

## 312-50v12 Dumps

### Certified Ethical Hacker Exam (CEHv12)

<https://www.certleader.com/312-50v12-dumps.html>



**NEW QUESTION 1**

- (Exam Topic 3)

Juliet, a security researcher in an organization, was tasked with checking for the authenticity of images to be used in the organization's magazines. She used these images as a search query and tracked the original source and details of the images, which included photographs, profile pictures, and memes. Which of the following footprinting techniques did Rachel use to finish her task?

- A. Reverse image search
- B. Meta search engines
- C. Advanced image search
- D. Google advanced search

**Answer:** C

**NEW QUESTION 2**

- (Exam Topic 3)

What useful information is gathered during a successful Simple Mail Transfer Protocol (SMTP) enumeration?

- A. The two internal commands VRFY and EXPN provide a confirmation of valid users, email addresses, aliases, and mailing lists.
- B. Reveals the daily outgoing message limits before mailboxes are locked
- C. The internal command RCPT provides a list of ports open to message traffic.
- D. A list of all mail proxy server addresses used by the targeted host

**Answer:** A

**NEW QUESTION 3**

- (Exam Topic 3)

Based on the below log, which of the following sentences are true?

Mar 1, 2016, 7:33:28 AM 10.240.250.23 - 54373 10.249.253.15 - 22 tcp\_ip

- A. Application is FTP and 10.240.250.23 is the client and 10.249.253.15 is the server.
- B. Application is SSH and 10.240.250.23 is the server and 10.249.253.15 is the client.
- C. SSH communications are encrypted; it's impossible to know who is the client or the server.
- D. Application is SSH and 10.240.250.23 is the client and 10.249.253.15 is the server.

**Answer:** D

**Explanation:**

Mar 1, 2016, 7:33:28 AM 10.240.250.23 - 54373 10.249.253.15 - 22 tcp\_ip

Let's just disassemble this entry.

Mar 1, 2016, 7:33:28 AM - time of the request 10.240.250.23 - 54373 - client's IP and port 10.249.253.15 - server IP  
- 22 - SSH port

**NEW QUESTION 4**

- (Exam 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 5**

- (Exam Topic 3)

Alex, a cloud security engineer working in Eyecloud Inc. is tasked with isolating applications from the underlying infrastructure and stimulating communication via well-defined channels. For this purpose, he used an open-source technology that helped him in developing, packaging, and running applications; further, the technology provides PaaS through OS-level visualization, delivers containerized software packages, and promotes fast software delivery. What is the cloud technology employed by Alex in the above scenario?

- A. Virtual machine
- B. Serverless computing
- C. Docker
- D. Zero trust network

**Answer:** C

**NEW QUESTION 6**

- (Exam Topic 3)

BitLocker encryption has been implemented for all the Windows-based computers in an organization. You are concerned that someone might lose their cryptographic key. Therefore, a mechanism was implemented to recover the keys from Active Directory. What is this mechanism called in cryptography?

- A. Key archival
- B. Key escrow.
- C. Certificate rollover
- D. Key renewal

**Answer:** B

#### NEW QUESTION 7

- (Exam Topic 3)

Which of the following tactics uses malicious code to redirect users' web traffic?

- A. Spimming
- B. Pharming
- C. Phishing
- D. Spear-phishing

**Answer:** B

#### NEW QUESTION 8

- (Exam Topic 3)

Joel, a professional hacker, targeted a company and identified the types of websites frequently visited by its employees. Using this information, he searched for possible loopholes in these websites and injected a malicious script that can redirect users from the web page and download malware onto a victim's machine. Joel waits for the victim to access the infected web application so as to compromise the victim's machine. Which of the following techniques is used by Joel in the above scenario?

- A. DNS rebinding attack
- B. Clickjacking attack
- C. MarioNet attack
- D. Watering hole attack

**Answer:** B

#### Explanation:

<https://en.wikipedia.org/wiki/Clickjacking>

Clickjacking is an attack that tricks a user into clicking a webpage element which is invisible or disguised as another element. This can cause users to unwittingly download malware, visit malicious web pages, provide credentials or sensitive information, transfer money, or purchase products online.

Typically, clickjacking is performed by displaying an invisible page or HTML element, inside an iframe, on top of the page the user sees. The user believes they are clicking the visible page but in fact they are clicking an invisible element in the additional page transposed on top of it.

#### NEW QUESTION 9

- (Exam Topic 3)

Lewis, a professional hacker, targeted the IoT cameras and devices used by a target venture-capital firm. He used an information-gathering tool to collect information about the IoT devices connected to a network, open ports and services, and the attack surface area. Using this tool, he also generated statistical reports on broad usage patterns and trends. This tool helped Lewis continually monitor every reachable server and device on the Internet, further allowing him to exploit these devices in the network. Which of the following tools was employed by Lewis in the above scenario?

- A. Censys
- B. Wapiti
- C. NeuVector
- D. Lacework

**Answer:** A

#### Explanation:

Censys scans help the scientific community accurately study the Internet. The data is sometimes used to detect security problems and to inform operators of vulnerable systems so that they can fixed

#### NEW QUESTION 10

- (Exam Topic 3)

John is investigating web-application firewall logs and observers that someone is attempting to inject the following:

```
char buff[10]; buff[>0] = 'a';
```

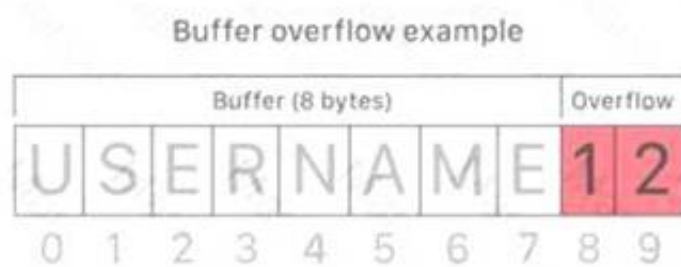
What type of attack is this?

- A. CSRF
- B. XSS
- C. Buffer overflow
- D. SQL injection

**Answer:** C

#### Explanation:

Buffer overflow this attack is an anomaly that happens when software writing data to a buffer overflows the buffer's capacity, leading to adjacent memory locations being overwritten. In other words, an excessive amount of information is being passed into a container that doesn't have enough space, which information finishes up replacing data in adjacent containers. Buffer overflows are often exploited by attackers with a goal of modifying a computer's memory so as to undermine or take hold of program execution.



What's a buffer? A buffer, or data buffer, is a neighborhood of physical memory storage used to temporarily store data while it's being moved from one place to a different . These buffers typically sleep in RAM memory. Computers frequently use buffers to assist improve performance; latest hard drives cash in of buffering to efficiently access data, and lots of online services also use buffers. for instance , buffers are frequently utilized in online video streaming to stop interruption. When a video is streamed, the video player downloads and stores perhaps 20% of the video at a time during a buffer then streams from that buffer. This way, minor drops in connection speed or quick service disruptions won't affect the video stream performance. Buffers are designed to contain specific amounts of knowledge . Unless the program utilizing the buffer has built-in instructions to discard data when an excessive amount of is shipped to the buffer, the program will overwrite data in memory adjacent to the buffer. Buffer overflows are often exploited by attackers to corrupt software. Despite being well-understood, buffer overflow attacks are still a serious security problem that torment cyber-security teams. In 2014 a threat referred to as 'heartbleed' exposed many many users to attack due to a buffer overflow vulnerability in SSL software.

How do attackers exploit buffer overflows? An attacker can deliberately feed a carefully crafted input into a program which will cause the program to undertake and store that input during a buffer that isn't large enough, overwriting portions of memory connected to the buffer space. If the memory layout of the program is well-defined, the attacker can deliberately overwrite areas known to contain executable code. The attacker can then replace this code together with his own executable code, which may drastically change how the program is meant to figure . For example if the overwritten part in memory contains a pointer (an object that points to a different place in memory) the attacker's code could replace that code with another pointer that points to an exploit payload. this will transfer control of the entire program over to the attacker's code.

### NEW QUESTION 10

- (Exam Topic 3)

You have compromised a server and successfully gained a root access. You want to pivot and pass traffic undetected over the network and evade any possible Intrusion Detection System. What is the best approach?

- A. Use Alternate Data Streams to hide the outgoing packets from this server.
- B. Use HTTP so that all traffic can be routed via a browser, thus evading the internal Intrusion Detection Systems.
- C. Install Cryptcat and encrypt outgoing packets from this server.
- D. Install and use Telnet to encrypt all outgoing traffic from this server.

**Answer: C**

#### Explanation:

<https://linuxsecurityblog.com/2018/12/23/create-a-backdoor-with-cryptcat/>

Cryptcat enables us to communicate between two systems and encrypts the communication between them with twofish, one of many excellent encryption algorithms from Bruce Schneier et al. Twofish's encryption is on par with AES encryption, making it nearly bulletproof. In this way, the IDS can't detect the malicious behavior taking place even when its traveling across normal HTTP ports like 80 and 443.

### NEW QUESTION 11

- (Exam 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 used 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 used to expand that foothold and make a persistent presence inside the targeted perimeter.

### NEW QUESTION 13



- (Exam Topic 3)

A hacker has successfully infected an internet-facing server which he will then use to send junk mail, take part in coordinated attacks, or host junk email content. Which sort of trojan infects this server?

- A. Botnet Trojan
- B. Banking Trojans
- C. Turtle Trojans
- D. Ransomware Trojans

**Answer:** A

#### NEW QUESTION 14

- (Exam Topic 3)

When configuring wireless on his home router, Javik disables SSID broadcast. He leaves authentication “open” but sets the SSID to a 32-character string of random letters and numbers.

What is an accurate assessment of this scenario from a security perspective?

- A. Since the SSID is required in order to connect, the 32-character string is sufficient to prevent brute-force attacks.
- B. Disabling SSID broadcast prevents 802.11 beacons from being transmitted from the access point, resulting in a valid setup leveraging “security through obscurity”.
- C. It is still possible for a hacker to connect to the network after sniffing the SSID from a successful wireless association.
- D. Javik’s router is still vulnerable to wireless hacking attempts because the SSID broadcast setting can be enabled using a specially crafted packet sent to the hardware address of the access point.

**Answer:** C

#### NEW QUESTION 16

- (Exam 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. VPN footprinting
- B. Email footprinting
- C. VoIP footprinting
- D. Whois footprinting

**Answer:** B

#### NEW QUESTION 17

- (Exam Topic 3)

John, a professional hacker, decided to use DNS to perform data exfiltration on a target network, in this process, he embedded malicious data into the DNS protocol packets that even DNSSEC cannot detect. Using this technique, John successfully injected malware to bypass a firewall and maintained communication with the victim machine and C&C server. What is the technique employed by John to bypass the firewall?

- A. DNS cache snooping
- B. DNSSEC zone walking
- C. DNS tunneling method
- D. DNS enumeration

**Answer:** C

#### Explanation:

DNS tunneling may be a method used to send data over the DNS protocol, a protocol which has never been intended for data transfer. Due to that, people tend to overlook it and it's become a well-liked but effective tool in many attacks. Most popular use case for DNS tunneling is obtaining free internet through bypassing captive portals at airports, hotels, or if you are feeling patient the not-so-cheap on the wing Wi-Fi. On those shared internet hotspots HTTP traffic is blocked until a username/password is provided, however DNS traffic is usually still allowed within the background: we will encode our HTTP traffic over DNS and voilà, we've internet access. This sounds fun but reality is, browsing anything on DNS tunneling is slow. Like, back to 1998 slow. Another more dangerous use of DNS tunneling would be bypassing network security devices (Firewalls, DLP appliances...) to line up an immediate and unmonitored communications channel on an organisation's network. Possibilities here are endless: Data exfiltration, fixing another penetration testing tool... you name it. To make it even more worrying, there's an outsized amount of easy to use DNS tunneling tools out there. There's even a minimum of one VPN over DNS protocol provider (warning: the planning of the web site is hideous, making me doubt on the legitimacy of it). As a pentester all this is often great, as a network admin not such a lot.

How does it work: For those that ignoramus about DNS protocol but still made it here, I feel you deserve a really brief explanation on what DNS does: DNS is sort of a phonebook for the web, it translates URLs (human-friendly language, the person's name), into an IP address (machine-friendly language, the phone number). That helps us remember many websites, same as we will remember many people's names. For those that know what DNS is I might suggest looking here for a fast refresh on DNS protocol, but briefly what you would like to understand is:

- A Record: Maps a website name to an IP address. example.com ? 12.34.52.67
- NS Record (a.k.a. Nameserver record): Maps a website name to an inventory of DNS servers, just in case our website is hosted in multiple servers. example.com ? server1.example.com, server2.example.com

Who is involved in DNS tunneling?

- Client. Will launch DNS requests with data in them to a website.
- One Domain that we will configure. So DNS servers will redirect its requests to an outlined server of our own.
- Server. This is often the defined nameserver which can ultimately receive the DNS requests.

The 6 Steps in DNS tunneling (simplified):

1. The client encodes data during a DNS request. The way it does this is often by prepending a bit of knowledge within the domain of the request. For instance: mypieceofdata.server1.example.com
2. The DNS request goes to a DNS server.
3. The DNS server finds out the A register of your domain with the IP address of your server.
4. The request for mypieceofdata.server1.example.com is forwarded to the server.
5. The server processes regardless of the mypieceofdata was alleged to do. Let's assume it had been an HTTP request.
6. The server replies back over DNS and woop woop, we've got signal.

Bypassing Firewalls through the DNS Tunneling Method DNS operates using UDP, and it has a 255-byte limit on outbound queries. Moreover, it allows only alphanumeric characters and hyphens. Such small size constraints on external queries allow DNS to be used as an ideal choice to perform data exfiltration by various malicious entities. Since corrupt or malicious data can be secretly embedded into the DNS protocol packets, even DNSSEC cannot detect the abnormality in DNS tunneling. It is effectively used by malware to bypass the firewall to maintain communication between the victim machine and the C&C server. Tools such as NSTX (<https://sourceforge.net>), Heyoka (<http://heyoka.sourceforge.net>), and Iodine (<https://code.kryo.se>) use this technique of tunneling

traffic across DNS port 53. CEH v11 Module 12 Page 994

**NEW QUESTION 19**

- (Exam Topic 3)

Kate dropped her phone and subsequently encountered an issue with the phone's internal speaker. Thus, she is using the phone's loudspeaker for phone calls and other activities. Bob, an attacker, takes advantage of this vulnerability and secretly exploits the hardware of Kate's phone so that he can monitor the loudspeaker's output from data sources such as voice assistants, multimedia messages, and audio files by using a malicious app to breach speech privacy. What is the type of attack Bob performed on Kate in the above scenario?

- A. Man-in-the-disk attack
- B. aLTer attack
- C. SIM card attack
- D. Spearphone attack

**Answer:** D

**NEW QUESTION 22**

- (Exam Topic 3)

A "Server-Side Includes" attack refers to the exploitation of a web application by injecting scripts in HTML pages or executing arbitrary code remotely. Which web-page file type, if it exists on the web server, is a strong indication that the server is vulnerable to this kind of attack?

- A. .stm
- B. .html
- C. .rss
- D. .cms

**Answer:** A

**NEW QUESTION 26**

- (Exam Topic 3)

Clark, a professional hacker, attempted to perform a Btlejacking attack using an automated tool, Btlejack, and hardware tool, micro:bit. This attack allowed Clark to hijack, read, and export sensitive information shared between connected devices. To perform this attack, Clark executed various btlejack commands. Which of the following commands was used by Clark to hijack the connections?

- A. btlejack-f 0x129f3244-j
- B. btlejack -c any
- C. btlejack -d /dev/ttyACM0 -d /dev/ttyACM2 -s
- D. btlejack -f 0x9c68fd30 -t -m 0x1 ffffffff

**Answer:** D

**NEW QUESTION 27**

- (Exam Topic 3)

Samuel, a professional hacker, monitored and Intercepted already established traffic between Bob and a host machine to predict Bob's ISN. Using this ISN, Samuel sent spoofed packets with Bob's IP address to the host machine. The host machine responded with <| packet having an Incremented ISN. Consequently, Bob's connection got hung, and Samuel was able to communicate with the host machine on behalf of Bob. What is the type of attack performed by Samuel in the above scenario?

- A. UDP hijacking
- B. Blind hijacking
- C. TCP/IP hacking
- D. Forbidden attack

**Answer:** C

**Explanation:**

A TCP/IP hijack is an attack that spoofs a server into thinking it's talking with a sound client, once actually it's communication with an assaulter that has condemned (or hijacked) the tcp session. Assume that the client has administrator-level privileges, which the attacker needs to steal that authority so as to form a brand new account with root-level access of the server to be used afterward. A tcp Hijacking is sort of a two-phased man-in-the-middle attack. The man-in-the-middle assaulter lurks within the circuit between a shopper and a server so as to work out what port and sequence numbers are being employed for the conversation.

First, the attacker knocks out the client with an attack, like Ping of Death, or ties it up with some reasonably ICMP storm. This renders the client unable to transmit any packets to the server. Then, with the client crashed, the attacker assumes the client's identity so as to talk with the server. By this suggests, the attacker gains administrator-level access to the server.

One of the most effective means of preventing a hijack attack is to want a secret, that's a shared secret between the shopper and also the server. looking on the strength of security desired, the key may be used for random exchanges. this is often once a client and server periodically challenge each other, or it will occur with each exchange, like Kerberos.

**NEW QUESTION 30**

- (Exam Topic 3)

Leverox Solutions hired Arnold, a security professional, for the threat intelligence process. Arnold collected information about specific threats against the organization. From this information, he retrieved contextual information about security events and incidents that helped him disclose potential risks and gain insight into attacker methodologies. He collected the information from sources such as humans, social media, and chat rooms as well as from events that resulted in cyberattacks. In this process, he also prepared a report that includes identified malicious activities, recommended courses of action, and warnings for emerging attacks. What is the type of threat intelligence collected by Arnold in the above scenario?

- A. Strategic threat intelligence
- B. Tactical threat intelligence

- C. Operational threat intelligence
- D. Technical threat intelligence

**Answer: C**

### NEW QUESTION 33

- (Exam 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 10.1.1.3. 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**

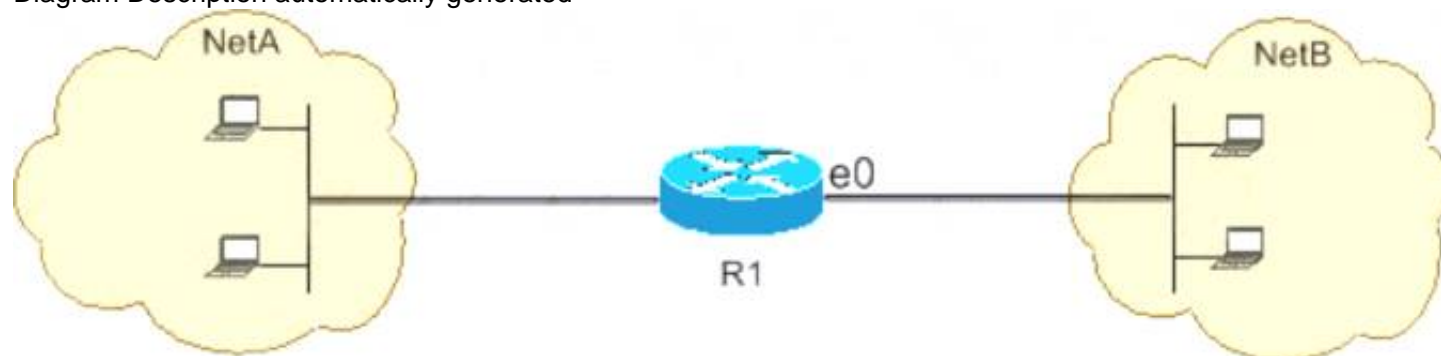
#### Explanation:

<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 35

- (Exam Topic 3)

if you send a TCP ACK segment to a known closed port on a firewall but it does not respond with an RST. what do you know about the firewall you are scanning?

- A. There is no firewall in place.
- B. This event does not tell you anything about the firewall.
- C. It is a stateful firewall
- D. It is a non-stateful firewall.

**Answer: B**

### NEW QUESTION 36

- (Exam Topic 3)

An attacker scans a host with the below command. Which three flags are set?

```
# nmap -sX host.domain.com
```

- A. This is SYN sca
- B. SYN flag is set.
- C. This is Xmas sca
- D. URG, PUSH and FIN are set.
- E. This is ACK sca
- F. ACK flag is set.
- G. This is Xmas sca
- H. SYN and ACK flags are set.

**Answer: B**

### NEW QUESTION 39

- (Exam Topic 3)

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 sent a mail?

- A. Non-Repudiation
- B. Integrity

- C. Authentication
- D. Confidentiality

**Answer:** A

**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 40**

- (Exam Topic 3)

Kevin, a professional hacker, wants to penetrate CyberTech Inc.'s network. He employed a technique, using which he encoded packets with Unicode characters. The company's IDS cannot recognize the packet, but the target web server can decode them. What is the technique used by Kevin to evade the IDS system?

- A. Desynchronization
- B. Obfuscating
- C. Session splicing
- D. Urgency flag

**Answer:** B

**Explanation:**

Adversaries could decide to build an possible or file difficult to find or analyze by encrypting, encoding, or otherwise obfuscating its contents on the system or in transit. this is often common behavior which will be used across totally different platforms and therefore the network to evade defenses.

Payloads may be compressed, archived, or encrypted so as to avoid detection. These payloads may be used throughout Initial Access or later to mitigate detection. typically a user's action could also be needed to open and Deobfuscate/Decode Files or info for User Execution. The user can also be needed to input a parole to open a parole protected compressed/encrypted file that was provided by the mortal. Adversaries can also used compressed or archived scripts, like JavaScript.

Portions of files can even be encoded to cover the plain-text strings that will otherwise facilitate defenders

with discovery. Payloads can also be split into separate, ostensibly benign files that solely reveal malicious practicality once reassembled.

Adversaries can also modify commands dead from payloads or directly via a Command and Scripting Interpreter. surroundings variables, aliases, characters, and different platform/language specific linguistics may be wont to evade signature based mostly detections and application management mechanisms.

**NEW QUESTION 41**

- (Exam 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) xxxxxxxx xxxxxx
```

xc. 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 44**

- (Exam Topic 3)

Which Nmap switch helps evade IDS or firewalls?

- A. -n/-R
- B. -0N/-0X/-0G
- C. -T
- D. -D

**Answer:** C

**NEW QUESTION 49**

- (Exam 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:** C

**NEW QUESTION 54**

- (Exam 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 56**

- (Exam Topic 3)

Dayn, an attacker, wanted to detect if any honeypots are installed in a target network. For this purpose, he used a time-based TCP fingerprinting method to validate the response to a normal computer and the response of a honeypot to a manual SYN request. Which of the following techniques is employed by Dayn to detect honeypots?

- A. Detecting honeypots running on VMware
- B. Detecting the presence of Honeyd honeypots
- C. Detecting the presence of Snort\_inline honeypots
- D. Detecting the presence of Sebek-based honeypots

**Answer: C**

**NEW QUESTION 57**

- (Exam Topic 3)

This type of injection attack does not show any error message. It is difficult to exploit as it returns information when the application is given SQL payloads that elicit a true or false response from the server. By observing the response, an attacker can extract sensitive information. What type of attack is this?

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

**Answer: D**

**NEW QUESTION 58**

- (Exam Topic 3)

```
#!/usr/bin/python import socket buffer=["A"] counter=50 while len(buffer)<=100: buffer.append ("A"*counter) counter=counter+50 commands= ["HELP","STATS .","RTIME .","LTIME. ","SRUN .","TRUN .","GMON .","GDOG .","KSTET .","GTER .","HTER .","LTER .","KSTAN ."] for command in commands: for buffstring in buffer: print "Exploiting" +command +":"+str(len(buffstring)) s=socket.socket(socket.AF_INET, socket.SOCK_STREAM) s.connect(('127.0.0.1', 9999)) s.recv(50) s.send(command+buffstring) s.close()
```

 What is the code written for?

- A. Denial-of-service (DOS)
- B. Buffer Overflow
- C. Bruteforce
- D. Encryption

**Answer: B**

**NEW QUESTION 63**

- (Exam Topic 3)

A security analyst is performing an audit on the network to determine if there are any deviations from the security policies in place. The analyst discovers that a user from the IT department had a dial-out modem installed.

Which security policy must the security analyst check to see if dial-out modems are allowed?

- A. Firewall-management policy
- B. Acceptable-use policy
- C. Permissive policy
- D. Remote-access policy

**Answer: D**

**NEW QUESTION 64**

- (Exam Topic 3)

in this attack, an adversary tricks a victim into reinstalling an already-in-use key. This is achieved by manipulating and replaying cryptographic handshake messages. When the victim reinstall the key, associated parameters such as the incremental transmit packet number and receive packet number are reset to their initial values. What is this attack called?

- A. Chop chop attack
- B. KRACK

- C. Evil twin
- D. Wardriving

**Answer:** B

**Explanation:**

In this attack KRACK is an acronym for Key Reinstallation Attack. KRACK may be a severe replay attack on Wi-Fi Protected Access protocol (WPA2), which secures your Wi-Fi connection. Hackers use KRACK to take advantage of a vulnerability in WPA2. When in close range of a possible victim, attackers can access and skim encrypted data using KRACK.

How KRACK WorksYour Wi-Fi client uses a four-way handshake when attempting to attach to a protected network. The handshake confirms that both the client — your smartphone, laptop, et cetera — and therefore the access point share the right credentials, usually a password for the network. This establishes the Pairwise passkey (PMK), which allows for encoding .Overall, this handshake procedure allows for quick logins and connections and sets up a replacement encryption key with each connection. this is often what keeps data secure on Wi-Fi connections, and every one protected Wi-Fi connections use the four-way handshake for security. This protocol is that the reason users are encouraged to use private or credential-protected Wi-Fi instead of public connections.KRACK affects the third step of the handshake, allowing the attacker to control and replay the WPA2 encryption key to trick it into installing a key already in use. When the key's reinstalled, other parameters related to it — the incremental transmit packet number called the nonce and therefore the replay counter — are set to their original values.Rather than move to the fourth step within the four-way handshake, nonce resets still replay transmissions of the third step. This sets up the encryption protocol for attack, and counting on how the attackers replay the third-step transmissions, they will take down Wi-Fi security.

Why KRACK may be a ThreatThink of all the devices you employ that believe Wi-Fi. it isn't almost laptops and smartphones; numerous smart devices now structure the web of Things (IoT). due to the vulnerability in WPA2, everything connected to Wi-Fi is in danger of being hacked or hijacked.Attackers using KRACK can gain access to usernames and passwords also as data stored on devices. Hackers can read emails and consider photos of transmitted data then use that information to blackmail users or sell it on the Dark Web.Theft of stored data requires more steps, like an HTTP content injection to load malware into the system. Hackers could conceivably take hold of any device used thereon Wi-Fi connection. Because the attacks require hackers to be on the brink of the target, these internet security threats could also cause physical security threats.On the opposite hand, the necessity to be in close proximity is that the only excellent news associated with KRACK, as meaning a widespread attack would be extremely difficult.Victims are specifically targeted. However, there are concerns that a experienced attacker could develop the talents to use HTTP content injection to load malware onto websites to make a more widespread affect.

Everyone is in danger from KRACK vulnerability. Patches are available for Windows and iOS devices, but a released patch for Android devices is currently in question (November 2017). There are issues with the discharge , and lots of question if all versions and devices are covered.The real problem is with routers and IoT devices. These devices aren't updated as regularly as computer operating systems, and for several devices, security flaws got to be addressed on the manufacturing side. New devices should address KRACK, but the devices you have already got in your home probably aren't protected.

The best protection against KRACK is to make sure any device connected to Wi-Fi is patched and updated with the newest firmware. that has checking together with your router's manufacturer periodically to ascertain if patches are available.

The safest connection option may be a private VPN, especially when publicly spaces. If you would like a VPN for private use, avoid free options, as they need their own security problems and there'll even be issues with HTTPs. Use a paid service offered by a trusted vendor like Kaspersky. Also, more modern networks use WPA3 for better security.Avoid using public Wi-Fi, albeit it's password protection. That password is out there to almost anyone, which reduces the safety level considerably.All the widespread implications of KRACK and

therefore the WPA2 vulnerability aren't yet clear. what's certain is that everybody who uses Wi-Fi is in danger and wishes to require precautions to guard their data and devices.

**NEW QUESTION 67**

- (Exam Topic 3)

An attacker utilizes a Wi-Fi Pineapple to run an access point with a legitimate-looking SSID for a nearby business in order to capture the wireless password. What kind of attack is this?

- A. MAC spoofing attack
- B. Evil-twin attack
- C. War driving attack
- D. Phishing attack

**Answer:** B

**NEW QUESTION 69**

- (Exam Topic 3)

Sam is a penetration tester hired by Inception Tech, a security organization. He was asked to perform port scanning on a target host in the network. While performing the given task, Sam sends FIN/ACK probes and determines that an RST packet is sent in response by the target host, indicating that the port is closed. What is the port scanning technique used by Sam to discover open ports?

- A. Xmas scan
- B. IDLE/IPID header scan
- C. TCP Maimon scan
- D. ACK flag probe scan

**Answer:** C

**Explanation:**

TCP Maimon scan

This scan technique is very similar to NULL, FIN, and Xmas scan, but the probe used here is FIN/ACK. In most cases, to determine if the port is open or closed, the RST packet should be generated

as a response to a probe request. However, in many BSD systems, the port is open if the packet gets dropped in response to a probe.

<https://nmap.org/book/scan-methods-maimon-scan.html> How Nmap interprets responses to a Maimon scan probe

Probe Response Assigned State

No response received (even after retransmissions) open|filtered TCP RST packet closed

ICMP unreachable error (type 3, code 1, 2, 3, 9, 10, or 13) filtered

**NEW QUESTION 74**

- (Exam Topic 3)

Tony is a penetration tester tasked with performing a penetration test. After gaining initial access to a target system, he finds a list of hashed passwords.

Which of the following tools would not be useful for cracking the hashed passwords?

- A. John the Ripper
- B. Hashcat

- C. netcat
- D. THC-Hydra

**Answer:** A

#### NEW QUESTION 78

- (Exam Topic 3)

Bob wants to ensure that Alice can check whether his message has been tampered with. He creates a checksum of the message and encrypts it using asymmetric cryptography. What key does Bob use to encrypt the checksum for accomplishing this goal?

- A. Alice's private key
- B. Alice's public key
- C. His own private key
- D. His own public key

**Answer:** B

#### NEW QUESTION 82

- (Exam Topic 3)

In both pharming and phishing attacks, an attacker can create websites that look similar to legitimate sites with the intent of collecting personal identifiable information from its victims.

What is the difference between pharming and phishing attacks?

- A. In a pharming attack, a victim is redirected to a fake website by modifying their host configuration file or by exploiting vulnerabilities in DN
- B. In a phishing attack, an attacker provides the victim with a URL that is either misspelled or looks similar to the actual websites domain name
- C. In a phishing attack, a victim is redirected to a fake website by modifying their host configuration file or by exploiting vulnerabilities in DN
- D. In a pharming attack, an attacker provides the victim with a URL that is either misspelled or looks very similar to the actual websites domain name
- E. Both pharming and phishing attacks are purely technical and are not considered forms of social engineering
- F. Both pharming and phishing attacks are identical

**Answer:** A

#### NEW QUESTION 84

- (Exam 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 88

- (Exam Topic 3)

Bill has been hired as a penetration tester and cyber security auditor for a major credit card company. Which information security standard is most applicable to his role?

- A. FISMA
- B. HITECH
- C. PCI-DSS
- D. Sarbanes-OxleyAct

**Answer:** C

#### NEW QUESTION 93

- (Exam Topic 3)

Which of the following provides a security professional with most information about the system's security posture?

- A. Phishing, spamming, sending trojans
- B. Social engineering, company site browsing tailgating
- C. Wardriving, warchalking, social engineering
- D. Port scanning, banner grabbing service identification

**Answer:** D

#### NEW QUESTION 97

- (Exam Topic 3)

You are a penetration tester and are about to perform a scan on a specific server. The agreement that you signed with the client contains the following specific condition for the scan: "The attacker must scan every port on the server several times using a set of spoofed sources IP addresses. " Suppose that you are using

Nmap to perform this scan. What flag will you use to satisfy this requirement?

- A. The -A flag
- B. The -g flag
- C. The -f flag
- D. The -D flag

**Answer:** D

**Explanation:**

flags –source-port and -g are equivalent and instruct nmap to send packets through a selected port. this option is used to try to cheat firewalls whitelisting traffic from specific ports. the following example can scan the target from the port twenty to ports eighty, 22, 21,23 and 25 sending fragmented packets to LinuxHint.

**NEW QUESTION 101**

- (Exam Topic 3)

Ron, a security professional, was pen testing web applications and SaaS platforms used by his company. While testing, he found a vulnerability that allows hackers to gain unauthorized access to API objects and perform actions such as view, update, and delete sensitive data of the company. What is the API vulnerability revealed in the above scenario?

- A. Code injections
- B. Improper use of CORS
- C. No ABAC validation
- D. Business logic flaws

**Answer:** B

**NEW QUESTION 104**

- (Exam Topic 2)

At what stage of the cyber kill chain theory model does data exfiltration occur?

- A. Actions on objectives
- B. Weaponization
- C. installation
- D. Command and control

**Answer:** A

**Explanation:**

The longer an adversary has this level of access, the greater the impact. Defenders must detect this stage as quickly as possible and deploy tools which can enable them to gather forensic evidence. One example would come with network packet captures, for damage assessment. Only now, after progressing through the primary six phases, can intruders take actions to realize their original objectives. Typically, the target of knowledge exfiltration involves collecting, encrypting and extracting information from the victim(s) environment; violations of knowledge integrity or availability are potential objectives also . Alternatively, and most ordinarily , the intruder may only desire access to the initial victim box to be used as a hop point to compromise additional systems and move laterally inside the network. Once this stage is identified within an environment, the implementation of prepared reaction plans must be initiated. At a minimum, the plan should include a comprehensive communication plan, detailed evidence must be elevated to the very best ranking official or board , the deployment of end-point security tools to dam data loss and preparation for briefing a CIRT Team. Having these resources well established beforehand may be a “MUST” in today’s quickly evolving landscape of cybersecurity threats

**NEW QUESTION 106**

- (Exam Topic 2)

Alice, a professional hacker, targeted an organization's cloud services. She infiltrated the targets MSP provider by sending spear-phishing emails and distributed custom-made malware to compromise user accounts and gain remote access to the cloud service. Further, she accessed the target customer profiles with her MSP account, compressed the customer data, and stored them in the MSP. Then, she used this information to launch further attacks on the target organization. Which of the following cloud attacks did Alice perform in the above scenario?

- A. Cloud hopper attack
- B. Cloud cryptojacking
- C. Cloudborne attack
- D. Man-in-the-cloud (MITC) attack

**Answer:** A

**Explanation:**

Operation Cloud Hopper was an in depth attack and theft of data in 2017 directed at MSP within the uk (U.K.), us (U.S.), Japan, Canada, Brazil, France, Switzerland, Norway, Finland, Sweden, South Africa , India, Thailand, South Korea and Australia. The group used MSP as intermediaries to accumulate assets and trade secrets from MSP client engineering, MSP industrial manufacturing, retail, energy, pharmaceuticals, telecommunications, and government agencies. Operation Cloud Hopper used over 70 variants of backdoors, malware and trojans. These were delivered through spear-phishing emails. The attacks scheduled tasks or leveraged services/utilities to continue Microsoft Windows systems albeit the pc system was rebooted. It installed malware and hacking tools to access systems and steal data.

**NEW QUESTION 107**

- (Exam Topic 2)

Robin, an attacker, is attempting to bypass the firewalls of an organization through the DNS tunneling method in order to exfiltrate data. He is using the NSTX tool for bypassing the firewalls. On which of the following ports should Robin run the NSTX tool?

- A. Port 53
- B. Port 23
- C. Port 50
- D. Port 80



**Answer: A**

**Explanation:**

DNS uses Ports 53 which is almost always open on systems, firewalls, and clients to transmit DNS queries. Instead of the more familiar Transmission Control Protocol (TCP) these queries use User Datagram Protocol (UDP) due to its low-latency, bandwidth and resource usage compared TCP-equivalent queries. UDP has no error or flow-control capabilities, nor does it have any integrity checking to make sure the info arrived intact. How is internet use (browsing, apps, chat etc) so reliable then? If the UDP DNS query fails (it's a best-effort protocol after all) within the first instance, most systems will retry variety of times and only after multiple failures, potentially switch to TCP before trying again; TCP is additionally used if the DNS query exceeds the restrictions of the UDP datagram size – typically 512 bytes for DNS but can depend upon system settings. Figure 1 below illustrates the essential process of how DNS operates: the client sends a question string (for example, mail.google[.]com during this case) with a particular type – typically A for a number address. I've skipped the part whereby intermediate DNS systems may need to establish where '.com' exists, before checking out where 'google[.]com' are often found, and so on.



Many worms and scanners are created to seek out and exploit systems running telnet. Given these facts, it's really no surprise that telnet is usually seen on the highest Ten Target Ports list. Several of the vulnerabilities of telnet are fixed. They require only an upgrade to the foremost current version of the telnet Daemon or OS upgrade. As is usually the case, this upgrade has not been performed on variety of devices. This might flow from to the very fact that a lot of systems administrators and users don't fully understand the risks involved using telnet. Unfortunately, the sole solution for a few of telnet's vulnerabilities is to completely discontinue its use. The well-liked method of mitigating all of telnet's vulnerabilities is replacing it with alternate protocols like ssh. Ssh is capable of providing many of an equivalent functions as telnet and a number of other additional services typical handled by other protocols like FTP and Xwindows. Ssh does still have several drawbacks to beat before it can completely replace telnet. It's typically only supported on newer equipment. It requires processor and memory resources to perform the info encryption and decryption. It also requires greater bandwidth than telnet thanks to the encryption of the info. This paper was written to assist clarify how dangerous the utilization of telnet are often and to supply solutions to alleviate the main known threats so as to enhance the general security of the web. Once a reputation is resolved to an IP caching also helps: the resolved name-to-IP is usually cached on the local system (and possibly on intermediate DNS servers) for a period of your time. Subsequent queries for an equivalent name from an equivalent client then don't leave the local system until said cache expires. Of course, once the IP address of the remote service is understood, applications can use that information to enable other TCP-based protocols, like HTTP, to try to to their actual work, for instance ensuring internet cat GIFs are often reliably shared together with your colleagues. So, beat all, a couple of dozen extra UDP DNS queries from an organization's network would be fairly inconspicuous and will leave a malicious payload to beacon bent an adversary; commands could even be received to the requesting application for processing with little difficulty.

**NEW QUESTION 109**

- (Exam Topic 2)

Bella, a security professional working at an IT firm, finds that a security breach has occurred while transferring important files. Sensitive data, employee usernames, and passwords are shared in plaintext, paving the way for hackers to perform successful session hijacking. To address this situation, Bella implemented a protocol that sends data using encryption and digital certificates. Which of the following protocols is used by Bella?

- A. FTP
- B. HTTPS
- C. FTPS
- D. IP

**Answer: C**

**Explanation:**

The File Transfer Protocol (FTP) is a standard organization convention utilized for the exchange of PC records from a worker to a customer on a PC organization. FTP is based on a customer worker model engineering utilizing separate control and information associations between the customer and the server.[1] FTP clients may validate themselves with an unmistakable book sign-in convention, ordinarily as a username and secret key, however can interface namelessly if the worker is designed to permit it. For secure transmission that ensures the username and secret phrase, and scrambles the substance, FTP is frequently made sure about with SSL/TLS (FTPS) or supplanted with SSH File Transfer Protocol (SFTP).

The primary FTP customer applications were order line programs created prior to working frameworks had graphical UIs, are as yet dispatched with most Windows, Unix, and Linux working systems.[2][3] Many FTP customers and mechanization utilities have since been created for working areas, workers, cell phones, and equipment, and FTP has been fused into profitability applications, for example, HTML editors.

**NEW QUESTION 112**

- (Exam 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 Unknornscan 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 to 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 117**

- (Exam Topic 2)

An attacker runs netcat tool to transfer a secret file between two hosts.

```
Machine A: netcat -l -p 1234 < secretfile
Machine B: netcat 192.168.3.4 > 1234
```

He is worried about information being sniffed on the network.

How would the attacker use netcat to encrypt the information before transmitting onto the wire?

- A. Machine A: netcat -l -p -s password 1234 < testfileMachine B: netcat <machine A IP> 1234
- B. Machine A: netcat -l -e magickey -p 1234 < testfileMachine B: netcat <machine A IP> 1234
- C. Machine A: netcat -l -p 1234 < testfile -pw passwordMachine B: netcat <machine A IP> 1234 -pw password
- D. Use cryptcat instead of netcat

**Answer: D**

#### NEW QUESTION 118

- (Exam Topic 2)

A pen tester is configuring a Windows laptop for a test. In setting up Wireshark, what driver and library are required to allow the NIC to work in promiscuous mode?

- A. Libpcap
- B. Awinpcap
- C. Winprom
- D. Winpcap

**Answer: D**

#### NEW QUESTION 123

- (Exam Topic 2)

Andrew is an Ethical Hacker who was assigned the task of discovering all the active devices hidden by a restrictive firewall in the IPv4 range in a given target network.

Which of the following host discovery techniques must he use to perform the given task?

- A. UDP scan
- B. TCP Maimon scan
- C. arp ping scan
- D. ACK flag probe scan

**Answer: C**

#### Explanation:

One of the most common Nmap usage scenarios is scanning an Ethernet LAN. Most LANs, especially those that use the private address range granted by RFC 1918, do not always use the overwhelming majority of IP addresses. When Nmap attempts to send a raw IP packet, such as an ICMP echo request, the OS must determine a destination hardware (ARP) address, such as the target IP, so that the Ethernet frame can be properly addressed. .. This is required to issue a series of ARP requests. This is best illustrated by an example where a ping scan is attempted against an Area Ethernet host. The --send-ip option tells Nmap to send IP-level packets (rather than raw Ethernet), even on area networks. The Wireshark output of the three ARP requests and their timing have been pasted into the session.

Raw IP ping scan example for offline targetsThis example took quite a couple of seconds to finish because the (Linux) OS sent three ARP requests at 1 second intervals before abandoning the host. Waiting for a few seconds is excessive, as long as the ARP response usually arrives within a few milliseconds. Reducing this timeout period is not a priority for OS vendors, as the overwhelming majority of packets are sent to the host that actually exists. Nmap, on the other hand, needs to send packets to 16 million IP s given a target like 10.0.0.0/8. Many targets are pinged in parallel, but waiting 2 seconds each is very delayed.

There is another problem with raw IP ping scans on the LAN. If the destination host turns out to be unresponsive, as in the previous example, the source host usually adds an incomplete entry for that destination IP to the kernel ARP table. ARP tablespace is finite and some operating systems become unresponsive when full. If Nmap is used in rawIP mode (--send-ip), Nmap may have to wait a few minutes for the ARP cache entry to expire before continuing host discovery. ARP scans solve both problems by giving Nmap the highest priority. Nmap issues raw ARP requests and handles retransmissions and timeout periods in its sole discretion. The system ARP cache is bypassed. The example shows the difference. This ARP scan takes just over a tenth of the time it takes for an equivalent IP. Example b ARP ping scan of offline target



```
nmap -s -sn -PR --packet-trace --send-eth 192.168.3.37
Starting Nmap ( http://nmap.org )
SENT (0.0000s) ARP who-has 192.168.3.37 tell 192.168.0.100
RECV (0.1100s) ARP who-has 192.168.3.37 tell 192.168.0.100
Note: Host seems down. If it is really up, has blocking ping probes, try -Ph
Nmap done: 1 IP address (0 hosts up) scanned in 0.11 seconds
```

In example b, neither the -PR option nor the -send-eth option has any effect. This is often because ARP has a default scan type on the Area Ethernet network when scanning Ethernet hosts that Nmap discovers. This includes traditional wired Ethernet as 802.11 wireless networks. As mentioned above, ARP scanning is not only more efficient, but also more accurate. Hosts frequently block IP-based ping packets, but usually cannot block ARP requests or responses and communicate over the network. Nmap uses ARP instead of all targets on equivalent targets, even if different ping types (such as -PE and -PS) are specified. LAN.. If you do not need to attempt an ARP scan at all, specify --send-ip as shown in Example a “Raw IP Ping Scan for Offline Targets”.

If you give Nmap control to send raw Ethernet frames, Nmap can also adjust the source MAC address. If you have the only PowerBook in your security conference room and a large ARP scan is initiated from an

Apple-registered MAC address, your head may turn to you. Use the --spoof-mac option to spoof the MAC address as described in the MAC Address Spoofing section.

#### NEW QUESTION 125

- (Exam 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 explanation 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 130**

- (Exam Topic 2)

in the Common Vulnerability Scoring System (CVSS) v3.1 severity ratings, what range does medium vulnerability fall in?

- A. 3.0-6.9
- B. 4.0-6.0
- C. 4.0-6.9
- D. 3.9-6.9

**Answer: C**

**Explanation:**

CVSS v2.0 Ratings

CVSS v3.0 Ratings

| Severity | Base Score Range | Severity | Base Score Range |
|----------|------------------|----------|------------------|
|          |                  | None     | 0.0              |
| Low      | 0.0-3.9          | Low      | 0.1-3.9          |
| Medium   | 4.0-6.9          | Medium   | 4.0-6.9          |
| High     | 7.0-10.0         | High     | 7.0-8.9          |
|          |                  | Critical | 9.0-10.0         |

**NEW QUESTION 134**

- (Exam Topic 2)

Steve, an attacker, created a fake profile on a social media website and sent a request to Stella. Stella was enthralled by Steve's profile picture and the description given for his profile, and she initiated a conversation with him soon after accepting the request. After a few days. Sieve started asking about her company details and eventually gathered all the essential information regarding her company. What is the social engineering technique Steve employed in the above scenario?

- A. Diversion theft
- B. Baiting
- C. Honey trap
- D. Piggybacking

**Answer: C**

**Explanation:**

The honey trap is a technique where an attacker targets a person online by pretending to be an attractive person and then begins a fake online relationship to obtain confidential information about the target company. In this technique, the victim is an insider who possesses critical information about the target organization. Baiting is a technique in which attackers offer end users something alluring in exchange for important information such as login details and other sensitive data. This technique relies on the curiosity and greed of the end-users. Attackers perform this technique by leaving a physical device such as a USB flash drive containing malicious files in locations where people can easily find them, such as parking lots, elevators, and bathrooms. This physical device is labeled with a legitimate company's logo, thereby tricking end-users into trusting it and opening it on their systems. Once the victim connects and opens the device, a malicious file downloads. It infects the system and allows the attacker to take control.

For example, an attacker leaves some bait in the form of a USB drive in the elevator with the label "Employee Salary Information 2019" and a legitimate company's logo. Out of curiosity and greed, the victim picks up the device and opens it up on their system, which downloads the bait. Once the bait is downloaded, a piece of malicious software installs on the victim's system, giving the attacker access.

**NEW QUESTION 137**

- (Exam Topic 2)

Which of the following is the primary objective of a rootkit?

- A. It opens a port to provide an unauthorized service
- B. It creates a buffer overflow
- C. It replaces legitimate programs
- D. It provides an undocumented opening in a program

**Answer:** C

#### NEW QUESTION 140

- (Exam Topic 2)

What port number is used by LDAP protocol?

- A. 110
- B. 389
- C. 464
- D. 445

**Answer:** B

#### NEW QUESTION 143

- (Exam Topic 2)

In the context of Windows Security, what is a 'null' user?

- A. A user that has no skills
- B. An account that has been suspended by the admin
- C. A pseudo account that has no username and password
- D. A pseudo account that was created for security administration purpose

**Answer:** C

#### NEW QUESTION 147

- (Exam Topic 2)

Taylor, a security professional, uses a tool to monitor her company's website, analyze the website's traffic, and track the geographical location of the users visiting the company's website. Which of the following tools did Taylor employ in the above scenario?

- A. WebSite Watcher
- B. web-Stat
- C. Webroot
- D. WAFW00F

**Answer:** B

#### Explanation:

Increase your web site's performance and grow! Add Web-Stat to your site (it's free!) and watch individuals act together with your pages in real time.

Learn how individuals realize your web site. Get details concerning every visitor's path through your web site and track pages that flip browsers into consumers.

One-click install. observe locations, in operation systems, browsers and screen sizes and obtain alerts for new guests and conversions

#### NEW QUESTION 152

- (Exam Topic 2)

How is the public key distributed in an orderly, controlled fashion so that the users can be sure of the sender's identity?

- A. Hash value
- B. Private key
- C. Digital signature
- D. Digital certificate

**Answer:** D

#### NEW QUESTION 157

- (Exam 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

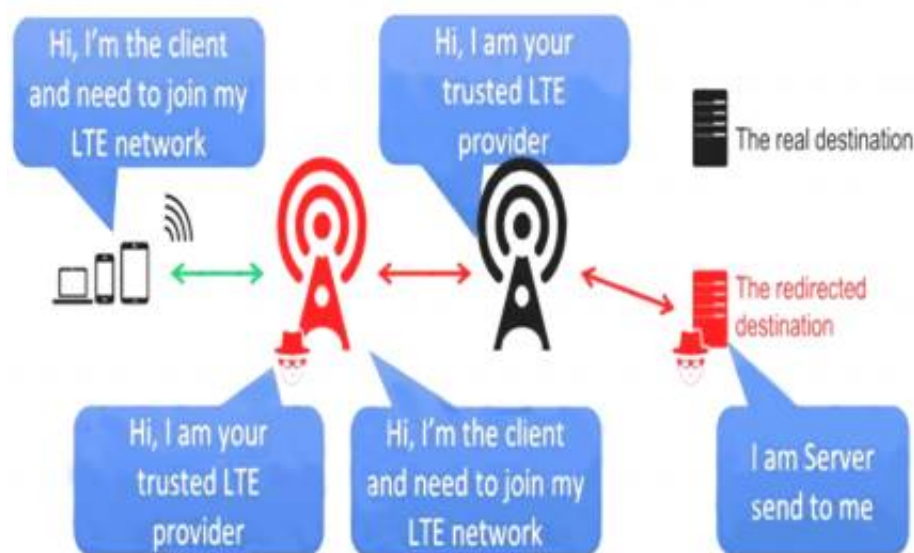
#### Explanation:

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 162

- (Exam Topic 2)

Windows LAN Manager (LM) hashes are known to be weak.

Which of the following are known weaknesses of LM? (Choose three.)

- A. Converts passwords to uppercase.
- B. Hashes are sent in clear text over the network.
- C. Makes use of only 32-bit encryption.
- D. Effective length is 7 characters.

**Answer:** ABD

#### NEW QUESTION 166

- (Exam 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 171

- (Exam Topic 2)

While testing a web application in development, you notice that the web server does not properly ignore the “dot dot slash” (../) character string and instead returns the file listing of a folder structure of the server.

What kind of attack is possible in this scenario?

- A. Cross-site scripting
- B. Denial of service
- C. SQL injection
- D. Directory traversal

**Answer:** D

#### Explanation:

Appropriately controlling admittance to web content is significant for running a safe web worker. Index crossing or Path Traversal is a HTTP assault which permits aggressors to get to limited catalogs and execute orders outside of the web worker's root registry.

Web workers give two primary degrees of security instruments

- Access Control Lists (ACLs)
- Root index

An Access Control List is utilized in the approval cycle. It is a rundown which the web worker's manager uses to show which clients or gatherings can get to, change or execute specific records on the worker, just as other access rights.

The root registry is a particular index on the worker record framework in which the clients are kept. Clients can't get to anything over this root.

For instance: the default root registry of IIS on Windows is C:\Inetpub\wwwroot and with this arrangement, a client doesn't approach C:\Windows yet approaches C:\Inetpub\wwwroot\news and some other indexes and documents under the root catalog (given that the client is confirmed by means of the ACLs).

The root index keeps clients from getting to any documents on the worker, for example, C:\WINDOWS\system32\win.ini on Windows stages and the/and so on/passwd record on Linux/UNIX stages.

This weakness can exist either in the web worker programming itself or in the web application code.

To play out a registry crossing assault, all an assailant requires is an internet browser and some information on where to aimlessly discover any default documents and registries on the framework.

What an assailant can do if your site is defenseless With a framework defenseless against index crossing, an aggressor can utilize this weakness to venture out of the root catalog and access different pieces of the record framework. This may enable the assailant to see confined documents, which could give the aggressor

more data needed to additional trade off the framework.

Contingent upon how the site access is set up, the aggressor will execute orders by mimicking himself as the client which is related with “the site”. Along these lines everything relies upon what the site client has been offered admittance to in the framework.

Illustration of a Directory Traversal assault by means of web application codeIn web applications with dynamic pages, input is generally gotten from programs through GET or POST solicitation techniques. Here is an illustration of a HTTP GET demand URL

GET

`http://test.webarticles.com/show.asp?view=oldarchive.html HTTP/1.1 Host: test.webarticles.com`

With this URL, the browser requests the dynamic page show.asp from the server and with it also sends the parameter view with the value of oldarchive.html. When this request is executed on the web

server, show.asp retrieves the file oldarchive.html from the server’s file system, renders it and then sends back to the browser which displays it to the user. The attacker would assume that show.asp can retrieve files from the file system and sends the following custom URL.

GET

`http://test.webarticles.com/show.asp?view=../../../../../Windows/system.ini HTTP/1.1 Host: test.webarticles.com`

This will cause the dynamic page to retrieve the file system.ini from the file system and display it to the user The expression ../ instructs the system to go one directory up which is commonly used as an operating system directive. The attacker has to guess how many directories he has to go up to find the Windows folder on the system, but this is easily done by trial and error.

Example of a Directory Traversal attack via web serverApart from vulnerabilities in the code, even the web server itself can be open to directory traversal attacks. The problem can either be incorporated into the web server software or inside some sample script files left available on the server.

The vulnerability has been fixed in the latest versions of web server software, but there are web servers online which are still using older versions of IIS and Apache which might be open to directory traversal attacks. Even though you might be using a web server software version that has fixed this vulnerability, you might still have some sensitive default script directories exposed which are well known to hackers.

For example, a URL request which makes use of the scripts directory of IIS to traverse directories and execute a command can be

GET

`http://server.com/scripts/..%5c../Windows/System32/cmd.exe?/c+dir+c:\ HTTP/1.1 Host: server.com`

The request would return to the user a list of all files in the C:\ directory by executing the cmd.exe comm shell file and run the command dir c:\ in the shell. The %5c expression that is in the URL request is a we server escape code which is used to represent normal characters. In this case %5c represents the character \ Newer versions of modern web server software check for these escape codes and do not let them through. Some older versions however, do not filter out these codes in the root directory enforcer and will let the attackers execute such commands.

### NEW QUESTION 175

- (Exam Topic 2)

These hackers have limited or no training and know how to use only basic techniques or tools. What kind of hackers are we talking about?

- A. Black-Hat Hackers A
- B. Script Kiddies
- C. White-Hat Hackers
- D. Gray-Hat Hacker

**Answer: B**

#### Explanation:

Script Kiddies: These hackers have limited or no training and know how to use only basic techniques or tools. Even then they may not understand any or all of what they are doing.

### NEW QUESTION 177

- (Exam Topic 2)

The tools which receive event logs from servers, network equipment, and applications, and perform analysis and correlation on those logs, and can generate alarms for security relevant issues, are known as what?

- A. network Sniffer
- B. Vulnerability Scanner
- C. Intrusion prevention Server
- D. Security incident and event Monitoring

**Answer: D**

### NEW QUESTION 182

- (Exam Topic 2)

Steven connected his iPhone to a public computer that had been infected by Clark, an attacker. After establishing the connection with the public computer, Steven enabled iTunes WI-FI sync on the computer so that the device could continue communication with that computer even after being physically disconnected. Now, Clark gains access to Steven’s iPhone through the infected computer and is able to monitor and read all of Steven’s activity on the iPhone, even after the device is out of the communication zone.

Which of the following attacks is performed by Clark in above scenario?

- A. IOS trustjacking
- B. IOS Jailbreaking
- C. Exploiting SS7 vulnerability
- D. Man-in-the-disk attack

**Answer: A**

#### Explanation:

An iPhone client’s most noticeably terrible bad dream is to have somebody oversee his/her gadget, including the capacity to record and control all action without waiting be in a similar room. In this blog entry, we present another weakness called “Trustjacking”, which permits an aggressor to do precisely that.

This weakness misuses an iOS highlight called iTunes Wi-Fi sync, which permits a client to deal with their iOS gadget without genuinely interfacing it to their PC. A solitary tap by the iOS gadget proprietor when the two are associated with a similar organization permits an assailant to oversee the gadget. Furthermore, we will stroll through past related weaknesses and show the progressions that iPhone has made to alleviate them, and why these are adequately not to forestall comparative assaults.

After interfacing an iOS gadget to another PC, the clients are being found out if they trust the associated PC or not. Deciding to believe the PC permits it to speak with the iOS gadget by means of the standard iTunes APIs.

This permits the PC to get to the photographs on the gadget, perform reinforcement, introduce applications and considerably more, without requiring another affirmation from the client and with no recognizable sign. Besides, this permits enacting the “iTunes Wi-Fi sync” highlight, which makes it conceivable to proceed with this sort of correspondence with the gadget even after it has been detached from the PC, as long as the PC and the iOS gadget are associated with a similar organization. It is intriguing to take note of that empowering “iTunes Wi-Fi sync” doesn’t need the casualty’s endorsement and can be directed simply from the PC side.

Getting a live stream of the gadget’s screen should be possible effectively by consistently requesting screen captures and showing or recording them distantly. It is imperative to take note of that other than the underlying single purpose of disappointment, approving the vindictive PC, there is no other component that forestalls this proceeded with access. Likewise, there isn’t anything that informs the clients that by approving the PC they permit admittance to their gadget even in the wake of detaching the USB link.

**NEW QUESTION 184**

- (Exam Topic 2)

Which command can be used to show the current TCP/IP connections?

- A. Netsh
- B. Netstat
- C. Net use connection
- D. Net use

**Answer:** A

**NEW QUESTION 185**

- (Exam Topic 2)

This wireless security protocol allows 192-bit minimum-strength security protocols and cryptographic tools to protect sensitive data, such as GCMP-256, 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 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 190**

- (Exam Topic 2)

What is one of the advantages of using both symmetric and asymmetric cryptography in SSL/TLS?

- A. Symmetric algorithms such as AES provide a failsafe when asymmetric methods fail.
- B. Asymmetric cryptography is computationally expensive in comparison.
- C. However, it is well-suited to securely negotiate keys for use with symmetric cryptography.
- D. Symmetric encryption allows the server to securely transmit the session keys out-of-band.
- E. Supporting both types of algorithms allows less-powerful devices such as mobile phones to use symmetric encryption instead.

**Answer:** D

**NEW QUESTION 194**

- (Exam Topic 2)

To invisibly maintain access to a machine, an attacker utilizes a toolkit that sits undetected in the core components of the operating system. What is this type of rootkit an example of?

- A. Hypervisor rootkit
- B. Kernel toolkit
- C. Hardware rootkit
- D. Firmware rootkit

**Answer:** B

**Explanation:**

Kernel-mode rootkits run with the best operating system privileges (Ring 0) by adding code or replacement parts of the core operating system, as well as each the kernel and associated device drivers. Most operative systems support kernel-mode device drivers, that execute with a similar privileges because the software itself. As such, several kernel-mode rootkits square measure developed as device drivers or loadable modules, like loadable kernel modules in Linux or device drivers in Microsoft Windows. This category of rootkit has unrestricted security access, however is tougher to jot down. The quality makes bugs common, and any bugs in code operative at the kernel level could seriously impact system stability, resulting in discovery of the rootkit. One amongst the primary wide familiar kernel rootkits was developed for Windows NT four.0 and discharged in Phrack magazine in 1999 by Greg Hoglund. Kernel rootkits are particularly tough to observe and take away as a result of they operate at a similar security level because the software itself, and square measure therefore able to intercept or subvert the foremost sure software operations. Any package, like antivirus package, running on the compromised system is equally vulnerable. During this scenario, no part of the system is sure.

**NEW QUESTION 199**

- (Exam Topic 2)

In this attack, a victim receives an e-mail claiming from PayPal stating that their account has been disabled and confirmation is required before activation. The attackers then scam to collect not one but two credit card numbers, ATM PIN number and other personal details. Ignorant users usually fall prey to this scam. Which of the following statement is incorrect related to this attack?

- A. Do not reply to email messages or popup ads asking for personal or financial information
- B. Do not trust telephone numbers in e-mails or popup ads
- C. Review credit card and bank account statements regularly
- D. Antivirus, anti-spyware, and firewall software can very easily detect these type of attacks
- E. Do not send credit card numbers, and personal or financial information via e-mail

**Answer: D**

**NEW QUESTION 201**

- (Exam Topic 2)

There have been concerns in your network that the wireless network component is not sufficiently secure. You perform a vulnerability scan of the wireless network and find that it is using an old encryption protocol that was designed to mimic wired encryption, what encryption protocol is being used?

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

**Answer: A**

**Explanation:**

Wired Equivalent Privacy (WEP) may be a security protocol, laid out in the IEEE wireless local area network (Wi-Fi) standard, 802.11b, that's designed to supply a wireless local area network (WLAN) with A level of security and privacy like what's usually expected of a wired LAN. A wired local area network (LAN) is usually protected by physical security mechanisms (controlled access to a building, for example) that are effective for a controlled physical environment, but could also be ineffective for WLANs because radio waves aren't necessarily bound by the walls containing the network. WEP seeks to determine similar protection thereto offered by the wired network's physical security measures by encrypting data transmitted over the WLAN. encoding protects the vulnerable wireless link between clients and access points; once this measure has been taken, other typical LAN security mechanisms like password protection, end-to-end encryption, virtual private networks (VPNs), and authentication are often put in situ to make sure privacy. A research group from the University of California at Berkeley recently published a report citing "major security flaws" in WEP that left WLANs using the protocol susceptible to attacks (called wireless equivalent privacy attacks). within the course of the group's examination of the technology, they were ready to intercept and modify transmissions and gain access to restricted networks. The Wireless Ethernet Compatibility Alliance (WECA) claims that WEP – which is included in many networking products – was never intended to be the only security mechanism for a WLAN, and that, in conjunction with traditional security practices, it's very effective.

**NEW QUESTION 205**

- (Exam Topic 2)

Trempe is an IT Security Manager, and he is planning to deploy an IDS in his small company. He is looking for an IDS with the following characteristics: - Verifies success or failure of an attack - Monitors system activities Detects attacks that a network-based IDS fails to detect - Near real-time detection and response - Does not require additional hardware - Lower entry cost Which type of IDS is best suited for Trempe's requirements?

- A. Gateway-based IDS
- B. Network-based IDS
- C. Host-based IDS
- D. Open source-based

**Answer: C**

**NEW QUESTION 209**

- (Exam Topic 2)

What is GINA?

- A. Gateway Interface Network Application
- B. GUI Installed Network Application CLASS
- C. Global Internet National Authority (G-USA)
- D. Graphical Identification and Authentication DLL

**Answer: D**

**NEW QUESTION 212**

- (Exam 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 properly 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.

Table Description automatically generated

| 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 215

- (Exam Topic 1)

What is not a PCI compliance recommendation?

- A. Use a firewall between the public network and the payment card data.
- B. Use encryption to protect all transmission of card holder data over any public network.
- C. Rotate employees handling credit card transactions on a yearly basis to different departments.
- D. Limit access to card holder data to as few individuals as possible.

**Answer: C**

#### Explanation:

[https://www.pcisecuritystandards.org/pci\\_security/maintaining\\_payment\\_security](https://www.pcisecuritystandards.org/pci_security/maintaining_payment_security) Build and Maintain a Secure Network

- \* 1. Install and maintain a firewall configuration to protect cardholder data.
- \* 2. Do not use vendor-supplied defaults for system passwords and other security parameters.

Protect Cardholder Data

- \* 3. Protect stored cardholder data.
- \* 4. Encrypt transmission of cardholder data across open, public networks.

Maintain a Vulnerability Management Program

- \* 5. Use and regularly update anti-virus software or programs.
- \* 6. Develop and maintain secure systems and applications.

Implement Strong Access Control Measures

- \* 7. Restrict access to cardholder data by business need-to-know.
- \* 8. Assign a unique ID to each person with computer access.
- \* 9. Restrict physical access to cardholder data.

Regularly Monitor and Test Networks

- \* 10. Track and monitor all access to network resources and cardholder data.
- \* 11. Regularly test security systems and processes.

Maintain an Information Security Policy

- \* 12. Maintain a policy that addresses information security for employees and contractors.

#### NEW QUESTION 217

- (Exam Topic 1)

Which type of security feature stops vehicles from crashing through the doors of a building?

- A. Bollards
- B. Receptionist
- C. Mantrap
- D. Turnstile

**Answer: A**

#### NEW QUESTION 221

- (Exam Topic 1)

DHCP snooping is a great solution to prevent rogue DHCP servers on your network. Which security feature on switchers leverages the DHCP snooping database to help prevent man-in-the-middle attacks?

- A. Spanning tree
- B. Dynamic ARP Inspection (DAI)

- C. Port security
- D. Layer 2 Attack Prevention Protocol (LAPP)

**Answer:** B

**Explanation:**

Dynamic ARP inspection (DAI) protects switching devices against Address Resolution Protocol (ARP) packet spoofing (also known as ARP poisoning or ARP cache poisoning).

DAI inspects ARPs on the LAN and uses the information in the DHCP snooping database on the switch to validate ARP packets and to protect against ARP spoofing. ARP requests and replies are compared against entries in the DHCP snooping database, and filtering decisions are made based on the results of those comparisons. When an attacker tries to use a forged ARP packet to spoof an address, the switch compares the address with entries in the database. If the media access control (MAC) address or IP address in the ARP packet does not match a valid entry in the DHCP snooping database, the packet is dropped.

**NEW QUESTION 225**

- (Exam Topic 1)

You have the SOA presented below in your Zone.

Your secondary servers have not been able to contact your primary server to synchronize information. How long will the secondary servers attempt to contact the primary server before it considers that zone is dead and stops responding to queries?

collegae.edu.SOA, cikkye.edu ipad.college.edu. (200302028 3600 3600 604800 3600)

- A. One day
- B. One hour
- C. One week
- D. One month

**Answer:** C

**NEW QUESTION 227**

- (Exam Topic 1)

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

- A. nmap
- B. tcpdump
- C. tracert
- D. ping

**Answer:** B

**NEW QUESTION 229**

- (Exam Topic 1)

What is the proper response for a NULL scan if the port is closed?

- A. SYN
- B. ACK
- C. FIN
- D. PSH
- E. RST
- F. No response

**Answer:** E

**NEW QUESTION 234**

- (Exam Topic 1)

A large mobile telephony and data network operator has a data center that houses network elements. These are essentially large computers running on Linux. The perimeter of the data center is secured with firewalls and IPS systems.

What is the best security policy concerning this setup?

- A. Network elements must be hardened with user ids and strong password
- B. Regular security tests and audits should be performed.
- C. As long as the physical access to the network elements is restricted, there is no need for additional measures.
- D. There is no need for specific security measures on the network elements as long as firewalls and IPS systems exist.
- E. The operator knows that attacks and down time are inevitable and should have a backup site.

**Answer:** A

**NEW QUESTION 238**

- (Exam 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 241

- (Exam Topic 1)

Study the following log extract and identify the attack.

```
12/26-07:06:22:31.167035 207.219.207.240:1882 -> 172.16.1.106:80
TCP TTL:13 TTL:50 TOS:0x0 IP:53476 DFF
***AP*** Seq: 0x2BDC107 Ack: 0x1CB9F186 Win: 0x2238 TcpLen: 20
47 45 54 20 2F 6D 73 61 64 63 2F 2E 2E C0 AF 2E GET /msadc/.....
2E 2F 2E 2E C0 AF 2E 2E 2F 2E 2E C0 AF 2E 2E 2F ./...../...../
77 69 6E 6E 74 2F 73 79 73 74 65 6D 33 32 2F 63 winnt/system32/c
6D 64 2E 65 78 65 3F 2F 63 2B 64 69 72 2B 63 3A md.exe?/c+dir+c:
5C 20 48 54 54 50 2F 31 2E 31 0D 0A 41 63 63 65 \ HTTP/1.1..Acce
70 74 3A 20 69 6D 61 67 65 2F 67 69 66 2C 20 69 pt: image/gif, i
6D 61 67 65 2F 78 2D 78 62 69 74 6D 61 70 2C 20 mage/x-xbitmap
69 6D 61 67 65 2F 6A 70 65 67 2C 20 69 6D 61 67 image/jpeg, imag
65 2F 70 6A 70 65 67 2C 20 61 70 70 6C 69 63 61 e/pjpeg, applica
74 69 6F 6E 2F 76 6E 64 2E 6D 73 2D 65 78 63 65 tion/vnd.ms-exce
6C 2C 20 61 70 70 6C 69 63 61 74 69 6F 6E 2F 6D l, application/m
73 77 6F 72 64 2C 20 61 70 70 6C 69 63 61 74 69 sword, applicati
6F 6E 2F 76 6E 64 2E 6D 73 2D 70 6F 77 65 72 70 on/vnd.ms-powerp
6F 69 6E 74 2C 20 2A 2F 2A 0D 0A 41 63 63 65 70 oint, =/?...Accep
74 2D 4C 6C 6C 61 2F 34 2E 30 20 28 63 6F 6D 70 ozilla/age: en-u
73 0D 0A 62 6C 65 3B 20 4D 53 49 45 20 35 2E 30 atible;pt-EncodD
6E 67 3A 57 69 6E 64 6F 77 73 20 39 35 29 0D 0A l; Windo, deflat
65 0D 0A 55 73 65 72 2D 41 67 65 6E 74 3A 20 4D e..User-Agent: M
6F 7A 69 6C 6C 61 2F 34 2E 30 20 28 63 6F 6D 70 ozilla/4.0 (comp
61 74 69 62 6C 65 3B 20 4D 53 49 45 20 35 2E 30 atible; MSIE 5.0
31 3B 20 57 69 6E 64 6F 77 73 20 39 35 29 0D 0A l; Windows 95)..
48 6F 73 74 3A 20 6C 61 62 2E 77 69 72 65 74 72 Host: lib.bvxttr
69 70 2E 6E 65 74 0D 0A 43 6F 6E 6E 65 63 74 69 ip.org..Connecti
6F 6E 3A 20 4B 65 65 70 2D 41 6C 69 76 65 0D 0A on: Keep-Alive..
43 6F 6F 6B 69 65 3A 20 41 53 50 53 45 53 53 49 Cookie: ASPSESSI
4F 4E 49 44 47 51 51 51 51 51 5A 55 3D 4B 4E 4F ONIDGQQQQZU=KNO
48 4D 4F 4A 41 4B 50 46 4F 50 48 4D 4C 41 50 4E HMOJAKPFOPHMLAPN
49 46 49 46 42 0D 0A 0D 0A 41 50 4E 49 46 49 46 IFIFB....APNIFIF
42 0D 0A 0D 0A B....
```

- A. Hexcode Attack
- B. Cross Site Scripting
- C. Multiple Domain Traversal Attack
- D. Unicode Directory Traversal Attack

**Answer:** D

#### NEW QUESTION 243

- (Exam Topic 1)

What tool can crack Windows SMB passwords simply by listening to network traffic?

- A. This is not possible
- B. Netbus
- C. NTFSDOS
- D. L0phtcrack

**Answer:** D

#### NEW QUESTION 248

- (Exam 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 250**

- (Exam Topic 2)

What is the first step for a hacker conducting a DNS cache poisoning (DNS spoofing) attack against an organization?

- A. The attacker queries a nameserver using the DNS resolver.
- B. The attacker makes a request to the DNS resolver.
- C. The attacker forges a reply from the DNS resolver.
- D. The attacker uses TCP to poison the DNS resolver.

**Answer:** B

**Explanation:**

[https://ru.wikipedia.org/wiki/DNS\\_spoofing](https://ru.wikipedia.org/wiki/DNS_spoofing)

DNS spoofing is a threat that copies the legitimate server destinations to divert the domain's traffic. Ignorant these attacks, the users are redirected to malicious websites, which results in insensitive and personal data being leaked. It is a method of attack where your DNS server is tricked into saving a fake DNS entry. This will make the DNS server recall a fake site for you, thereby posing a threat to vital information stored on your server or computer.

The cache poisoning codes are often found in URLs sent through spam emails. These emails are sent to prompt users to click on the URL, which infects their computer. When the computer is poisoned, it will divert you to a fake IP address that looks like a real thing. This way, the threats are injected into your systems as well.

Different Stages of Attack of DNS Cache Poisoning:

- The attacker proceeds to send DNS queries to the DNS resolver, which forwards the Root/TLD authoritative DNS server request and awaits an answer.
- The attacker overloads the DNS with poisoned responses that contain several IP addresses of the malicious website. To be accepted by the DNS resolver, the attacker's response should match a port number and the query ID field before the DNS response. Also, the attackers can force its response to increasing their chance of success.
- If you are a legitimate user who queries this DNS resolver, you will get a poisoned response from the cache, and you will be automatically redirected to the malicious website.

**NEW QUESTION 255**

- (Exam Topic 2)

Attacker Steve targeted an organization's network with the aim of redirecting the company's web traffic to another malicious website. To achieve this goal, Steve performed DNS cache poisoning by exploiting the vulnerabilities in the DNS server software and modified the original IP address of the target website to that of a fake website. What is the technique employed by Steve to gather information for identity theft?

- A. Pretexting
- B. Pharming
- C. Wardriving
- D. Skimming

**Answer:** B

**Explanation:**

A pharming attacker tries to send a web site's traffic to a faux website controlled by the offender, typically for the aim of collection sensitive data from victims or putting in malware on their machines. Attacker tend to specialize in making look-alike ecommerce and digital banking websites to reap credentials and payment card data.

Though they share similar goals, pharming uses a special technique from phishing. "Pharming attacker are targeted on manipulating a system, instead of tricking people into reaching to a dangerous web site," explains David Emm, principal security man of science at Kaspersky. "When either a phishing or pharming attacker is completed by a criminal, they need a similar driving issue to induce victims onto a corrupt location, however the mechanisms during which this is often undertaken are completely different."



**NEW QUESTION 256**

- (Exam 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 259**

- (Exam Topic 2)

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

- A. 3
- B. 5
- C. 4
- D. 2

**Answer:** A

**NEW QUESTION 264**

- (Exam Topic 2)

Why containers are less secure than virtual machines?

- A. Host OS on containers has a larger surface attack.
- B. Containers may full 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 269**

- (Exam 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 270**

- (Exam Topic 2)

\_\_\_\_\_ is a tool that can hide processes from the process list, can hide files, registry entries, and intercept keystrokes.

- A. Trojan
- B. RootKit
- C. DoS tool
- D. Scanner
- E. Backdoor

**Answer:** B

**NEW QUESTION 275**

- (Exam Topic 1)

MX record priority increases as the number increases. (True/False.)

- A. True
- B. False

**Answer:** B

**NEW QUESTION 277**

- (Exam Topic 1)

What is a "Collision attack" in cryptography?

- A. Collision attacks try to get the public key
- B. Collision attacks try to break the hash into three parts to get the plaintext value
- C. Collision attacks try to break the hash into two parts, with the same bytes in each part to get the private key
- D. Collision attacks try to find two inputs producing the same hash

**Answer:** D

**NEW QUESTION 278**

- (Exam Topic 1)

A company's security policy states that all Web browsers must automatically delete their HTTP browser cookies upon terminating. What sort of security breach is this policy attempting to mitigate?

- A. Attempts by attackers to access the user and password information stored in the company's SQL database.
- B. Attempts by attackers to access Web sites that trust the Web browser user by stealing the user's authentication credentials.
- C. Attempts by attackers to access password stored on the user's computer without the user's knowledge.
- D. Attempts by attackers to determine the user's Web browser usage patterns, including when sites were visited and for how long.

**Answer:** B

**NEW QUESTION 280**

- (Exam Topic 1)

A bank stores and processes sensitive privacy information related to home loans. However, auditing has never been enabled on the system. What is the first step that the bank should take before enabling the audit feature?

- A. Perform a vulnerability scan of the system.
- B. Determine the impact of enabling the audit feature.
- C. Perform a cost/benefit analysis of the audit feature.
- D. Allocate funds for staffing of audit log review.

**Answer:** B

**NEW QUESTION 282**

- (Exam Topic 1)

Eve is spending her day scanning the library computers. She notices that Alice is using a computer whose port 445 is active and listening. Eve uses the ENUM tool to enumerate Alice machine. From the command prompt, she types the following command.

```
For /f "tokens=1 %%a in (hackfile.txt) do net use *  
\\10.1.2.3\c$ /user:"Administrator" %%a
```

What is Eve trying to do?

- A. Eve is trying to connect as a user with Administrator privileges
- B. Eve is trying to enumerate all users with Administrative privileges
- C. Eve is trying to carry out a password crack for user Administrator
- D. Eve is trying to escalate privilege of the null user to that of Administrator

**Answer:** C

**NEW QUESTION 287**

- (Exam Topic 1)

In the field of cryptanalysis, what is meant by a "rubber-hose" attack?

- A. Forcing the targeted keystream through a hardware-accelerated device such as an ASIC.
- B. A backdoor placed into a cryptographic algorithm by its creator.
- C. Extraction of cryptographic secrets through coercion or torture.
- D. Attempting to decrypt ciphertext by making logical assumptions about the contents of the original plaintext.

**Answer:** C

**Explanation:**

A powerful and often the most effective cryptanalysis method in which the attack is directed at the most vulnerable link in the cryptosystem - the person. In this attack, the cryptanalyst uses blackmail, threats, torture, extortion, bribery, etc. This method's main advantage is the decryption time's fundamental independence from the volume of secret information, the length of the key, and the cipher's mathematical strength.

The method can reduce the time to guess a password, for example, for AES, to an acceptable level; however, it requires special authorization from the relevant regulatory authorities. Therefore, it is outside the scope of this course and is not considered in its practical part.

**NEW QUESTION 290**

- (Exam Topic 1)

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

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

**Answer:** A

**NEW QUESTION 292**

- (Exam Topic 1)

A large company intends to use Blackberry for corporate mobile phones and a security analyst is assigned to evaluate the possible threats. The analyst will use the Blackjacking attack method to demonstrate how an attacker could circumvent perimeter defenses and gain access to the Prometric Online Testing – Reports [https://ibt1.prometric.com/users/custom/report\\_queue/rq\\_str...](https://ibt1.prometric.com/users/custom/report_queue/rq_str...) corporate network. What tool should the analyst use to perform a Blackjacking attack?

- A. Paros Proxy
- B. BBProxy
- C. Blooover
- D. BBCrack

**Answer:** B

#### NEW QUESTION 295

- (Exam Topic 1)

What kind of detection techniques is being used in antivirus software that identifies malware by collecting data from multiple protected systems and instead of analyzing files locally it's made on the provider's environment?

- A. Behavioral based
- B. Heuristics based
- C. Honeypot based
- D. Cloud based

**Answer:** D

#### NEW QUESTION 300

- (Exam Topic 1)

```
env x='(){ :};echo exploit' bash -c 'cat/etc/passwd'
```

What is the Shellshock bash vulnerability attempting to do on a vulnerable Linux host?

- A. Removes the passwd file
- B. Changes all passwords in passwd
- C. Add new user to the passwd file
- D. Display passwd content to prompt

**Answer:** D

#### NEW QUESTION 305

- (Exam 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 308

- (Exam Topic 1)

What term describes the amount of risk that remains after the vulnerabilities are classified and the countermeasures have been deployed?

- A. Residual risk
- B. Impact risk
- C. Deferred risk
- D. Inherent risk

**Answer:** A

#### Explanation:

[https://en.wikipedia.org/wiki/Residual\\_risk](https://en.wikipedia.org/wiki/Residual_risk)

The residual risk is the risk or danger of an action or an event, a method or a (technical) process that, although being abreast with science, still conceives these dangers, even if all theoretically possible safety measures would be applied (scientifically conceivable measures); in other words, the amount of risk left over after natural or inherent risks have been reduced by risk controls.

· Residual risk = (Inherent risk) – (impact of risk controls)

#### NEW QUESTION 310

- (Exam Topic 1)

If a token and 4-digit personal identification number (PIN) are used to access a computer system and the token performs off-line checking for the correct PIN, what type of attack is possible?

- A. Birthday
- B. Brute force
- C. Man-in-the-middle
- D. Smurf

**Answer:** B

#### NEW QUESTION 315

- (Exam Topic 1)

Which of the following programs is usually targeted at Microsoft Office products?

- A. Polymorphic virus
- B. Multipart virus
- C. Macro virus
- D. Stealth virus

**Answer: C**

**Explanation:**

A macro virus is a virus that is written in a macro language: a programming language which is embedded inside a software application (e.g., word processors and spreadsheet applications). Some applications, such as Microsoft Office, allow macro programs to be embedded in documents such that the macros are run automatically when the document is opened, and this provides a distinct mechanism by which malicious computer instructions can spread. (Wikipedia)

NB: The virus Melissa is a well-known macro virus we could find attached to word documents.

**NEW QUESTION 318**

- (Exam 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 323**

- (Exam Topic 1)

You have successfully comprised a server having an IP address of 10.10.0.5. You would like to enumerate all machines in the same network quickly. What is the best Nmap command you will use?

- A. nmap -T4 -q 10.10.0.0/24
- B. nmap -T4 -F 10.10.0.0/24
- C. nmap -T4 -r 10.10.1.0/24
- D. nmap -T4 -O 10.10.0.0/24

**Answer: B**

**Explanation:**

<https://nmap.org/book/man-port-specification.html>

NOTE: In my opinion, this is an absolutely wrong statement of the question. But you may come across a question with a similar wording on the exam. What does "fast" mean? If we want to increase the speed and intensity of the scan we can select the mode using the -T flag (0/1/2/3/4/5). At high -T values, we will sacrifice stealth and gain speed, but we will not limit functionality.

«nmap -T4 -F 10.10.0.0/24» This option is "correct" because of the -F flag.

-F (Fast (limited port) scan)

Specifies that you wish to scan fewer ports than the default. Normally Nmap scans the most common 1,000 ports for each scanned protocol. With -F, this is reduced to 100.

Technically, scanning will be faster, but just because we have reduced the number of ports by 10 times, we are just doing 10 times less work, not faster.

**NEW QUESTION 327**

- (Exam 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 328**

- (Exam Topic 1)

You need to deploy a new web-based software package for your organization. The package requires three separate servers and needs to be available on the Internet. What is the recommended architecture in terms of server placement?

- A. All three servers need to be placed internally
- B. A web server facing the Internet, an application server on the internal network, a database server on the internal network
- C. A web server and the database server facing the Internet, an application server on the internal network
- D. All three servers need to face the Internet so that they can communicate between themselves

**Answer: B**

**NEW QUESTION 332**

- (Exam 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 335

- (Exam Topic 1)

Which mode of IPSec should you use to assure security and confidentiality of data within the same LAN?

- A. ESP transport mode
- B. ESP confidential
- C. AH permiscuous
- D. AH Tunnel mode

**Answer:** A

#### NEW QUESTION 336

- (Exam Topic 1)

Study the snort rule given below:

```
alert tcp $EXTERNAL_NET any -> $HOME_NET 135
(msg: "NETBIOS DCERPC ISystemActivator bind attempt";
flow:to_server, established; content: "|05|"; distance: 0; within: 1;
content: "|ob|"; distance: 1; within: 1; byte_test: 1, &, 1, 0, relative;
content: "|A0 01 00 00 00 00 00 00 C0 00 00 00 00 00 00 46|";
distance: 29; within: 16; reference: cve, CAN-2003-0352;
classtype: attempted-admin; sid: 2192; rev: 1;)
```

```
alert tcp $EXTERNAL_NET any -> $HOME_NET 445 (msg: "NETBIOS SMB
DCERPC ISystemActivator bind attempt"; flow: to_server, established;
content: "|FF|SMB|25|"; nocase; offset:4, depth:5; content: "|26 00|";
nocase; distance:5; within: 12; content: "|05|"; distance:0; within:1;
content: "|ob|"; distance: 1; within: 1; byte_test: 1, &, 1, 0, relative;
content: "|A0 01 00 00 00 00 00 00 C0 00 00 00 00 00 00 46|";
distance: 29; within: 16; reference: cve, CAN-2003-0352;
classtype: attempted-admin; sid: 2193; rev: 1;)
```

From the options below, choose the exploit against which this rule applies.

- A. WebDav
- B. SQL Slammer
- C. MS Blaster
- D. MyDoom

**Answer:** C

#### NEW QUESTION 341

- (Exam Topic 1)

What does a firewall check to prevent particular ports and applications from getting packets into an organization?

- A. Transport layer port numbers and application layer headers
- B. Presentation layer headers and the session layer port numbers
- C. Network layer headers and the session layer port numbers
- D. Application layer port numbers and the transport layer headers

**Answer:** A

#### NEW QUESTION 342

- (Exam 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 344

- (Exam 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 349**

- (Exam Topic 1)

Which method of password cracking takes the most time and effort?

- A. Dictionary attack
- B. Shoulder surfing
- C. Rainbow tables
- D. Brute force

**Answer:** D

**Explanation:**

Brute-force attack when an attacker uses a set of predefined values to attack a target and analyze the response until he succeeds. Success depends on the set of predefined values. It will take more time if it is larger, but there is a better probability of success. In a traditional brute-force attack, the passcode or password is incrementally increased by one letter/number each time until the right passcode/password is found.

**NEW QUESTION 351**

- (Exam 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 354**

- (Exam Topic 1)

User A is writing a sensitive email message to user B outside the local network. User A has chosen to use PKI to secure his message and ensure only user B can read the sensitive email. At what layer of the OSI layer does the encryption and decryption of the message take place?

- A. Application
- B. Transport
- C. Session
- D. Presentation

**Answer:** D

**Explanation:**

[https://en.wikipedia.org/wiki/Presentation\\_layer](https://en.wikipedia.org/wiki/Presentation_layer)

In the seven-layer OSI model of computer networking, the presentation layer is layer 6 and serves as the data translator for the network. It is sometimes called the syntax layer. The presentation layer is responsible for the formatting and delivery of information to the application layer for further processing or display.

Encryption is typically done at this level too, although it can be done on the application, session, transport, or network layers, each having its own advantages and disadvantages. Decryption is also handled at the presentation layer. For example, when logging on to bank account sites the presentation layer will decrypt the data as it is received.

**NEW QUESTION 355**

- (Exam 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 360

- (Exam Topic 2)

Samuel a security administrator, is assessing the configuration of a web server. He noticed that the server permits SSLv2 connections, and the same private key certificate is used on a different server that allows SSLv2 connections. This vulnerability makes the web server vulnerable to attacks as the SSLv2 server can leak key information.

Which of the following attacks can be performed by exploiting the above vulnerability?

- A. DROWN attack
- B. Padding oracle attack
- C. Side-channel attack
- D. DUHK attack

Answer: A

#### Explanation:

DROWN is a serious vulnerability that affects HTTPS and other services that deem SSL and TLS, some of the essential cryptographic protocols for net security. These protocols allow everyone on the net to browse the net, use email, look on-line, and send instant messages while not third-parties being able to browse the communication.

DROWN allows attackers to break the encryption and read or steal sensitive communications, as well as passwords, credit card numbers, trade secrets, or financial data. At the time of public disclosure on March 2016, our measurements indicated thirty third of all HTTPS servers were vulnerable to the attack.

fortuitously, the vulnerability is much less prevalent currently. As of 2019, SSL Labs estimates that one.2% of HTTPS servers are vulnerable.

What will the attackers gain?Any communication between users and the server. This typically includes, however isn't limited to, usernames and passwords, credit card numbers, emails, instant messages, and sensitive documents. under some common scenarios, an attacker can also impersonate a secure web site and intercept or change the content the user sees.

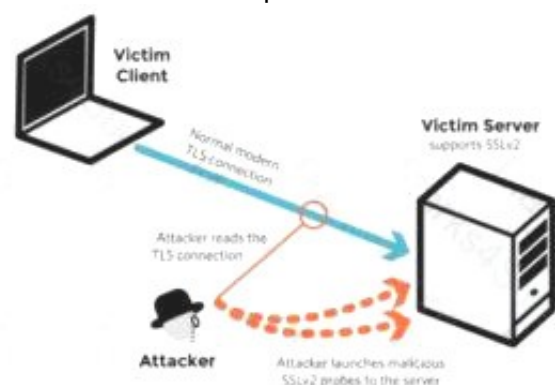
Who is vulnerable?Websites, mail servers, and other TLS-dependent services are in danger for the DROWN attack. At the time of public disclosure, many popular sites were affected. we used Internet-wide scanning to live how many sites are vulnerable:

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| HTTPS — Top one million domains   | Vulnerable at Disclosure (March 2016) |
| HTTPS — All browser-trusted sites | 25%                                   |
| HTTPS — All sites                 | 22%                                   |
|                                   | 33%                                   |

Operators of vulnerable servers got to take action. there's nothing practical that browsers or end-users will do on their own to protect against this attack.

Is my site vulnerable?Modern servers and shoppers use the TLS encryption protocol. However, because of misconfigurations, several servers also still support SSLv2, a 1990s-era precursor to TLS. This support did not matter in practice, since no up-to-date clients really use SSLv2. Therefore, despite the fact that SSLv2 is thought to be badly insecure, until now, simply supporting SSLv2 wasn't thought of a security problem, is a clients never used it.

DROWN shows that merely supporting SSLv2 may be a threat to fashionable servers and clients. It modern associate degree attacker to modern fashionable TLS connections between up-to-date clients and servers by sending probes to a server that supports SSLv2 and uses the same private key.



#### SSLv2

- > It allows SSLv2 connections. This is surprisingly common, due to misconfiguration and inappropriate default settings.
- > Its private key is used on any other serverthat allows SSLv2 connections, even for another protocol.

Many companies reuse the same certificate and key on their web and email servers, for instance. In this case, if the email server supports SSLv2 and the web server does not, an attacker can take advantage of the email server to break TLS connections to the web server.

A server is vulnerable to DROWN if:SSLv2



How do I protect my server?To protect against DROWN, server operators need to ensure that their private keys software used anyplace with server computer code that enables SSLv2 connections. This includes net servers, SMTP servers, IMAP and POP servers, and the other software that supports SSL/TLS.

Disabling SSLv2 is difficult and depends on the particular server software. we offer instructions here for many common products:

OpenSSL: OpenSSL may be a science library employed in several server merchandise. For users of OpenSSL, the simplest and recommended solution is to upgrade to a recent OpenSSL version. OpenSSL 1.0.2 users ought to upgrade to 1.0.2g. OpenSSL 1.0.1 users ought to upgrade to one.0.1s. Users of older OpenSSL versions ought to upgrade to either one in every of these versions. (Updated March thirteenth, 16:00 UTC) Microsoft IIS (Windows Server): Support for SSLv2 on the server aspect is enabled by default only on the OS versions that correspond to IIS 7.0 and IIS seven.5, particularly Windows scene, Windows Server 2008, Windows seven and Windows Server 2008R2. This support is disabled within the appropriate SSLv2 subkey for 'Server', as outlined in KB245030. albeit users haven't taken the steps to disable SSLv2, the export-grade and 56-bit ciphers that build DROWN possible don't seem to be supported by default.

Network Security Services (NSS): NSS may be a common science library designed into several server merchandise. NSS versions three.13 (released back in 2012) and higher than ought to have SSLv2 disabled by default. (A little variety of users might have enabled SSLv2 manually and can got to take steps to disable it.) Users of older versions ought to upgrade to a more modern version. we tend to still advocate checking whether or not your non-public secret is exposed elsewhere

Other affected software and in operation systems:  
Instructions and data for: Apache, Postfix, Nginx, Debian, Red Hat

Browsers and other consumers: practical nothing practical that net browsers or different client computer code will do to stop DROWN. only server operators ar ready to take action to guard against the attack.

**NEW QUESTION 363**

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