

Entry Level Cybersecurity Interview Questions

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Cyber Security Interview Questions - Operating Systems and Applications

This section of cybersecurity interview questions is based on operating systems and applications.

55. What is virtual memory?

Virtual memory is a storage allocation method in which a secondary memory (hard disk) is used as the primary memory (RAM).

56. What are the different scheduling algorithms?

Listed below are the different scheduling algorithms:

1. First come, first serve: The process which requests the CPU first gets the CPU allocation first.
2. Shortest job first: Here, the process with the shortest execution time should be selected for execution next.
3. Priority scheduling: Here, the scheduler selects the tasks to work as per the priority.
4. Multiple level queues: Processes are assigned to a queue based on a specific property like the process priority, size of the memory, etc.
5. Shortest remaining time: Here, the process will be allocated to the task, which is closest to its completion.
6. Round Robin: Each process that comes, in turn, gets an equal share of time.

57. What are the steps involved in hacking a server or network?

This is more of an ethical hacking question; the steps involved in hacking a server or network are :

1. Reconnaissance: In this phase, all the evidence and information on the target are gathered.
2. Scanning: Here, you take the gathered information and apply various tools and techniques to collect more in-depth information on the targets.
3. Gain access: In this phase, accurate attacks are leveled against the targets enumerated in the second phase.
4. Maintain access: Here, hackers ensure that they have a way back into the compromised system.
5. Cover tracks: Finally, attackers try to conceal their success and avoid detection by security professionals.

58. What are the various sniffing tools?

Given below is a list of a few of the sniffing tools:

1. Wireshark: It is used to analyze the network in detail
2. TCPDUMP: It analyzes the packets which are transmitted
3. MSN Sniffer 2: MSN Sniffer 2 is the first chat sniffing tool
4. Ettercap: This tool is perfect for the man-in-the-middle attack
5. Dsniff: It is a password and network analyzing tool
6. EtherApe: It displays the network activity graphically

59. What is an operating system?

It is a software program that provides a computer hardware platform to communicate and operate with the computer software.

For input and output functions, the operating system acts as an intermediate between the program and computer hardware. Some examples of OS are Windows, Unix, Android, Linux, etc.

60. What is the difference between microkernel and macrokernel?

Aspects	Microkernel	Macrokernel

Size	Small	Large
Execution	Slow	Fast
Extendibility	Easy to extend	Hard to extend
Security	If it crashes, only the working on the microkernel is affected	If it crashes, the whole system is affected
Code	More coding is required	Less coding is required
Example	QNX, Symbian, L4Linux	Linux, BSDs

61. What are the various types of operating systems?

The various types of operating systems are:

1. Batched OS: The computer operator places the jobs coming from input devices into batches.
2. Distributed OS: Many computers are interconnected with communication networks.
3. Time-sharing OS: Time-sharing OS minimizes the response time.
4. Multi-programmed OS: The operating system uses CPU scheduling to separate jobs.
5. Real-time OS: Here, the OS gives maximum time to critical operations.

62. What is the difference between logical address space and physical address space?

Aspects	Logical Address	Physical Address
Definition	The address generated during the running of a program is called the logical address.	A physical address is the physical location of the memory.
Visibility	Viewable	Not viewable
Address space	Logical	Physical

Access	Access only physical address	Not directly accessed
Generation	Generated by CPU	Computed by the memory management unit
Variation	Variable	Constant

63. Which shells are used in Linux?

The shells used in Linux are:

1. bash: Bourne again shell is the default for Linux distributions
2. ksh: Korn shell is a high-level programming shell that supports associative arrays and built-in operations
3. csh: C shell does spelling corrections and job control
4. zsh: Z shell provides unique features like filename generation, startup files, etc.
5. fish: Friendly interactive shell which provides features like auto-suggestions, configurations, etc.

64. What are the process states in Linux?

The process states in Linux are:

1. Ready: In this state, the process is created and is ready to run.
2. Running: Here, the process is being executed.
3. Blocked or wait: In this state, the process is waiting for input from the user.

4. Completed or Terminated: Here, either the process completed execution or was terminated by the OS.
5. Zombie: In this state, the process is terminated, but the process table still holds the information.

Let's go to the next section of this article on cybersecurity interview questions.

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