

Cisco

Exam Questions 300-425

Designing Cisco Enterprise Wireless Networks (ENWLSD)



NEW QUESTION 1

A customer requires that two wireless APs be installed in a reception area, in a historic building, the impact of the APs on the appearance of the reception area must be minimized. Which two AP antennas should be used? (Choose two.)

- A. AP with a Yagi antenna
- B. AP with a patch antenna
- C. AP with a monopole antenna
- D. AP with an integrated antenna
- E. AP with a dipole antenna

Answer: AB

NEW QUESTION 2

A rapidly expanding company has tasked their network engineer with wirelessly connecting a new cubicle area with Cisco workgroup bridges until the wired network is complete. Each of 42 new users has a computer and VoIP phone. How many APs for workgroup bridging must be ordered to keep cost at a minimum while connecting all devices?

- A. 4
- B. 5
- C. 6
- D. 7

Answer: A

Explanation:

- Number of 802.11b devices per AP: Cisco recommends that you have no more than 15 to 25

So, each AP will have 25 clients. Minimum 4 APs are sufficient.

NEW QUESTION 3

An engineer is designing a wireless deployment for a university auditorium. Which two features can be used to help deal with the issues introduced by high AP count? (Choose two.)

- A. TSPEC
- B. RXSOP
- C. TPC
- D. LSS
- E. DFS

Answer: CE

Explanation:

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/80211/200069-Overview-on-802-11h-Transmit-P>

NEW QUESTION 4

A customer is looking for a network design with Cisco Hyperlocation using AP4800 for location tracking via a custom mobile app. Issues appeared in the past with refresh rates for location updates. What needs to be implemented to meet these requirements?

- A. Cisco CMX SDK in the location app
- B. redundant CMX and fetch location in round-robin fashion.
- C. device Bluetooth via the app
- D. Cisco FastLocate technology

Answer: D

NEW QUESTION 5

A network engineer is working on a design for a wireless network that must support data, voice, and location services. To support these services, which access point placement must the engineer use?

- A. corner only
- B. perimeter and corner
- C. perimeter only
- D. indoor and outdoor

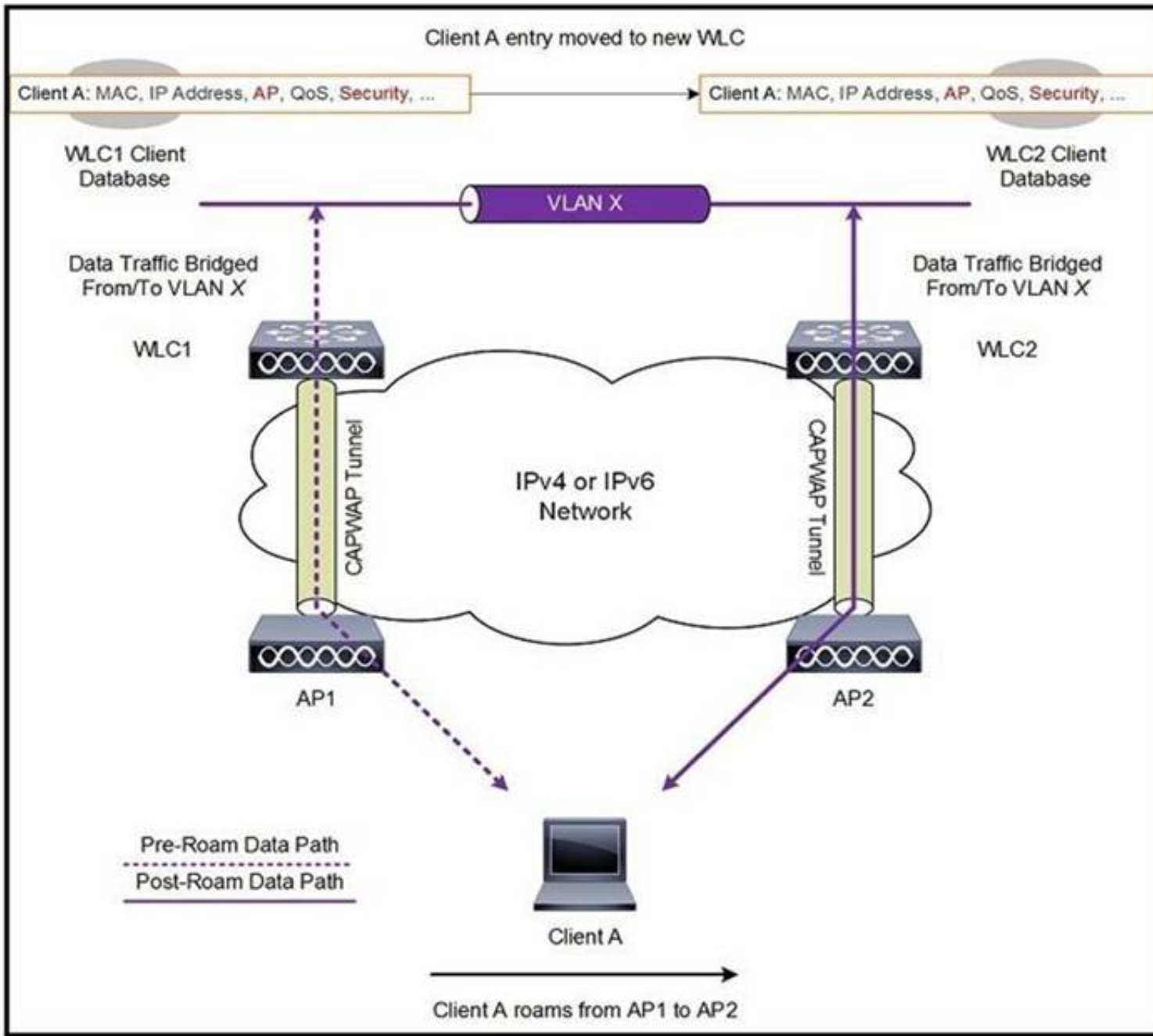
Answer: B

Explanation:

In a location-ready design, it is important to ensure that access points are not solely clustered in the interior and toward the center of floors. Rather, perimeter access points should complement access points located within floor interior areas. In addition, access points should be placed in each of the four corners of the floor, and at any other corners that are encountered along the floor perimeter. These perimeter access points play a vital role in ensuring good location fidelity within the areas they encircle, and in some cases may participate in the provisioning of general voice or data coverage as well.

NEW QUESTION 6

Refer to the exhibit.

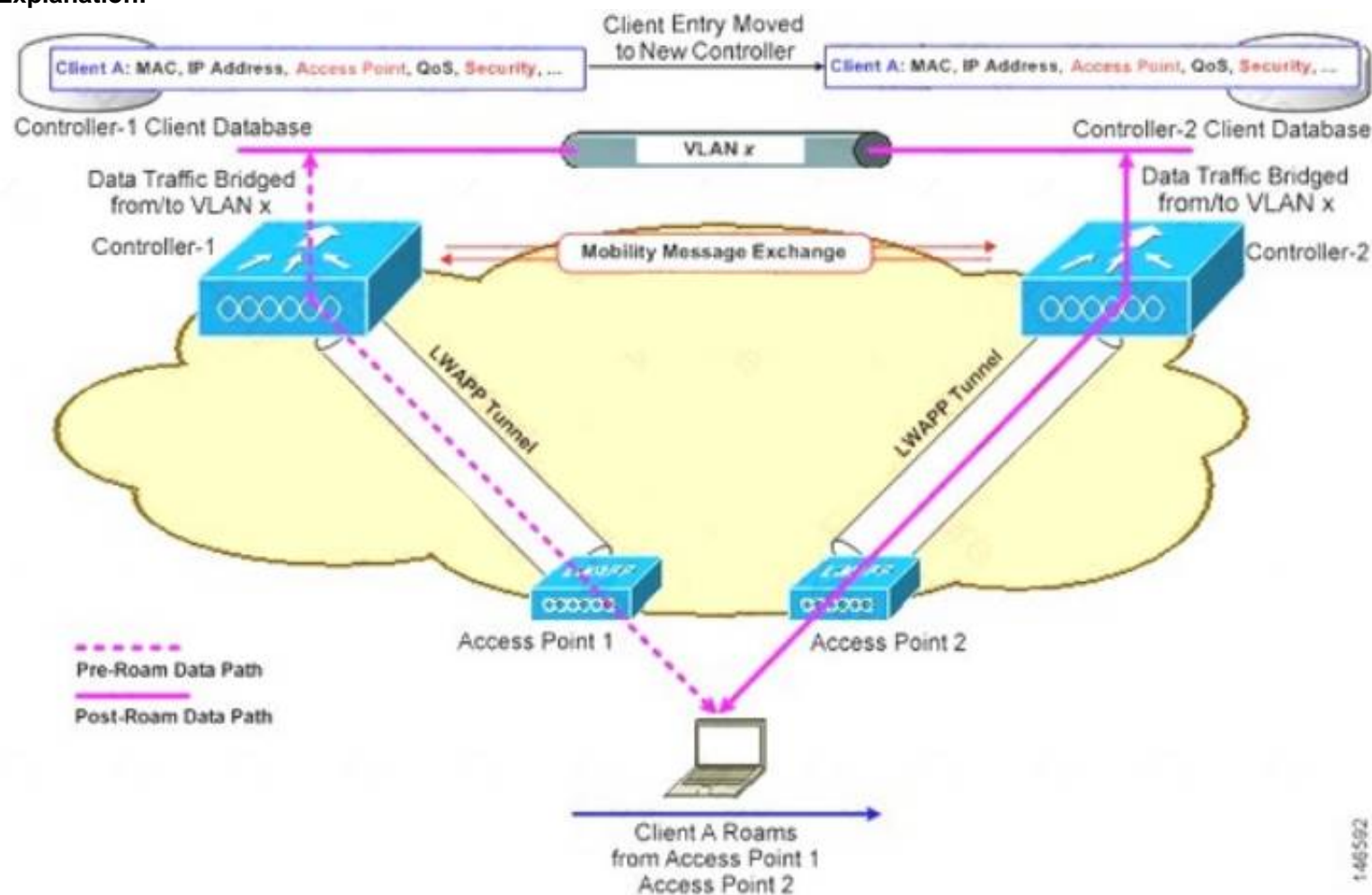


A client roams between two APs that are registered to two different controllers, where each controller has an interface in the client subnet. Both controllers are running AireOS. Which scenario explains the client roaming behavior?

- A. Controllers exchange mobility control messages (over UDP port 16666) and the client database entry is moved from the original controller to the new controller.
- B. Controllers do not exchange mobility control messages (over UDP port 16666) and the client database entry is not moved from the original controller to the new controller.
- C. Controllers exchange mobility control messages (over UDP port 16666) and a new client session is started with the new controller.
- D. Controllers exchange mobility control messages (over UDP port 16666) and the client database entry is tunneled from the original controller to the new controller.

Answer: A

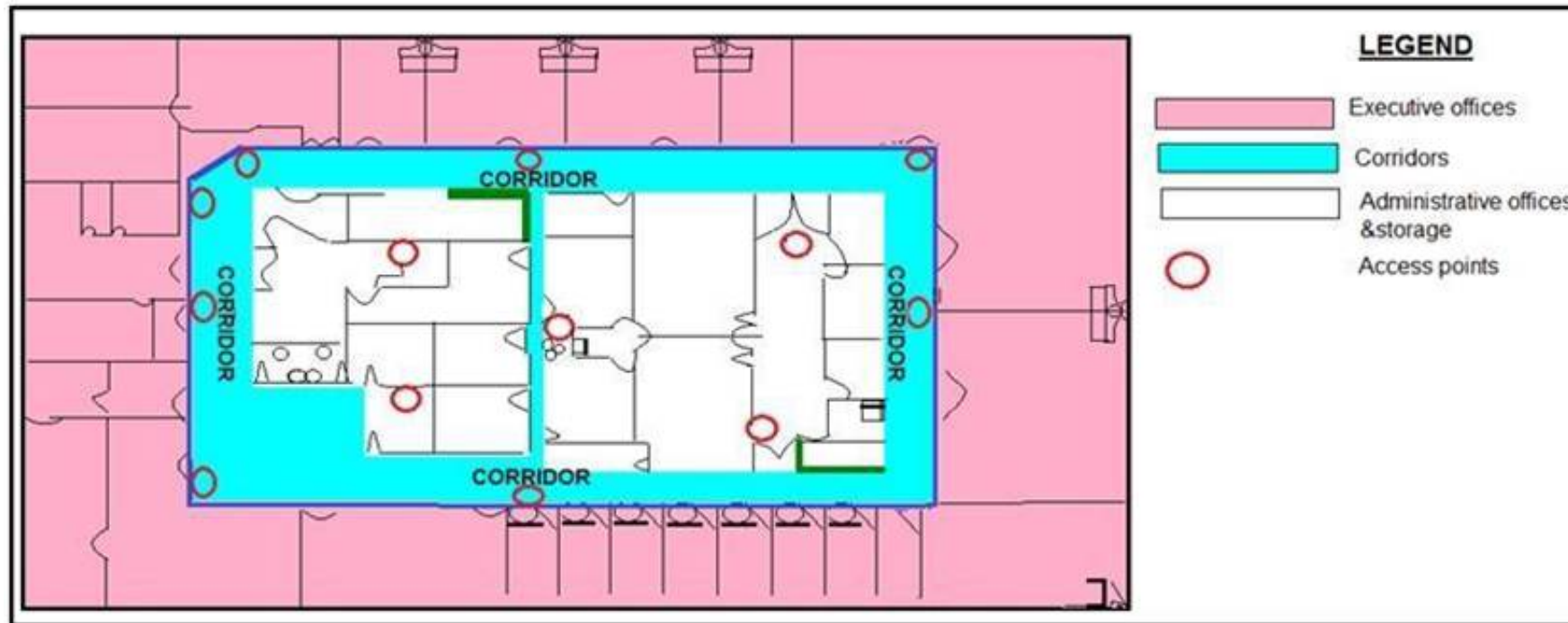
Explanation:



In this instance controllers exchange mobility control messages (over UDP port 16666) and the client database entry is **moved** from the original controller to the new controller.

NEW QUESTION 7

Refer to the exhibit.



What is the main reason why the Wi-Fi design engineer took a different approach than installing the APs in the offices, even though that installation provides better coverage?

- A. aesthetics
- B. transmit power considerations
- C. antenna gain
- D. power supply considerations

Answer: B

Explanation:

<https://www.cisco.com/en/US/docs/solutions/Enterprise/Mobility/emob30dg/RFDesign.html#wp1000551>

NEW QUESTION 8

An engineer must ensure that the wireless network can accomplish fast secure roaming by way of caching keys on the access points. Which key caching mechanism is enabled by default on a Cisco AireOS WLC?

- A. SKC
- B. OKC
- C. 802.11r
- D. CCKM

Answer: B

Explanation:

Step 2 Enable sticky key caching by entering this command:

config wlan security wpa wpa2 cache sticky enable wlan_id

By default, SKC is disabled and opportunistic key caching (OKC) is enabled.

An extension of this technique is known as OKC (Opportunistic Key Caching), a method not defined in 802.11i but necessary to enable optimized roaming at layer 2 for client devices moving between APs. Using OKC, all APs on the same layer 2 network will receive a copy of a client's PMK ID, enabling client devices authenticated via 802.1X to authenticate with decreased latency whilst roaming. In this fashion, even if a client has not been

NEW QUESTION 9

An engineer is reducing the subnet size of the corporate WLAN by segmenting the VLAN into smaller subnets. Clients will be assigned a subnet by location. Which type of groups can the engineer use to map the smaller subnets to the corporate WLAN?

- A. WLC port groups
- B. RF groups
- C. AP groups
- D. interface groups

Answer: D

Explanation:

- AP groups give the ability to statically map Wi-Fi service (WLAN) to VLAN based on physical location
- Users see the same Wi-Fi service on all sites.
- Admin can monitor and filter based on different IP@ each site
- Can also be used to have smaller Wi-Fi subnets

NEW QUESTION 10

Multiple WLCs are implemented in a high-availability configuration in a mobility group. APs are deployed with only a primary controller assigned. By default, which mobility group member controller do the orphaned APs join in the event of a failed controller?

- A. controller with the most available AP free license capacity
- B. controller with the lowest percent of associated APs per license capacity
- C. controller with the least CPU utilization over the last reporting period
- D. controller with the least number of associated APs

Answer: D

Explanation:

<https://mrnciew.com/2013/04/07/ap-failover/>

NEW QUESTION 10

How does AP failover priority for access points function when configured with priority 1 or 4?

- A. When configured with priority 1, the access point is assigned with the highest priority level and it is marked as critical
- B. This access point fails over before other access points with the lower priority when there is primary controller failure.
- C. When configured with priority 4, the access point is assigned with the highest priority level and it is marked as critical
- D. This access point fails over before other access points with the lower priority when there is primary controller failure.
- E. When configured with priority 4, the access point is assigned with the lowest priority level and it is marked as low
- F. This access point fails over after other access points with the higher priority when there is primary controller failure.
- G. When configured with priority 1, the access point is assigned with the medium priority level and it is marked as medium
- H. This access point fails over after other access points with the higher priority when there is primary controller failure.

Answer: B

NEW QUESTION 14

A company has 10 access point licenses available on their backup Cisco WLC and their primary Cisco WLC is at full capacity, 5 access points are set to high failover priority and 7 access points are set to critical failover priority. During a failure, not all critical access points failed over to the backup Cisco WLC. Which configuration is the cause of this issue?

- A. The high priority access point is oversubscribed.
- B. network ap-priority is set to enable.
- C. The critical priority access point count is oversubscribed.
- D. network ap-priority is set to disable.

Answer: D

Explanation:

<https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2016/pdf/BRKCOL-2275.pdf>

NEW QUESTION 18

A wireless engineer is designing a wireless network for a warehouse using access points with internal antennas. Which two elements have a negative effect on the wireless users? (Choose two.)

- A. wireless channels
- B. access point height
- C. client authentication
- D. client authorization
- E. absorption

Answer: BE

Explanation:

https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-1250-series/design_guide_c07-693245.html#

NEW QUESTION 23

A network engineer is designing a new wireless network. The network needs to have these characteristics:

- support high client concentration
- optimize client performance
- avoid interference

Which approach should be taken?

- A. Deploy APs near each other for 5 GHz coverage, and disable the 2A GHz radios for some Aps.
- B. Deploy APs near each other for 2.4 GHz coverage, and disable the 5 GHz radios for all APs.
- C. Deploy APs near each other for 5 GHz coverage, and enable the 2.4 GHz radios for all Aps.
- D. Deploy APs near each other for 2.4 GHz coverage, and disable the 5 GHz radios for some APs.

Answer: D

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/86/b_Cisco_Wireless_LAN_Controller_Co

NEW QUESTION 28

During a client roaming event, which device is responsible for communicating the new Layer 2 EID mapping of a wireless supplicant to the fabric domain?

- A. WLC
- B. BN
- C. CP2
- D. CP1

Answer: A

Explanation:

<https://www.cisco.com/c/dam/en/us/td/docs/cloud-systems-management/network-automation-and-management/>

NEW QUESTION 33

What is the attenuation value of a human body on a wireless signal?

- A. 3 dB
- B. 4 dB
- C. 6 dB
- D. 12 dB

Answer: A

Explanation:

Signal AttenuationSignal attenuation or signal loss occurs even as the signal passes through air. The loss of signal strength is more pronounced as the signal passes through different objects. A transmit power of 20 mW is equivalent to 13 dBm. Therefore, if the transmitted power at the entry point of a plasterboard wall is at 13 dBm, the signal strength is reduced to 10 dBm when exiting that wall. This table shows the likely loss in signal strength caused by various types of objects.

Signal Attenuation Caused By Various Types of Objects

Object in Signal Path

Signal Attenuation through Object

Plasterboard wall 3 dB

Glass wall with metal frame 6 dB

Cinder block wall 4 dB

Office window 3 dB

Metal door 6 dB

Metal door in brick wall 12 dB

Human body 3 dB

Each site surveyed has different levels of multipath distortion, signal losses, and signal noise. Hospitals are typically the most challenging environment to survey due to high multipath distortion, signal losses and signal noise. Hospitals take longer to survey, require a denser population of access points, and require higher performance standards. Manufacturing and shop floors are the next hardest to survey. These sites generally have metal siding and many metal objects on the floor, which result in reflected signals that recreate multipath distortion. Office buildings and hospitality sites generally have high signal attenuation but a lesser degree of multipath distortion.

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/71642-vocera-deploy-guid>

NEW QUESTION 37

Which two considerations must a network engineer have when planning for voice over wireless roaming? (Choose two.)

- A. Full reauthentication introduces gaps in a voice conversation.
- B. Roaming time increases when using 802.1x + Cisco Centralized Key Management.
- C. Roaming occurs when the phone has seen at least four APs.
- D. Roaming occurs when the phone has reached -80 dBs or below.
- E. Roaming with only 802.1x authentication requires full reauthentication.

Answer: AE

Explanation:

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Mobility/vowlan/41dg/vowlan41dg-book/vowlan_c

NEW QUESTION 39

An AP is receiving 802.11 packets on its 802.11a radio with an RSSI value of -77 dBm. The current AP is part of an AP group that has been assigned an RF profile with RX-SOP set to Medium for 802.11a. Which action does the AP take with the packets?

- A. All frames are classified as non-Wi-Fi frames and are not decoded by the 5 GHz radio.
- B. Frames are decoded by the 2.4 GHz radio.

- C. All frames are classified as non-Wi-Fi frames and are not decoded by the 2.4 GHz radio.
D. Frames are decoded by the 5 GHz radio.

Answer: C

NEW QUESTION 43

An engineer is designing a new wireless network. The network needs to meet these requirements:

- support a high wireless client concentration
- support data over wireless
- support voice over wireless
- avoid interference

Which design approach should be taken?

- A. 5 GHz frequency band with channel bonding, to support 40 MHz channels
B. 5 GHz frequency band without channel bonding, to support 20 MHz channels
C. 5 GHz frequency band with channel bonding, to support 80 MHz channels.
D. 2.4 GHz frequency band without channel bonding, to support 20 MHz channels

Answer: D

Explanation:

<https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/108184-config-802-1>

NEW QUESTION 48

A wireless engineer must optimize RF performance for multiple buildings with multiple types of construction and user density. Which two actions must be taken? (Choose two.)

- A. Configure Flexconnect groups for each building.
B. Configure WMM profiles for each building.
C. Configure AP groups for each area type.
D. Configure RF profiles for each area type.
E. Enable DTPC on the network.

Answer: CD

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-10/config-guide/b_cg810/configuring_ap_groups.ht

NEW QUESTION 52

A wireless deployment in a high-density environment is being used by vendors to process credit card payment transactions via handheld mobile scanners. The scanners are having problems roaming between access points in the environment. Which feature on the wireless controller should have been incorporated in the design?

- A. RX SOP
B. 802.11w
C. AP Heartbeat Timeout
D. Application Visibility Control

Answer: A

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/configguide/b_cg85/advanced_wireless_tuning.ht

NEW QUESTION 55

A network engineer is preparing for an office site survey with a height of 2.5 meters. Which three components are recommended to complete the survey? (Choose three.)

- A. Use a battery pack to power APs
B. Use a drawing of the office space to draw AP and client placements.
C. Use DoS attack on APs while measuring the throughput.
D. Use APs with directional antennas.
E. Use APs with external antennas.
F. Use APs with built-in antennas.

Answer: ABF

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/technology/mesh/8-4/b_mesh_84/Site_Preparation_and_Plannin

NEW QUESTION 56

An engineer must perform a pre-deployment site survey for a new building in a high-security area. The design must provide a primary signal RSSI of -65 dBm for the clients. Which two requirements complete This design? (Choose two)

- A. Site access
B. AP model
C. WLC model
D. HAVC access

E. Number of clients

Answer: BE

Explanation:

<https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/116057-site-survey-guide>

NEW QUESTION 57

Guest anchoring is configured for a newly created SSID for your company. It has been noticed that the mobility tunnels are not up, and that MPING fails from your foreign WLC to the anchor WLC. What is the reason that it is failing?

- A. A rule is needed at the firewall to allow UDP port 16666 for communication to work.
- B. A rule is needed at the firewall to allow UDP port 97 for communication to work.
- C. A rule is needed at the firewall to allow TCP port 97 for communication to work.
- D. A rule is needed at the firewall to allow TCP port 16666 for communication to work.

Answer: A

Explanation:

- UDP 16666 for tunnel control traffic
- IP Protocol 97 for user data traffic
- UDP 161 and 162 for SNMP

NEW QUESTION 59

An engineer must perform an assessment of a customer LAN for a future IEEE 802.11ac Wave 2 wireless deployment. All access switches are Fast Ethernet-Capable only, and the wired infrastructure between existing APs and access switches is based on the CAT 6A standard. Which two actions provide maximum support of Cisco 3800 Series access points? (Choose two.)

- A. Replace the existing switches with mGig switches.
- B. Replace the existing switches with gigabit switches with 10G uplinks.
- C. Ensure that cable distances between access switches and APs are not longer than 100 meters.
- D. Replace the existing wiring infrastructure with the CAT-7E wiring standard.
- E. Ensure that cable distances between access switches and APs are not longer than 55 meters.

Answer: AC

NEW QUESTION 60

Where must the APs be mounted when used in a high-density wireless network to provide 6 dB to 20 dB of attenuation to a cell?

- A. in the aisle
- B. under the seat
- C. above the stage
- D. under the stage

Answer: B

Explanation:

Under seat or under desk mounting can provide from 6 dB to 20 dB of attenuation to the cell,

NEW QUESTION 62

During a wireless network design, a customer requires wireless coverage on the perimeter of a building but also wants to minimize signal leakage from the wireless network. Which antenna should be used to accomplish this design?

- A. Patch
- B. Dipole
- C. Monopole
- D. Omnidirectional

Answer: C

Explanation:

<https://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/antennas/installing-combined/industrial-routers-an>

NEW QUESTION 66

A customer has multiple WLCs running N+1 redundancy with APs equally distributed. Only one WLC is a designated backup for all other WLCs so the customer must ensure that the most critical APs remain registered or get priority over other APs in case of a WLC failure. However, the customer notices on WLC failure that some critical APs remain unregistered. What needs to be addressed in the design?

- A. AP fallback is not enabled on the backup WLC.
- B. AP failover priority is not enabled globally on the backup WLC.
- C. AP failover priority is not enabled globally on the failed WLC.
- D. AP fallback is not enabled on the failed WLC.

Answer: C

NEW QUESTION 68

An engineer must configure the virtual IP address on multiple controllers in a mobility group. Which rule must the engineer follow to ensure proper roaming?

- A. Ensure that the DNS entry is tied to the virtual IP address of the WLC.
- B. Use a unique IP address for each WLC.
- C. Ensure that the DNS Host Name field is defined.
- D. Use the same IP address for each WLC.

Answer: A

Explanation:

All controllers within a mobility group must be configured with the same virtual interface IP address.

NEW QUESTION 69

An engineer at a global enterprise organization must ensure that a mesh deployment has the highest number of channels available to the backhaul, regardless of region deployed, which design meets this requirement?

- A. one controller per continent
- B. one controller per country code
- C. redundant controllers in the most restrictive regulatory domain
- D. redundant controllers in the least restrictive regulatory domain

Answer: B

Explanation:

AP regulatory domain is set when shipped, this can't be changed. Country codes are changed manually on the WLC, not the regulatory domain. The country set must be in the regulatory domain of any associated APs. There is no setting for continent.

NEW QUESTION 72

An engineer has configured guest anchoring for a newly created SSD however, the mobility tunnels are not up, and EPING is failing from the foreign WLC to the anchor WLC. Which traffic flow must be allowed at the firewall to enable the communication?

- A. UDP port 16666
- B. IP protocol 97
- C. UDP port 97
- D. TCP port 97

Answer: A

Explanation:

The only special implementation of the WLC in CCKM is that WLCs exchange client PMK via mobility packets, such as UDP 16666.

NEW QUESTION 75

Which statement about the 9800 Series Wireless Controller mobility tunnel on a Cisco Catalyst 9800 controller is true?

- A. It is an IPsec tunnel with control path only.
- B. It is a CAPWAP tunnel with data path only.
- C. It is a CAPWAP tunnel with control path and data path.
- D. It is an IPsec tunnel with control path and data path.

Answer: C

Explanation:

The Cisco Catalyst 9800 Series Wireless Controller mobility tunnel is a CAPWAP tunnel with control path (UDP 16666) and data path (UDP 16667). The control path is DTLS encrypted by default. Data path DTLS can be enabled when you add the mobility peer.

https://www.cisco.com/c/en/us/td/docs/wireless/controller/9800/config-guide/b_wl_16_10_cg/mobility.html

NEW QUESTION 76

An engineer is designing an outdoor mesh network to cover several sports fields. The core of the network is located in a building at the entrance of a sports complex. Which type of antenna should be used with the RAP for backhaul connectivity?

- A. 5 GH
- B. 8-dBi omnidirectional antenna
- C. 2.4 GH
- D. 8-dBi patch antenna
- E. 2.4 GH
- F. 14-dBi omnidirectional antenna
- G. 5 GH
- H. 14-DBi patch antenna

Answer: A

Explanation:

[https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/product_data_she](https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/product_data_sheet.html)

NEW QUESTION 80

A wireless engineer is utilizing the voice readiness tool in Cisco Prime for a customer that wants to deploy Cisco IP phones. Which dBm range is the network inspected against?

- A. -78 to -65 dBm
- B. -72 to -67 dBm
- C. -85 to -65 dBm
- D. -85 to -67 dBm

Answer: D

Explanation:

Default voice minimum RSSI is -75 dBm. but cisco recommend to get RSSI better than -67 dBm.

[https://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/infrastructure/34/user/guide/bk_CiscoPrimeInfrastructure](https://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/infrastructure/34/user/guide/bk_CiscoPrimeInfrastructure.html) minimum is -90 and maximum is -67 for IP phone

NEW QUESTION 81

Which statement about creating a mobility group is true, excluding mobility anchors?

- A. Each WLC must use the same mobility name and be defined as a peer in each other's static mobility members list.
- B. If WLCs with HA SSO are deployed, each WLC in the WLC HA pair considered separately as a mobility peer.
- C. The WLCs do not have to be of the same model or type to be a member of a mobility group, however each member should be running different software versions.
- D. A mobility groups does not require all WLCs in the group to use the same virtual IP address.

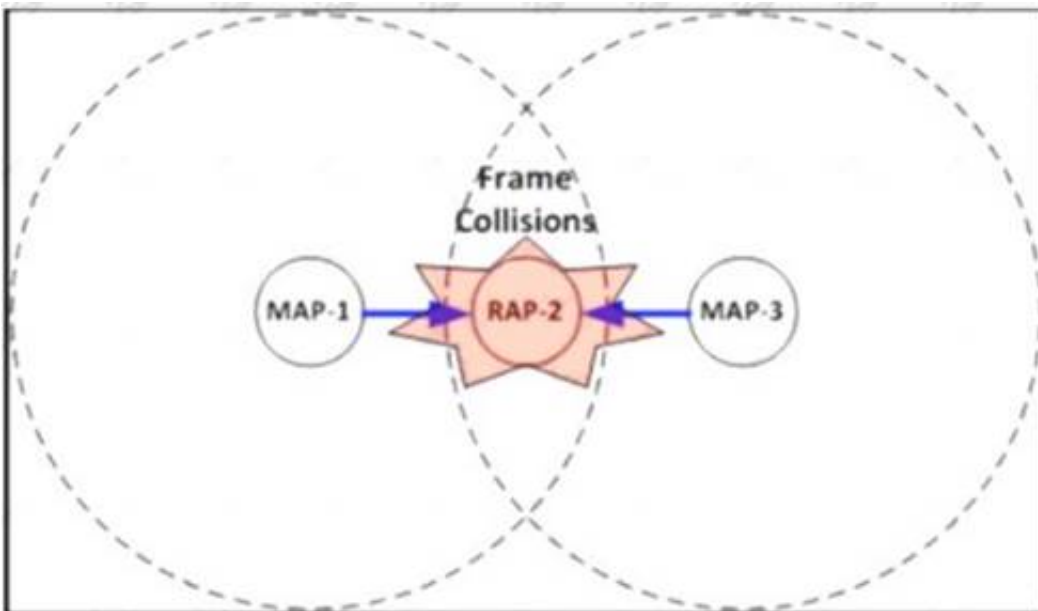
Answer: B

Explanation:

- The HA pair of AireOS WLCs should be considered as separated WLCs with the same exact configuration

NEW QUESTION 83

Refer to the exhibit.



During a post Mesh deployment survey, an engineer notices that frame collisions occur when MAP-1 and MAP-3 talk to RAP-2 Which type of issue does the engineer need to address in the design?

- A. co-channel interference
- B. backhaul latency
- C. hidden node
- D. exposed node

Answer: C

Explanation:

<https://www.cisco.com/en/US/docs/solutions/Enterprise/Mobility/emob30dg/WiMesh.pdf>

NEW QUESTION 86

A network engineer needs to create a wireless design to bridge wired IP surveillance cameras in the parking lot through a mesh AP. To which operate mode of the AP should the cameras connect?

- A. Flexconnect
- B. MAP
- C. RAP
- D. Local

Answer: B

NEW QUESTION 91

Drag and drop the characteristics from the left onto the correct functionalities on the right.

complex configuration on the Cisco WLC and infrastructure

achieves optimal AP join process with src-dst-ip load-balancing

simple configuration on the Cisco WLC and infrastructure

avoids single point of failure on neighbor switches

Multiple AP-Manager Interfaces

LAG

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONS

NEW QUESTION 92

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