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Exam : **4A0-112**

Title : Nokia IS-IS Routing
Protocol

Version : DEMO

1.What do the address resolution protocol (ARP) for IPv4 and the neighbor discovery procedures for IPv6 have in common?

- A. Both detect duplicate MAC address assignments.
- B. Both detect duplicate IP address assignments.
- C. Both resolve a host device's MAC address using its IP address.
- D. Both resolve a host device's IP address using its MAC address.

Answer: C

Explanation:

ARP for IPv4 and Neighbor Discovery Protocol (NDP) for IPv6 are both used to map a device's IP address to its MAC address. This is essential for communication within a local network.

ARP is used in IPv4 networks, and NDP performs a similar function in IPv6 networks, ensuring devices can communicate effectively on the same network segment.

2.Which of the following statements about the IP forwarding process on a router is TRUE?

- A. It uses the routing table to find a match for the source IP address.
- B. It uses the routing table to find a match for the destination IP address.
- C. It uses the ARP table to find a match for the source MAC address.
- D. It uses the ARP table to find a match for the destination MAC address.

Answer: B

Explanation:

During the IP forwarding process, routers use the routing table to determine the next hop based on the destination IP address. The source IP address is not directly involved in the lookup process for forwarding.

The ARP table is used to map IP addresses to MAC addresses, specifically for resolving the MAC address of the next hop (destination MAC address) for forwarding packets within the local network.

3.When multiple routing protocols offer a route for the same prefix, what part of the router is in charge of deciding which route to make active?

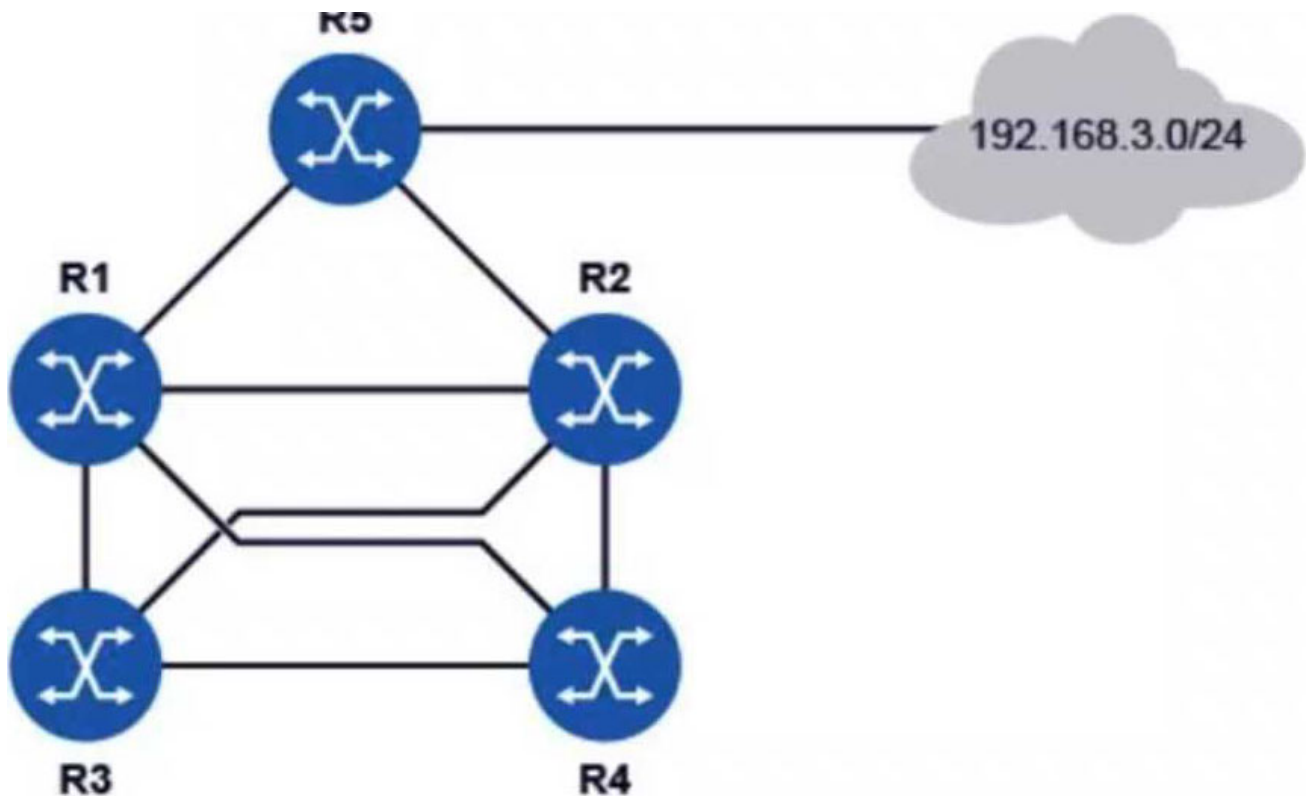
- A. The routing information base (RIB)
- B. The routing table manager (RTM)
- C. The equal cost multipath configuration
- D. The forwarding information base (FIB)

Answer: B

Explanation:

The routing table manager (RTM) is responsible for selecting the best route when multiple routing protocols provide a route for the same destination prefix. It makes the decision on which route to add to the routing table based on the administrative distance, metric, and other criteria.

4.Refer to the exhibit.



All routers in the diagram are running an interior gateway protocol (IGP) and have been configured with an ECMP value of 4. Router R5 advertises the prefix 192.168.3.0/24 using the IGP.

Assuming all links have the same cost, how many entries for prefix 192.168.3.0/24 will be in router R3's routing table?

- A. 1
- B. 2
- C. 3
- D. 4

Answer: D

Explanation:

In this scenario, the routers are configured with an Equal-Cost Multi-Path (ECMP) value of 4, meaning they can utilize up to 4 equal-cost paths to reach a destination. Since Router R5 is advertising the 192.168.3.0/24 prefix and all links have the same cost, router R3 will receive multiple routes to reach this destination.

Given that all the routers (R1, R2, R3, R4, and R5) are connected in a way that can support multiple equal-cost paths, and assuming ECMP is set to 4, the routing table on Router R3 will have up to 4 entries for the prefix 192.168.3.0/24.

Thus, Router R3's routing table will contain 4 entries for the prefix 192.168.3.0/24.

5. Which component of the Nokia 7750 SR is in charge of performing the longest prefix match lookup on packets that arrive on the physical interfaces?

- A. Control Processing Module (CMP)
- B. Media Dependent Adapter (MDA)
- C. Switch Fabric (SF)
- D. Input/Output Module (IOM)

Answer: D

Explanation:

The Input/Output Module (IOM) is responsible for performing the longest prefix match (LPM) lookup on packets that arrive at the physical interfaces. The IOM performs this function by examining the destination IP address of incoming packets and using the routing table to determine the best match.