ENCOR v1.1 (350-401) Video Training Series
Module 1 – Lesson 1 Quiz

Questions

1. Which type of network topology is most often found within a data center?

    A. Point-to-Multipoint
    B. Spine-Leaf
    C. Three-Tier
    D. Collapsed Core

2. Which of the following is an advantage of a Cloud Design versus an On-Premise design?

    A. You don't need to purchase physical servers.
    B. You can better control the user experience.
    C. You can better meet compliance requirements.
    D. You don't need to be concerned with redundancy.

3. The "5 Nines of Availability" refers to what?

    A. Limiting a network's downtime to no more than 5 minutes per year
    B. Having 99.9 percent uptime for 99 percent of a network's components
    C. Limiting a network's downtime to no more than 30 seconds per year
    D. Having 99 percent uptime for 99.9 percent of a network's components

4. What is the role of an Active Virtual Gateway (AVG)?

    A. An AVG responds to ARP queries with the MAC address of the Master gateway.
    B. An AVG responds to different ARP queries with the MAC addresses of AVFs.
    C. An AVG responds to different ARP queries with the MAC address of the Backup gateway.
    D. An AVG responds to ARP queries with the MAC address of the Standby gateway.

5. Stateful Switchover (SSO) is often used in conjunction with which feature to prevent packets from being dropped when a router fails over from one of its route processors to another?

   A. Reverse Path Forwarding (RPF)
   B. Embedded Event Manager (EEM)
   C. Multilayer Switching (MLS)
   D. Nonstop Forwarding (NSF)

Questions and Answers

1. Which type of network topology is most often found within a data center?

   A. Point-to-Multipoint
   B. Spine-Leaf
   C. Three-Tier
   D. Collapsed Core

Answer: B
Explanation: Data centers commonly use a Spine-Leaf design, where a leaf switch connects to multiple spine switches, such that the leaf switch can reach any other leaf switch by transiting a single spine switch. A Point-to-Multipoint design is commonly found in older wide area networks using Frame Relay or ATM. A Three-Tier architecture is commonly found in enterprise networks and consists of the Access, Building Distribution, and Core layers. A Collapsed Core design is commonly found in small to medium sized networks, where the Building Distribution and Core layers found in an enterprise network design are consolidated into a "collapsed core."

Video Reference: Tier 2 vs. Tier 3 Designs

2. Which of the following is an advantage of a Cloud Design versus an On-Premise design?

   A. You don't need to purchase physical servers.
   B. You can better control the user experience.
   C. You can better meet compliance requirements.
   D. You don't need to be concerned with redundancy.

Answer: A
Explanation: With a Cloud Design, you don't need to purchase physical servers. Instead, you can pay the cloud provider for your actual usage of virtual servers they host. However, an On-Premise design usually lets you have better control of the end-user experience and allows you more flexibility in meeting compliance requirements. Also, even though you might have your servers hosted by a cloud provider, you still need to be concerned with redundancy, and perhaps have duplicate servers in the cloud, along with a virtual load-balancer to distribute the load between those servers, while providing redundancy.

Video Reference: On-Premise vs. Cloud Designs

3. The "5 Nines of Availability" refers to what?

   A. Limiting a network's downtime to no more than 5 minutes per year
   B. Having 99.9 percent uptime for 99 percent of a network's components
   C. Limiting a network's downtime to no more than 30 seconds per year
   D. Having 99 percent uptime for 99.9 percent of a network's components

Answer: A
Explanation: The "5 Nines of Availability" refers to keeping a network operational 99.999 percent of the time. That translates to approximately 5 minutes of downtime per year. The "6 Nines of Availability" refers to keeping a network operational 99.9999 percent of the time, which translates to approximately 30 seconds of downtime per year.

Video Reference: Redundant Design

4. What is the role of an Active Virtual Gateway (AVG)?

   A. An AVG responds to ARP queries with the MAC address of the Master gateway.
   B. An AVG responds to different ARP queries with the MAC addresses of AVFs.
   C. An AVG responds to different ARP queries with the MAC address of the Backup gateway.
   D. An AVG responds to ARP queries with the MAC address of the Standby gateway.

Answer: B
Explanation: An Active Virtual Gateway (AVG) is a type of gateway used by Gateway Load Balancing Protocol (GLBP). GLBP is unique among the First Hop Redundancy Protocols (FHRPs) in that instead of having a single gateway service all traffic from a subnet, it load balances the traffic across as many as four Active Virtual Forwarders (AVFs). An AVG accomplishes this by responding to ARP queries (for a default gateway's virtual IP address) with different MAC addresses (i.e. the MAC addresses of the AVFs in a GLBP group).

Video Reference: First Hop Redundancy Protocols (FHRPs)

5. Stateful Switchover (SSO) is often used in conjunction with which feature to prevent packets from being dropped when a router fails over from one of its route processors to another?

   A. Reverse Path Forwarding (RPF)
   B. Embedded Event Manager (EEM)
   C. Multilayer Switching (MLS)
   D. Nonstop Forwarding (NSF)

Answer: D
Explanation: Stateful Switchover (SSO) allows a router with two route processors to fail over from its primary route processor to its backup route processor without dropping routing

protocol neighborships with other routers. However, the backup route processor might drop packets while it constructs an IP routing table. To prevent those initial packet drops after the failover, a feature called Nonstop Forwarding (NSF) could be used. NSF allows the IP routing information maintained by Cisco Express Forwarding (CEF) in the primary route processor to remain in memory and be used by the backup route processor. This allows the backup route processor to immediately have IP forwarding information after a failover.

Video Reference: Stateful Switchover (SSO)