



Cisco

Exam Questions 300-425

Designing Cisco Enterprise Wireless Networks (ENWLSD)

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NEW QUESTION 1

An engineer has performed a predictive site survey for high-speed data and voice in an indoor office. What is the recommended data rate with -67 dBm signal level for optimal VoWLAN design?

- A. 6 Mbps on 802.11 bgn
- B. 24 Mbps on 802.11 bgn
- C. 12 Mbps on 802.11 an
- D. 24 Mbps on 802.11 an

Answer: B

Explanation:

The -67 dBm measurement has been used for years for 11b phone clients from many vendors. Tests indicate that this same rule of thumb measurement works well for 11g and 11a phone clients.

NEW QUESTION 2

A high-density wireless network is designed. Which Cisco WLC configuration setting must be incorporated in the design to encourage clients to use the 5 GHz spectrum?

- A. Band Select
- B. RRM
- C. Cisco Centralized Key Management
- D. load balancing

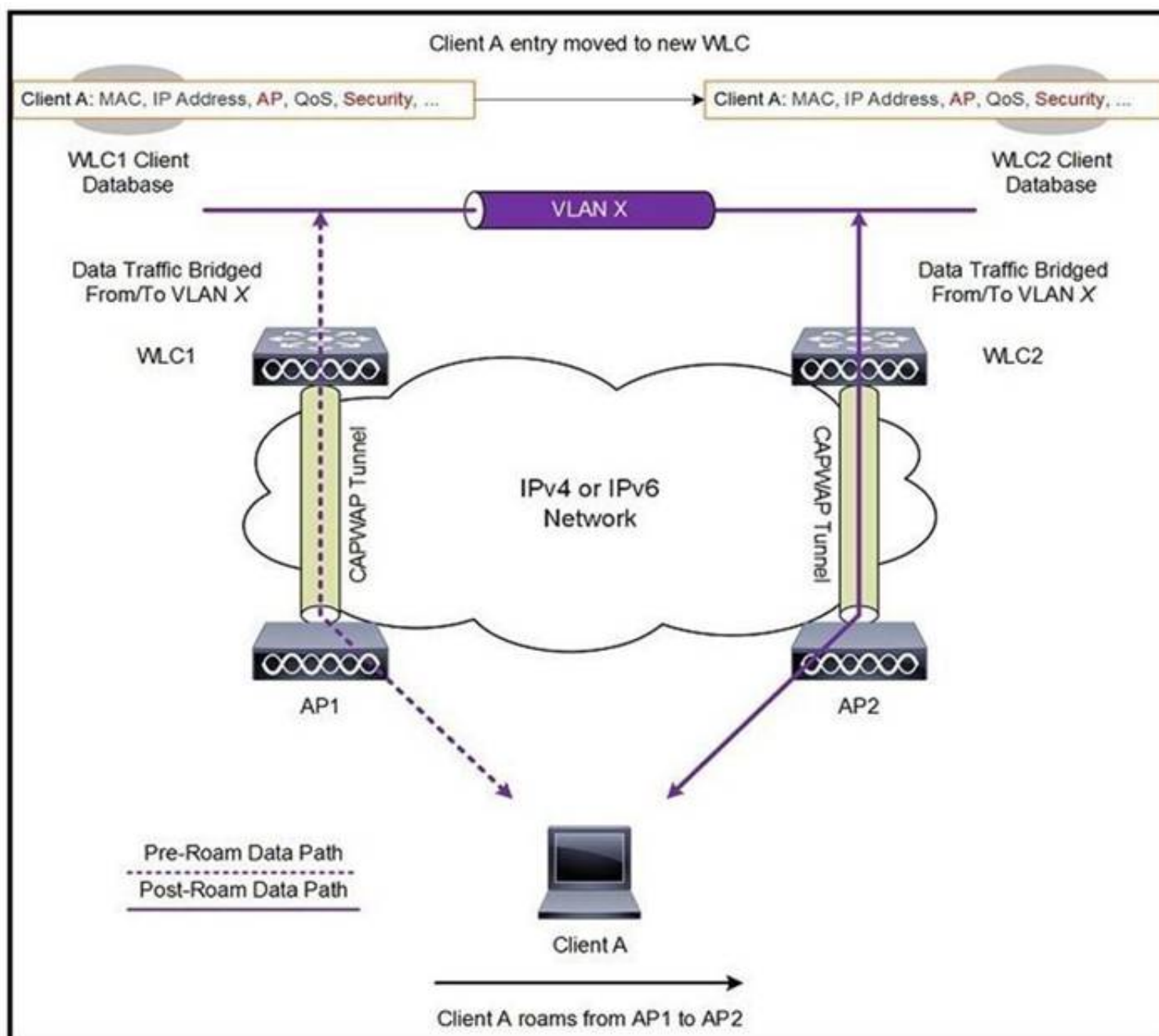
Answer: A

Explanation:

Band Select will impact the initial scan, steering clients towards **5 GHz**

NEW QUESTION 3

Refer to the exhibit.

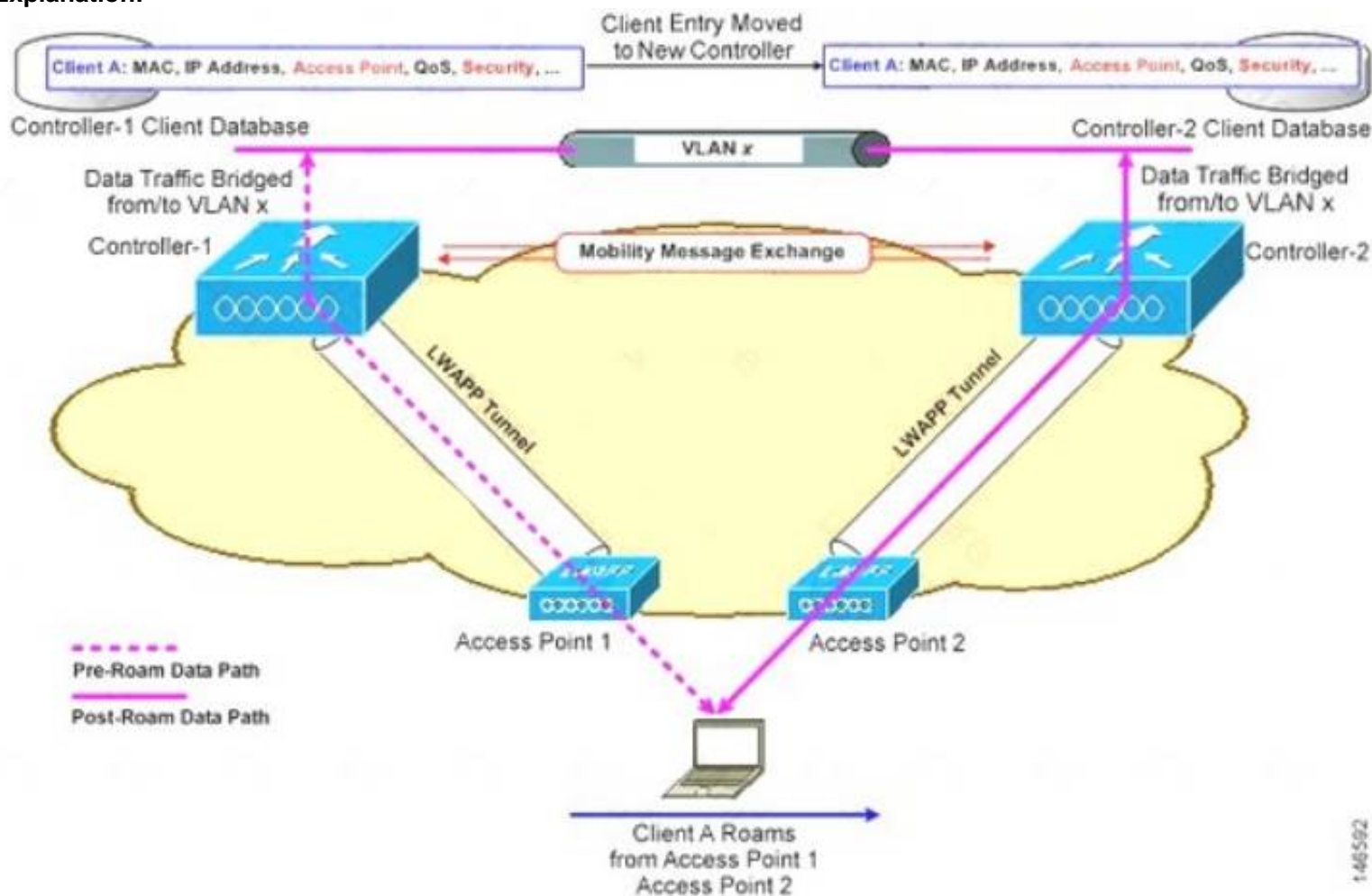


A client roams between two APs that are registered to two different controllers, where each controller has an interface in the client subnet. Both controllers are running AireOS. Which scenario explains the client roaming behavior?

- 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 4

An engineer is designing a network deployment for a college with six buildings. Each building must have a WLC located in the IDF to support the APs. The wireless clients should be able to roam between the APs and the controllers. Which type of wireless architecture should be used?

- A. Distributed
- B. Centralized
- C. Cloud
- D. Autonomous

Answer: B

Explanation:

Cloud-based architecture has controllers in the cloud, not on premises. Autonomous architecture means each AP is autonomous and is not managed by a WLC, distributed architecture is another term for autonomous architecture, so the same applies. Centralized architecture, a.k.a. split-MAC architecture is when all APs are managed centrally by WLCs, they do not need to be co-located. Understanding Cisco Wireless Architectures - CCNA Wireless 200-355 Official Cert Guide (2016) (apprize.best)

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Mobility/emob41dg/emob41dg-wrapper/ch2_A

NEW QUESTION 5

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 6

A customer is running a guest WLAN with a foreign/export-anchor setup. There is one anchor WLC in the US and two in Europe. Anchor WLC priorities are used to prefer local anchors. During a routine network audit, it is discovered that a large number of guest client sessions in the US are anchored to the WLCs in Europe. Which reason explains this behavior?

- A. The foreign WLC failed and recovered.
- B. The US anchor WLC failed and recovered.
- C. The US anchor WLC is anchored to itself with a priority value of zero.
- D. The anchor WLC is in the same mobility group.

Answer: B

Explanation:

<https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-1/Enterprise-Mobility-8-1-Design-Guide/Enterprise>

NEW QUESTION 7

How should the concept of mobility domains and mobility groups be explained to a customer?

- A. WLCs do not need to be in the same mobility domain to communicate with each other. Mobility groups constrain the distribution of security context of a client and also constrain AP fail-over between controllers.
- B. A mobility group does not constrain the distribution of security context of a client and also does not constrain AP fail-over between controllers when the WLCs are in the same mobility domain.
- C. If WLCs are in same mobility domain, they communicate with each other.
- D. Mobility groups constrain the distribution of security context of a client and also constrain AP fail-over between controllers.
- E. If WLCs are in the same mobility domain, they communicate with each other but
- F. If an anchor WLC is present, it must be in the same mobility domain for communication to be possible.

Answer: C

NEW QUESTION 8

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 Attenuation Signal 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 9

A customer has two Cisco 550B WLCs that manage all the access points in their network and provide N+1 redundancy and load balancing. The primary Cisco WLC has 60 licenses and the secondary Cisco WLC has 40. The customer wants to convert the N+1 model to an HA model and provide SSO. Configuration must be performed during a maintenance window. After performing all the configurations on both controllers, the config redundancy unit secondary command is issued on the secondary Cisco WLC and it fails. Which parameter needs to be in place to complete the configuration?

- A. A cable in the RP port
- B. The secondary Cisco WLC needs a minimum of 50 base licenses
- C. The primary Cisco WLC is already set as the secondary unit.
- D. SSO needs to be enabled

Answer: B

Explanation:

- With Release 7.4, an HA-SKU secondary controller can be configured as a backup controller for N+1 HA. For example, the following can be used as an HA-SKU controller:
 - 5508 Series Standalone controller with 50 AP license

NEW QUESTION 10

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 10

Campus users report a poor wireless experience. An engineer investigating the issue notices that in high-density areas, the wireless clients fail to switch the AP to which are automatically connected. This sticky client behavior is causing roaming issues. Which feature must the engineer configure?

- A. Load balancing and band select
- B. optimized roaming
- C. Layer 3 roaming
- D. Layer 2 roaming

Answer: B

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/80/hdx_final/b_hdx_dg_final/high_de

NEW QUESTION 11

During a post-deployment site Survey, issues are found with non wi-Fi interference. What should the engineer use to identify the source of the Interference?

- A. Network analysis module
- B. Wireless intrusion prevention
- C. Wireshark
- D. Cisco spectrum expert

Answer: D

NEW QUESTION 14

Refer to the exhibit.

Global Configuration		
Redundancy Mgmt Ip	172.25.44.4	
Peer Redundancy Mgmt Ip	172.25.44.5	
Redundancy port Ip	169.254.44.4	
Peer Redundancy port Ip	169.254.44.5	
Redundant Unit	Primary	
Mobility Mac Address	60:73:5C:D1:76:00	
Keep Alive Timer (100 - 1000)	100	milliseconds
Keep Alive Retries (3 - 10)	3	
Peer Search Timer (60 - 300)	120	seconds
Management Gateway Failover	Enabled	
SSO	Disabled	

An enterprise is using wireless as the main network connectivity for clients. To ensure service continuity, a pair of controllers will be installed in a datacentre. An engineer is designing SSO on the pair of controllers. What needs to be included in the design to avoid having the secondary controller go into maintenance mode?

- A. The Keep alive timer is too low
- B. which causes synchronization problems.
- C. The connection between the redundancy ports is missing.
- D. The redundancy port must be the same subnet as the redundancy mgmt.
- E. The Global Configuration of SSO is set to Disabled on the controller.

Answer: B

Explanation:

‘There are few scenarios where the Standby WLC may go into Maintenance Mode and not be able to communicate with the network and peer: • Non reachability to Gateway via Redundant Management Interface

• WLC with HA SKU which had never discovered peer • Redundant Port is down • Software version mismatch (WLC which boots up first goes into active mode and the other WLC in Maintenance Mode)’ High Availability (SSO) Deployment Guide – Cisco

NEW QUESTION 16

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 21

Refer to the exhibit.

Name Prefix

Add APs

AP Type

Enable 11n Support ☐

802.11a/n/ac Antenna

802.11b/g/n Antenna

Protocol

Throughput 802.11a/n/ac

802.11b/g/n

Services: ☒ Advanced Options

☒ Data/Coverage

Safety Margin

☒ Voice

Safety Margin

☒ Location

☐ Location with Monitor Mode APs

☐ Demand

☐ Override Coverage Per AP

Per AP Area0 (sq feet)

Total Coverage Area 179312 (sq feet)

Recommended AP Count **74**

Data/Coverage **48**

Voice **48**

Location **59**


Location with Monitor


Mode APs

Demand

Floor Type: Cubes and Walled Offices

Add APs Automatically:
Realize and move the rectangle using the mouse over the desired coverage area, then specify placement criteris. Click "Calculate" to determine the number of APs recommended by NCS. If you are satisfied with the result, press "Apply". APs will be created and automatically positioned on the map.





Which two statements about Cisco Prime Infrastructure are true? (Choose two.)

- A. It presents the recommended number of APs for the selected coverage area based on the selections made.
- B. Planning mode requires a special license in Cisco Prime Infrastructure.
- C. It shows the map editor feature in Cisco Prime Infrastructure.
- D. Controllers must be synchronized with Cisco Prime Infrastructure for planning mode to work.
- E. It shows the planning mode feature in Cisco Prime Infrastructure.

Answer: DE

Explanation:

Use Planning Mode to Calculate Access Point Coverage Requirements

Prime Infrastructure planning mode lets you calculate the number of access points (APs) required to cover an area by placing fictitious APs on a map and viewing the coverage area. Based on the throughput specified for each protocol (802.11a/n or 802.11b/g/n), planning mode calculates the total number of APs required to provide optimum coverage in your network. You can calculate the recommended number and location of APs based on the following criteria:

NEW QUESTION 22

A wireless engineer is using Ekahau site survey to validate that an existing wireless network is operating as expected, which type of survey should be using to identify the end-to-end network performance?

- A. GPS assisted
- B. Spectrum analysis
- C. Passive
- D. Active ping

Answer: B

Explanation:

<https://support.ekahau.com/hc/en-us/articles/115004973067-Spectrum-Analysis-Surveys>

NEW QUESTION 27

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 32

Which statement about AP failover priority for access points when configured with priority 1 or 4 is true?

- A. When configured with priority 1, the access point is assigned with the highest priority level and it is marked as critica
- 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 critica
- 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 lo
- 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 mediu
- H. This access point fails over after other access points with the higher priority when there is primary controller failure.

Answer: B

Explanation:

N+1 Redundancy

AP Failover Priority

- Assign priorities to APs: Critical, High, Medium, Low
- Critical priority APs get precedence over all other APs when joining a controller
- In a failover situation, a higher priority AP will be allowed to join ahead of all other APs

NEW QUESTION 33

A technician connects a Cisco Aironet 3700 Series access point to a switch and realizes that the AP is coming up with 3x3 MIMO. Which reason explains this behavior?

- A. A redundant power supply is unavailable on the switch.
- B. The switch is 802.3af capable.
- C. The AP is getting power from a power injector.
- D. The switch is PoE+ capable.

Answer: D

Explanation:

The AP 3700 with integrated 802.11ac wave-1 radio is designed to run from Power over Ethernet (PoE) sources, local power, or via mid-span or power injector. If the AP 3700 is powered by PoE and the source is 802.3af (15.4 Watts) the AP will come up and fully function in a 3x3:3 mode. For enhanced performance additional power sources such as 802.3at, enhanced PoE, Cisco PoE Injector-4, or local power may be used. With additional power (greater than 15.4W) supplied, the 3700 will shift into the 4x4:3 mode.

The big difference between 802.3af (PoE) and 802.3at (PoE+) is the amount of power delivered over each standard.

NEW QUESTION 35

Clustering Cisco WLCs into a single RF group enables the RRM algorithms to scale beyond the capabilities of a single Cisco WLC. How many WLC and APs in an RF group can the controller software scale up to in WLC release 8.9 depending on the platform?

- A. up to 20 WLCs and 1000 APs
- B. up to 20 WLCs and 3000 APs
- C. up to 20 WLCs and 4000 APs
- D. up to 20 WLCs and 6000 APs

Answer: D

Explanation:

- Controller software supports up to **20 controllers** and **6000 access points** in an RF group.

https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-9/config-guide/b_cg89/radio_resource_managemen

NEW QUESTION 36

A customer called with a requirement that internal clients must be on different subnets depending on the building they are in. All access points are operating in local mode and will not be modified, and this is a single controller solution. Which design approach creates the desired result?

- A. Create AP groups for each desired location, map the correct VLANs to the internal SSID, and add the access points for that location.
- B. Create an SSID place it to the desired VLAN under WLANs and configure 802.1x in ISE to assign the correct VLAN based on the SSID from which the client is authenticating
- C. Create FlexConnect groups, place the access points in, and set the correct VLAN to SSID mapping based on location.
- D. Create mobility anchors for the SSID and on the controller under the internal SSID create a foreign map to the desired VLAN based on location.

Answer: A

Explanation:

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-vlan/71477-ap-group-vlans-wlc.html>

NEW QUESTION 37

A wireless engineer is hired to design a network for a technology company. The company campus has four buildings and a warehouse with access points that provide full wireless coverage as well as a pair of WLCs located in the core of the network. Which type of wireless architecture is being used?

- A. unified deployment
- B. autonomous deployment
- C. centralized deployment
- D. distributed deployment

Answer: C

Explanation:

Centralized – Works across APs and WLCs in the same Mobility group

NEW QUESTION 42

A high-density wireless network is designed. Which Cisco WLC configuration setting must be incorporated in the design to encourage clients to use the 5 GHz spectrum?

- A. RRM
- B. Cisco centralized key management
- C. Band select
- D. Load balancing

Answer: C

NEW QUESTION 46

A wireless engineer is designing a wireless network to support real-time applications over wireless. Which IEEE protocol must the engineer enables on the WLC so that the number of packets that are exchanged between an access point and client are reduced and fast roaming occurs?

- A. 802.11w
- B. 802.11r
- C. 802.11i
- D. 802.11k

Answer: D

Explanation:

802.11r reduces the number of packets that are exchanged between the client and an AP. The client preauthenticates to the AP it will roam to before actually roaming. This means the roam itself occurs faster because the AP already has the client authentication credentials cached, resulting in fewer packets required between the client and the AP.

NEW QUESTION 50

Which non-Wi-Fi interferer can be identified by Metageek Chanalyzer?

- A. PDAs

- B. jammers
- C. smartphones
- D. printers

Answer: B

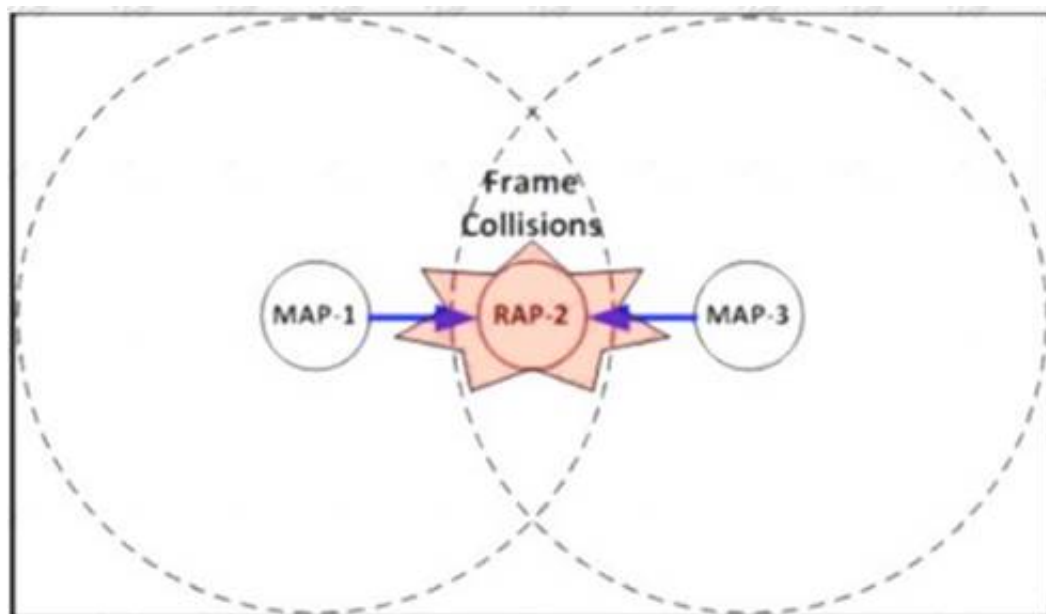
Explanation:

<https://www.metageek.com/training/resources/wifi-and-non-wifi-interference>

A jamming transmitter creates constant noise across each frequency. These are used in a denial-of-service attack, and will prevent other wireless technologies from fully operating.

NEW QUESTION 54

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 55

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