CWNP CWAP-404

CWNP Wi-Fi Analysis Certification Questions & Answers

Exam Summary – Syllabus – Questions

CWAP-404

CWNP Certified Wireless Analysis Professional

60 Questions Exam – 70% Cut Score – Duration of 90 minutes

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Know Your CWAP-404 Certification Well:

The CWAP-404 is best suitable for candidates who want to gain knowledge in the CWNP Wireless Network. Before you start your CWAP-404 preparation you may struggle to get all the crucial Wi-Fi Analysis materials like CWAP-404 syllabus, sample questions, study guide.

But don't worry the CWAP-404 PDF is here to help you prepare in a stress free manner.

The PDF is a combination of all your queries like-
- What is in the CWAP-404 syllabus?
- How many questions are there in the CWAP-404 exam?
- Which Practice test would help me to pass the CWAP-404 exam at the first attempt?

Passing the CWAP-404 exam makes you CWNP Certified Wireless Analysis Professional. Having the Wi-Fi Analysis certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

CWNP CWAP-404 Wi-Fi Analysis Certification Details:

Exam Name	Wireless Analysis Professional
Exam Code	CWAP-404
Exam Price	$325 USD
Duration	90 minutes
Number of Questions	60
Passing Score	70%
Recommended Training	**CWAP self-paced training kit**, **Training Class**
Exam Registration	**PEARSON VUE**
Sample Questions	**CWNP CWAP-404 Sample Questions**
Practice Exam	**CWNP Certified Wireless Analysis Professional Practice Test**

CWAP-404 Syllabus:

Section	Objectives
	Protocol Analysis - 15%
Capture 802.11 frames using the appropriate methods	- Select capture devices • Laptop protocol analyzers • APs, controllers, and other management solutions • Specialty devices (hand-held analyzers and custom-built devices) - Install monitor mode drivers - Select capture location(s) - Capture sufficient data for analysis - Capture all channels or capture on a single channel as needed - Capture roaming events
Understand and apply the common capture configuration parameters available in protocol analysis tools	- Save to disk - Packet slicing - Event triggers - Buffer options - Channels and channel widths - Capture filters - Channel scanning and dwell time
Analyze 802.11 frame captures to discover problems and find solutions	- Use appropriate display filters to view relevant frames and packets - Use colorization to highlight important frames and packets - Configure and display columns for analysis purposes - View frame and packet decodes while understanding the information shown and applying it to the analysis process - Use multiple adapters and channel aggregation to view captures from multiple channels - Implement protocol analyzer decryption procedures - View and use a capture's statistical information for analysis - Use expert mode for analysis - View and understand peer maps as they relate to communications analysis

Section	Objectives
Utilize additional tools that capture 802.11 frames for analysis and troubleshooting	- WLAN scanners and discovery tools - Protocol capture visualization and analysis tools - Centralized monitoring, alerting, and forensic tools
Ensure appropriate troubleshooting methods are used with all analysis types	- Define the problem - Determine the scale of the problem - Identify probable causes - Capture and analyze the data - Observe the problem - Choose appropriate remediation steps - Document the problem and resolution
Spectrum Analysis - 10%	
Capture RF spectrum data and understand the common views available in spectrum analyzers	- Install, configure, and use spectrum analysis software and hardware - Capture RF spectrum data using handheld, laptop-based, and infrastructure spectrum capture solutions - Understand and use spectrum analyzer views • Real-time FFT • Waterfall, swept spectrogram, density, and historic views • Utilization and duty cycle • Detected devices • WLAN integration views
Analyze spectrum captures to identify relevant RF information and issues	- RF noise floor in an environment - Signal-to-Noise Ratio (SNR) for a given signal - Sources of RF interference and their locations - RF channel utilization - Non-Wi-Fi transmitters and their impact on WLAN communications - Overlapping and non-overlapping adjacent channel interference - Poor performing or faulty radios
Analyze spectrum captures to identify various device signatures	- Identify various 802.11 PHYs • DSSS • OFDM

Section	Objectives
	• OFDMA
	• Channel widths
	• Primary channel
	- Identify non-802.11 devices based on RF behaviors and signatures
	• Frequency hopping devices
	• IoT devices
	• Microwave ovens
	• Video devices
	• RF Jammers
	• Cordless phones
Use centralized spectrum analysis solutions	- AP-based spectrum analysis - Sensor-based spectrum analysis
PHY Layers and Technologies - 10%	
Understand and describe the functions of the PHY layer and the PHY protocol data units (PPDUs)	- DSSS (Direct Sequence Spread Spectrum) - HR/DSSS (High Rate/Direct Sequence Spread Spectrum) - OFDM (Orthogonal Frequency Division Multiplexing) - ERP (Extended Rate PHY) - HT (High Throughput) - VHT (Very High Throughput) - HE (High Efficiency) • HE SU PPDU • HE MU PPDU • HE ER SU PPDU • HE TB PPDU • HE NULL data packets
Apply the understanding of PHY technologies, including PHY headers, preambles, training fields, frame aggregation, and data rates, to captured data	
Identify and use PHY information provided within	- Pseudo-Header formats

Section	Objectives
pseudo-headers in protocol analyzers	• Radiotap • Per Packet Information (PPI) - Key pseudo-header content • Guard intervals • Resource units allocation • PPDU formats • Signal strength • Noise • Data rate and MCS index • Length information • Channel center frequency or received channel • Channel properties
Recognize the limits of protocol analyzers to capture PHY information including NULL data packets and PHY headers	
Use appropriate capture devices based on proper understanding of PHY types	- Supported PHYs - Supported spatial streams
MAC Sublayer and Functions - 25%	
Understand frame encapsulation and frame aggregation	- Frame aggregation (A-MSDU and A-MPDU)
Identify and use MAC information in captured data for analysis	- Management, Control, and Data frames - MAC frame formats and contents • Frame Control field • To DS and From DS fields • Address fields • Frame Check Sequence (FCS) field - 802.11 Management frame formats

Section	Objectives
	- Information Elements - Authentication - Association and Reassociation - Beacon - Prove Request and Probe Response - Data and QoS Data frame formats - 802.11 Control frame formats - Acknowledgement (ACK) - Request to Send/Clear to Send (RTS/CTS) - Block Acknowledgement and related frames - Trigger frames - VHT/HE NDP announcements - Multiuser RTS
Validate BSS configuration through protocol analysis	- Country code - Minimum basic rate - Supported rates and coding schemes - Beacon interval - WMM settings - RSN settings - HT/VHT/HE operations - Channel width - Primary channel - Hidden or non-broadcast SSIDs
Identify and analyze CRC error frames and retransmitted frames	
WLAN Medium Access - 10%	
Understand 802.11 contention algorithms in-depth and know how they impact WLANs	- Distributed Coordination Function (DCF) - Carrier Sense (CS) and Energy Detect (ED) - Network Allocation Vector (NAV) - Contention Windows (CW) and random backoff - Interframe spacing - Enhanced Distributed Channel Access (EDCA)

Section	Objectives
	• EDCA Function (EDCAF) • Access Categories and Queues • Arbitration Interframe Space Number (AIFSN) - Wi-Fi Multimedia (WMM) • WMM parameters • WMM-Power Save • WMM-Admission Control
Analyze QoS configuration and operations	- Verify QoS parameters in capture files - Ensure QoS is implemented end-to-end
802.11 Frame Exchanges - 30%	
Capture, understand, and analyze BSS discovery and joining frame exchanges	- BSS discovery - 802.11 Authentication and Association - 802.1X/EAP exchanges - Pre-Shared Key authentication - Four-way handshake - Group key exchange - Simultaneous Authentication of Equals (SAE) - Opportunistic Wireless Encryption (OWE) - WPA2 and WPA3 - Fast secure roaming mechanisms • Fast BSS Transition (FT) roaming exchanges • Pre-FT roaming exchanges - Neighbor discovery (802.11k/v) - Hotspot 2.0 protocols and operations from the client access perspective • ANQP • Initial access
Analyze roaming behavior and resolve problems related to roaming	- Sticky clients - Excessive roaming - Channel aggregation for roaming analysis
Analyze data frame exchanges	- Data frames and acknowledgement frames - RTS/CTS data frame exchanges

Section	Objectives
	- QoS Data frame exchanges - Block Acknowledgement exchanges
Analyze MIMO and multiuser-specific transmission methods	- MIMO • Transmit Beamforming (TxBF) • MU-MIMO - OFDMA • Scheduling and trigger frames
Analyze behavior and solve problems related to MAC layer operations	- Power Save operations - Protection mechanisms - Load balancing - Band Steering

CWNP CWAP-404 Sample Questions:

Question: 1

What does ATIM stand for?

    a) Ad Hoc Traffic Indication Message
    b) Announcement Traffic Indication Message
    c) Announcement Traffic Indication Map
    d) Ad Hoc Traffic Indication Map

Answer: b

Question: 2

How wide are the UNII-1, UNII-2, and UNII-3 bands?

    a) 20 MHz
    b) 22 MHz
    c) 11 MHz
    d) 100 MHz
    e) It varies depending upon the specific band.

Answer: d

Question: 3

In which frame would you find a timestamp field?

a) Beacon
b) Association request
c) Association response
d) Authentication

Answer: a

Question: 4

Where in the packet can you see its access category?

a) QoS Control Field
b) WMM Information Element
c) IP Header
d) Frame Body

Answer: a

Question: 5

How does a client station indicate that it is using Power Save mode?

a) It transmits a frame to the access point with the Sleep field set to 1.
b) It transmits a frame to the access point with the Power Management field set to 1.
c) Using DTIM, the access point determines when the client station uses Power Save mode.
d) It doesn't need to, because Power Save mode is the default.

Answer: b

Question: 6

Which of these roaming methods requires the use of FT Action frames?

a) Over-the-air fast BSS transition
b) Over-the-WDS fast BSS transition
c) Over-the-DS fast BSS transition
d) Over-the-WLS fast BSS transition

Answer: c

Question: 7

Which of the following are protection mechanisms? (Choose two.)

a) NAV back-off
b) RTS/CTS
c) RTS-to-self
d) CTS-to-self
e) WEP encryption

Answer: b, d

Question: 8

An MOS score of 4 indicates what level of quality?

a) Excellent
b) Good
c) Fair
d) Poor
e) Bad

Answer: b

Question: 9

What is the purpose of link adaptation?

a) Establishes STA-to-STA communication
b) Allows a Beamformer to estimate the channel in order to calculate a steering matrix
c) Performs over-the-air calibration to reduce the differences between a STA's transmit and receive radio chains
d) Dynamically assigns an MCS

Answer: d

Question: 10

Which type of power management frame is used only in an IBSS?

a) ATIM
b) DTIM
c) CF-Poll
d) PS-Poll

Study Guide to Crack CWNP Wi-Fi Analysis CWAP-404 Exam:

- Getting details of the CWAP-404 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the CWAP-404 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the CWNP provided training for CWAP-404 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the CWAP-404 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on CWAP-404 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

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