly connected networks to the next hop router.
- Drop the packet.
- Forward the packet to the next hop router specified by the route to network 0.0.0.0.
- Send the packet out both of its directly connected networks as a broadcast frame.

## Explanation

A route of 0.0.0.0 with a mask of 0.0.0.0 identifies a default route. The default route is used when no other route is a better match. Packets that match no other networks are sent to the next hop router specified by the default route.

## References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm NP09_1-6 #MCS2]

**Question 4:** Correct

A router is connected to network 192.168.1.0/24 and network 192.168.2.0/24. The router is configured to use RIP and has learned of networks 192.168.3.0/24 and 192.168.4.0/24. There is no default route configured on the router.

The router receives a packet addressed to network 10.1.0.0/16. What will the router do with the packet?

- Hold the packet in cache until a matching route is learned or configured.
- Drop the packet.
- Send the packet out both of its directly-connected networks as a broadcast frame.
- Send the packet to both networks 192.168.3.0 and 192.168.4.0 and to the next hop router.

## Explanation

If a packet does not match any route in a routing table, the router drops the packet. In this example, the router does not know about the destination network, and it is not configured with a default route. With a default route, the router will forward the packet to the next hop router specified by the default route.

## References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm NP09_1-6 #MCS3]

**Question 5:** Incorrect

Which of the following is a characteristic of static routing when compared to dynamic routing?

- Routers use the hop count to identify the distance to a destination network.

- Routers can only use static routing when not connected to the internet.
- ~~Routers send packets for destination networks to the next hop router.~~
- All routes must be manually updated on the router.

## Explanation

Static routing requires that entries in the routing table are configured manually. Network entries remain in the routing table until manually removed. When changes to the network occur, static entries must be added or removed.

The next hop router is used with most routes to identify the next router in the path to the destination, regardless of whether the route is a static or dynamically-learned route. The hop count can be used by static or dynamic routes, depending on the routing protocol used. Static routing can be used for private and public networks whether they are connected to the internet or not.

## References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm NP09_1-6 #MCS5]

**Question 6:** Incorrect

Which of the following tasks do routers perform? (Select two.)

- [ ] Route data based on logical network addresses.
- [x] Maintain information about paths through an internetwork.
- [ ] Control access to the transmission media.
- [x] ~~Route data based on hardware device addresses.~~
- [ ] Identify devices through hardware addresses.
- [ ] Multiplex signals onto the same transmission media.

## Explanation

Routers build and maintain tables of routes through an internetwork and deliver data between networks based on logical network addresses.

## References

LabSim for Network Pro, Section 7.1.
[netpro18v5_all_questions_en.exm NP05_1-6 #169]