Chapter 18: Quiz – Wireless Architecture Infrastructure (Answers) CCNPv8 ENCOR

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13. What are the two locations that a WLC is commonly placed in when deploying a centralized wireless LAN topology? (Choose two.)

- **implemented near the network core**
- **implemented within the data center**
- implemented within the access layer
- implemented as software on an AP
- embedded within an access switch

Explanation: A WLC deployed in a centralized or unified wireless LAN topology is commonly placed in a central location such as a data center or near the network core. A centralized WLC design facilitates the enforcement of wireless security policies.

14. How often are keepalives sent from an AP to a controller over a wired network?

- every 3 seconds
- every 6 seconds
- every 10 seconds
- **every 30 seconds**

Explanation: By default, an AP will send a keepalive message every 30 seconds over a wired network to the WLC that it joined.

15. When considering the performance of a wireless antenna, what is a radiation pattern?

- a graph of the RF signal as a frequency compared to time
- a plot that shows the dynamic rate shifting of a wireless connection over varying distance
- a graph comparing the varying wireless antenna types and the measured distances achievable
- **a plot that shows the relative signal strength around an antenna**

Explanation: Antenna pattern plots can be a bit confusing to interpret as they are placed on a 2D paper environment. However, it is important to review the radiation patterns, which are viewed as a plot that shows the relative signal strength of an antenna drawn out in a three-

dimensional form on a two-dimensional medium.

16. Which statement describes an autonomous access point?

- It is used for networks that require a large number of access points.
- **It is a standalone access point.**
- It is server-dependent.
- It is managed by a WLAN controller.

Explanation: An autonomous access point is used in environments that require a small number of access points. As network demands increase, more access points can be added to the environment with each access point acting independently of another. An autonomous access point can be configured using either a GUI or CLI.

17. When must both the `ip forward-protocol` and `ip helper-address` commands be entered on a Cisco device during a WLC deployment in order to successfully forward CAPWAP Discovery Requests?

- **when a router is positioned between the WLC and the lightweight AP**
- when an access switch is positioned between the WLC and the lightweight AP
- when a WLC is deployed within a centralized WLAN network topology
- when a WLC is deployed using an embedded access switch

Explanation: A Cisco router separates broadcast domains and will prevent broadcasted CAPWAP Discovery Requests from being forwarded between a WLC and an access point. The `ip forward-protocol` and `ip helper-address` commands must be entered on the Cisco router to enable the forwarding of broadcast traffic to the specified WLC.

18. What is the function provided by CAPWAP protocol in a corporate wireless network?

- **CAPWAP provides the encapsulation and forwarding of wireless user traffic between an access point and a wireless LAN controller.**
- CAPWAP provides the encryption of wireless user traffic between an access point and a wireless client.
- CAPWAP provides connectivity between an access point using IPv6 addressing and a wireless client using IPv4 addressing.
- CAPWAP creates a tunnel on Transmission Control Protocol (TCP) ports in order to allow a WLC to configure an autonomous access point

Explanation: CAPWAP is an IEEE standard protocol that enables a WLC to manage multiple APs and WLANs. CAPWAP is also responsible for the encapsulation and forwarding of WLAN client traffic between an AP and a WLC.

19. Which DHCP feature or option provides a list of suggested wireless controllers to a lightweight AP?

- DHCP option 150
- **DHCP option 43**
- DNS server IPs
- default router IP

Explanation: A local DHCP server can provide an access point with an IP address and with DHCP option 43, which is a list of suggested WLC IP addresses.

20. What is the maximum recommended round-trip time between an access point and a controller when trying to maintain near real-time wireless communication?

- less than 50 ms
- less than 75 ms
- **less than 100 ms**
- less than 150 ms

Explanation: The round-trip time (RTT) between an AP and a controller should be less than 100 ms so that wireless communication can be maintained in near real-time.

21. What is the default mode being used by a lightweight access point?

- sniffer
- **local**
- monitor
- bridge

Explanation: The default lightweight mode is local and provides one or more functioning BSSs on a specific channel.

22. Which step can be taken to minimize downtime when moving APs from one controller to a new controller with a different code release?

- **Predownload the new release to the APs to be moved.**
- Configure the APs to be moved with the IP address of the new controller.
- Connect the new WLC as the primary controller and force the APs to join the new controller and automatically download the software release.
- Reboot the new controller with the software release and then join the current APs to it.

Explanation: In order to best minimize downtime, it is recommended to download a new code release to a controller and delay any reboots. Next, the new release can be predownloaded to the APs. Both the controller and the APs can reboot during a maintenance

window and load the new image.

23. What is a characteristic of a Yagi antenna that is used by Cisco Aironet Access Points?

- It provides 360-degree coverage.
- **It can be used for long-distance Wi-Fi networking.**
- It is also referred to as a “rubber duck” design.
- It has the same characteristics as an omnidirectional Wi-Fi antenna.

Explanation: Yagi antennas are a type of directional radio antenna that can be used for long-distance Wi-Fi networking. They are typically used to extend the range of outdoor hotspots in a specific direction, owing to their high gain. Omnidirectional Wi-Fi antennas are also referred as a “rubber duck” design and provide 360-degree coverage.

24. What is a difference between autonomous APs and controller-based APs in wireless LANs?

- Controller-based APs support PAgP and LACP protocols, whereas autonomous APs do not.
- **When wireless demands increase, controller-based APs provide a better solution than do autonomous APs.**
- Autonomous APs are easier to configure and manage than are controller-based APs.
- Autonomous APs require no initial configuration, whereas the lightweight APs require an initial configuration before communicating with a WLAN controller.

Explanation: When the wireless demands increase, more autonomous APs would be required. Each of them operates independently of the others and each one requires manual configuration and management. This would become overwhelming if many APs are needed. Controller-based APs require no initial configuration and are often called lightweight APs. Controller-based APs are useful in situations where many APs are required in the network. As more APs are added, each AP is automatically configured and managed by the WLC. The WLC does not support PaGP or LACP.