

# EC-Council

## Exam Questions 312-50v12

Certified Ethical Hacker Exam (CEHv12)



**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)

Insecure direct object reference is a type of vulnerability where the application does not verify if the user is authorized to access the internal object via its name or key. Suppose a malicious user Rob tries to get access to the account of a benign user Ned.

Which of the following requests best illustrates an attempt to exploit an insecure direct object reference vulnerability?

- A. "GET /restricted/goldtransfer?to=Rob&from=1 or 1=1' HTTP/1.1Host: westbank.com"
- B. "GET /restricted/\r\n%00account%00Ned%00access HTTP/1.1 Host: westbank.com"
- C. "GET /restricted/accounts/?name=Ned HTTP/1.1 Host westbank.com"
- D. "GET /restricted/ HTTP/1.1 Host: westbank.com

**Answer: C**

**Explanation:**

This question shows a classic example of an IDOR vulnerability. Rob substitutes Ned's name in the "name" parameter and if the developer has not fixed this vulnerability, then Rob will gain access to Ned's account. Below you will find more detailed information about IDOR vulnerability.

Insecure direct object references (IDOR) are a cybersecurity issue that occurs when a web application developer uses an identifier for direct access to an internal implementation object but provides no additional access control and/or authorization checks. For example, an IDOR vulnerability would happen if the URL of a transaction could be changed through client-side user input to show unauthorized data of another transaction.

Most web applications use simple IDs to reference objects. For example, a user in a database will usually be referred to via the user ID. The same user ID is the primary key to the database column containing user information and is generated automatically. The database key generation algorithm is very simple: it usually uses the next available integer. The same database ID generation mechanisms are used for all other types of database records.

The approach described above is legitimate but not recommended because it could enable the attacker to enumerate all users. If it's necessary to maintain this approach, the developer must at least make absolutely sure that more than just a reference is needed to access resources. For example, let's say that the web application displays transaction details using the following URL:

> <https://www.example.com/transaction.php?id=74656>

A malicious hacker could try to substitute the id parameter value 74656 with other similar values, for example

> <https://www.example.com/transaction.php?id=74657>

The 74657 transaction could be a valid transaction belonging to another user. The malicious hacker should not be authorized to see it. However, if the developer made an error, the attacker would see this transaction and hence we would have an insecure direct object reference vulnerability.

**NEW QUESTION 4**

- (Exam Topic 3)

Which among the following is the best example of the third step (delivery) in the cyber kill chain?

- A. An intruder sends a malicious attachment via email to a target.
- B. An intruder creates malware to be used as a malicious attachment to an email.
- C. An intruder's malware is triggered when a target opens a malicious email attachment.
- D. An intruder's malware is installed on a target's machine.

**Answer: A**

**NEW QUESTION 5**

- (Exam Topic 3)

Which type of malware spreads from one system to another or from one network to another and causes similar types of damage as viruses do to the infected system?

- A. Rootkit
- B. Trojan
- C. Worm
- D. Adware

**Answer:** C

#### NEW QUESTION 6

- (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 7

- (Exam Topic 3)

Harper, a software engineer, is developing an email application. To ensure the confidentiality of email messages. Harper uses a symmetric-key block cipher having a classical 12- or 16-round Feistel network with a block size of 64 bits for encryption, which includes large 8 x 32-bit S-boxes (S1, S2, S3, S4) based on bent functions, modular addition and subtraction, key-dependent rotation, and XOR operations. This cipher also uses a masking key(Km1)and a rotation key (Kr1) for performing its functions. What is the algorithm employed by Harper to secure the email messages?

- A. CAST-128
- B. AES
- C. GOST block cipher
- D. DES

**Answer:** A

#### NEW QUESTION 8

- (Exam Topic 3)

Jude, a pen tester working in Keiltech Ltd., performs sophisticated security testing on his company's network infrastructure to identify security loopholes. In this process, he started to circumvent the network protection tools and firewalls used in the company. He employed a technique that can create forged TCP sessions by carrying out multiple SYN, ACK, and RST or FIN packets. Further, this process allowed Jude to execute DDoS attacks that can exhaust the network resources. What is the attack technique used by Jude for finding loopholes in the above scenario?

- A. UDP flood attack
- B. Ping-of-death attack
- C. Spoofed session flood attack
- D. Peer-to-peer attack

**Answer:** C

#### NEW QUESTION 9

- (Exam Topic 3)

By performing a penetration test, you gained access under a user account. During the test, you established a connection with your own machine via the SMB service and occasionally entered your login and password in plaintext.

Which file do you have to clean to clear the password?

- A. .X session-log
- B. .bashrc
- C. .profile
- D. .bash\_history

**Answer:** D

#### Explanation:

File created by Bash, a Unix-based shell program commonly used on Mac OS X and Linux operating systems; stores a history of user commands entered at the command prompt; used for viewing old commands that are executed.BASH\_HISTORY files are hidden files with no filename prefix. They always use the filename .bash\_history.NOTE: Bash is that the shell program employed by Apple Terminal.Our goal is to assist you understand what a \*.bash\_history suffix is and the way to open it.The Bash History file type, file format description, and Mac and Linux programs listed on this page are individually researched and verified by the FileInfo team. we attempt for 100% accuracy and only publish information about file formats that we've tested and validated.

#### NEW QUESTION 10

- (Exam Topic 3)

Dorian Is sending a digitally signed email to Polly, with which key is Dorian signing this message and how is Poly validating It?

- A. Dorian is signing the message with his public ke
- B. and Poly will verify that the message came from Dorian by using Dorian's private key.
- C. Dorian Is signing the message with Polys public ke
- D. and Poly will verify that the message came from Dorian by using Dorian's public key.
- E. Dorian is signing the message with his private ke
- F. and Poly will verify that the message came from Dorian by using Dorian's public key.

G. Dorian is signing the message with Polys private ke  
H. and Poly will verify mat the message came from Dorian by using Dorian's public key.

**Answer: C**

**Explanation:**

<https://blog.mailfence.com/how-do-digital-signatures-work/> [https://en.wikipedia.org/wiki/Digital\\_signature](https://en.wikipedia.org/wiki/Digital_signature)

A digital signature is a mathematical technique used to validate the authenticity and integrity of a message, software, or digital document. It's the digital equivalent of a handwritten signature or stamped seal, but it offers far more inherent security. A digital signature is intended to solve the problem of tampering and impersonation in digital communications.

Digital signatures can provide evidence of origin, identity, and status of electronic documents, transactions, or digital messages. Signers can also use them to acknowledge informed consent.

Digital signatures are based on public-key cryptography, also known as asymmetric cryptography. Two keys are generated using a public key algorithm, such as RSA (Rivest-Shamir-Adleman), mathematically linked pair of keys, one private and one public.

creating a Digital signatures work through public-key cryptography's two mutually authenticating cryptographic keys.

The individual who creates the digital signature uses a private key only way to decrypt that data is with the signer's public key.

to encrypt signature-related data, while the

**NEW QUESTION 10**

- (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 15**

- (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 19**

- (Exam Topic 3)

An organization decided to harden its security against web-application and web-server attacks. John, a security personnel in the organization, employed a security scanner to automate web-application security testing and to guard the organization's web infrastructure against web-application threats. Using that tool, he also wants to detect XSS, directory transversal problems, fault injection, SQL injection, attempts to execute commands, and several other attacks. Which of the following security scanners will help John perform the above task?

- A. AlienVault@OSSIM™
- B. Syhunt Hybrid
- C. Saleae Logic Analyzer
- D. Cisco ASA

**Answer: B**

**NEW QUESTION 23**

- (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 26**

- (Exam Topic 3)

Ben purchased a new smartphone and received some updates on it through the OTA method. He received two messages: one with a PIN from the network operator and another asking him to enter the PIN received from the operator. As soon as he entered the PIN, the smartphone started functioning in an abnormal manner. What is the type of attack performed on Ben in the above scenario?

- A. Advanced SMS phishing
- B. Bypass SSL pinning
- C. Phishing
- D. Tap 'n ghost attack

**Answer:** A

**NEW QUESTION 27**

- (Exam Topic 3)

A company's Web development team has become aware of a certain type of security vulnerability in their Web software. To mitigate the possibility of this vulnerability being exploited, the team wants to modify the software requirements to disallow users from entering HTML as input into their Web application. What kind of Web application vulnerability likely exists in their software?

- A. Cross-site scripting vulnerability
- B. SQL injection vulnerability
- C. Web site defacement vulnerability
- D. Cross-site Request Forgery vulnerability

**Answer:** A

**Explanation:**

There is no single, standardized classification of cross-site scripting flaws, but most experts distinguish between at least two primary flavors of XSS flaws: non-persistent and persistent. In this issue, we consider the non-persistent cross-site scripting vulnerability.

The non-persistent (or reflected) cross-site scripting vulnerability is by far the most basic type of web vulnerability. These holes show up when the data provided by a web client, most commonly in HTTP query parameters (e.g. HTML form submission), is used immediately by server-side scripts to parse and display a page of results for and to that user, without properly sanitizing the content.

Because HTML documents have a flat, serial structure that mixes control statements, formatting, and the actual content, any non-validated user-supplied data included in the resulting page without proper HTML encoding, may lead to markup injection. A classic example of a potential vector is a site search engine: if one searches for a string, the search string will typically be redisplayed verbatim on the result page to indicate what was searched for. If this response does not properly escape or reject HTML control characters, a cross-site scripting flaw will ensue.

**NEW QUESTION 28**

- (Exam Topic 3)

Sam, a web developer, was instructed to incorporate a hybrid encryption software program into a web application to secure email messages. Sam used an encryption software, which is a free implementation of the OpenPGP standard that uses both symmetric-key cryptography and asymmetric-key cryptography for improved speed and secure key exchange. What is the encryption software employed by Sam for securing the email messages?

- A. PGP
- B. S/MIME
- C. SMTP
- D. GPG

**Answer:** A

**NEW QUESTION 29**

- (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 30**

- (Exam Topic 3)

Which of the following allows attackers to draw a map or outline the target organization's network infrastructure to know about the actual environment that they are going to hack.

- A. Enumeration
- B. Vulnerability analysis
- C. Malware analysis
- D. Scanning networks

**Answer:** D



**NEW QUESTION 31**

- (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':

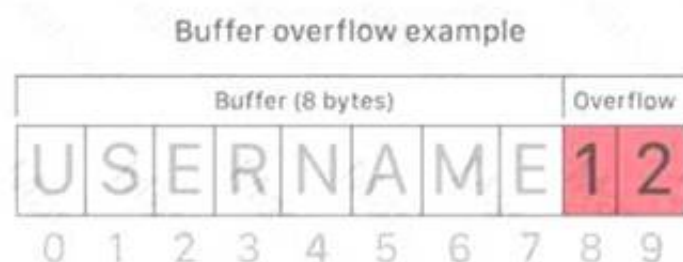
What type of attack is this?

- 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 wont 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 35**

- (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 vis 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 37**

- (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 42**

- (Exam Topic 3)

Which of the following scanning method splits the TCP header into several packets and makes it difficult for packet filters to detect the purpose of the packet?

- A. ACK flag probe scanning
- B. ICMP Echo scanning

- C. SYN/FIN scanning using IP fragments
- D. IPID scanning

**Answer:** C

**Explanation:**

SYN/FIN scanning using IP fragments is a process of scanning that was developed to avoid false positives generated by other scans because of a packet filtering device on the target system. The TCP header splits into several packets to evade the packet filter. For any transmission, every TCP header must have the source and destination port for the initial packet (8-octet, 64-bit). The initialized flags in the next packet allow the remote host to reassemble the packets upon receipt via an Internet protocol module that detects the fragmented data packets using field-equivalent values of the source, destination, protocol, and identification.

**NEW QUESTION 44**

- (Exam Topic 3)

You start performing a penetration test against a specific website and have decided to start from grabbing all the links from the main page.

What Is the best Linux pipe to achieve your milestone?

- A. `dirb https://site.com | grep "site"`
- B. `curl -s https://sile.com | grep "< a href='\"http\" | grep \"Site-com- | cut -d \"V\" -f 2`
- C. `wget https://stte.com | grep "< a href=\\*http\" | grep "site.com"`
- D. `wgethttps://site.com | cut-d"http`

**Answer:** C

**NEW QUESTION 45**

- (Exam Topic 3)

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

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

**Answer:** C

**NEW QUESTION 50**

- (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 51**

- (Exam Topic 3)

What type of virus is most likely to remain undetected by antivirus software?

- A. Cavity virus
- B. Stealth virus
- C. File-extension virus
- D. Macro virus

**Answer:** B

**NEW QUESTION 56**

- (Exam Topic 3)

Which of the following is a passive wireless packet analyzer that works on Linux-based systems?

- A. Burp Suite
- B. OpenVAS
- C. tshark
- D. Kismet

**Answer:** C

**NEW QUESTION 58**

- (Exam Topic 3)

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

used to infect the target device?

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

**Answer:** B

#### NEW QUESTION 60

- (Exam Topic 3)

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

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

**Answer:** C

#### NEW QUESTION 65

- (Exam Topic 3)

Kevin, an encryption specialist, implemented a technique that enhances the security of keys used for encryption and authentication. Using this technique, Kevin input an initial key to an algorithm that generated an enhanced key that is resistant to brute-force attacks. What is the technique employed by Kevin to improve the security of encryption keys?

- A. Key derivation function
- B. Key reinstallation
- C. A Public key infrastructure
- D. Key stretching

**Answer:** D

#### NEW QUESTION 68

- (Exam Topic 3)

Thomas, a cloud security professional, is performing security assessment on cloud services to identify any loopholes. He detects a vulnerability in a bare-metal cloud server that can enable hackers to implant malicious backdoors in its firmware. He also identified that an installed backdoor can persist even if the server is reallocated to new clients or businesses that use it as an IaaS.

What is the type of cloud attack that can be performed by exploiting the vulnerability discussed in the above scenario?

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

**Answer:** C

#### NEW QUESTION 70

- (Exam Topic 3)

An attacker decided to crack the passwords used by industrial control systems. In this process, he employed a loop strategy to recover these passwords. He used one character at a time to check whether the first character entered is correct; if so, he continued the loop for consecutive characters. If not, he terminated the loop. Furthermore, the attacker checked how much time the device took to finish one complete password authentication process, through which he deduced how many characters entered are correct.

What is the attack technique employed by the attacker to crack the passwords of the industrial control systems?

- A. Side-channel attack
- B. Denial-of-service attack
- C. HMI-based attack
- D. Buffer overflow attack

**Answer:** C

#### NEW QUESTION 75

- (Exam Topic 3)

To create a botnet, the attacker can use several techniques to scan vulnerable machines. The attacker first collects information about a large number of vulnerable machines to create a list. Subsequently, they infect the machines. The list is divided by assigning half of the list to the newly compromised machines. The scanning process runs simultaneously. This technique ensures the spreading and installation of malicious code in little time.

Which technique is discussed here?

- A. Hit-list-scanning technique
- B. Topological scanning technique
- C. Subnet scanning technique
- D. Permutation scanning technique

**Answer:** A

#### Explanation:

One of the biggest problems a worm faces in achieving a very fast rate of infection is “getting off the ground.” although a worm spreads exponentially throughout



the early stages of infection, the time needed to infect say the first 10,000 hosts dominates the infection time.

There is a straightforward way for an active worm a simple this obstacle, that we term hit-list scanning. Before the worm is free, the worm author collects a listing of say ten,000 to 50,000 potentially vulnerable machines, ideally ones with sensible network connections. The worm, when released onto an initial machine on this hit-list, begins scanning down the list. once it infects a machine, it divides the hit-list in half, communicating half to the recipient worm, keeping the other half.

This fast division ensures that even if only 10-20% of the machines on the hit-list are actually vulnerable, an active worm can quickly bear the hit-list and establish itself on all vulnerable machines in only some seconds. though the hit-list could begin at 200 kilobytes, it quickly shrinks to nothing during the partitioning. This provides a great benefit in constructing a quick worm by speeding the initial infection.

The hit-list needn't be perfect: a simple list of machines running a selected server sort could serve, though larger accuracy can improve the unfold. The hit-list itself is generated victimization one or many of the following techniques, ready well before, typically with very little concern of detection.

➤ Stealthy scans. Portscans are so common and then wide ignored that even a quick scan of the whole net would be unlikely to attract law enforcement attention or over gentle comment within the incident response community. However, for attackers wish to be particularly careful, a randomised sneaky scan taking many months would be not possible to attract much attention, as most intrusion detection systems are not currently capable of detecting such low-profile scans. Some portion of the scan would be out of date by the time it had been used, however abundant of it'd not.

➤ Distributed scanning. an assailant might scan the web using a few dozen to some thousand already-compromised "zombies," the same as what DDOS attackers assemble in a very fairly routine fashion. Such distributed scanning has already been seen within the wild—Lawrence Berkeley National Laboratory received ten throughout the past year.

➤ DNS searches. Assemble a list of domains (for example, by using wide offered spam mail lists, or trolling the address registries). The DNS will then be searched for the science addresses of mail-servers (via mx records) or net servers (by looking for www.domain.com).

➤ Spiders. For net server worms (like Code Red), use Web-crawling techniques the same as search engines so as to produce a list of most Internet-connected web sites. this would be unlikely to draw in serious attention.

➤ Public surveys. for many potential targets there may be surveys available listing them, like the Netcraft survey.

➤ Just listen. Some applications, like peer-to-peer networks, wind up advertising many of their servers.

Similarly, many previous worms effectively broadcast that the infected machine is vulnerable to further attack. easy, because of its widespread scanning, during the Code Red I infection it was easy to select up the addresses of upwards of 300,000 vulnerable IIS servers—because each came knock on everyone's door!

### NEW QUESTION 79

- (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 81

- (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 83

- (Exam Topic 3)

From the following table, identify the wrong answer in terms of Range (ft). Standard Range (ft)

- \* 802.11a 150-150
- \* 802.11b 150-150
- \* 802.11g 150-150
- \* 802.16 (WiMax) 30 miles

- A. 802.16 (WiMax)
- B. 802.11g
- C. 802.11b
- D. 802.11a

**Answer: A**

### NEW QUESTION 86

- (Exam Topic 3)

Rebecca, a security professional, wants to authenticate employees who use web services for safe and secure communication. In this process, she employs a component of the Web Service Architecture, which is an extension of SOAP, and it can maintain the integrity and confidentiality of SOAP messages.

Which of the following components of the Web Service Architecture is used by Rebecca for securing the communication?

- A. WSDL
- B. WS Work Processes
- C. WS-Policy

D. WS-Security

**Answer:** D

**NEW QUESTION 89**

- (Exam Topic 3)

What information security law or standard aims at protecting stakeholders and the general public from accounting errors and fraudulent activities within organizations?

- A. PCI-DSS
- B. FISMA
- C. SOX
- D. ISO/I EC 27001:2013

**Answer:** C

**NEW QUESTION 94**

- (Exam Topic 3)

Which of the following Google advanced search operators helps an attacker in gathering information about websites that are similar to a specified target URL?

- A. [inurl:]
- B. [related:]
- C. [info:]
- D. [site:]

**Answer:** B

**Explanation:**

related:This operator displays websites that are similar or related to the URL specified.

**NEW QUESTION 95**

- (Exam Topic 3)

While performing an Nmap scan against a host, Paola determines the existence of a firewall. In an attempt to determine whether the firewall is stateful or stateless, which of the following options would be best to use?

- A. -sA
- B. -sX
- C. -sT
- D. -sF

**Answer:** A

**NEW QUESTION 99**

- (Exam Topic 3)

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

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

**Answer:** B

**NEW QUESTION 100**

- (Exam Topic 3)

If executives are found liable for not properly protecting their company's assets and information systems, what type of law would apply in this situation?

- A. Criminal
- B. International
- C. Common
- D. Civil

**Answer:** D

**NEW QUESTION 104**

- (Exam Topic 3)

To hide the file on a Linux system, you have to start the filename with a specific character. What is the character?

- A. Exclamation mark (!)
- B. Underscore (\_)
- C. Tilde H
- D. Period (.)

**Answer:** D

**NEW QUESTION 107**

- (Exam Topic 3)

Miley, a professional hacker, decided to attack a target organization's network. To perform the attack, she used a tool to send fake ARP messages over the target network to link her MAC address with the target system's IP address. By performing this, Miley received messages directed to the victim's MAC address and further used the tool to intercept, steal, modify, and block sensitive communication to the target system. What is the tool employed by Miley to perform the above attack?

- A. Gobbler
- B. KDerpNSpoof
- C. BetterCAP
- D. Wireshark

**Answer: C**

**NEW QUESTION 109**

- (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 111**

- (Exam Topic 3)

John, a professional hacker, targeted CyberSol Inc., an MNC. He decided to discover the IoT devices connected in the target network that are using default credentials and are vulnerable to various hijacking attacks. For this purpose, he used an automated tool to scan the target network for specific types of IoT devices and detect whether they are using the default, factory-set credentials. What is the tool employed by John in the above scenario?

- A. IoTSeeker
- B. IoT Inspector
- C. AT&T IoT Platform
- D. Azure IoT Central

**Answer: A**

**NEW QUESTION 113**

- (Exam Topic 3)

What would be the purpose of running "wget 192.168.0.15 -q -S" against a web server?

- A. Performing content enumeration on the web server to discover hidden folders
- B. Using wget to perform banner grabbing on the webserver
- C. Flooding the web server with requests to perform a DoS attack
- D. Downloading all the contents of the web page locally for further examination

**Answer: B**

**Explanation:**

-q, --quiet quiet (no output)

-S, --server-response print server response

**NEW QUESTION 117**

- (Exam Topic 3)

What is the most common method to exploit the "Bash Bug" or "Shellshock" vulnerability?

- A. SYN Flood
- B. SSH
- C. Through Web servers utilizing CGI (Common Gateway Interface) to send a malformed environment variable to a vulnerable Web server
- D. Manipulate format strings in text fields

**Answer: C**

**NEW QUESTION 121**

- (Exam Topic 3)

Attacker Simon targeted the communication network of an organization and disabled the security controls of NetNTLMv1 by modifying the values of LMCompatibilityLevel, NTLMMinClientSec, and RestrictSendingNTLMTraffic. He then extracted all the non-network logon tokens from all the active processes to masquerade as a legitimate user to launch further attacks. What is the type of attack performed by Simon?

- A. Internal monologue attack
- B. Combinator attack
- C. Rainbow table attack

D. Dictionary attack

**Answer:** A

#### NEW QUESTION 126

- (Exam Topic 3)

Which of the following statements is TRUE?

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

**Answer:** B

#### NEW QUESTION 128

- (Exam Topic 3)

Mike, a security engineer, was recently hired by BigFox Ltd. The company recently experienced disastrous DoS attacks. The management had instructed Mike to build defensive strategies for the company's IT infrastructure to thwart DoS/DDoS attacks. Mike deployed some countermeasures to handle jamming and scrambling attacks. What is the countermeasure Mike applied to defend against jamming and scrambling attacks?

- A. Allow the usage of functions such as gets and strcpy
- B. Allow the transmission of all types of addressed packets at the ISP level
- C. Implement cognitive radios in the physical layer
- D. A Disable TCP SYN cookie protection

**Answer:** D

#### NEW QUESTION 132

- (Exam Topic 3)

Which among the following is the best example of the hacking concept called "clearing tracks"?

- A. After a system is breached, a hacker creates a backdoor to allow re-entry into a system.
- B. During a cyberattack, a hacker injects a rootkit into a server.
- C. An attacker gains access to a server through an exploitable vulnerability.
- D. During a cyberattack, a hacker corrupts the event logs on all machines.

**Answer:** D

#### NEW QUESTION 133

- (Exam Topic 3)

Robert, a professional hacker, is attempting to execute a fault injection attack on a target IoT device. In this process, he injects faults into the power supply that can be used for remote execution, also causing the skipping of key instructions. He also injects faults into the clock network used for delivering a synchronized signal across the chip.

Which of the following types of fault injection attack is performed by Robert in the above scenario?

- A. Frequency/voltage tampering
- B. Optical, electromagnetic fault injection (EMFI)
- C. Temperature attack
- D. Power/clock/reset glitching

**Answer:** D

#### Explanation:

These types of attacks occur when faults or glitches are INJECTED into the Power supply that can be used for remote execution.

#### NEW QUESTION 135

- (Exam Topic 3)

Jane is working as a security professional at CyberSol Inc. She was tasked with ensuring the authentication and integrity of messages being transmitted in the corporate network. To encrypt the messages, she implemented a security model in which every user in the network maintains a ring of public keys. In this model, a user needs to encrypt a message using the receiver's public key, and only the receiver can decrypt the message using their private key. What is the security model implemented by Jane to secure corporate messages?

- A. Zero trust network
- B. Transport Layer Security (TLS)
- C. Secure Socket Layer (SSL)
- D. Web of trust (WOT)

**Answer:** D

#### NEW QUESTION 137

- (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 140

- (Exam Topic 3)

Upon establishing his new startup, Tom hired a cloud service provider (CSP) but was dissatisfied with their service and wanted to move to another CSP. What part of the contract might prevent him from doing so?

- A. Virtualization
- B. Lock-in
- C. Lock-down
- D. Lock-up

**Answer:** B

#### NEW QUESTION 141

- (Exam Topic 3)

Firewalk has just completed the second phase (the scanning phase) and a technician receives the output shown below. What conclusions can be drawn based on these scan results?

TCP port 21 no response TCP port 22 no response  
TCP port 23 Time-to-live exceeded

- A. The lack of response from ports 21 and 22 indicate that those services are not running on the destination server
- B. The scan on port 23 was able to make a connection to the destination host prompting the firewall to respond with a TTL error
- C. The scan on port 23 passed through the filtering device
- D. This indicates that port 23 was not blocked at the firewall
- E. The firewall itself is blocking ports 21 through 23 and a service is listening on port 23 of the target host

**Answer:** C

#### NEW QUESTION 143

- (Exam Topic 3)

Jacob works as a system administrator in an organization. He wants to extract the source code of a mobile application and disassemble the application to analyze its design flaws. Using this technique, he wants to fix any bugs in the application, discover underlying vulnerabilities, and improve defense strategies against attacks.

What is the technique used by Jacob in the above scenario to improve the security of the mobile application?

- A. Reverse engineering
- B. App sandboxing
- C. Jailbreaking
- D. Social engineering

**Answer:** A

#### NEW QUESTION 146

- (Exam Topic 3)

CyberTech Inc. recently experienced SQL injection attacks on its official website. The company appointed Bob, a security professional, to build and incorporate defensive strategies against such attacks. Bob adopted a practice whereby only a list of entities such as the data type, range, size, and value, which have been approved for secured access, is accepted. What is the defensive technique employed by Bob in the above scenario?

- A. Output encoding
- B. Enforce least privileges
- C. Whitelist validation
- D. Blacklist validation

**Answer:** C

#### NEW QUESTION 147

- (Exam Topic 3)

Mason, a professional hacker, targets an organization and spreads Emotet malware through malicious script. After infecting the victim's device. Mason further used Emotet to spread the infection across local networks and beyond to compromise as many machines as possible. In this process, he used a tool, which is a self-extracting RAR file, to retrieve information related to network resources such as writable share drives. What is the tool employed by Mason in the above scenario?

- A. NetPass.exe
- B. Outlook scraper
- C. WebBrowserPassView
- D. Credential enumerator

**Answer:** D

#### NEW QUESTION 149

- (Exam Topic 3)

Which of the following antennas is commonly used in communications for a frequency band of 10 MHz to VHF and UHF?



- A. Yagi antenna
- B. Dipole antenna
- C. Parabolic grid antenna
- D. Omnidirectional antenna

**Answer:** A

#### NEW QUESTION 154

- (Exam Topic 3)

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

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

**Answer:** B

#### NEW QUESTION 157

- (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 161

- (Exam Topic 3)

What type of a vulnerability/attack is it when the malicious person forces the user's browser to send an authenticated request to a server?

- A. Session hijacking
- B. Server side request forgery
- C. Cross-site request forgery
- D. Cross-site scripting

**Answer:** C

#### NEW QUESTION 165

- (Exam Topic 3)

Which of the following is considered an exploit framework and has the ability to perform automated attacks on services, ports, applications and unpatched security flaws in a computer system?

- A. Wireshark
- B. Maltego
- C. Metasploit
- D. Nessus

**Answer:** C

#### Explanation:

[https://en.wikipedia.org/wiki/Metasploit\\_Project](https://en.wikipedia.org/wiki/Metasploit_Project)

The Metasploit Project is a computer security project that provides information about security vulnerabilities and aids in penetration testing and IDS signature development. It is owned by Boston, Massachusetts-based security company Rapid7.

Its best-known sub-project is the open-source Metasploit Framework, a tool for developing and executing exploit code against a remote target machine. Other important sub-projects include the Opcode Database, shellcode archive and related research.

The Metasploit Project includes anti-forensic and evasion tools, some of which are built into the Metasploit Framework. Metasploit is pre-installed in the Kali Linux operating system.

The basic steps for exploiting a system using the Framework include.

- \* 1. Optionally checking whether the intended target system is vulnerable to an exploit.
- \* 2. Choosing and configuring an exploit (code that enters a target system by taking advantage of one of its bugs; about 900 different exploits for Windows, Unix/Linux and macOS systems are included).
- \* 3. Choosing and configuring a payload (code that will be executed on the target system upon successful entry; for instance, a remote shell or a VNC server). Metasploit often recommends a payload that should work.
- \* 4. Choosing the encoding technique so that hexadecimal opcodes known as "bad characters" are removed from the payload, these characters will cause the exploit to fail.
- \* 5. Executing the exploit.

This modular approach – allowing the combination of any exploit with any payload – is the major advantage of the Framework. It facilitates the tasks of attackers, exploit writers and payload writers.

**NEW QUESTION 169**

- (Exam Topic 3)

Calvin, a software developer, uses a feature that helps him auto-generate the content of a web page without manual involvement and is integrated with SSI directives. This leads to a vulnerability in the developed web application as this feature accepts remote user inputs and uses them on the page. Hackers can exploit this feature and pass malicious SSI directives as input values to perform malicious activities such as modifying and erasing server files. What is the type of injection attack Calvin's web application is susceptible to?

- A. Server-side template injection
- B. Server-side JS injection
- C. CRLF injection
- D. Server-side includes injection

**Answer:** D

**NEW QUESTION 171**

- (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 173**

- (Exam Topic 3)

You are logged in as a local admin on a Windows 7 system and you need to launch the Computer Management Console from command line. Which command would you use?

- A. c:\compmgmt.msc
- B. c:\services.msc
- C. c:\ncpa.cp
- D. c:\gpedit

**Answer:** A

**Explanation:**

To start the Computer Management Console from command line just type compmgmt.msc

/computer:computername in your run box or at the command line and it should automatically open the Computer Management console.

References:

<http://www.waynezim.com/tag/compmgmtmsc/>

**NEW QUESTION 178**

- (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 180

- (Exam Topic 3)

Attacker Rony installed a rogue access point within an organization's perimeter and attempted to intrude into its internal network. Johnson, a security auditor, identified some unusual traffic in the internal network that is aimed at cracking the authentication mechanism. He immediately turned off the targeted network and tested for any weak and outdated security mechanisms that are open to attack. What is the type of vulnerability assessment performed by Johnson in the above scenario?

- A. Host-based assessment
- B. Wireless network assessment
- C. Application assessment
- D. Distributed assessment

**Answer: B**

#### Explanation:

Wireless network assessment determines the vulnerabilities in an organization's wireless networks. In the past, wireless networks used weak and defective data encryption mechanisms. Now, wireless network standards have evolved, but many networks still use weak and outdated security mechanisms and are open to attack. Wireless network assessments try to attack wireless authentication mechanisms and gain unauthorized access. This type of assessment tests wireless networks and identifies rogue networks that may exist within an organization's perimeter. These assessments audit client-specified sites with a wireless network. They sniff wireless network traffic and try to crack encryption keys. Auditors test other network access if they gain access to the wireless network.

#### NEW QUESTION 183

- (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 184

- (Exam Topic 3)

In an attempt to damage the reputation of a competitor organization, Hailey, a professional hacker, gathers a list of employee and client email addresses and other related information by using various search engines, social networking sites, and web spidering tools. In this process, she also uses an automated tool to gather a list of words from the target website to further perform a brute-force attack on the previously gathered email addresses.

What is the tool used by Hailey for gathering a list of words from the target website?

- A. Shadowsocks
- B. CeWL
- C. Psiphon
- D. Orbot

**Answer: B**

#### NEW QUESTION 186

- (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 190

- (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 194

- (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 198

- (Exam Topic 3)

When you are testing a web application, it is very useful to employ a proxy tool to save every request and response. You can manually test every request and analyze the response to find vulnerabilities. You can test parameter and headers manually to get more precise results than if using web vulnerability scanners. What proxy tool will help you find web vulnerabilities?

- A. Maskgen
- B. Dimitry
- C. Burpsuite
- D. Proxychains

**Answer: C**

#### NEW QUESTION 203

- (Exam Topic 3)

When considering how an attacker may exploit a web server, what is web server footprinting?

- A. When an attacker implements a vulnerability scanner to identify weaknesses
- B. When an attacker creates a complete profile of the site's external links and file structures
- C. When an attacker gathers system-level data, including account details and server names
- D. When an attacker uses a brute-force attack to crack a web-server password

**Answer: B**

#### NEW QUESTION 204

- (Exam Topic 3)

After an audit, the auditors Inform you that there is a critical finding that you must tackle Immediately. You read the audit report, and the problem is the service running on port 389. Which service Is this and how can you tackle the problem?

- A. The service is LDA
- B. and you must change it to 636. which is LDPAPS.
- C. The service is NT
- D. and you have to change It from UDP to TCP in order to encrypt it
- E. The findings do not require immediate actions and are only suggestions.
- F. The service is SMTP, and you must change it to SMIM
- G. which is an encrypted way to send emails.

**Answer: A**

#### Explanation:

[https://en.wikipedia.org/wiki/Lightweight\\_Directory\\_Access\\_Protocol](https://en.wikipedia.org/wiki/Lightweight_Directory_Access_Protocol)

LDAP, the Lightweight Directory Access Protocol, is a mature, flexible, and well supported standards-based mechanism for interacting with directory servers. It's often used for authentication and storing information about users, groups, and applications, but an LDAP directory server is a fairly general-purpose data store and can be used in a wide variety of applications.

The LDAP protocol can deal in quite a bit of sensitive data: Active Directory usernames, login attempts, failed-login notifications, and more. If attackers get ahold of that data in flight, they might be able to compromise data like legitimate AD credentials and use it to poke around your network in search of valuable assets.

Encrypting LDAP traffic in flight across the network can help prevent credential theft and other malicious activity, but it's not a failsafe—and if traffic is encrypted, your own team might miss the signs of an attempted attack in progress.



While LDAP encryption isn't standard, there is a nonstandard version of LDAP called Secure LDAP, also known as "LDAPS" or "LDAP over SSL" (SSL, or Secure Socket Layer, being the now-deprecated ancestor of Transport Layer Security). LDAPS uses its own distinct network port to connect clients and servers. The default port for LDAP is port 389, but LDAPS uses port 636 and establishes TLS/SSL upon connecting with a client.

#### NEW QUESTION 206

- (Exam Topic 3)

What is the least important information when you analyze a public IP address in a security alert?

- A. DNS
- B. Whois
- C. Geolocation
- D. ARP

**Answer:** D

#### NEW QUESTION 207

- (Exam Topic 3)

Which Nmap option would you use if you were not concerned about being detected and wanted to perform a very fast scan?

- A. -T5
- B. -O
- C. -T0
- D. -A

**Answer:** A

#### NEW QUESTION 208

- (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 213

- (Exam Topic 3)

Websites and web portals that provide web services commonly use the Simple Object Access Protocol (SOAP).

Which of the following is an incorrect definition or characteristics of the protocol?

- A. Exchanges data between web services
- B. Only compatible with the application protocol HTTP
- C. Provides a structured model for messaging
- D. Based on XML

**Answer:** B

#### NEW QUESTION 215

- (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 217

- (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 222

- (Exam Topic 3)

A computer science student needs to fill some information into a secured Adobe PDF job application that was received from a prospective employer. Instead of requesting a new document that allowed the forms to be completed, the student decides to write a script that pulls passwords from a list of commonly used passwords to try against the secured PDF until the correct password is found or the list is exhausted.

Which cryptography attack is the student attempting?

- A. Man-in-the-middle attack
- B. Brute-force attack
- C. Dictionary attack
- D. Session hijacking

**Answer:** C

#### NEW QUESTION 227

- (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 232

- (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 234

- (Exam Topic 2)

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

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

**Answer:** D

#### Explanation:

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

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

#### NEW QUESTION 236

- (Exam Topic 2)

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

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

**Answer:** C

#### NEW QUESTION 241

- (Exam Topic 2)

What piece of hardware on a computer's motherboard generates encryption keys and only releases a part of the key so that decrypting a disk on a new piece of hardware is not possible?

- A. CPU
- B. GPU
- C. UEFI
- D. TPM

**Answer:** D

#### Explanation:

The TPM is a chip that's part of your computer's motherboard

— if you bought an off-the-shelf PC, it's soldered onto the motherboard. If you built your own computer, you can buy one as an add-on module if your motherboard supports it. The TPM generates encryption keys, keeping part of the key to itself

#### NEW QUESTION 244

- (Exam Topic 2)

Joe works as an IT administrator in an organization and has recently set up a cloud computing service for the organization. To implement this service, he reached out to a telecom company for providing Internet connectivity and transport services between the organization and the cloud service provider, in the NIST cloud deployment reference architecture, under which category does the telecom company fall in the above scenario?

- A. Cloud booker
- B. Cloud consumer
- C. Cloud carrier
- D. Cloud auditor

**Answer:** C

#### Explanation:

A cloud carrier acts as an intermediary that provides connectivity and transport of cloud services between cloud consumers and cloud providers.

Cloud carriers provide access to consumers through network, telecommunication and other access devices. For instance, cloud consumers will obtain cloud services through network access devices, like computers, laptops, mobile phones, mobile web devices (MIDs), etc.

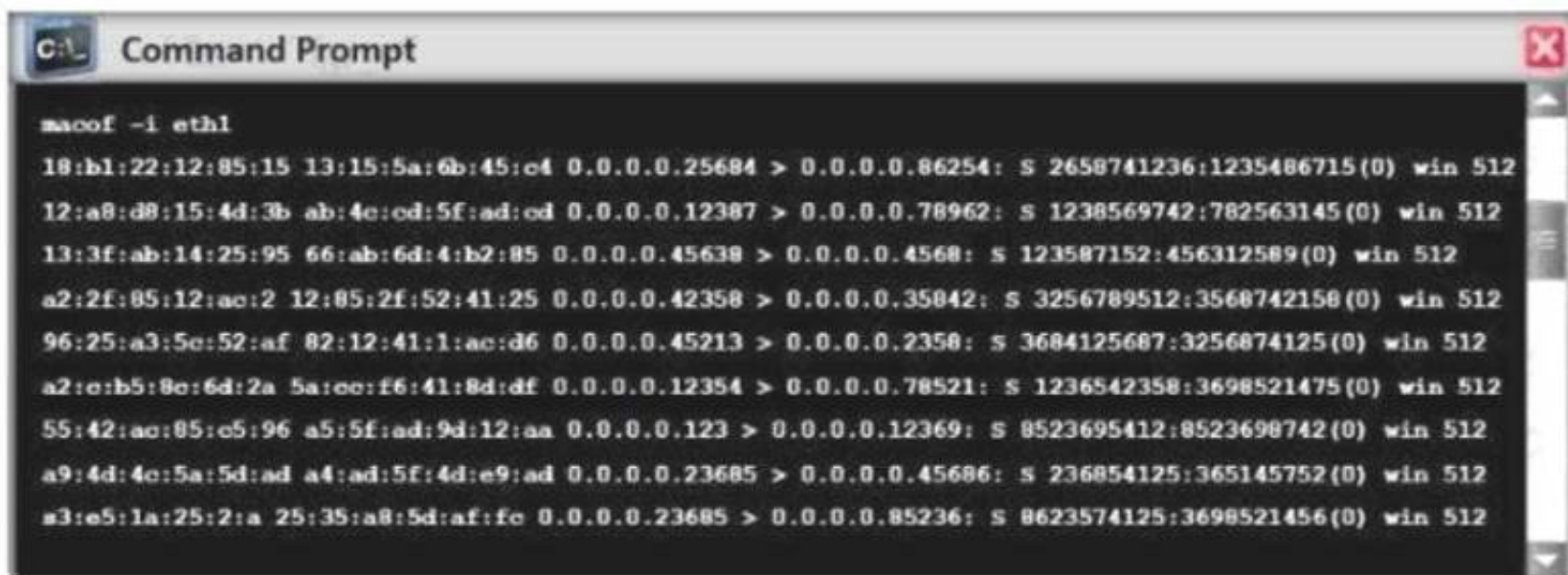
The distribution of cloud services is often provided by network and telecommunication carriers or a transport agent, wherever a transport agent refers to a business organization that provides physical transport of storage media like high-capacity hard drives.

Note that a cloud provider can start SLAs with a cloud carrier to provide services consistent with the level of SLAs offered to cloud consumers, and will require the cloud carrier to provide dedicated and secure connections between cloud consumers and cloud providers.

#### NEW QUESTION 247

- (Exam Topic 2)

Switches maintain a CAM Table that maps individual MAC addresses on the network to physical ports on the switch.



In a MAC flooding attack, a switch is fed with many Ethernet frames, each containing different source MAC addresses, by the attacker. Switches have a limited memory for mapping various MAC addresses to physical ports. What happens when the CAM table becomes full?

- A. Switch then acts as hub by broadcasting packets to all machines on the network
- B. The CAM overflow table will cause the switch to crash causing Denial of Service
- C. The switch replaces outgoing frame switch factory default MAC address of FF:FF:FF:FF:FF:FF
- D. Every packet is dropped and the switch sends out SNMP alerts to the IDS port

**Answer:** A

#### NEW QUESTION 249

- (Exam Topic 2)

This TCP flag instructs the sending system to transmit all buffered data immediately.

- A. SYN
- B. RST
- C. PSH
- D. URG
- E. FIN

**Answer:** C

#### NEW QUESTION 252

- (Exam Topic 2)

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

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

**Answer:** B

#### Explanation:

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

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

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

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

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

#### NEW QUESTION 253

- (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 258

- (Exam Topic 2)

Boney, a professional hacker, targets an organization for financial benefits. He performs an attack by sending his session ID using an MITM attack technique.

Boney first obtains a valid session ID by logging into a service and later feeds the same session ID to the target employee. The session ID links the target employee to Boney's account page without disclosing any information to the victim. When the target employee clicks on the link, all the sensitive payment details entered in a form are linked to Boney's account. What is the attack performed by Boney in the above scenario?

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 261

- (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 targets This 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 tablespaces are 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 -s -PR --packet-trace --send-eth 192.168.33.37
Starting Nmap ( http://nmap.org )
Nmap (0.0000s) ARP who-has 192.168.33.37 tell 192.168.0.100
Nmap (0.1100s) ARP who-has 192.168.33.37 tell 192.168.0.100
Note: Host seems down: If it is really up, has blocking ping probes, try -Pn
Nmap done: 1 IP address (0 hosts up) scanned in 0.33 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 264

- (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 267

- (Exam Topic 2)

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

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

What is this attack?

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

**Answer: A**

#### NEW QUESTION 269

- (Exam Topic 2)

Fred is the network administrator for his company. Fred is testing an internal switch.

From an external IP address, Fred wants to try and trick this switch into thinking it already has established a session with his computer. How can Fred accomplish this?

- A. Fred can accomplish this by sending an IP packet with the RST/SIN bit and the source address of his computer.
- B. He can send an IP packet with the SYN bit and the source address of his computer.
- C. Fred can send an IP packet with the ACK bit set to zero and the source address of the switch.
- D. Fred can send an IP packet to the switch with the ACK bit and the source address of his machine.

**Answer: D**

#### NEW QUESTION 272

- (Exam Topic 2)

What type of analysis is performed when an attacker has partial knowledge of inner-workings of the application?

- A. Black-box
- B. Announced
- C. White-box
- D. Grey-box

**Answer: D**

#### NEW QUESTION 274

- (Exam Topic 2)

You went to great lengths to install all the necessary technologies to prevent hacking attacks, such as expensive firewalls, antivirus software, anti-spam systems and intrusion detection/prevention tools in your company's network. You have configured the most secure policies and tightened every device on your network. You are confident that hackers will never be able to gain access to your network with complex security system in place.

Your peer, Peter Smith who works at the same department disagrees with you.

He says even the best network security technologies cannot prevent hackers gaining access to the network because of presence of "weakest link" in the security chain.

What is Peter Smith talking about?

- A. Untrained staff or ignorant computer users who inadvertently become the weakest link in your security chain
- B. "zero-day" exploits are the weakest link in the security chain since the IDS will not be able to detect these attacks
- C. "Polymorphic viruses" are the weakest link in the security chain since the Anti-Virus scanners will not be able to detect these attacks
- D. Continuous Spam e-mails cannot be blocked by your security system since spammers use different techniques to bypass the filters in your gateway

**Answer: A**

#### NEW QUESTION 275

- (Exam Topic 2)

You are tasked to configure the DHCP server to lease the last 100 usable IP addresses in subnet to. 1.4.0/23. Which of the following IP addresses could be teased as a result of the new configuration?

- A. 210.1.55.200
- B. 10.1.4.254
- C. 10..1.5.200
- D. 10.1.4.156

**Answer: C**

#### NEW QUESTION 278

- (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 282

- (Exam Topic 2)

What port number is used by LDAP protocol?

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

**Answer: B**

#### NEW QUESTION 284

- (Exam Topic 2)



George is a security professional working for iTech Solutions. He was tasked with securely transferring sensitive data of the organization between industrial systems. In this process, he used a short-range communication protocol based on the IEEE 802.15.4 standard. This protocol is used in devices that transfer data infrequently at a low rate in a restricted area, within a range of 10-100 m. What is the short-range wireless communication technology George employed in the above scenario?

- A. MQTT
- B. LPWAN
- C. Zigbee
- D. NB-IoT

**Answer: C**

**Explanation:**

Zigbee could be a wireless technology developed as associate open international normal to deal with the unique desires of affordable, low-power wireless IoT networks. The Zigbee normal operates on the IEEE 802.15.4 physical radio specification and operates in unauthorised bands as well as a pair of 4 GHz, 900 MHz and 868 MHz.

The 802.15.4 specification upon that the Zigbee stack operates gained confirmation by the Institute of Electrical and physical science Engineers (IEEE) in 2003. The specification could be a packet-based radio protocol supposed for affordable, battery-operated devices. The protocol permits devices to speak in an exceedingly kind of network topologies and may have battery life lasting many years.

The Zigbee three.0 Protocol

The Zigbee protocol has been created and ratified by member corporations of the Zigbee Alliance. Over three hundred leading semiconductor makers, technology corporations, OEMs and repair corporations comprise the Zigbee Alliance membership. The Zigbee protocol was designed to supply associate easy-to-use wireless information answer characterised by secure, reliable wireless network architectures.

**THE ZIGBEE ADVANTAGE**

The Zigbee 3.0 protocol is intended to speak information through rip-roaring RF environments that area unit common in business and industrial applications. Version 3.0 builds on the prevailing Zigbee normal however unifies the market-specific application profiles to permit all devices to be wirelessly connected within the same network, no matter their market designation and performance. what is more, a Zigbee 3.0 certification theme ensures the ability of product from completely different makers. Connecting Zigbee three.0 networks to the information science domain unveil observance and management from devices like smartphones and tablets on a local area network or WAN, as well as the web, and brings verity net of Things to fruition.

Zigbee protocol options include:

- Support for multiple network topologies like point-to-point, point-to-multipoint and mesh networks
- Low duty cycle – provides long battery life
- Low latency
- Direct Sequence unfold Spectrum (DSSS)
- Up to 65,000 nodes per network
- 128-bit AES encryption for secure information connections
- Collision avoidance, retries and acknowledgements

This is another short-range communication protocol based on the IEEE 802.15.4 standard. Zig-Bee is used in devices that transfer data infrequently at a low rate in a restricted area and within a range of 10–100 m.

**NEW QUESTION 285**

- (Exam Topic 2)

which of the following Bluetooth hacking techniques refers to the theft of information from a wireless device through Bluetooth?

- A. Bluesmacking
- B. Bluebugging
- C. Bluejacking
- D. Bluesnarfing

**Answer: D**

**Explanation:**

Bluesnarfing is the unauthorized access of information from a wireless device through Bluetooth connection, often between phones, desktops, laptops, and PDAs (personal digital assistant).

**NEW QUESTION 290**

- (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 293**

- (Exam Topic 2)

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

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

**Answer: D**

#### NEW QUESTION 296

- (Exam Topic 2)

Which file is a rich target to discover the structure of a website during web-server footprinting?

- A. Document root
- B. Robots.txt
- C. domain.txt
- D. index.html

**Answer: B**

#### NEW QUESTION 298

- (Exam Topic 2)

Ricardo has discovered the username for an application in his targets environment. As he has a limited amount of time, he decides to attempt to use a list of common passwords he found on the Internet. He compiles them into a list and then feeds that list as an argument into his password-cracking application, what type of attack is Ricardo performing?

- A. Known plaintext
- B. Password spraying
- C. Brute force
- D. Dictionary

**Answer: D**

#### Explanation:

A dictionary Attack as an attack vector utilized by the attacker to break in a very system, that is password protected, by golf shot technically each word in a very dictionary as a variety of password for that system. This attack vector could be a variety of Brute Force Attack.

The lexicon will contain words from an English dictionary and conjointly some leaked list of commonly used passwords and once combined with common character substitution with numbers, will generally be terribly effective and quick.

How is it done?

Basically, it's attempting each single word that's already ready. it's done victimization machine-controlled tools that strive all the possible words within the dictionary.

Some password Cracking Software:

- John the ripper
- L0phtCrack
- Aircrack-ng

#### NEW QUESTION 301

- (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 305

- (Exam Topic 2)

Fingerprinting an Operating System helps a cracker because:

- A. It defines exactly what software you have installed
- B. It opens a security-delayed window based on the port being scanned
- C. It doesn't depend on the patches that have been applied to fix existing security holes

D. It informs the cracker of which vulnerabilities he may be able to exploit on your system

**Answer:** D

#### NEW QUESTION 310

- (Exam Topic 2)

John, a disgruntled ex-employee of an organization, contacted a professional hacker to exploit the organization. In the attack process, the professional hacker installed a scanner on a machine belonging to one of the victims and scanned several machines on the same network to identify vulnerabilities to perform further exploitation. What is the type of vulnerability assessment tool employed by John in the above scenario?

- A. Proxy scanner
- B. Agent-based scanner
- C. Network-based scanner
- D. Cluster scanner

**Answer:** C

#### Explanation:

Network-based scanner

A network-based vulnerability scanner, in simplistic terms, is the process of identifying loopholes on a computer's network or IT assets, which hackers and threat actors can exploit. By implementing this process, one can successfully identify their organization's current risk(s). This is not where the buck stops; one can also verify the effectiveness of your system's security measures while improving internal and external defenses. Through this review, an organization is well equipped to take an extensive inventory of all systems, including operating systems, installed software, security patches, hardware, firewalls, anti-virus software, and much more.

Agent-based scanner

Agent-based scanners make use of software scanners on each and every device; the results of the scans are reported back to the central server. Such scanners are well equipped to find and report out on a range of vulnerabilities.

NOTE: This option is not suitable for us, since for it to work, you need to install a special agent on each computer before you start collecting data from them.

#### NEW QUESTION 311

- (Exam Topic 2)

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

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

**Answer:** D

#### Explanation:

Non-repudiation is the assurance that someone cannot deny the validity of something. Non-repudiation is a legal concept that is widely used in information security and refers to a service, which provides proof of the origin of data and the integrity of the data. In other words, non-repudiation makes it very difficult to successfully deny who/where a message came from as well as the authenticity and integrity of that message.

#### NEW QUESTION 316

- (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 317

- (Exam Topic 2)

What is the main security service a cryptographic hash provides?

- A. Integrity and ease of computation
- B. Message authentication and collision resistance
- C. Integrity and collision resistance
- D. Integrity and computational in-feasibility

**Answer:** D

#### NEW QUESTION 318

- (Exam Topic 2)

You are programming a buffer overflow exploit and you want to create a NOP sled of 200 bytes in the program exploit.c

```
char shellcode[] =  
"\x31\xc0\xb0\x46\x31\xdb\x31\xc9\xcd\x80\xeb\x16\x5b\x31\xc0"  
"\x88\x43\x07\x89\x5b\x08\x89\x43\x0c\xb0\x0b\x8d\x4b\x08\x8d"  
"\x53\x0c\xcd\x80\xe8\xe5\xff\xff\xff\x2f\x62\x69\x6e\x2f\x73"  
"\x68";
```

What is the hexadecimal value of NOP instruction?

- A. 0x60
- B. 0x80
- C. 0x70
- D. 0x90

**Answer:** D

#### NEW QUESTION 321

- (Exam Topic 2)

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

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

**Answer:** D

#### NEW QUESTION 326

- (Exam Topic 2)

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

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

**Answer:** C

#### Explanation:

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

#### NEW QUESTION 328

- (Exam Topic 2)

Tremp 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 Tremp's requirements?

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

**Answer:** C

#### NEW QUESTION 331

- (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 335

- (Exam Topic 2)



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

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

**Answer:** D

### NEW QUESTION 336

- (Exam Topic 2)

What is the common name for a vulnerability disclosure program opened by companies in platforms such as HackerOne?

- A. Vulnerability hunting program
- B. Bug bounty program
- C. White-hat hacking program
- D. Ethical hacking program

**Answer:** B

#### Explanation:

Bug bounty programs allow independent security researchers to report bugs to an companies and receive rewards or compensation. These bugs area unit sometimes security exploits and vulnerabilities, although they will additionally embody method problems, hardware flaws, and so on.

The reports area unit usually created through a program travel by associate degree freelance third party (like Bugcrowd or HackerOne). The companies can got wind of (and run) a program curated to the organization's wants.

Programs is also non-public (invite-only) wherever reports area unit unbroken confidential to the organization or public (where anyone will sign in and join). they will happen over a collection timeframe or with without stopping date (though the second possibility is a lot of common).

Who uses bug bounty programs?Many major organizations use bug bounties as an area of their security program, together with AOL, Android, Apple, Digital Ocean, and goldman Sachs. you'll read an inventory of all the programs offered by major bug bounty suppliers, Bugcrowd and HackerOne, at these links.

Why do corporations use bug bounty programs?Bug bounty programs provide corporations the flexibility to harness an outsized cluster of hackers so as to seek out bugs in their code.

This gives them access to a bigger variety of hackers or testers than they'd be able to access on a one-on-one basis. It {can also|also will|can even|may also|may} increase the probabilities that bugs area unit found and reported to them before malicious hackers can exploit them.

It may also be an honest publicity alternative for a firm. As bug bounties became a lot of common, having a bug bounty program will signal to the general public and even regulators that a corporation incorporates a mature security program.

This trend is likely to continue, as some have began to see bug bounty programs as an business normal that all companies ought to invest in.

Why do researchers and hackers participate in bug bounty programs?Finding and news bugs via a bug bounty program may end up in each money bonuses and recognition. In some cases, it will be a good thanks to show real-world expertise once you are looking for employment, or will even facilitate introduce you to parents on the protection team within an companies.

This can be full time income for a few of us, income to supplement employment, or the way to point out off your skills and find a full time job.

It may also be fun! it is a nice (legal) probability to check out your skills against huge companies and government agencies.

What area unit the disadvantages of a bug bounty program for independent researchers and hackers?A lot of hackers participate in these varieties of programs, and it will be tough to form a major quantity of cash on the platform.

In order to say the reward, the hacker has to be the primary person to submit the bug to the program. meaning that in apply, you may pay weeks searching for a bug to use, solely to be the person to report it and build no cash.

Roughly ninety seven of participants on major bug bounty platforms haven't sold-out a bug.

In fact, a 2019 report from HackerOne confirmed that out of quite three hundred,000 registered users, solely around two.5% received a bounty in their time on the platform.

Essentially, most hackers are not creating a lot of cash on these platforms, and really few square measure creating enough to switch a full time wage (plus they do not have advantages like vacation days, insurance, and retirement planning).

What square measure the disadvantages of bug bounty programs for organizations?These programs square measure solely helpful if the program ends up in the companies realizeing issues that they weren't able to find themselves (and if they'll fix those problems)!

If the companies is not mature enough to be able to quickly rectify known problems, a bug bounty program is not the right alternative for his or her companies.

Also, any bug bounty program is probably going to draw in an outsized range of submissions, several of which can not be high-quality submissions. a corporation must be ready to cope with the exaggerated volume of alerts, and also the risk of a coffee signal to noise magnitude relation (essentially that it's probably that they're going to receive quite few unhelpful reports for each useful report).

Additionally, if the program does not attract enough participants (or participants with the incorrect talent set, and so participants are not able to establish any bugs), the program is not useful for the companies.

The overwhelming majority of bug bounty participants consider web site vulnerabilities (72%, per HackerOn), whereas solely a number of (3.5%) value more highly to seek for package vulnerabilities.

This is probably because of the actual fact that hacking in operation systems (like network hardware and memory) needs a big quantity of extremely specialised experience. this implies that firms may even see vital come on investment for bug bounties on websites, and not for alternative applications, notably those that need specialised experience.

This conjointly implies that organizations which require to look at AN application or web site among a selected time-frame may not need to rely on a bug bounty as there is no guarantee of once or if they receive reports.

Finally, it are often probably risky to permit freelance researchers to try to penetrate your network. this could end in public speech act of bugs, inflicting name harm within the limelight (which could end in individuals not eager to purchase the organizations' product or service), or speech act of bugs to additional malicious third parties, United Nations agency may use this data to focus on the organization.

### NEW QUESTION 339

- (Exam Topic 2)

which type of virus can change its own code and then cipher itself multiple times as it replicates?

- A. Stealth virus
- B. Tunneling virus
- C. Cavity virus
- D. Encryption virus

**Answer:** A



**Explanation:**

A stealth virus may be a sort of virus malware that contains sophisticated means of avoiding detection by antivirus software. After it manages to urge into the now-infected machine a stealth viruses hides itself by continually renaming and moving itself round the disc. Like other viruses, a stealth virus can take hold of the many parts of one's PC. When taking control of the PC and performing tasks, antivirus programs can detect it, but a stealth virus sees that coming and can rename then copy itself to a special drive or area on the disc, before the antivirus software. Once moved and renamed a stealth virus will usually replace the detected 'infected' file with a clean file that doesn't trigger anti-virus detection. It's a never-ending game of cat and mouse. The intelligent architecture of this sort of virus about guarantees it's impossible to completely rid oneself of it once infected. One would need to completely wipe the pc and rebuild it from scratch to completely eradicate the presence of a stealth virus. Using regularly-updated antivirus software can reduce risk, but, as we all know, antivirus software is additionally caught in an endless cycle of finding new threats and protecting against them.

<https://www.techslang.com/definition/what-is-a-stealth-virus/>

**NEW QUESTION 340**

- (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 342**

- (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 346**

- (Exam Topic 1)

An incident investigator asks to receive a copy of the event logs from all firewalls, proxy servers, and Intrusion Detection Systems (IDS) on the network of an organization that has experienced a possible breach of security. When the investigator attempts to correlate the information in all of the logs, the sequence of many of the logged events do not match up.

What is the most likely cause?

- A. The network devices are not all synchronized.
- B. Proper chain of custody was not observed while collecting the logs.
- C. The attacker altered or erased events from the logs.
- D. The security breach was a false positive.

**Answer:** A

**Explanation:**

Many network and system administrators don't pay enough attention to system clock accuracy and time synchronization. Computer clocks can run faster or slower over time, batteries and power sources die, or daylight-saving time changes are forgotten. Sure, there are many more pressing security issues to deal with, but not ensuring that the time on network devices is synchronized can cause problems. And these problems often only come to light after a security incident.

If you suspect a hacker is accessing your network, for example, you will want to analyze your log files to look for any suspicious activity. If your network's security devices do not have synchronized times, the timestamps' inaccuracy makes it impossible to correlate log files from different sources. Not only will you have difficulty in tracking events, but you will also find it difficult to use such evidence in court; you won't be able to illustrate a smooth progression of events as they occurred throughout your network.

**NEW QUESTION 349**

- (Exam Topic 1)

CompanyXYZ has asked you to assess the security of their perimeter email gateway. From your office in New York, you craft a specially formatted email message and send it across the Internet to an employee of CompanyXYZ. The employee of CompanyXYZ is aware of your test. Your email message looks like this:

From: jim\_miller@companyxyz.com

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

The employee of CompanyXYZ receives your email message.

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

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

**Answer:** D

**Explanation:**

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

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

#### NEW QUESTION 352

- (Exam Topic 1)

Which of the following tools are used for enumeration? (Choose three.)

- A. SolarWinds
- B. USER2SID
- C. Cheops
- D. SID2USER
- E. DumpSec

**Answer:** BDE

#### NEW QUESTION 353

- (Exam Topic 1)

Which address translation scheme would allow a single public IP address to always correspond to a single machine on an internal network, allowing "server publishing"?

- A. Overloading Port Address Translation
- B. Dynamic Port Address Translation
- C. Dynamic Network Address Translation
- D. Static Network Address Translation

**Answer:** D

#### NEW QUESTION 355

- (Exam Topic 1)

Based on the following extract from the log of a compromised machine, what is the hacker really trying to steal?

- A. har.txt
- B. SAM file
- C. wwwroot
- D. Repair file

**Answer:** B

#### NEW QUESTION 359

- (Exam Topic 1)

The change of a hard drive failure is once every three years. The cost to buy a new hard drive is \$300. It will require 10 hours to restore the OS and software to the new hard disk. It will require a further 4 hours to restore the database from the last backup to the new hard disk. The recovery person earns \$10/hour. Calculate the SLE, ARO, and ALE. Assume the EF = 1(100%). What is the closest approximate cost of this replacement and recovery operation per year?

- A. \$1320
- B. \$440
- C. \$100
- D. \$146

**Answer:** D

#### Explanation:

\* 1. AV (Asset value) = \$300 + (14 \* \$10) = \$440 - the cost of a hard drive plus the work of a recovery person, i.e.how much would it take to replace 1 asset? 10 hours for resorting the OS and soft + 4 hours for DB restore multiplies by hourly rate of the recovery person.

\* 2. SLE (Single Loss Expectancy) = AV \* EF (Exposure Factor) = \$440 \* 1 = \$440

\* 3. ARO (Annual rate of occurrence) = 1/3 (every three years, meaning the probability of occurring during 1 years is 1/3)

\* 4. ALE (Annual Loss Expectancy) = SLE \* ARO = 0.33 \* \$440 = \$145.2

#### NEW QUESTION 363

- (Exam Topic 1)

Although FTP traffic is not encrypted by default, which layer 3 protocol would allow for end-to-end encryption of the connection?

- A. SFTP
- B. Ipsec
- C. SSL
- D. FTPS

**Answer:** B

#### Explanation:

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

Internet Protocol Security (IPsec) is a secure network protocol suite that authenticates and encrypts the packets of data to provide secure encrypted communication between two computers over an Internet Protocol network. It is used in virtual private networks (VPNs).

IPsec includes protocols for establishing mutual authentication between agents at the beginning of a session and negotiation of cryptographic keys to use during the session. IPsec can protect data flows between a pair of hosts (host-to-host), between a pair of security gateways (network-to-network), or between a security gateway and a host (network-to-host). IPsec uses cryptographic security services to protect communications over Internet Protocol (IP) networks. It supports network-level peer authentication, data-origin authentication, data integrity, data confidentiality (encryption), and replay protection.

The initial IPv4 suite was developed with few security provisions. As a part of the IPv4 enhancement, IPsec is a layer 3 OSI model or internet layer end-to-end security scheme. In contrast, while some other Internet security systems in widespread use operate above layer 3, such as Transport Layer Security (TLS) that operates at the Transport Layer and Secure Shell (SSH) that operates at the Application layer, IPsec can automatically secure applications at the IP layer.

#### NEW QUESTION 368

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