



Cisco

Exam Questions 300-425

Designing Cisco Enterprise Wireless Networks (ENWLSD)

NEW QUESTION 1

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 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

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 4

An engineer has successfully configured high availability and SSO using two Cisco 5508 Wireless LAN Controllers. The engineer can access the Active Primary WLC, but the Secondary Standby WLC is not accessible. Which two methods allow access to the standby unit? (Choose two.)

- A. via the console connection
- B. SSH to the redundancy management interface of the primary WLC
- C. SSH to the service port interface
- D. SSH to the virtual interface of the secondary WLC
- E. SSH to the management interface of the primary WLC

Answer: AC

Explanation:

Once SSO is enabled, the Standby WLC can be accessed via console connection or via SSH on the service port and on the redundant management interface.

NEW QUESTION 5

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 6

An engineer must create data link redundancy for the company's Cisco Wireless LAN controller. The engineer has decided to configure LAG-based redundancy instead of port-based redundancy. Which three features of LAG-based redundancy influenced this decision? (Choose three.)

- A. Packets are always sent out on the same port they are received on.
- B. All interface traffic passes as long as one port is up.
- C. The same port has multiple untagged dynamic interfaces.
- D. Interface connection to two separate nonstacked switches is available.
- E. Full bandwidth of all links is available.
- F. Ports are grouped into multiple LAGs.

Answer: ABF

Explanation:

<https://community.cisco.com/t5/wireless-mobility-documents/lag-link-aggregation/ta-p/3128669>

NEW QUESTION 7

An enterprise is using two wireless controllers to support the wireless network. The data centre is located in the head office Each controller has a corporate WLAN configured with the nameCopr-NET390595865WLC-1 and Copr-NET6837I638WLC-2. The APs are installed using a round-robin approach to load balance the traffic. What should be changed on the configuration to optimize roaming?

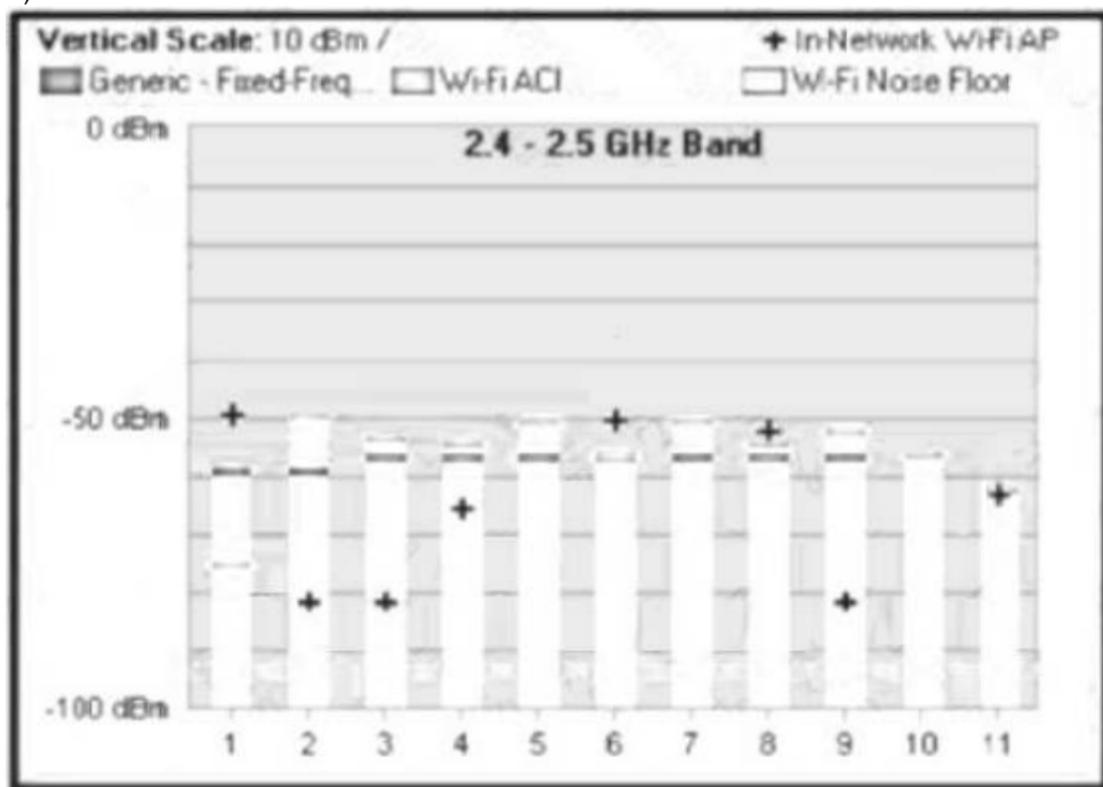
- A. Move all access points to one controller and use the other as N+1 HA.
- B. Use the same WLAN name for the corporate network on both controllers.
- C. Use the same WLAN name for the corporate network on both controllers.
- D. Place the access points per floor on the same controller.

Answer: A

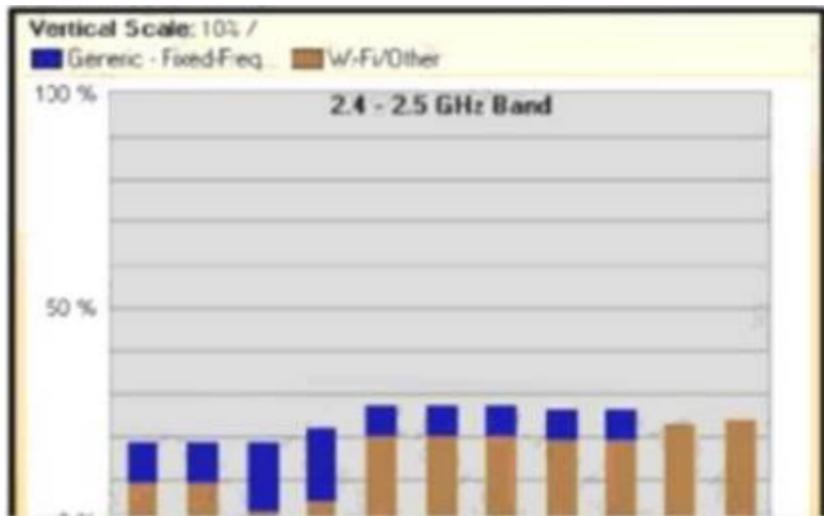
NEW QUESTION 8

An engineer as performing a Layer 1 passive wireless site survey utilizing a channel analyzer software in the 2.4 GHz spectrum. Which chart indicates the ratio of interference present during the duration of the capture?

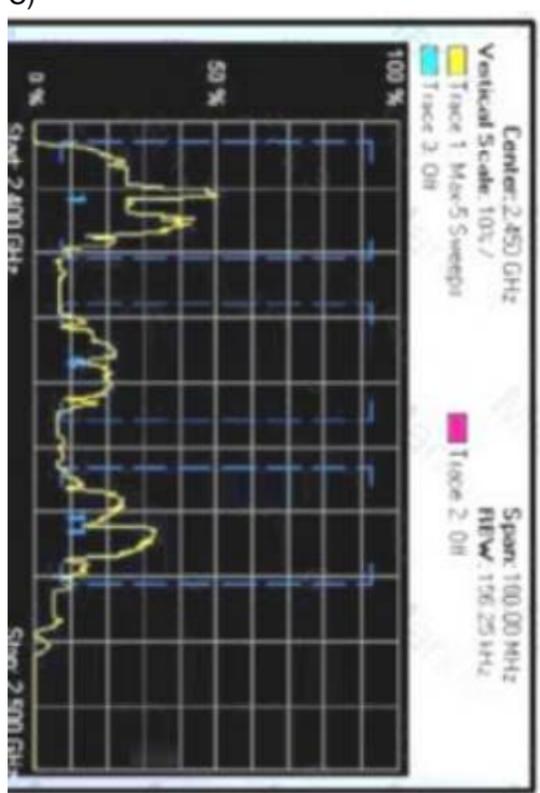
A)



B)



C)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

NEW QUESTION 9

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 10

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 lo
- 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 10

Refer to the exhibit.

Name Prefix: AP_

Add APs: Automatic

AP Type: AP3700I

Enable 11n Support:

802.11a/n/ac Antenna: Internal-3700-5GHz

802.11b/g/n Antenna: Internal-3700-2.4GHz

Protocol: 802.11a/n/ac/b/g/n

Throughput: 802.11a/n/ac: 15-18, 802.11b/g/n: 6

Services: Advanced Options

Data/Coverage
 Safety Margin: Aggressive

Voice
 Safety Margin: Aggressive

Location

Location with Monitor Mode APs

Demand

Override Coverage Per AP
 Per AP Area0 (sq feet)

Total Coverage Area: 179312 (sq feet)

Calculate

Recommended AP Count	74
Data/Coverage	48
Voice	48
Location	59
Location with Monitor	
Mode APs	
Demand	

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 13

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 15

A network administrator of a global organization is collapsing all controllers to a single cluster located in central Europe. Which concern must addressed?

- A. Some channels may not be available consistently across the organization.
- B. Different RF policies per office are not available in this configuration.
- C. Syslog must be configured to the time-zone of the NMS platform.
- D. Centralized controllers cannot uniformly authenticate global users.

Answer: C

Explanation:

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

NEW QUESTION 16

An enterprise is using a Cisco AireOS controller and Wi-Fi 6 APs. The controller is installed in the head office, and the employees primarily use Apple OS devices. The APs broadcast WLAN ENT-WLAN406558520-1 for the employees and a guest WLAN with similar naming. What needs to be enabled on the controller to optimize roaming?

- A. Aggregated Probe Response Optimization
- B. Fast SSID Changing
- C. Load Balancing Window
- D. Client Timers

Answer: B

NEW QUESTION 18

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 20

A network engineer is configuring high availability on an access point. What is the maximum number of controllers that can be configured?

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

Answer: B

Explanation:

The N+1 HA architecture provides redundancy for controllers across geographically separate data centers with low cost of deployment.

So max 2 will be supported on an AP.

NEW QUESTION 25

Which UDP port numbers are used for exchange mobility packets in an AireOS wireless deployment?

- A. UDP 16666 for control plane, EoIP (IP protocol 97) for data plane
- B. UDP 16668 for control plane, UDP 16667 for data plane
- C. UDP 16667 for control plane, UDP 16666 for data plane
- D. UDP 16666 for control plane, UDP 16667 for data plane

Answer: D

Explanation:

- Enable these UDP ports for Mobility traffic:
 - 16666 - Secured Mode
 - 16667 - Unsecured Mode

NEW QUESTION 26

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 31

A company wants to replace its existing PBX system with a new VoIP System that will include wireless IP phones. The CIO has concerns about whether the company's existing wireless network can support the new system. Which tool in Cisco Prime can help ensure that the current network will support the new phone system?

- A. Location Readiness
- B. Site Calibration
- C. Map Editor
- D. Voice Readiness

Answer: D

Explanation:

The VoWLAN Readiness (voice readiness) tool allows you to check the RF coverage to determine if it is sufficient for your voice needs.

NEW QUESTION 36

A customer is concerned about mesh backhaul link security. Which level of encryption does the backhaul link use?

- A. hash
- B. AES
- C. WEP
- D. 3DES

Answer: B

Explanation:

In a Cisco wireless backhaul network, traffic can be bridged between MAPs and RAPs. This traffic can be from wired devices that are being bridged by the wireless mesh or CAPWAP traffic from the mesh access points. This traffic is always AES encrypted when it crosses a wireless mesh link such as a wireless backhaul.

NEW QUESTION 41

A customer has restricted the AP and antenna combinations for a design to be limited to one model integrated antenna AP for carpeted spaces and one model external antenna AP with high gain antennas for industrial, maintenance, or storage areas. When moving between a carpeted area to an industrial area, the engineer forgets to change survey devices and surveys several APs. Which strategy will reduce the negative impact of the design?

- A. Resurvey and adjust the design.
- B. Deploy unsurveyed access points to the design.
- C. Deploy the specified access points per area type.
- D. Increase the Tx power on incorrectly surveyed access points.

Answer: A

NEW QUESTION 46

A wireless engineer is designing a wireless network to support real-time applications over wireless. Which IEEE protocol must the engineer enable 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

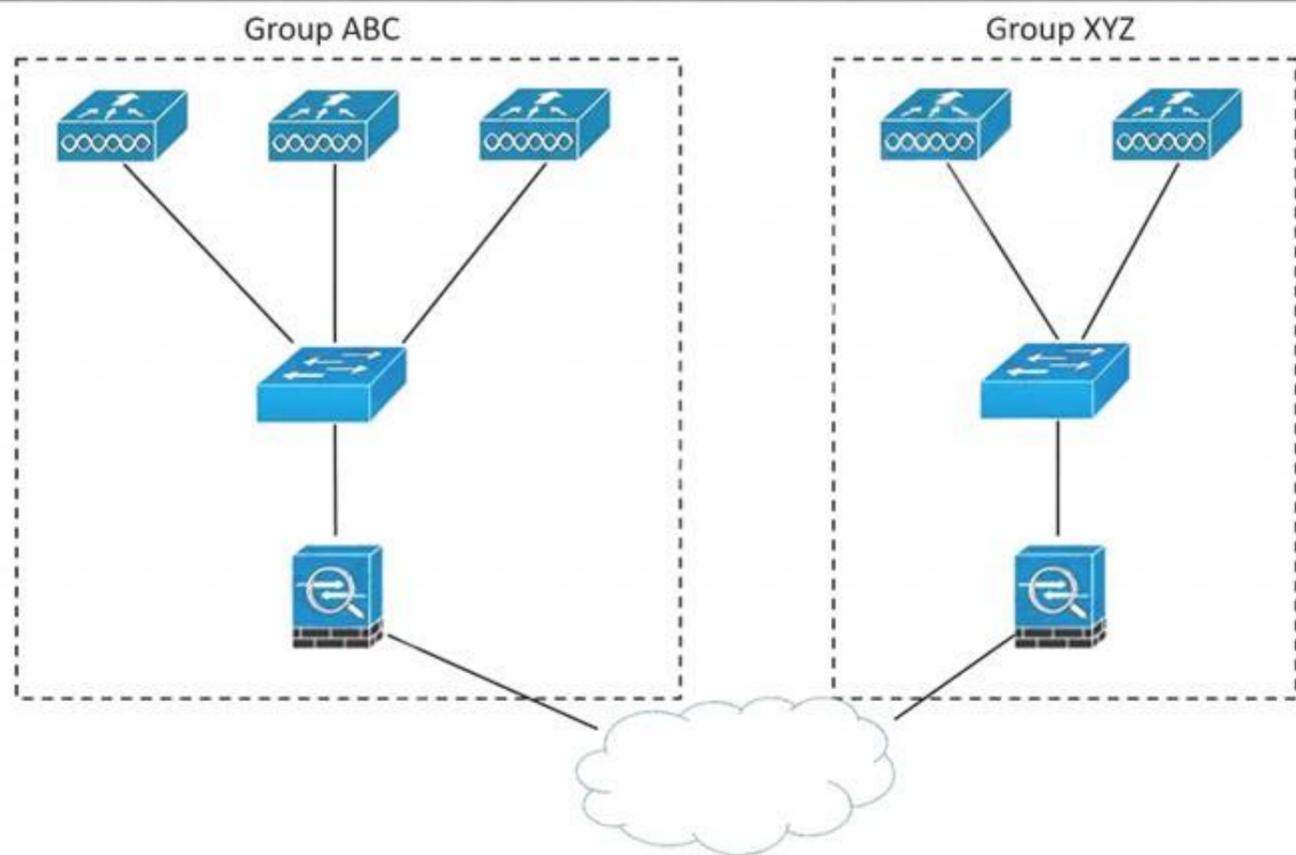
Answer: D

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 49

Refer to the exhibit.



An enterprise has offices spread around the globe. The APs are connected to different controllers installed in separate datacenters. The IT team wants to allow clients to roam from controllers in group ABC to controllers in group XYZ. Which feature must be incorporated in the design to accomplish this task?

- A. switch peer group
- B. workgroup bridge
- C. mDNS gateway
- D. mobility lists

Answer: D

NEW QUESTION 52

Which three pieces of equipment are needed to conduct a fully measured wireless survey? (Choose three.)

- A. PoE battery
- B. spirit level
- C. access point
- D. tall tripod
- E. goggles
- F. ladder

Answer: ACD

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/technology/mesh/81/design/guide/b_mesh_81/Site_Preparation_

NEW QUESTION 57

The wireless team must configure a new voice SSID for optimized roaming across multiple WLCs with Cisco 8821 phones. Which two settings accomplish this goal? (Choose two.)

- A. Configure mobility groups between WLCs.
- B. Use Cisco Centralized Key Management for authentication.
- C. Configure AP groups between WLCs.
- D. Configure AVC profile on new SSID.
- E. Use AVC to tag traffic voice traffic as best effort.

Answer: AB

NEW QUESTION 61

An engineer must repurpose a lab WLC appliance for use in the production environment of the enterprise. After the new WLC is configured with the information of the other WLC, the mobility tunnels are still not coming up. What is the reason?

- A. A firewall is blocking UDP port 16667 between the WLCs.
- B. The WLC management interfaces are in the same VLAN.
- C. The hardware platform is incompatible.
- D. The mobility groups are different.

Answer: D

NEW QUESTION 63

During a wireless design all APs are mapped to designated controllers in case of a failure. The controllers are located in the same data center but in different racks. An AP failed over to a controller that was not defined on its High Availability tab. The customer does not want the AP to move back to its defined Cisco WLCs until they manually intervene. What needs to be addressed in the design?

- A. Set AP fallback to enabled.
- B. Set AP fallback to disabled.
- C. Change the HA SKU secondary unit option.
- D. Change the default mobility domain.

Answer: B

NEW QUESTION 65

An engineer performs a Layer 1 survey by using Metageek chanalyzer only on the current operating channel. Which operating mode is configured for a Cisco CleanAIR AP?

- A. Local
- B. Sniffer
- C. Monitor
- D. SE-connect

Answer: A

Explanation:

Local Mode

Each Cisco CleanAir-enabled access point radio provides air quality and interference detection reports for the current operating channel only. Local mode does not disrupt client connections. When a hybrid-REAP access point is connected to the controller, its Cisco CleanAir functionality is identical to local mode.

NEW QUESTION 67

An engineer is trying to determine the most cost-effective way to deploy high availability for a campus enterprise wireless network that currently leverages three wireless LAN controllers. Which architecture should the engineer deploy?

- A. N+1 solution without SSO
- B. N+1 with SSO
- C. N+N solution without SSO
- D. N+N with SSO

Answer: B

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/technology/hi_avail/N1_High_Availability_Deployment_G

NEW QUESTION 71

Two Cisco 5520 wireless LAN controllers are managing all access points throughout the network. The WLCs are in different locations to provide geographical redundancy. A mobility group has been configured on both WLCs and has a UP status on both controllers. The APs in location A are statically configured to use controller A as the primary and controller B as the secondary. If the WLC in location A goes offline, the APs successfully join the WLC in location B, but they do not fail over to their primary configured controller. Which configuration task fixes the issue?

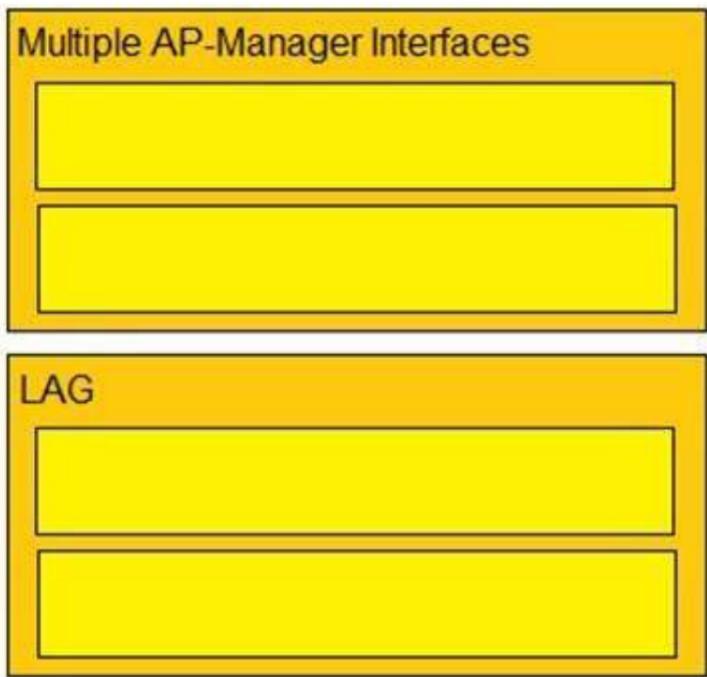
- A. Configure the WLC in location A as primary using the CAPWAP AP Controller IP Address command on all the location A Access points.
- B. Use DHCP Option 43 and specify WLC in location A as primary.
- C. Enable AP fallback globally on the WLC.
- D. Change the AP Failover Priority to critical.

Answer: C

NEW QUESTION 73

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



- 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 76

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