# Career Services Assignment 3 – Java Flash Cards

**Points possible:** 50

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| **Category** | **Criteria** | **% of Grade** |
| **Completeness** | All requirements of the assignment are complete. | 100 |

**Instructions:** Research common JavaScript interview questions online and create 20 flash cards from the information you find. Study your flash cards regularly to better prepare for interviews. Fill out the table below with the information you put on each of your flash cards.

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| **Front of Card** | **Back of Card** |
| **JavaScript Interview Questions** | Source: <https://www.dotnettricks.com/learn/javascript/javascript-interview-questions> |
| 1. What is JavaScript? | Ans: JavaScript is an object-based programming language, mostly used as a client-side programming language with the HTML page to add some behavior to it.  JavaScript was initially created as a browser-only language, but not it can be executed on the server or any client which has a JavaScript Engine. A product like Node.js, MongoDB, jaggery.js, ASP and many more use server-side JavaScript.  In the browser, JavaScript can do many things as given below:  # manipulating the HTML element |
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| **C++ Interview Questions** |  |
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| **Linux Admin Interview Questions** | Source: https://www.linuxtechi.com/experience-linux-admin-interview-questions/  next time should use this one:  Source: <https://www.whizlabs.com/blog/top-linux-interview-questions-answers/> |
| 1. What is Linux and also explain the basic components of Linux? | Answer: Linux is the most commonly used operating system that is open source and free. For any computer, the operating system acts as the backbone, and it is most important software that is required for any computer. From network routers, television, video games console, smartwatches, smartphones, desktops, laptops to any other electronic device, Linux is everywhere.  Linux operating system is consist of 3 components which are as below:  Kernel: Linux is a monolithic kernel that is free and open source software that is responsible for managing hardware resources for the users.  System Library: System Library plays a vital role because application programs access Kernels feature using system library.  System Utility: System Utility performs specific and individual level tasks. |
| 2. What are the differences between UNIX and Linux Operating System? | Answer: To understand the differences between UNIX and Linux Operating system, first of all, we should know that Linux is a UNIX clone, the Kernel of which is created by Linus Torvalds. There are so many differences between Linux and UNIX operating system which are as follows:  Open Source Operating System:  The most significant difference between UNIX and Linux operating system is Linux is an open source operating system. The open-source operating system that means Linux source code is available for use so that developers can modify it as per their requirement. But UNIX operating system doesn’t come under the broad category of an open-source operating system for which developers can edit it.  Free of Cost:  One of the biggest reason that it is broadly used is Linux operating system is free of cost. Linux operating system is free, but UNIX Operating system is not free. We can download it from the internet.  Compatibility and Flexibility:  If we compare the flexibility and compatibility of both operating system, you will find that Linux is more flexible than UNIX operating system and more compatible with different types of hardware as compared to UNIX operating System. |
| 3. Describe BASH. | Answer: BASH stands for Bourne Again Shell. BASH is the UNIX shell for the GNU operating system. So, BASH is the command language interpreter that helps you to enter your input, and so you can retrieve information. In a straightforward language, we can say that it is a program that will understand the data entered by the user and execute the command and gives output. |
| 4. What is crontab and explain its functionality and explain the format of crontab? | Answer: Cron is a scheduler that executes the commands at a regular interval as per the specific date and time defined. We have multiple users in Linux, and all the users can have their crontab separately. The crontabs files are saved at a particular location that is /var/spool/cron/crontabs.  There are six fields in the format for the crontab that is as below:  <Minute><Hour><Day\_of\_the\_Month><Month\_of\_the\_Year><Day\_of\_the\_Week><command/program to execute> |
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| 1. Why LVM is required ? | Ans: LVM stands for Logical Volume Manager, to resize file system’s size online we require LVM partition in Linux. Size of LVM partition can be extended and reduced the lvextend and lvreduce commands respectively. |
| 2. How to check memory stats and CPU stats? | Ans: Using ‘free’ & ‘vmstat’ command we can display the physical and virtual memory statistics respectively. With the help of ‘sar’ command we see the CPU utilization & other stats. |
| 3. What does Sar provides and at which location Sar logs are stored? | Ans: Sar collect, report, or save system activity information. The default version of the sar command (CPU utilization report) might be one of the first facilities the user runs to begin system activity investigation, because it monitors major system resources. If CPU utilization is near 100 percent (user + nice + system), the workload sampled is CPU-bound.  By default log files of Sar command is located at /var/log/sa/sadd/ file, where the dd parameter indicates the current day. |
| 4. How to increase the size of LVM partition? | Ans: Below are the Logical Steps:  # use the lvextend command (lvextend -L +100M /dev/<Name of the LVM Partition> , in this example we are extending the size by 100MB.)  # resize2fs /dev/<Name of the LVM Partition>  -check the size of partition using df command |
| 5. How to reduce or shrink the size of LVM partition? | Ans: Below are the logical steps to reduce size of LVM partition:  # Unmount the filesystem using umount command [umount or unmount?]  # Use resize2fs command, e.g. resize2fs /dev/mapper/myvg-mylv 10G  # Now use the lvreduce command, e.g. lvreduce L 10G dev/mapper/myvg-lv  Above Command ^ will shrink the file system and make the filesystem size 10GB. |
| 6. How to create partition on the raw disk? | Ans: Using fdisk utility we can create partitions on the raw disk. Below are the steps to create partition:  # fdisk dev/hd\* (IDE) or dev/sd\* (SCSI)  # Type n to create a new partition.  # After creating partition, type w command to write the changes to the partition table.  # Type ‘partprobe’ to instruct the kernel to re-read the partition table. |
| 7. Where are the kernel modules located? | Ans: The ‘/lib/modules/kernel-version/’ directory stores all kernel modules or compiled drivers in Linux operating system. Also with ‘lsmod’ command we can see all the installed kernel modules. |
| 8. What is umask? | Ans: umask stands for ‘User file creation mask,’ which determines the settings of a mask that controls which file permissions are set for files and directories when they are created. |
| 9. How to set the umask permanently for a user? | Ans: To set this value permanently for a user, it has to be put in the appropriate profile which depends on the default shell of the user. |
| 10. How to Boot RHEL / Rocky Linux / CentOS in Single User Mode? | Ans: Follow the beneath steps to boot RHEL / Rocky Linux / CentOS in single user mode:  # Reboot and go to the grub prompt  # Go to the end of line which starts with ‘linux’ and type ‘rd.break’ and hit enter.  # Mount the root file system in rw mode and then do chroot/sysroot.  # Perform the troubleshooting |
| 11. How to share a directory using nfs | Ans: To share a directory using nfs,  # First edit the configuration file ‘/etc/exportfs’, add a entry like  # /<directory-name> <ip or Network>(Options)  # Restart the nfs service or ‘exportfs -arv’ |
| 12. How to check and mount nfs share? | Ans: Using ‘showmount’ command we can see which directories are shared via nfs e.g. ‘showmount -e <ip address of nds server>’ Using mount command we can mount the nfs share on Linux machine. |
| 13. What are the default ports used for SMTP, DNS, FTP, DHCP, SSH and squid? | Ans: Default ports are listed below:  # Service | Port  # SMTP 25  # DNS 53  # FTP 20 (data transfer), 21 (Connection established)  # DHCP 67/UDP(dhcp server), 68/UDP(dhcp client)  # SSH 22  # Squid 3128 |
| 14. What is Network Bonding? | Ans: Network bonding is the aggregation of multiple lan cards into a single bonded interface to provide fault tolerance and high performance. Network bonding is also known as NIC Teaming. |
| 15. What are the different modes of Network bonding in Linux? | Ans: Below are the list of modes used in network bonding:  # balance-rr or 0 – round-robin mode for fault tolerance and load balancing  # active-backup or 1 – Sets active-backup moder for fault tolerance  # balance-xor or 2 – Sets an XOR (exclusive-or) mode for fault tolerance and load balancing.  # broadcast or 3 – Sets a broadcast mode for fault tolerance. All transmissions are sent on all slave interfaces.  # 802.3ad or 4 – Sets an IEEE 802.3ad dynamic link aggregation mode. Creates aggregation groups that share the same speed & duplex settings.  # balance-tlb or 5 – Sets a Transmit Load Balancing (TLB) mode for fault tolerance & load balancing.  # balance-alb or 6 – Sets and Active Load Balancing (ALB) mode for fault tolerance & load balancing. |
| 16. How to check and verify the status of the bond interface? | Ans: Using the command ‘cat /proc/net/bonding/bond0’, we can check which mode is enabled and what lan cards are used in this bond. In this example we have only one bond interface but we can have multiple bond interfaces like bond1, bond2 and so on. |
| 17. How to check default route and routing table? | Ans: Using the commands ‘netstat -nr’, ‘ip route show’ and ‘route -n’ we can see the default route and routing tables. |
| 18. How to check which ports are listening in my Linux Server? | Ans: With the help of ‘ss’, ‘netstat -listen’ and ‘lsof -i’ commands we can check ports listening status. |
| 19. What is default data directory for docker containers? | Ans: Default data directory for docker containers are ‘/var/lib/docker’. |
| 20. What is the difference between Docker and Podman? | Ans: Docker is a daemon based process, it means containers will only work when docker daemon is running, whereas Podman is daemon-less, it means containers don’t need any daemon to run. |
| 21. How to upgrade Kernel in Linux? | Ans: We should never upgrade Linux Kernel, always install the new kernel using dnf (or yum) or rpm command because upgrading a kernel can make your linux box in an unbootable state. |
| 22. How to scan newly assigned luns on Linux box without rebooting? | Ans: There are two ways to scan newly assigned luns:  # Method 1: if sg3 rpm is installed, then run the command ‘rescan-scsi-bus.sh’  # Method 2: Run the Command, ‘echo “---” > /sys/class/scsi\_host/hostX/scan’ |
| 23. How to find WWN numbers of HBA cards in Linux Server? | Ans: We can find the WWN numbers of HBA cards using the command ‘systool -c fc\_host -v | grep port\_name’ |
| 24. How to add & change the Kernel parameters? | Ans: To set the kernel parameters in linux, first edit the file ‘/etc/sysctl.conf’ after making the changes save the file and run the command ‘sysctl -p’, this command will make the changes permanently without rebooting the machine. |
| 25. What is Puppet Server? | Ans: Puppet is an open-source & enterprise software server for configuration management toll in UNIX like operating system. Puppet is an IT automation software used to push configuration to its clients (puppet agents) using code. Puppet code can do a variety of tasks from installing new software, to check file permissions, or updating user accounts & lots of other tasks. |
| 26. What are manifests in Puppet? | Ans: Manifests in Puppet are the files in which the client configuration is specified. |
| 27. Which Command is used to sign requested certificates in Puppet Server? | Ans: ‘puppetca -sign hostname-of-agent’ in (2.X) & ‘puppet ca sign hostname-of-agent’ in (3.X) |
| 28. How and Where to use Ansible ad-hoc commands? | Ans: Use the following syntax to use ansible ad-hoc command:  # $ ansible [pattern] -m [module] -a <module option>  # $ ansible webservers -m shell -a ‘df -Th’  Ad hoc commands are used for performing quick tasks and tests. We don’t need to write any playbook to run ad-hoc commands on ansible hosts. |
| 29. How to find all the files under /var whose size is more than 200MB? | Ans: With the help of find command, we can list all the filds whose size is more than 200MB,  # $ sudo find /var -type f -size +100M -exec ls -lah {} \; |
| 30.What is load average in Linux? | Ans: Load Average is defined as the average sum of the number of processes waiting in the run queue and number of processes currently executing over the period of 1, 5, and 15 minutes. Using the ‘top’ and ‘uptime’ command we find the load average of a Linux server. |
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