Certified Wireless Analysis Professional (CWAP) Exam

1. Which one of the following should be the first step when troubleshooting a WLAN issue?

A. Identify probable causes

B. Identify capture locations

C. Perform an initial WLAN scan and see if any obvious issues stand out

D. Define the problem

Answer(s): D

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2. Which one of the following is an advantage of using display filters that is not an advantage of capture-time filters?

A. They allow for focused analysis on just the packets of interest

B. Once created they are reusable for later captures

C. They only hide the packets from view and the filtered packets can be enabled for view later

D. Multiple of them can be applied simultaneously

Answer(s): C

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3. Using a portable analyzer you perform a packet capture next to a client STA and you can see that the STA is associated to a BSS. You observe the STA sending packets to the AP and the AP sending packets to the ST

A. Less than 2% of all packets are retransmissions. You move to capture packets by the AP and, while the retry rate is still less than 2%, you now only see unidirectional traffic from the AP to the client.How do

you explain this behavior?

B. The portable analyzer is too close to the AP causing CCI, blinding the AP to the clients packets

C. The STA is transmitting data using more spatial streams than the potable analyzer can support

D. There is a transmit power mismatch between the client and the AP and while the client can hear the APs traffic, the AP cannot hear the client

E. The portable analyzer has a lower receive sensitivity than the AP and while it can't capture the packets from the client STA, the AP can receive them OK

Answer(s): D

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4. Given a protocol analyzer can decrypt WPA2-PSK data packets providing the PSK and SSID are configured in the analyzer software.
When performing packet capture (in a non-FT environment) which frames are required in order for PSK frame decryption to be possible?

A. Authentication

B. 4-Way Handshake

C. Reassociation

D. Probe Response

Answer(s): B

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5. When configuring a long-term, forensic packet capture and saving all packets to disk which of the following is not a consideration?

A. Real-time packet decodes

B. Analyzer location

C. Total capture storage space

D. Individual trace file size

Answer(s): A

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6. You are performing a multiple adapter channel aggregation capture to troubleshoot a VoIP roaming problem and would like to measure the roaming time from the last VoIP packet sent on the old AP's channel to the first VoIP packet sent on the new AP's channel.
Which timing column in the packet view would measure this for you?

A. Roaming

B. Relative

C. Absolute

D. Delta

Answer(s): D

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7. Protocol analyzers may present field values in either binary, decimal or hexadecimal.
What preceeds a hexadecimal value to indicate it is hexadecimal?

A. 0x

B. 16x

C. %

D. HEX

Answer(s): A

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8. Which one of the these is the most important in the WLAN troubleshooting methodology among those listed?

A. Obtain detailed -knowledge of the wireless vendors debug and logging options

B. Interview the network manager about the issues being experienced

C. Observe the problem

D. Talk to the end users about their experiences

Answer(s): C

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9. The network administrator at ABC Engineering has taken a large packet capture from one of their APs running in monitor mode. She has very little knowledge of 802.11 protocols but would like to use the capture file to evaluate the overall health and performance of their wireless network.
When she asks your advice, which tool do you recommend she opens the packet capture file with?

A. Spectrum analyzer

B. Python

C. Capture visualization tool

D. WLAN scanner

Answer(s): C

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10. What is used to respond with an uplink transmission to an MU-RTS trigger frame in the 802.11ax PHY?

A. HE SU PPDU

B. HE MU PPDU

C. HE TB PPDU

D. VHT PPDU

Answer(s): C

11. Which one of the following is required for Wi-Fi integration in laptop-based Spectrum Analyzer software in addition to the spectrum analysis adapter?

> A. An 802.11 wireless adaptor

> B. A firmware upgrade for the spectrum analysis adapter

> C. A directional antenna

> D. SNMP read credentials to the WLAN controller or APs

Answer(s): A

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12. You're the WLAN administrator for a large retailer based at the HQ in New York. The London-based office has been complaining about WLAN disconnections around lunch time each day. You suspect this might be interference from the staff microwave, how might you test your theory from the New York office?

> A. Ask a local member of staff to change the frequency of the microwave and see if the disconnections stop

> B. Ask a local member of staff to take some pictures of the microwave, including some close-ups of the door seal so that you can assess it

> C. Access the microwave remotely and run a diagnostic check

> D. Place one of the London APs into spectrum analyzer mode and monitor the situation over lunch time

Answer(s): D

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13. ABC International has installed a new smart ZigBee controlled lighting system. However, the network team is concerned that this new system will interfere with the existing WLAN and has asked you to investigate the impact of the two systems operating simultaneously in the 2.4 GHz band.
When performing Spectrum Analysis, which question could you answer by looking at the FFT plot?

A. Do the ZigBee channels used by the lighting system overlap with the WLAN channels?

B. Is the ZigBee system using more than 50% of the available airtime?

C. Is the WLAN corrupting ZigBee system messages?

D. Is the ZigBee system causing an increase in WLAN retries?

Answer(s): A

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14. In a Spectrum Analyzer the Swept Spectrogram plot displays what information?

A. RF power present at a particular frequency over the course of time

B. Reductions in frame transmissions

C. Wi-Fi Device information

D. The RF time domain

Answer(s): A

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15. You have installed a new 802.1 lac WLAN configured with 80 MHz channels. Users in one area are complaining about poor performance. This area is currently served by a single AP. You take a spectrum analysis capture in the poor performing are

A. While examining the waterfall plot you notice the airtime utilization is higher on the first 20 MHz of the 80 MHz channel when compared to the rest of the channel. What do you conclude?

B. The AP is misconfigured and needs to be reconfigured to 80 MHz operation

C. Non-Wi-Fi interference is preventing the APs 80 MHz operation

D. The first 20 MHz is the AP's primary channel and higher airtime utilization on the primary channel is normal when an AP is configured for 80 MHz operation

E. RRM is enabled and has dynamically picked a 20 MHz channel

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16. Which common feature of a Spectrum Analyzer would be the best to help you locate a non-802.11 interference source?

A. Max hold

B. Min hold

C. Location filter

D. Device finder

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17. A manufacturing facility has installed a new automation system which incorporates an 802.11 wireless network. The automation system is controlled from tablet computers connected via the WLAN. However, the automation system has not gone live due to problem with the tablets connecting to the WLAN. The WLAN vendor has been onsite to perform a survey and confirmed good primary and secondary coverage across the facility. As a CWAP you are called in to perform Spectrum Analysis to identify any interference sources. From the spectrum analysis, you did not identify any interference sources but were able to correctly identify the issue.
Which of the following issues did you identify from the spectrum analysis?

A. The tablets are connecting to the wrong SSID

B. The tablets are entering power save mode and failing to wake up to receive the access points transmissions

C. A high noise floor has resulted in a SNR of less than 20dB

D. There is a power mismatch between the APs and the clients

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18. Finish the statement:
It is possible to distinguish between_____22 MHz transmissions and_____20 MHz transmissions when looking at an FFT plot.

A. HR/DSSS and ERP

B. OFDM and HT

C. ERP and VHT

D. HT and VHT

Answer(s): B

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19. What is the function of the PHY layer?

A. Convert PPDUs to PSDUs for transmissions and PSDUs to PPDUs for receptions

B. Convert MSDUs to PPDUs for transmissions and PPDUs to MSDUs for receptions

C. Convert PPDUs to MSDUs for transmissions and MSDUs to PPDUs for receptions

D. Convert PSDUs to PPDUs for transmissions and PPDUs to PSDUs for receptions

Answer(s): D

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20. What is the function of the PHY Preamble?

A. To terminate a conversation between transmitter and receiver

B. To set the modulation method for the MPDU

C. Carries the NDP used in Transmit Beamforming and MU-MIMO

D. Allows the receiver to detect and synchronize with the signal

Answer(s): D