Exam Report: 10.7.8 Practice Questions

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Overall Performance

Your Score: 71%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Correct

Which of the following recommendations should you follow when placing access points to provide wireless access for users within your company building?

- Place access points in the basement.
- Place access points near outside walls.
- Place access points above where most clients are.
- Place multiple access points in the same area.

Explanation

Follow a few guidelines for placing wireless access points:

- Devices often get better reception from access points that are above or below.
- If possible, place access points higher up to avoid interference problems caused by going through building foundations.
- For security reasons, do not place APs near outside walls. The signal will extend outside beyond the walls. Placing the AP in the center of the building decreases the range of the signals available outside of the building.
- When using multiple access points, place access points evenly through the area, taking care to minimize the overlap of the broadcast area while ensuring adequate coverage for all areas.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP09_3-4 #6]

Question 2: Correct

Your wireless network consists of multiple 802.11n access points that are configured as follows:

- SSID (hidden): CorpNet
- Security: WPA2-PSK using AES
- Frequency: 5.75 GHz
- Bandwidth per channel: 40 MHz

Because of the unique construction of your organization's facility, there are many locations that do not have a clear line of sight between network clients and access points. As a result, radio signals are reflected along multiple paths before finally being received. The result is distorted signals that interfere with each other.

What should you do?

- Implement antenna diversity.

- Switch to RADIUS authentication for wireless clients.
- Reduce the power of the access point radio signals.
- Install directional access points.

Explanation

Antenna diversity implements two or more radio antennae to improve the quality and reliability of a wireless link. In environments where there is no clear line of sight between transmitter and receiver, the radio signal is reflected along multiple paths before finally being received. This can introduce phase shifts, time delays, attenuation, and distortion that interfere with each another on the receiving antenna.

You can rectify the situation by implementing antenna diversity two ways:

- *Spatial diversity* uses multiple antennas that are physically separated from one another.
- *Pattern diversity* uses two or more co-located antennas with different radiation patterns.

Using a RADIUS authentication solution increases wireless network security, but it doesn't address the issue of multipath interference. Reducing radio power could help solve multipath interference issues in some situations, but it may make it worse in others. This is also true of directional access points.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm MCS4]

Question 3: Correct

You have physically added a wireless access point to your network and installed a wireless networking card in two laptops running Windows. Neither laptop can find the network, and you have come to the conclusion that you must manually configure the wireless access point (AP).

Which of the following values uniquely identifies the network AP?

- PS
- SSID
- WEP
- Channel

Explanation

The SSID (service set identifier) identifies the wireless network. All PCs and access points in a LAN share the same SSID.

WEP (Wired equivalent privacy) is used to add a layer of security to the transmission, while the channel identifies the frequency that the card and AP will communicate on.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm APESS_5-1 MC [318]]

Question 4: Correct

You need to place a wireless access point in your two-story building. While trying avoid interference, which of the following is the best location for the access point?

- Near the backup generators
- In the basement

- On the top floor
- In the kitchen area

Explanation

In general, place access points high up to avoid interference problems caused by going through building foundations.

Do not place the access point next to sources of interference such as other wireless transmitting devices (cordless phones or microwaves) or other sources of interference (motors or generators).

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm AP09PA_3-2 #15]

Question 5: Correct

You are setting up a wireless hotspot in a local coffee shop. For best results, you want to disperse the radio signals evenly throughout the coffee shop.

Which of the following antenna types would you use on the AP to provide a 360-degree dispersed wave pattern?

- Omni-directional
- Multi-directional
- Multi-point
- Uni-directional
- Directional

Explanation

An omni-directional antenna provides a 360-degree dispersed wave pattern. In this configuration, signals are dispersed evenly in all directions, making this antenna well suited for environments where clients are accessing the network from various locations, such as coffee shops. A dispersed wireless signal is weaker and, therefore, is restricted to shorter signal distances.

A directional wireless antenna focuses a signal in a particular direction. The focused signal allows for greater transmission distances and a stronger signal. Directional antennas are sometimes used to establish a wireless point-to-point connection where greater transmission distances are often required.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_1-8 #7]

Question 6: Incorrect

You are troubleshooting a wireless connectivity issue in a small office. You determine that the 2.4GHz cordless phones used in the office are interfering with the wireless network transmissions.

If the cordless phones are causing the interference, which of the following wireless standards could the network be using? (Select two.)

- [ ] Infrared
- [ ] 802.3a
- [ ]

- [ ] Bluetooth
- [ ] 802.11b
- [x] ~~802.11a~~

Explanation

Both the 802.11b and Bluetooth wireless standards use the 2.4 GHz RF range to transmit data. Cordless phones that operate at the same frequency can cause interference on the wireless network. Other devices, such as microwaves and electrical devices, may also cause interference.

802.11a uses the 5 GHz radio frequency, so they would not be affected by the 2.4 GHz phones used in the office. Infrared uses a light beam to connect computer and peripheral devices to create a personal area network (PAN).

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_1-8 #16]

Question 7: Correct

You are implementing a wireless network inside a local office. You require a wireless link to connect a laptop in the administrator's office directly to a system in the sales department. In the default configuration, the wireless AP uses a 360-dispersed RF wave design. After installation, the signal between the two systems is weak, as many obstacles interfere with the signal.

Which of the following strategies could you try to increase signal strength?

- (•) Replace the omni-directional antenna with a directional antenna.
- ( ) Increase the RF power on the isotropic antenna.
- ( ) Increase the RF setting on the AP.
- ( ) Increase the RF setting on the client system.
- ( ) Replace the directional antenna with an omni-directional antenna.

Explanation

A directional antenna is designed to create a narrow, focused signal in a particular direction. This focused signal provides greater signal strength between two points and increases the distance that the signal can travel. Because directional antennas provide a stronger point-to-point connection, they are better equipped to handle obstacles that may be in the way of the signal.

The default antenna used with this configuration is an omni-directional antenna that disperses the RF wave in an equal 360-degree pattern. This antenna is commonly used to provide access to many clients in a radius.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_1-8 #25]

Question 8: Correct

A user on your network has been moved to another office down the hall. After the move, she calls you complaining that she has only occasional network access through her wireless connection. Which of the following is most likely the cause of the problem?

- (•) The client system has moved too far away from the access point.
- ( ) The encryption level has been erroneously set back to the default setting.

- The client has incorrect WEP settings.
- An SSID mismatch between the client and the server.
- An SSID mismatch between the client and the WAP.

Explanation

In this case, the wireless client system has had no problems accessing the wireless access point until she moves to the new office. In some cases, moving a system will cause signal loss either from the increased distance away from the WAP or from unexpected interference by such things as concrete walls or steel doors. There are several ways to correct the problem, including reducing the physical distance to the client, using a wireless amplifier, upgrading the antennae on the wireless devices, or adding another WAP to the infrastructure.

Because the client could previously access the WAP and still has occasional access, it is likely that the move was the cause of the problem and not any configuration setting on the client system.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #23]

Question 9: Correct

You have been hired to troubleshoot a wireless connectivity issue for two separate networks located within a close proximity. Both networks use a WAP from the same manufacturer, and all settings, with the exception of SSIDs, remain configured to the default.

Which of the following might you suspect as the cause of the connectivity problems?

- The SSIDs of the two client systems match.
- The SSIDs of the two server systems match.
- WEP overlap.
- Crosstalk between the RF signals.
- Overlapping channels.

Explanation

Overlapping wireless networks should use different channels to ensure that they do not conflict with each other. In this case, each WAP is using the default channel which, by default, is the same for each WAP. The solution to the problem would be to configure different channels for each access point.

To configure client connectivity, the wireless client and the access point must share the same SSID, channel, and WEP encryption strength. In this case, the SSIDs were changed for each station, so they are not the problem.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #32]

Question 10: Incorrect

You have decided to conduct a business meeting at a local coffee shop. The coffee shop you chose has a wireless hotspot for customers who want internet access.

You decide to check your email before the meeting begins. When you open the browser, you cannot gain internet access. Other customers are using the internet without problems. You are sure your laptops wireless adapter works because you use a wireless connection at work.

What is the likely cause of the problem?

- A mismatched SSID.
- ~~Antenna strength on the WAP is too low.~~
- Different LAN protocols are being used.
- WAP is out of range.
- PPP is not configured correctly.

Explanation

A wireless client and the access point must be configured to use the same SSID. In this case, the client system was used on a different wireless network and may still be using the SSID from that network. To log onto this network, the system will need to be configured to use the same SSID as other customers in the coffee shop. Sometimes the SSID will automatically be detected by a wireless monitoring program. As a new SSID is detected, it will attempt to connect and use the new SSID and new access point. When this does not happen, you need to change the the SSID manually.

The problem is not with LAN protocols, as TCP/IP is the protocol used on the internet, so there are no other choices. The WAP is not out of range, as other clients are accessing it. PPP is not required to make the internet connection.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #41]

Question 11: Incorrect

After installing a new 2.4Ghz cordless phone system in your office, you notice that wireless network performance is adversely affected. Which of the following wireless networking standards are you most likely using? (Select two.)

- [ ] 802.11a
- [x] 802.11b
- [x] ~~Bluetooth~~
- [ ] 802.11g

Explanation

Both the 802.11b and 802.11g wireless networking standards use the 2.4Ghz frequency range. A cordless phone system on the same frequency range may affect the performance of the wireless network.

802.11a uses the 5Ghz frequency range, so it would not be affected by a cordless phone system that uses the 2.4Ghz frequency range. Bluetooth does use the 2.4Ghz frequency range, but is used more widely as a mechanism to connect consumer electronic devices like personal digital assistants (PDAs), cameras, and phones, rather than as a wireless local area networking (LAN) method.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #87]

Question 12: Correct

A user calls to report that she is experiencing intermittent problems while accessing the wireless network from her laptop computer. While talking to her, you discover that she is trying to work from the coffee room two floors above the floor where she normally works.

What is the most likely cause of her connectivity problem?

- The user has not yet rebooted her laptop computer while at her new location.
- The user needs a new IP address because she is working on a different floor.
- ➡ The user is out of the effective range of the wireless access point on her floor.
- The user has not yet logged off and back on to the network while at her new location.
- The wireless network access point on the user's normal floor has failed.

Explanation

Because the user is only experiencing intermittent problems, the most likely cause is that she is out of the effective range of the wireless network access point.

All of the other answers listed may be appropriate if the user was unable to connect to the network at all. However, as the user is experiencing only intermittent problems, none of the other answers is likely to cure the problem.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #103]

Question 13: Correct

While configuring a new 802.11g wireless network, you discover another wireless network within range that uses the same channel ID that you intend to use. Which of the following strategies are you most likely to adopt in order to avoid a conflict between the networks?

- ➡ Use a different channel ID.
- Use 802.11b instead of 802.11g.
- Use the same channel ID, but configure a different SSID.
- Use the same channel ID, but configure your wireless network to use WEP.

Explanation

Overlapping wireless networks should use different channels to ensure that they do not conflict with each other.

Even though you should use a different SSID anyway, you would also need to configure a different channel for each of the wireless networks. Using 802.11b instead of 802.11g would not avoid a conflict between the networks and would limit the speed of the wireless network to 11Mbps as opposed to 54Mbps available with 802.11g. Using Wired Equivalent Privacy (WEP) is a prudent security measure; however, it does not prevent the conflicts that can occur with overlapping wireless networks that use the same channel ID.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm NP05_4-8 #112]

Question 14: Incorrect

Mobile devices in your organization use the access points shown in the figure below to connect to your wireless network.

Recently, a catastrophic early morning power surge occurred. It was followed by an outage that lasted longer than your backup equipment could supply temporary power.

After you powered the equipment back on, everything initially appeared to work correctly. However, ever since this event, some mobile users report that wireless network connections

sometimes get dropped or perform very poorly.
What should you do? (Select two.)

A

- SSID: WestSimWireless
- Mode: 802.11n
- Security: WPA2-PSK
- Channel: 1
- Frequency: 2.4 GHz
- Admin username: @dM1n
- Admin password: p@$$w0rd
- IP address: 192.168.0.1

B

- SSID: WestSimWireless
- Mode: 802.11b
- Security: WPA2-PSK
- Channel: 4
- Frequency: 2.4 GHz
- Admin username: @dM1n
- Admin password: p@$$w0rd
- IP address: 192.168.0.2

C

- SSID: WestSimWireless
- Mode: 802.11n
- Security: WPA2-PSK
- Channel: 6
- Frequency: 2.4 GHz
- Admin username: @dM1n
- Admin password: p@$$w0rd
- IP address: 192.168.0.3

- [ ] Set the channel used by access point A to 5.
- [ ] Configure each access point to use a different SSID.
- [ ] Set the channel used by access point B to 11.
- [ ] Configure each access point to use 802.1x authentication.
- [ ] Set the channel used by access point B to 8.
- [x] ~~Set access points A and C to use 802.11b wireless networking.~~
- [x] Set access point B to use 802.11n wireless networking.
- [ ] Set the channel used by access point C to 7.

Explanation

During the power surge and/or power outage, some of the configuration settings on access point B were lost or reset to default values. To fix the issues users are experiencing, you need to:

- Set access point B to use 802.11n wireless networking. This will rectify the poor performance users are experiencing while accessing the wireless network through access point B.
- Set the channel used by access point B to 11. 2.4 GHz channels overlap. In this scenario, the channel used by access point B (4) overlaps with the channels used by access points A (1) and C (6). This will rectify the dropped connections users are experiencing.

Channels 5, 7, and 8 overlap with channel 6, so setting any access point to these channels will cause a conflict with access point C. Using the same SSID on all access points allows users to roam about the facility and stay connected to the same wireless network. While using 802.1x authentication would make the wireless network more secure, it will not address the issues users are experiencing. Configuring access points A and C to use 802.11b will cause all users to experience poor network performance.

References

LabSim for Network Pro, Section 10.7.
[netpro18v5_all_questions_en.exm MCS9]