1. What is DevOps?

2. What is Version control system and types?

3. What are types of testing?

4. What is Continoues Integeration?

5. What is Continous Delivery?

6. What are tools used in CI?

7. What are the skills for DevOps Candidate?

8. ls -ltr means?

9. Difference between EXT2, EXT3 and EXT4 File systems?

10. Difference between compiler and interperter languages?

11. What is TOP Command and explanation?

A. **TOP :** The Linux top command is used to show all the running processes within your Linux environment

**Line 1:**

* The time
* How long the computer has been running
* Number of users
* Load average

**Line 2:**

* Total number of tasks
* Number of running tasks
* Number of sleeping tasks
* Number of stopped tasks
* Number of zombie tasks

**Line 3:**

* CPU usage as a percentage by the user
* CPU usage as a percentage by system
* CPU usage as a percentage by low priority processes
* CPU usage as a percentage by idle processes
* CPU usage as a percentage by io wait
* CPU usage as a percentage by hardware interrupts
* CPU usage as a percentage by software interrupts
* CPU usage as a percentage by steal time

**Line 4:**

* Total system memory
* Free memory
* Memory used
* Buffer cache

**Line 5:**

* Total swap available
* Total swap free
* Total swap used
* available memory

**Main table:**

* Process ID
* User
* Priority
* Nice level
* Virtual memory used by process
* Resident memory used by a process
* Shareable memory
* CPU used by process as a percentage
* Memory used by process as a percentage
* Time process has been running
* Command

### Key Switches For The Top Command:

* -h - Show the current version
* -c - This toggles the command column between showing command and program name
* -d - Specify the delay time between refreshing the screen
* -o - Sorts by the named field
* -p - Only show processes with specified process IDs
* -u - Show only processes by the specified user

12. What is Data base and it’s purpose?

13. what is virtualization?

A. Virtualization is a concept that enables us to allow a piece of hardware to run multiple operating system images at the same time. And also provides efficent utilization of hardware

Types of virtualization

I) Network virtualization

II) Storage virtualization

III) Server virtualization

IV) Data virtualization

V) Desktop virtualization

VI) Application virtualization

14. What is Database and it’s purpose?

A: A database is a structured collection of records

Database Management System (DBMS)

– add, remove, update records

– retrieve data that match certain criteria

– cross-reference data in different tables

– perform complex aggregate calculation

15. What is DNS?

A: Domain Name Servers (DNS) are the Internet's equivalent of a phone book. They maintain a directory of domain names and translate them to Internet Protocol (IP) addresses.  
  
This is necessary because, although domain names are easy for people to remember, computers or machines, access websites based on IP addresses.   
  
Information from all the domain name servers across the Internet are gathered together and housed at the Central Registry. Host companies and Internet Service Providers interact with the Central Registry on a regular schedule to get updated DNS information

16. what is portocols? find out default ports for portocols?

**A:** a **protocol** is a standard used to define a method of exchanging data over a computer network such as local area network, Internet, Intranet, etc.

#### Common TCP/IP Protocols and Ports

|  |  |  |  |
| --- | --- | --- | --- |
| Protocol | TCP/UDP | Port Number | Description |
| File Transfer Protocol (FTP)  (RFC 959) | TCP | 20/21 | FTP is one of the most commonly used file transfer protocols on the Internet and within private networks. An FTP server can easily be set up with little networking knowledge and provides the ability to easily relocate files from one system to another. FTP control is handled on TCP port 21 and its data transfer can use TCP port 20 as well as dynamic ports depending on the specific configuration. |
| Secure Shell (SSH)  (RFC 4250-4256) | TCP | 22 | SSH is the primary method used to manage network devices securely at the command level. It is typically used as a secure alternative to Telnet which does not support secure connections. |
| Telnet  (RFC 854) | TCP | 23 | Telnet is the primary method used to manage network devices at the command level. Unlike SSH which provides a secure connection, Telnet does not, it simply provides a basic unsecured connection. Many lower level network devices support Telnet and not SSH as it required some additional processing. Caution should be used when connecting to a device using Telnet over a public network as the login credentials will be transmitted in the clear. |
| Simple Mail Transfer Protocol (SMTP)  (RFC 5321) | TCP | 25 | SMTP is used for two primary functions, it is used to transfer mail (email) from source to destination between mail servers and it is used by end users to send email to a mail system. |
| Domain Name System (DNS)  (RFC 1034-1035) | TCP/UDP | 53 | The DNS is used widely on the public internet and on private networks to translate domain names into IP addresses, typically for network routing. DNS is hieratical with main root servers that contain databases that list the managers of high level Top Level Domains (TLD) (such as .com). These different TLD managers then contain information for the second level domains that are typically used by individual users (for example, cisco.com). A DNS server can also be set up within a private network to private naming services between the hosts of the internal network without being part of the global system. |
| Dynamic Host Configuration Protocol (DHCP)  (RFC 2131) | UDP | 67/68 | DHCP is used on networks that do not use static IP address assignment (almost all of them). A DHCP server can be set up by an administrator or engineer with a poll of addresses that are available for assignment. When a client device is turned on it can request an IP address from the local DHCP server, if there is an available address in the pool it can be assigned to the device. This assignment is not permanent and expires at a configurable interval; if an address renewal is not requested and the lease expires the address will be put back into the poll for assignment. |
| Trivial File Transfer Protocol (TFTP)  (RFC 1350) | UDP | 69 | TFTP offers a method of file transfer without the session establishment requirements that FTP uses. Because TFTP uses UDP instead of TCP it has no way of ensuring the file has been properly transferred, the end device must be able to check the file to ensure proper transfer. TFTP is typically used by devices to upgrade software and firmware; this includes Cisco and other network vendors’ equipment. |
| Hypertext Transfer Protocol (HTTP)  (RFC 2616) | TCP | 80 | HTTP is one of the most commonly used protocols on most networks. HTTP is the main protocol that is used by web browsers and is thus used by any client that uses files located on these servers. |
| Post Office Protocol (POP) version 3  (RFC 1939) | TCP | 110 | POP version 3 is one of the two main protocols used to retrieve mail from a server. POP was designed to be very simple by allowing a client to retrieve the complete contents of a server mailbox and then deleting the contents from the server. |
| Network Time Protocol (NTP)  (RFC 5905) | UDP | 123 | One of the most overlooked protocols is NTP. NTP is used to synchronize the devices on the Internet. Even most modern operating systems support NTP as a basis for keeping an accurate clock. The use of NTP is vital on networking systems as it provides an ability to easily interrelate troubles from one device to another as the clocks are precisely accurate. |
| NetBIOS  (RFC 1001-1002) | TCP/UDP | 137/138/139 | NetBIOS itself is not a protocol but is typically used in combination with IP with the NetBIOS over TCP/IP (NBT) protocol. NBT has long been the central protocol used to interconnect Microsoft Windows machines. |
| Internet Message Access Protocol (IMAP)  (RFC 3501) | TCP | 143 | IMAP version3 is the second of the main protocols used to retrieve mail from a server. While POP has wider support, IMAP supports a wider array of remote mailbox operations which can be helpful to users. |
| Simple Network Management Protocol (SNMP)  (RFC 1901-1908, 3411-3418) | TCP/UDP | 161/162 | SNMP is used by network administrators as a method of network management. SNMP has a number of different abilities including the ability to monitor, configure and control network devices. SNMP traps can also be configured on network devices to notify a central server when specific actions are occurring. Typically, these are configured to be used when an alerting condition is happening. In this situation, the device will send a trap to network management stating that an event has occurred and that the device should be looked at further for a source to the event. |
| Border Gateway Protocol (BGP)  (RFC 4271) | TCP | 179 | BGP version 4 is widely used on the public internet and by Internet Service Providers (ISP) to maintain very large routing tables and traffic processing. BGP is one of the few protocols that have been designed to deal with the astronomically large routing tables that must exist on the public Internet. |
| Lightweight Directory Access Protocol (LDAP)  (RFC 4510) | TCP/UDP | 389 | LDAP provides a mechanism of accessing and maintaining distributed directory information. LDAP is based on the ITU-T X.500 standard but has been simplified and altered to work over TCP/IP networks. |
| Hypertext Transfer Protocol over SSL/TLS (HTTPS)  (RFC 2818) | TCP | 443 | HTTPS is used in conjunction with HTTP to provide the same services but doing it using a secure connection which is provided by either SSL or TLS. |
| Lightweight Directory Access Protocol over TLS/SSL (LDAPS)  (RFC 4513) | TCP/UDP | 636 | Just like HTTPS, LDAPS provides the same function as LDAP but over a secure connection which is provided by either SSL or TLS. |
| FTP over TLS/SSL  (RFC 4217) | TCP | 989/990 | Again, just like the previous two entries, FTP over TLS/SSL uses the FTP protocol which is then secured using either SSL or TLS. |

17. Find out all the outputs are redirect to a file?

A.

18. how to put port number in ssh command in client side?

A: Change the port number in sshd\_config file

ssh vagrant@192.168.0.42 -p 229

19. find out how to add epel repository to yum?

A. By Manually

wget http://download.fedoraproject.org/pub/epel/6/x86\_64/epel-release-6-8.noarch.rpm

rpm -ivh epel-release-6-8.noarch.rpm

By Command:

yum install -y epel-release

20. install group development tools?

A. yum grouplist ===> shows the available group list

yum groupinfo “Development tools” ==> shows the list of available packages in given group

yum groupinstall “Development tools” ==> install the group **um groupinstall "Development tools"**

21. where the run levels file will be saved?

A. /etc/inittab

22. download vsftp package

23. find a file that ends with .xyz and delete those files

24. write a script to print other special variables

25. options for read in scripting?