**General Questions**

**1: What is the difference between Telnet and SSH?**

**Answer:**

Although Telnet and SSH are both communication protocols to

manage a remote system, the SSH is the secured version of the telnet,

and will require key exchange unlike Telnet which sends the data on

clear-text.

**2: When you need to edit a file by a system command (like**

**crontab -e) how do you change the default editor that the system**

**opens the file with to nano?**

**Answer**:

The system will use the editor defined in your EDITOR environment

variable and can be set by *export*EDITOR=*nano*

**3: While using X, you encounter issues and cannot quit the X**

**server, how can you force it to restart? strong>**

**Answer:**

Linux has a solution for restarting X server with the combination of

Alt-Ctrl-Backspace which will force X Restart.

**4: What would be the result of the key combination ALT+9 then**

**pressing m?**

**Answer:**

This would print the letter *m*9 times into your STDIN.

**5: Which TCP ports do you need to keep open for FTP, SSH,**

**SMTP, POP3, HTTP and HTTPS respectively?**

**Answer**:

For the mentioned services you will need to keep the following TCP

ports free: 21, 22, 25, 110, 80, 443.

**6: What is the difference between the commands *ping*and *ping6*?**

**Answer:**

The commands ending with 6 – ping6, traceroute6, tracepath6 have

the same meaning, but are intended to use on  
ipv6 IP addresses.

**7: What does an open mail relay server mean?**

**Answer:**

An Open mail relay server, means that this is a server that everyone

can send emails through it without the need to identify first or be a

part of the domain group.

\*\*\*\*\*

**General Tools**

**8: You want to find all of the “.tmp” files in /home/\* and delete**

**them, how can you do it in a command?**

**Answer:**

First you need to find the files using find, then delete them using rm -

*find /home/ -name ‘\*.tmp’ | xargs rm –rf.*

**9: How can you add an “auto correction” that will automatically**

**fix “cd /homr” to “cd /home”?**

**Answer:**

You can add the option cdspell to your shell options by typing “*shopt*

*-s cdspell*”.

**10: How do you get additional  
information about a command -**

**for example get information about mail?**

**Answer**:

If you want to learn about a command, you can use the commands

*man mail*or *info mail*to learn more about mail.

**11: You are running a crontab command and doesn’t want the**

**command to send an output to the crontab service, how can you**

**handle it?**

**Answer:**

You can send all of the output from the command (STDOUT AND

STDERR) to /dev/null – *commandName 2>&1 >/dev/null*

**12: How can you list the arp cache table of the current machine?**

**Answer:**

You can use the command arp to control and view the arp table.

**13: How can you eject your cdrom drive from the console?**

**Answer:**

In order to eject the cdrom drive, you can use the  
command *eject*.

**14: You see a process “./myApplication” with PID 44556, how can**

**you know where was the file executed from?**

**Answer:**

You can identify the path where the PID was executed by running

*pwdx*44556 and you will get the command executing path as an

output.

**15: You are doing an installation and want to record your**

**commands and outputs for later review, how can you do that?**

**Answer:**

You can use the *script*application for this functionality – type *script -*

*a mysession*.log and it will start recording your terminal to

mysession.log, when you want to exit, type exit.

**16: How can you get a view of the calendar of January 2004 on a**

**Linux console?**

**Answer**:

You can get the view of month/year calendar with the  
command: *cal*

*01 2004*.

**17: You have 100 .txt files in a directory, you want to know in**

**which file you have the string “Error Found”, how can you do it?**

**Answer**:

You will need to use the command “grep” in order to find data in files

*- grep “Error Found” \*.txt*

**18: What command is used to get the IP address(es) of the domain**

**name Google.com in Linux?**

**Answer:**

In order to find the related IP Address(es) of the domain google.com

you can use “*nslookup google.com”*

**19: What will be the outcome of the following command – touch -**

**m myFile?**

**Answer:**

If the file exists, it will only change the *modification time*of the file,

if the file doesn’t exist, it will create it.

**20: Given the directory “  
myImportantFiles” how can you create a**

**tar file “myImportantTar.tar” containing this folder?**

**Answer:**

You need to use the tar command to create a tar file – *tar -cf*

*myImportantTar.tar  myImportantFiles.*

**21: How can you know, without checking the logs, which Kernel**

**version is currently loaded to the system?**

**Answer:**

The *uname*tool allows you to get various system information – to get

only the kernel data, you can use *uname –rsv*.

**22: What is the equivalent of “Norton commander” or “Windows**

**Commander” for Linux console?**

**Answer:**

Linux provides the mc (Midnight Commander) tool to allow the user

to have an interactive interface for file management in Linux Console.

**23: How can you change a password of a different user (john), strong>**

**when you have root access?**

**Answer:**

Using the *passwd*command with the destination username – *passwd*

*john*

**24: How do you make sure that your computer date & time are**

**always aligned?**

**Answer:**

You need to connect your server to an *ntp*server using *ntpd*, or run

manually “*ntptime ntpserver.com”*

**25: You have a tar file (myFile.tar), how do you convert it to a**

**gzip file on best compression?**

**Answer:**

If you need to compress the file on a best compression, you need to

run the command “*gzip -9 myFile.tar*” and it will convert it to

*myFile.tar.gz.*

**26: How can you disable eth1 during runtime?**

**Answer:**

In order to disable a network card, for the current  
runtime , you can

run the command “*ifdown eth1*” or “*ifconfig eth1 down*”.

**27: How can you get the current username that you are logged in**

**with?**

**Answer:**

You can find the user that you are logged in with, using the

commands “*who am I*” or “*whoami*”.

**28: Using the apt-get application, how can you install gcc**

**compiler?**

**Answer:**

The apt-get allows you to download and install new applications like

gcc – *apt-get install gcc*

**29: How do you run the internal “remote-desktop” VNC**

**application on Linux?**

**Answer:**

In order to run the *vncserver*daemon and connect to the server using

a *vncviewer*on port 15000 + vnc instance number (15001,15002).

**30: How can you find all lines starting with the  
word “Error” in**

**the log file “mylog.log”, with a single command?**

**Answer:**

The Linux command look allows you to find only lines beginning

with the provided string – look Error mylog.log

**31: You have a file that you want to randomize its lines and create**

**permutations of it for distinctive file list, how can you create a**

**permutation of the file “myfile” into “mynewfile”?**

**Answer:**

The Linux tool shuf allows you to create permutations of file and

shuffle the lines, which will allow you to create new distinctive files -

shuf myfile > mynewfile.

**32: You have moved a file from one server to another, but you are**

**not sure that the file has been perfectly moved, how can you**

**verify that the file has not been corrupted?**

**Answer:**

You  
can use the *md5sum*tool on both sides (both servers) on the file

and match the result, if it is the same, the file has not been corrupted.

**33: How would you copy the file “file.txt” owned by root using**

**secure ftp from 10.1.1.1 on /root/ to your local folder in one**

**command?**

**Answer:**

You need to use the scp tool (secure copy over sftp) which allows

copying in one line *scp root@10.1.1.1:/root/file.txt ./*

**34: How will you change all the ownership of /home/user1 to**

**user2 (recursively)?**

**Answer:**

You need to use the chown command on the directory – *chown*

*user2:user2 /home/user1 –R.*

**35: How can you check how long is the system running since the**

**last restart and the load average on it?**

**Answer:**

The  
*uptime*command can show you the current time, how long the

system has been running since the last restart, how many users are

currently logged on to the system, and the system load averages in the

resolution of the last 1, 5, and 15 minutes.

**36: How can you check what processes a specified user (tom) is**

**currently running?**

**Answer:**

*ps*command will output the current processes of all or specific users -

*ps -U tom*.

**37: How can you see all the running processes at the system and**

**their resources use on a live auto-refreshing view?**

**Answer:**

*Top*lets you see all the processes in the system and sort them by

resources usage.

**38: What is the tool provided with gzip for decompression?**

**Answer:**

The gzip tool provides another tool *gunzip em>for gzip files*

decompression.

**39: You are waiting for a file to finish upload (newFile.tar.gz) by a**

**user to your directory and you know that the file size is 100M -**

**how can you sample the file every 5 seconds to see if it was**

**changed?**

**Answer:**

You can monitor commands using “*watch -n 5 ‘ls -sh newFile.tar.gz*‘”

and it will give you the output of the command every 5 seconds.

**40: How would you see the contents of a gzip compressed contents**

**without decompressing it first?**

**Answer:**

Using zcat with the following command: *zcat <filename>.gz*

**41: You have found a command on /bin/ that you don’t know**

**what it does, and you want a brief explanation about it, what do**

**you do in order to find it?**

n**Answer:**

You can find a command brief information using: *whatis*

*<command>*

**42: What is the difference between locate and slocate?**

**Answer:**

Unlike locate, which will search the updated results for the file,

*slocate*will look for files that the user have access to.

**43: What does the command locate expecting in order to provide**

**successful results?**

**Answer:**

The command locate relays on the database created by *updatedb*and

will provide results according to the last updated db.

**44: How can you search for the word “FindMe” in all of the “.txt”**

**files in the current directory, recursively?**

**Answer**:

Find . -name “\*.txt” | xargs grep “FindMe”

**45: How can you send a message “Hello everyone” to everyone**

r  
**who is currently connected to the system?**

**Answer:**

If you want to send a message to all of the connected users, you can

use the command “*wall Hello everyone*”.

**46: Create a crontab that will run once a day at 3am and write**

**the output of ls into /tmp/ls\_result (truncate the file) ?**

**Answer:**

a) Edit crontab: crontab -e

b) Add crontab line: 0 3 \* \* \* /bin/ls > /tmp/ls\_result

c) Save crontab.

**47: How do you create a symbolic link between /bin/runme to the**

**new file /bin/runmetoo?**

**Answer:**

You need to use the link tool “ln” in order to create links *- ln -s*

*/bin/runme /bin/runmetoo*.

\*\*\*\*\*

**Advanced Tools**

**48: How can you make the file untouchable.txt to be immutable**

**(un-alterable) so it  
will not be able to be changed or deleted by**

**any user including root?**

**Answer**:

You can use attributes to change the file to be immutable using *chattr*

*+i untouchable.txt.*

**49: How can you run a PHP statement from the command line**

**without creating a file?**

**Answer:**

You can use the PHP interactive input – php -r ‘echo “Hello

World\r\n”;’

**50: How can you find the usage time of all the users on the**

**machine (individually)?**

**Answer:**

You can use the command ac in order to get login information about

users – *ac -p*

**51: How can you use variables as a part of your command? For**

**example, set pipeline=”|” and run *ps aux $pipeline grep root***

**Answer:**

You can  
use the *eval*command to use variables literally – *eval ps aux*

*$pipeline grep root*will be the same as *eval ps aux | grep root*.

**52: You want to create network statistics and graphs for your**

**server, which tool would you use (most common)?**

**Answer:**

The most common network statistics tool is called *mrtg*(Multi Router

Traffic Grapher) and is the most recommended open-source tool.

**53: How can you send the BIOS a query message directly from**

**the command line?**

**Answer:**

In order to query the BIOS, you can send it a message from the

console by using the *biosdecode*tool.

**54: How can you manipulate partitions on a Linux system?**

**Answer:**

Linux provides two applications for partition manipulation – fdisk and

parted.

**55:  
What is the result of the *lsmod*command?**

**Answer:**

The *lsmod*command will show you the status of modules that are

loaded into the Linux kernel , this is a nice way to see /proc/modules.

**56: How can you find your hardware configuration and**

**description of the local machine?**

**Answer:**

Using the DMI table decoder (*dmidecode*) you can see your system

hardware and configuration.

**57: How can you mount an NTFS partition on Linux?**

**Answer:**

You need to use an external application *“ntfs-3g”*also called

*“mount.ntfs”*in order to mount ntfs.

**58: What is the LD\_LIBRARY\_PATH environment variable?**

**Answer:**

It is an environment variable set to give the RT Shared library loader

extra directories to look  
for when searching for shared libraries.

**59: How can you get the Access, Modify and Change date & time**

**of the file “myFile”?**

**Answer:**

In order to get those times, you need to use *stat myFile*and look for

the Access/Modify/Change information.

**60: You want to save the mysql DB “mySQLDB” to a file**

**“mySQLDB.sql”, how can you do it?**

**Answer:**

You can use the mysqldump command to dump a database –

*mysqldump -u username -p mySQLDB > mySQLDB.sql*

**61: How can you prioritize system resources per *running process*?**

**Answer:**

The system allocate and prioritize resources for processes on the

system using *nice*levels, and in order to change the nice of a specific

process, you need to run *renice level <process  
id>*

**62: How can you get the NS records of the domain “google.com”**

**from the terminal command line?**

**Answer:**

The command dig allows you to get specific domain information,

such as A, AAAA, NS, etc’ records – you can use *dig google.com NS.*

**63: You are running a tail -f on /var/log/messages file and looking**

**for specific error, you want only the log that you saw to be printed**

**into a local file “found.log” in order to search it later on a smaller**

**file, how can you do it?**

**Answer:**

The *tee*command allows you to save data from the standard I/O to a

file, you can use it as *tail -f /var/log/messages | tee found.log*and it

will save you only the data that you saw on the tail.

**64: How do you check all the services that start/stop on each**

r  
**runlevel?**

**Answer:**

In order to check the runlevel services information for the run levels

you need to use the chkconfig: *chkconfig –list*.

**65: How can you allow a user to run *superuser*commands without**

**knowing the root password?**

**Answer:**

If you want to allow a user to run *superuser*commands without

having *superuser*(or root) access, you can add him specific (or all)

access using *sudoers*file.

**66: How can you check which libraries are being used and needed**

**for the binary file /bin/vi?**

**Answer:**

Running the tool *“ldd /bin/vi”*will show you the shared libraries

needed to run the binary application /bin/vi.

**67: You want to install a new PERL module, what is the correct**

n**way to do it?**

**Answer:**

PERL has its management console *cpan*that allows you to install new

modules using the command *“install Group::Module”*.

**68: How can you enable jumbo-frame (9000) on a network**

**interface eth0 in Linux?**

**Answer:**

You can use *ifconfig eth0 mtu 9000*, but in order to make it permanent

you will need to add it to the *ifcfg-eth0 file.*

**69: Explain the following command: “*iptables -A OUTPUT -p***

***icmp –icmp-type echo-request -j DROP”***

**Answer:**

The command will add a rule to the iptables that will drop all PING

requests to the server.

**70: What does the wine application does on Linux system?**

**Answer:**

The *wine*application allows you to run windows  
applications on a

Linux server/workstation.

**71: What is the Nagios system?**

**Answer:**

The Nagios is an open-source monitoring tool/application that helps

identify and resolve infrastructure/network problems.

**72: You need to generate a random number in the console, how**

**can you do it without any random application?**

**Answer:**

Generate a number string from the /dev/urandom – *od -N3 -tu2*

*-vAn < /dev/urandom | sed ‘s/ //g’*

**73: You have a very secret file “TOP-SECRET.txt”, which needs**

**to be deleted “for good”, how can you do it?**

**Answer:**

You can use the shred tool to overwrite the file X times so it will not

be able to recover – *shred -n 10 -z TOP-SECRET.txt.*

**74: You are in a directory /home/user/downloaded/ and you want**

n**to share the files in this directory quickly over web without**

**configuring an httpd server, how can you do it with python?**

**Answer:**

The Python script language allows a quick httpd service called

SimpleHTTPServer, and you can share the local directory you’re in

using the command *python -m SimpleHTTPServer*

**75: While running a command interactively, how do you send the**

**command into background?**

**Answer:**

To send a command to the background, click Ctrl+Z, it will send you

to the command line and pause the application, then type *bg*in order

to send that command to background.

**76: How can you compile a regular c application “myprog.c” and**

**create a binary “myprog”?**

**Answer:**

The most common way to compile is with the “gcc” compiler, and in

norder to compile a c file to a binary file you run *gcc myprog.c -o*

*myprog.*

\*\*\*\*\*

**Files Manipulation**

**77: You have an application that creates a log file**

**“myApplication.log” that grows 1GB a day. You want to save only**

**the last 3 days, on 100MB file each, how would you do that?**

**Answer:**

In order to do that task you will need to add a new configuration (/etc/

logrotate.conf) to the logrotate service with 30 files of 100M each

(100M \* 10 day \* 3 days).

**78: Given a file unformattedLetters.txt containing text in the**

**form of “tHiS iS AN UnForMatteD tEXt”, how can you change in**

**one command all the letters to lower case and output it to**

**formattedLetters.txt?**

**Answer:**

You can use the *tr*command to replace letters  
from upper/lower and

vice versa – *cat unformattedLetters.txt | tr “[:lower:]” “[:upper:] >*

*formattedLetters.txt”*.

**79: How would you connect the files first.txt, second.txt and**

**third.txt to one file all.txt?**

**Answer:**

You can *cat*the files together into an output file – *cat first.txt*

*second.txt third.txt > all.txt.*

**80: You have a file (myfriends.txt) with names list, and you want**

**to know how many unique names you have in that file, how can**

**you do that?**

**Answer:**

You can run over the file and count unique names with: *uniq*

*myfriends.txt | wc -l*

**81: You want to run a binary file, you have permissions to it, but**

**it gives you “Access Denied”, what do you need to do?**

**Answer**:  
r

In order to run an application in Linux you need to add executable

permission to the file: in order to change a file mode, you need to use

the chmod with the required parameters – *chmod +x <filename>.*

**82: Given a CSV file “a.csv” , how can you get the first column, of**

**all the rows, into a new file called “result.log”?**

**Answer:**

cat a.csv | awk -F’,’ ‘{print $1}’ >> result.log.

**83: You want to create files 1-100.log with the same text “Hello**

**This is a test” in it, how can you do it?**

**Answer:**

For i in `seq 1 100` ; do echo “Hello this is a test” > $i.log ; done.

**84: You have an xml file (myXML.xml) which is all in one line,**

**how do you convert the xml into a well-formatted XML ?**

**Answer:**

You can manipulate XML files using the “xmllint”  
application *-*

*xmllint –format*myXML.xml.

**85: Given the text file “MyLog.log”, which is written backwards,**

**how can you invert the order of the lines?**

**Answer:**

cat MyLog.log | nl -ba | sort -rn | cut -f2-

**86: How can you find and display *only the differences*between**

**myconfig.new and myconfig.old?**

**Answer:**

In order to find differences, we will use *sdiff,*and in order to see *only*

*the differences*, we will use the -s argument: *sdiff -s myconfig.new*

*myconfig.old*

\*\*\*\*\*

**Linux Understanding**

**87: How can you set KDE to be the default desktop manager?**

**Answer:**

You will need to edit the file */etc/sysconfig/desktop*and add the

following lines:  
n  
DESKTOP=”KDE”

DISPLAYMANAGER=”KDE”

**88: When will you encounter a kernel panic issue?**

**Answer:**

A kernel panic will encounter when the system had found a critical

error like – an error communicating with the hardware or a missing

OS file.

**89: What is an *intrid*image?**

**Answer:**

An *intrid*image is the initial ram disk image that is loaded into the

memory after the POST in order to improve the machine’s I/O

performance; it will contain a temporary root file system.

**90: What is the minimum partitions do you need for a Linux**

**installation?**

**Answer:**

The minimum partitions that you need in order to install a Linux

installation is two(2), root and swap.

**91: What is the recommended size for the swap partition to be**  
n  
**(minimum size) if you have 2GB RAM?**

**Answer**:

The SWAP partition minimum recommended size is RAM\*2 and

never less than 32MB, therefore for 2GB RAM you should have 4GB

SWAP.

**92: How can you add special commands to run after the init**

**process has been completed?**

**Answer:**

In order to add a command that will run after the system finish its

initialization, you can add the command to */etc/rc.local*.

**93: Explain the following statement:**

***ls -lhrS | grep -i $USER | tail -3 | awk ‘{ print $5, $9; }*‘**

**Answer:**

a) List the files (Long list) + human read + reverse + order by size.

b) Grep only lines matching my user name

c) Get the 3 last results

d) Manipulate the string and print the 5th and 9th parameters (size +

file name)

n**94: You want to set global environment and startup programs for**

**all users, where can you set it?**

**Answer:**

The */etc/profile*configuration file holds the global profile parameters

and is inherited by the users on login, you can add your configuration

there.

**95: In which configuration can you set the user prompt**

**automatically to all bash users to look like [user@host][~]#?**

**Answer:**

You can set bash configuration for all the users in the */etc/bashrc*

configuration file.

**96: What would the command “ls -d /root” as a regular user give**

**you as an output?**

**Answer:**

The command will give you an output of information on that specific

directory (-d) this will help you understanding why you don’t have

access to the directory.

**97:  
What would be the result of the command “#reboot now”?**

**Answer:**

The “#” sign states a comment, therefore the command “reboot now”

would be ignored.

**98: What would be the result of the command *“!l”*after running**

***“ls”*then *“id”*then *“who”*?**

**Answer:**

*“!”*will run the latest command matching “l\*” therefore it will run

“ls”

**99: What would be the result of type for?**

**Answer:**

For is a *shell internal command*therefore it will be detected as a *shell*

*keyword*.

**100: How can you identify, using environment variables, which**

**shell are you currently using?**

**Answer:**

The  
system holds your shell name in $SHELL and you can print it

using *echo $SHELL*.

**101: What is the difference between “su root” and “su – root”?**

**Answer:**

When running “su root” you only change the UID and GUID and stay

in the current environment, if you use the minus sign “su – root” you

also initiate his login and inherit his environment which will make the

change user the same as a real login.

**102: What is the difference between the commands “cd /tmp &&**

**pwd” and “(cd /tmp && pwd)”?**

**Answer:**

When running the first command, you will move to the /tmp folder,

and stay there when the command ends, unlike when running the

second command, where you go back to the starting directory.

**103: What are the most common steps in the procedure of**

**installing a source tarball?**

n**Answer:**

a) extract the tarball

b) ./configure

c) make

d) make install

**104: You are working on a demo site “mydomain.cool” which the**

**domain does not exist, but it is configured on your local server**

**apache that runs on the IP 10.10.10.1, how can you change it to**

**work from your local browser?**

**Answer:**

You can add the host “mydomain.cool” to be resolved by your server

by adding the line “10.10.10.1 mydomain.cool” to */etc/hosts*.

**105: In bash shell, how can you change your command prompt of**

**root to look like [User][Host]{path} #**

**Answer:**

You need to change the PS1 environment variable: *export PS1=’[\u]*

*[\h]{\w}# ‘*

**106: How can you delete a file called “–test”?**

**Answer:**

nAs “–test” may be considered as an argument, you need to add “–“

before the fie name: *rm — –test*

**107: You want to change the Message Of The Day, How can you**

**do it?**

**Answer:**

In order to change the Message Of The Day, you need to edit

*/etc/motd.*

**108: What is the minimum memory required in order to run**

**XFree86**

**Answer:**

XFree86 requires the minimum of *8MB*to run.

**109: How do you create a new file system using a command?**

**Answer:**

You can create a new file system with the *mkfs*command.

**110: Which are the valid wildcards in Linux?**

**Answer:**

Linux supports the following wildcards: ? *and \**

**111: How would you send a command into the background?**

**Answer: strong>**

Add Ampersand in the end of the command: i.e. *./run\_file\_exec &*

**112: How do you redirect a command STDERR response into**

**STDOUT**

**Answer:**

In order to direct the STDERR into the STDOUT, you need to add the

redirection parameters to the command – <Command> 2>&1.

**113: What is the difference between `*echo Hello > tmp.log*` and**

**`*echo Hello >> tmp.log*`?**

**Answer:**

When using > you truncate the file and insert a new row, when using

>> you add new line at the end of the file.

**114: What is the limit of a Linux file name?**

**Answer:**

256 Characters.

**115: How do you send a SIGKILL to a process?**

**Answer:**

kill -9 &  
lt;process\_id>

**116: What is a Linux ISO?**

**Answer:**

Downloadable binary file containing a CD/DVD disc image of a

Linux distribution

**117: Given the text “fileone,filetwo,filethree,filefour”, you need to**

**delete all of the .sh files with those names (fileone.shfiletwo.sh…),**

**how can you do it with brace expansion?**

**Answer:**

In order to use brace expansion, you need to add it to take the list and

use it in braces -

rm -f {fileone,filetwo,filethree,filefour}.sh.

**118: You have a scripts directory called /scripts/ and you want to**

**add it temporarily to your executable path, how can you do that?**

**Answer:**

Your executable path are extracted from the environment $PATH, you

can add temporary item to it on the current shell using -

*export*PATH=$PATH:  
/scripts.

**119: If I have configured the parameter TTL in my domain**

**configuration file (named) to 14400, what does it mean?**

**Answer:**

The domain TTL configuration is setting the time which name-servers

querying the name server will cache the results in their DB before

asking the server for new configuration.

14400 seconds is 4 hours.

**120: You want to encrypt and password-protect a password file**

**“mysecret.txt”, how can you do it with GPG and then decrypt it**

**to view the contents?**

**Answer:**

In order to gpg encrypt a file, you type “*gpg -c mysecret.txt*” and

choose your desired password.

In order to decrypt it and view the contents, you type “*gpg -d*

*mysecret.txt.gpg*”

**121: You want to traceroute a remote server with an interactive**

n**interface and fast resolution (more than traceroute), how can you**

**do it?**

**Answer:**

The mtr tool allows you a fast and much more interactive solution for

the server administrator than traceroute.

\*\*\*\*\*

**Server Administration**

**122: How can you find which of the users (residing in /home/) are**

**using the most HD space?**

**Answer:**

You should use the du tool to get the HD usage and find the most

heavy directories – *du -hs /home/\* | sort -nr | head -10*.

**123: How can you change your server timezone to a**

**Europe/France timezone?**

**Answer:**

You need to link the file */usr/share/zoneinfo/Europe/Paris to*

*/etc/localtime*.

**124: How do you change the user tom’s login shell to /bin/sh?**

**Answer: strong>**

You need to use the command *chsh -s /bin/sh tom.*

**125: What is the difference between “kill <PID>” and “kill -9**

**<PID>”?**

**Answer:**

When adding “-9” to the kill command, it tells the PID to exit

immediately instead of exiting in the correct way – cleaning

children/temp/sockets.

**126: How do you add a virtual network interface on eth0 with the**

**ip 10.10.10.1 on class C?**

**Answer:**

You can add virtual interfaces on eth cards that will hold additional

system IPs – ifconfig eth0:0 10.10.10.1 netmask 255.255.255.0.

**127: How can you define the log level of the messages that are**

**written to /var/log/messages?**

**Answer:**

The logs that are being sent to the messages log are being managed by

the syslogd which is configured in */etc/  
syslog.conf.*

**128: How can you turn your Linux server into a router?**

**Answer:**

In order for the Linux server to allow routing, you need to allow ip

forwarding on it by:

*echo “1″ > /proc/sys/net/ipv4/ip\_forward and setting*

*net.ipv4.ip\_forward = 1*in /etc/sysctl.conf

**129: What is the difference between a swap file and a swap**

**partition?**

**Answer:**

A swap file is a local file on your partition and can be used by the

current system, whereas the swap partition is a standalone partition

and can be used by multiple OS.

**130: Given installed RPM file “xinetd-2.3.14-10.el5” how can you**

**know which files on the system belong to this RPM?**

**Answer:**

RPM allows you to query an RPM and identify its files by: *rpm -ql*

*xinetd-2.3.14-10.el5.*  
n  
**131: Given a local file /usr/bin/pstree” on the HD, how can you**

**identify if it came from an RPM?**

**Answer:**

RPM allows you to reverse-query the RPM DB and search its files

by: *rpm -qf /usr/bin/pstree*

**132: What is the LVM and where can you find its configuration?**

**Answer:**

The LVM is the Linux Volume Manager and its configuration is found

under */etc/lvm/lvm.conf.*

**133: How can you get the status of all the services configured on**

**your Linux machine?**

**Answer:**

You can use the service command to stop/start and get information

about the services – *service –status-all.*

**134: How can you change the system library paths?**

**Answer:**

In order to change the system library paths, you need to edit the file

*/etc/  
ld.so.conf*and then run *ldconfig*to reload the changes.

**135: How can you disable all ping responses from the Linux**

**machine?**

**Answer:**

You need to manipulate the ip configuration files – *echo 1 >*

*/proc/sys/net/ipv4/icmp\_echo\_ignore\_all*

**136: You want to force the user john to change his password after**

**90 days, how can you do that?**

**Answer:**

The *chage*tool allows you to force a user to change his password

after X days – *chage -M 90 john*

**137: How can you list all of the USB buses and devices that are**

**connected?**

**Answer:**

You can run the command “*lsusb*” which will give you the bus

information and who is using it.

**138: Your hardware clock and your system clock are not the**

n**same, how can you sync between your system clock and the**

**hardware clock?**

**Answer:**

The hardware clock can be reached by the *hwclock*and in order to

sync them you can use the command *hwclock –systohc*to copy the

system to *hw*to *hwclock –hctosys*to copy the hw to system.

**139: How can you check the status of bad blocks on your hard**

**drive?**

**Answer:**

The *badblocks*application gives you information about the HD bad

blocks – *badblocks -s /dev/sda*

**140: How do you show all the current mounts and their stats?**

**Answer:**

**Using the**command *df -ah*you can get information about your

current mounts including available/used space

**141: How can you check the memory and paging status (free,**

n**used, cached)?**

**Answer**:

Using *free -m*you will get the current memory status, including free,

used, cached both for the physical and swap memory.

**142: How can you get cpu and harddrive activities average**

**report?**

**Answer:**

*iostat*gives you information and averages about your system I/O for

the CPU and HD.

**143: If you want to get statistical information about your server**

**for the previous days, how can you do that?**

**Answer:**

In order to get statistical information about your server, you can use

sar.

**144: How can you get CPU statistics, per CPU or Core?**

**Answer:**

In order to get statistical information, per CPU/Core, you can use

“*mpstat -P ALL*”

**145: How can you find which of the directories (  
top level) on the**

**current directory is the heaviest (kb)?**

**Answer:**

Use du to get the size of each top level dir, and sort it

*du -k –max-depth=1 | sort -nr*

**146: Where does the Linux system save its passwords?**

**Answer:**

The Linux system passwords are encrypted and saved in */etc/shadow*.

**147: You’re using a Linux system and you’re not sure which**

**distribution you’re using right now, how do you check it?**

**Answer:**

In order to find the Linux distro information, you can use: *cat*

*/etc/\*release*

**148: How can you check how many ports are currently being used**

**(listening) on the local machine, and which application is listening**

**on each port?**

**Answer:**

In order to know the listening  
ports and applications, you can check

*netstat*output: *netstat -tupln*

**149: You’ve forgotten the root password, how can you login to**

**your system in order to change it?**

**Answer**:

Reboot the machine and start the Linux in *single mode*, change the

password, and login with the new password.

**150: How can you change the behavior of the Linux DNS search**

**to first look for DNS and only then in the hosts files?**

**Answer:**

Change hosts parameter in /etc/nsswitch.conf from “files dns” to “dns

files”.

**151: How can you find, who was logged in to the system, the**

**dates, and the amount of time they were logged in?**

**Answer:**

In order to find the last users logged in to your system you can use

“last”.

**152: How can you find out which  
process is using the port 80 on**

**your Linux?**

**Answer**:

Fuser 80/tcp –v

**153: Where can you find the following configuration: “%admin**

**ALL=(ALL) ALL”**

**Answer:**

*Sudoers*configuration.

**154: What is the major change between the ext2 and ext3 file**

**systems?**

**Answer:**

The *ext3*contains journaling, unlike the *ext2*.

**155: How can you manipulate incoming and outgoing packets in**

**Linux?**

**Answer:**

Using *iptables*

**156: On a default Linux installation,**

**156: On a default Linux installation, your root UMASK value is**

**022 – what does it mean?**

**Answer:**

UMASK is the file creation permissions mask, by having 022 it

means that a new file will be created as 644 and a  
directory with 755.

**157: Where can you find information about your Linux server**

**CPU?**

**Answer:**

On a Linux system, your server information is kept on */proc/*

You can find the CPU information in */proc/cpuinfo*.

**158: If you want to trace (attach to) a process and trace its system**

**calls and signals (file/memory access), how can you do it?**

**Answer**:

In order to attach to a process, you need to find the process number

and then attach to it with *strace*- i.e.

*strace -p <process\_number>*

**159: How can you dump the server boot messages into a local log**

**file “myboot.log”?**

**Answer:**

The boot messages you need to use the dmesg tool and dump it to

myboot.log

*dmesg > myboot.log.*

**160: Someone is  
trying to hack your system (valid and invalid**

**users), write a command that will show you failed ssh logins to**

**the system and its date & ip as “Jul 8 12:00:00 username**

**192.168.10.10”**

**Answer:**

You can find the failed logins in the secure log, filter by failed logins,

and make a unified line for parsing.

*cat /var/log/secure | grep “Failed password for” | sed ‘s/invalid user//*

*g’ | awk ‘{ print $1,$2,$3,$9,$11; }’*

**161: You have a DNS server and you have updated your**

**configuration – how do you tell the named to reload the**

**configuration with the DNS admin tool?**

**Answer:**

The DNS admin tool is the *rndc*- you can use it to reload the

configuration with – *rndc reload*

**162: What is the difference between the “crontab” and the  
“at”**

**functionality?**

**Answer:**

Crontab (Cron command) is used to schedule a task daily at the same

time (or times) repeatedly, on the other hand, the “at” command is

used to schedule the task only to run only one time.

**163: How can you add a file system (partition) that will be**

**mounted automatically when the Linux is booting?**

**Answer:**

In order to allow automatically mounting of a partition, you will need

to add the partition to your *fstab*under /etc/fstab and provide Label,

mount point, FS Type and options/permissions.

**164: You have decided to add 80.161.161.1 to your DNS servers**

**(for DNS resolving), which file should be edited and what should**

**be added to this file?**

**Answer:**

The */etc/resolv.conf*holds your DNS servers list;  
you need to add a

new line “*nameserver 80.161.161.1*” at the end of the file.

**165: How can you set the eth0 interface to auto-negotiation on?**

**Answer:**

You can use the *ethtool*to configure the eth card:

*ethtool –change eth0 autoneg on.*

**166: How can you display your server routing table (IP view)?**

**Answer:**

You can get a display of your current routing table without resolving

for faster results, by using the command *route –n*.

**167: You want to run the application *heavyapplication*with a low**

**priority so it will not take all the resources from the system and**

**run at the lowest priority there is, how can you do it during the**

**application start?**

**Answer:**

Using the *nice*tool, you  
can start an application with the desired nice

level

*- nice -n 19 heavyapplication.*

**168: How can you change the default init runlevel to 5?**

**Answer:**

In order to change the default init runlevel you need to edit the file

/etc/inittab and change the line starting with “id”

*- “id:5:initdefault:”*

**169: You have an application crashes, but there is no core file**

**created, what should you do?**

**Answer:**

Make sure that the *ulimit -c*is not set to 0, this will disable the

creation of the core dump creation.

**170: The time is 1:00 PM, you have upgraded the kernel and need**

**to reboot, but you won’t be here at night, how can you tell the**

**system to shutdown at 1AM?**

**Answer:**

You can define time to the shutdown command: *shutdown -r 01:  
00*

will reboot at 1AM

**171: How do you check the *seLinux*status?**

**Answer:**

In order to get information about the *seLinux*, you can run the

command *sestatus*and get its current status.

\*\*\*\*\*

**Services and Daemons**

**172: What is the purpose of an exim service on a server?**

**Answer:**

The *exim*service is an SMTP service that can replace the regular

*sendmail*service that comes with the Linux installation.

**173: What solution will you use for a reverse proxy in Linux?**

**Answer:**

In Linux, the two main solutions are Squid and Apache reverse proxy,

the most common is the Squid and it is mostly recommended.

**174: What is the purpose of a NIS server?**

**Answer:**

A NIS server is a  
Network Information Service and it provides the

user the possibility to login to different system with the same

credentials.

**175: If you would like to use the apache tools in order to**

**benchmark your apache service that holds**[**http://www.google.com**](http://www.google.com/)**using**

**5 concurrent requests over 20 overall requests, what tool would**

**you use and how?**

**Answer:**

You can use the ab (*apache benchmarking*) tool on *localhost*

*- ab Http://google.com -n 20 -c 5.*

**176: What does each of the error codes 200, 300, 400 and 500 in**

**apache mean?**

**Answer:**

2xx are successful requests, 3xx are redirection, 4xx are client error

and 5xx are server error codes.

**177: Create a new Apache VirtualHost configuration for the host**

[**http://www.google.com**](http://www.google.com/)**that sits at /home/google/  
public\_html/ and**

**default logs on /var/log/httpd/**

**Answer:**

*<VirtualHost \*:80>*

*DocumentRoot /home/google/public\_html*

*ServerName*[*http://www.google.com*](http://www.google.com/)

*ServerAlias google.com*

*CustomLog /var/log/httpd/google.com.log combined*

*ErrorLog /var/log/httpd/google.com.error.log*

*</VirtualHost>*

**178: How do you stop the Apache HTTPD service, through its**

**control script?**

**Answer:**

The apache control script is called *apachectl*and you can stop the

apache using *“apachectl stop”*

**179: How can you enable, on a default Linux installation, root**

**remote access through SSH?**

**Answer:**

Edit ssh configuration on /etc/ssh/sshd\_config and enable Root by

changing “PermitRootLogin” to “yes”.  
r

**180: What is the difference between *“apachectl restart”*and**

**“*apachectl graceful*”?**

**Answer:**

*apachectl restart*will force the Apache to stop all its processes and

restart the service, the *apachectl graceful*will “advise” the httpd

processes to restart only after the finish their current work.

**181: How can you add the service sshd to start when starting at**

**INIT level 3?**

**Answer:**

You need to use the chkconfig tool in order to change the runlevel

parameters:

*chkconfg –level 3 sshd on.*

**182: How can you dump all the packets of http traffic into**

**http.out?**

**Answer:**

In order to capture network traffic, we should use tcpdump.

*tcpdump tcp  
port 80 -s0 -w http.out.*

**183: You want to check a slow download from a remote server to**

**check long download sessions, how can you do it?**

**Answer:**

In order to download a file and be able to cap your connection you

can use the *wget*network limitation option:

*wget*[*http://test.com/bigfile.zip*](http://test.com/bigfile.zip)*–limit-rate=10k.*

**184: How can you check the mail queue of an exim mail server?**

**Answer:**

The exim mail server allows a quick and clean command to view the

mail queue – *mailq.*

**185: How do you configure the nfs exports/mounts of your**

**machine?**

**Answer:**

The /etc/export allows you to create *nfs*exports and expose them to

the world.

\*\*\*\*\*

**Scripts**

**186: How can you create a script that will wait for specific  
output**

**and will act according to it? – for instance, wait for “username:”**

**before sending the username.**

**Answer:**

Linux provides a tool that “expects” a specific string and sending new

commands in response which called *“expect”.*

**187: You want to add logger to your script, how can you send**

**logging messages to the /var/log/messages for your script**

**“MyCoolScript”?**

**Answer:**

If you want to write to the messages file, you can use the logger tool

which is the syslogd api and send log messages *- logger -t*

*MyCoolScript Starting Application*….

**188: Using perl, write a command that will print all the IPs,**

**Bcasts and Masks configured on the server line by line.**

**Answer:**

You need to extract the IPs from the  
ifconfig first, then run on each

line and get the required information -

*ifconfig -a | perl -n -l -e ‘/ addr:([^ ].+)/ and print $1*‘

**189: Write a shell script that checks if a file (as an argument) has**

**write permissions – if its available print “write access approved”**

**else print “no write access”.**

**Answer:**

*#!/bin/bash*

*filename =”$1″*

*if [ -w "$filename" ]*

*then*

*echo “write access approved”*

*else*

*echo “no write access”;*

*fi*

**190: You have a bash script that does not produce the expected**

**result, how can you debug it?**

**Answer**:

In order to debug a bash shell script, you need to add “-x” to the shell

execute line – *“#!/bin/bash -x”*

**191: You have a regular user access  
to a server, with no root**

**permissions, but you need to create a script that requires root**

**permissions to run – how can you manipulate the system to think**

**that you have root permissions, without a real superuser access?**

**Answer:**

Linux provides a tool called *fakeroot*that allows you to run a “fake

root shell” that will present you as root and your id as 0, this will

make the system believe that you have root access for the current run.

**192: Write a script that receives one parameters (file name) and**

**checks if the file exists or not – If it does, print “Roger that!” else,**

**print “Huston we’ve got a problem!”**

**Answer:**

*#!/bin/bash*

*FILE=$1*

*if [ -f $FILE ];*

*then*

*echo “Roger that!”*

*else*

n*echo “Huston we’ve got a problem”*

*fi*

**193: Write a script that checks if a file, given as an argument, has**

**more than 10 lines or not, if it does – print “Over 10”, else print**

**“Less than 10”**

**Answer:**

*#!/bin/bash*

*count=`cat $1 | wc -l`*

*if [ "$count" -gt "10" ] ;*

*then*

*echo “Over 10″*

*else*

*echo “Less than 10″*

*fi*

**194: You want to create a backup script called “backupMyFiles”**

**and it will run every hour, how do you make sure that your script**

**is not already running when you run the script – write a short**

**script that will handle this issue and exit with the message**

**“Previous <command> is still running” in case the script is still in**

**the  
background.**

**Answer:**

You need to check if your script is currently running in the system -

you can do it with *ps*

*#!/bin/bash*

*cmd=namedScript*

*runningProcs=`ps –no-headers -C${cmd}`*

*count=`echo $runningProcs|wc -l`*

*if [ $count -gt 1 ]; then*

*echo “Previous $cmd is still running.”*

*exit 1*

*fi*

**195: create a Fibonacci function (Fn=Fn-1+Fn-2) using awk (until**

**F20).**

**Answer:**

*awk ‘BEGIN {*

*fa=1;*

*fb=1;*

*while(++i<=20)*

*{*

*print fa;*

*ft=fa;*

*fa=fa+fb;*

*fb=ft*

*};*

*exit}’*

**196: Write a script that will go over all the users on the system**

**and will write the last login  
date of the user – if we don’t have**

**information about the last login, write “No data for <username>”**

**Answer:**

*#!/bin/sh*

*for i in `cat /etc/passwd | awk -F: ‘{print $1; }’` ;*

*do*

*last=`last $i | head -n 1`;*

*if [ "$last" != "" ];*

*then*

*echo `last $i | head -n 1`;*

*else*

*echo “No data for $i”*

*fi*

*done*

**197: How can you check what are the most common commands**

**that you have used in the Linux shell?**

**Answer:**

You can get this information from the history command and sort it by

most used – *history | awk ‘{h[$2]++}END{for(c in h){print h[c] ” “*

*c}}’ | sort -nr | head.*

**198: Write a script that goes to**[***http://www.whatismyip.org/***](http://www.whatismyip.org/)**strong>and**

**writes “Your IP is: <Result from site>”.**

**Answer:**

#!/bin/sh

ip=`links –source <http://www.whatismyip.org/>`

echo -n “Your IP is: ”

echo $ip

**199: Create a small calculator in bash script which will have an**

**internal function “dosomething” that will receive a math function**

**as an input – mycalc 4+4\*4.**

**Answer**:

*#!/bin/bash*

*function dosomething*

*{*

*echo “${1}”|bc -l;*

*}*

*dosomething $1*

**200: Create a script called Kill User Procs that will get a username**

**as an input and will kill all his processes.**

**Answer:**

*#!/bin/bash*

*kill -9 `ps aux|awk -v var=$1 ‘$1==var { print $2 }’`*

\*\*\*\*\*

**HR Questions**

Review these typical interview questions and think about how you

would answer them. Read the answers listed; you will find best

possible answers along with strategies and suggestions.

\*\*\*\*\*

**1: Tell me about yourself.**

**Answer:**

The most often asked question in interviews. You need to have a short

statement prepared in your mind. Keep your answer to one or two

minutes. Don’t ramble. Be careful that it does not sound rehearsed.

Limit it to work-related items unless instructed otherwise. Talk about

things you have done and jobs you have held that relate to the

position you are interviewing for. Start with the item farthest back and

work up to the present (If you have a profile or personal statement(s)

at the top of your CV use this as your starting point).

**2: Why did you leave your last job?**

**Answer:**

Stay positive regardless of the  
circumstances. Never refer to a major

problem with management and never speak ill of supervisors, coworkers

or the organization. If you do, you will be the one looking

bad. Keep smiling and talk about leaving for a positive reason such as

an opportunity, a chance to do something special or other forwardlooking

reasons.

**3: What experience do you have in this field?**

**Answer:**

Speak about specifics that relate to the position you are applying for.

If you do not have specific experience, get as close as you can.

**4: Do you consider yourself successful?**

**Answer:**

You should always answer yes and briefly explain why. A good

explanation is that you have set goals, and you have met some and are

on track to achieve the others.

**5: What do co-workers say about you?**

**Answer:**

Be prepared with a quote or two  
from co-workers. Either a specific

statement or a paraphrase will work. Bill Smith, a co-worker at Clarke

Company, always said I was the hardest worker’s he had ever known.

It should be as powerful as Bill having said it at the interview himself.

**6: What do you know about this organization?**

**Answer:**

This question is one reason to do some research on the organization

before the interview. Research the company’s products, size,

reputation, Image, goals, problems, management style, skills, History

and philosophy. Be informed and interested. Find out where they have

been and where they are going. What are the current issues and who

are the major players?

**7: What have you done to improve your knowledge in the last**

**year?**

**Answer:**

Try to include improvement activities that relate to the job. A wide

variety of activities can  
be mentioned as positive self-improvement.

Have some good ones handy to mention.

**8: Are you applying for other jobs?**

**Answer:**

Be honest but do not spend a lot of time in this area. Keep the focus

on this job and what you can do for this organization. Anything else is

a distraction.

**9: Why do you want to work for this organization?**

**Answer:**

This may take some thought and certainly, should be based on the

research you have done on the organization. Sincerity is extremely

important here and will easily be sensed. Relate it to your long-term

career goals. Never talk about what you want; first talk about their

Needs. You want to be part of an exciting forward-moving company.

You can make a definite contribution to specific company goals.

**10: Do you know anyone who works for us?**

**Answer:**

Be aware of  
the policy on relatives working for the organization. This

can affect your answer even though they asked about friends not

relatives. Be careful to mention a friend

only if they are well thought of.

**11: What kind of salary do you need?**

**Answer:**

A loaded question! A nasty little game that you will probably lose if

you answer first. So, do not answer it. Instead, say something like,

that’s a tough question. Can you tell me the range for this position? In

most cases, the interviewer, taken off guard, will tell you. If not, say

that it can depend on the details of the job. Then give a wide range.

**12: Are you a team player?**

**Answer:**

You are, of course, a team player. Be sure to have examples ready.

Specifics that show you often perform for the good of the team rather

than for yourself is good evidence of your team attitude. Do not brag;

njust say it in a matter-of-fact tone. This is a key point.

**13: How long would you expect to work for us if hired?**

**Answer:**

Specifics here are not good. Something like this should work:

I’d like it to be a long time. Or As long as we both feel I’m doing a

good job.

**14: Have you ever had to fire anyone? How did you feel about**

**that?**

**Answer:**

This is serious. Do not make light of it or in any way seem like you

like to fire people. At the same time, you will do it when it is the right

thing to do. When it comes to the organization versus the individual

who has created a harmful situation, you will protect the organization.

Remember firing is not the same as layoff or reduction in force.

**15: What is your philosophy towards work?**

**Answer:**

The interviewer is not looking for a long or  
flowery dissertation here.

Do you have strong feelings that the job gets done? Yes. That’s the

type of answer that works best here. Keep it short and positive,

showing a benefit to the organization.

**16: If you had enough money to retire right now, would you?**

**Answer:**

Answer yes if you would. But since you need to work, this is the type

of work you prefer. Do not say yes if you do not mean it.

**17: Have you ever been asked to leave a position?**

**Answer:**

If you have not, say no. If you have, be honest, brief and avoid saying

negative things about the people or organization involved.

**18: Explain how you would be an asset to this organization.**

**Answer**:

You should be anxious for this question. It gives you a chance to

highlight your best points as they relate to the position being

discussed. Give a little  
advance thought to this relationship.

**19: Why should we hire you?**

**Answer:**

Point out how your assets meet what the organization needs. Also

mention about your knowledge, experience, abilities, and skills.

Never mention any other candidates to make a comparison.

**20: Tell me about a suggestion you have made.**

**Answer:**

Have a good one ready. Be sure and use a suggestion that was

accepted and was then considered successful. One related to the type

of work applied for is a real plus.

**21: What irritates you about co-workers?**

**Answer:**

This is a trap question. Think real hard but fail to come up with

anything that irritates you. A short statement that you seem to get

along with folks is great.

**22: What is your greatest strength?**

**Answer:**

Numerous answers are good,  
just stay positive. A few good examples:

Your ability to prioritize, Your problem-solving skills, Your ability to

work under pressure, Your ability to focus on projects, Your

professional expertise, Your leadership skills, Your positive attitude

**23: Tell me about your dream job or what are you looking for in a**

**job?**

**Answer:**

Stay away from a specific job. You cannot win. If you say the job you

are contending for is it, you strain credibility. If you say another job is

it, you plant the suspicion that you will be dissatisfied with this

position if hired. The best is to stay genetic and say something like: A

job where I love the work, like the people, can contribute and can’t

wait to get to work.

**24: Why do you think you would do well at this job?**

**Answer:**

Give several reasons and include skills, experience and interest.

r  
**25: What do you find the most attractive about this position**

**(Least attractive)?**

**Answer:**

a) List a couple of attractive factors such as the responsibility the post

offers and the opportunity to work with experienced teams that have a

reputation for innovation and creativity.

b) Say you’d need more information and time before being able to

make a judgment on any unattractive aspects.

**26: What kind of person would you refuse to work with?**

**Answer**:

Do not be trivial. It would take disloyalty to the organization,

violence or lawbreaking to get you to object. Minor objections will

label you as a whiner.

**27: What is more important to you: the money or the work?**

**Answer:**

Money is always important, but the work is the most important. There

is no better answer.

**28: What  
would your previous supervisor say your strongest**

**point is?**

**Answer:**

There are numerous good possibilities:

Loyalty, Energy, Positive attitude, Leadership, Team player,

Expertise, Initiative, Patience, Hard work, Creativity, Problem solver.

**29: Tell me about a problem you had with a supervisor.**

**Answer:**

Biggest trap of all! This is a test to see if you will speak ill of your

boss. If you fall for it and tell about a problem with a former boss,

you may well below the interview right there. Stay positive and

develop a poor memory about any trouble with a supervisor.

**30: What has disappointed you about a job?**

**Answer:**

Don’t get trivial or negative. Safe areas are few but can include:

Not enough of a challenge. You were laid off in a reduction Company

did not win a contract, which would have  
given you more

responsibility.

**31: Tell me about your ability to work under pressure.**

**Answer:**

You may say that you thrive under certain types of pressure. Give an

example that relates to the type of position applied for.

**32: Do your skills match this job or another job more closely?**

**Answer:**

Probably this one! Do not give fuel to the suspicion that you may

want another job more than this one.

**33: What motivates you to do your best on the job?**

**Answer:**

This is a personal trait that only you can say, but good examples are:

Challenge, Achievement, and Recognition.

**34: Are you willing to work overtime? Nights? Weekends?**

**Answer**:

This is up to you. Be totally honest.

**35: How would you know you were successful on this job?**

**Answer: strong>**

Several ways are good measures:

You set high standards for yourself and meet them. Your outcomes are

a success. Your boss tells you that you are successful and doing a

great job.

**36: Would you be willing to relocate if required?**

**Answer:**

You should be clear on this with your family prior to the interview if

you think there is a chance it may come up. Do not say yes just to get

the job if the real answer is no. This can create a lot of problems later

on in your career. Be honest at this point. This will save you from

future grief.

**37: Are you willing to put the interests of the organization ahead**

**of your own?**

**Answer:**

This is a straight loyalty and dedication question. Do not worry about

the deep ethical and philosophical implications. Just say yes.

**38: Describe your management style.**  
n  
**Answer:**

Try to avoid labels. Some of the more common labels, like

progressive, salesman or consensus, can have several meanings or

descriptions depending on which management expert you listen to.

The situational style is safe, because it says you will manage

according to the situation, instead of one size fits all.

**39: What have you learned from mistakes on the job?**

**Answer:**

Here you have to come up with something or you strain credibility.

Make it small, well intentioned mistake with a positive lesson

learned. An example would be, working too far ahead of colleagues

on a project and thus throwing coordination off.

**40: Do you have any blind spots?**

**Answer:**

Trick question! If you know about blind spots, they are no longer

blind spots. Do not reveal any personal areas of concern here. Let

them do their own  
discovery on your bad points. Do not hand it to

them.

**41: If you were hiring a person for this job, what would you look**

**for?**

**Answer:**

Be careful to mention traits that are needed and that you have.

**42: Do you think you are overqualified for this position?**

**Answer:**

Regardless of your qualifications, state that you are very well

qualified for the position you’ve been interviewed for.

**43: How do you propose to compensate for your lack of**

**experience?**

**Answer:**

First, if you have experience that the interviewer does not know

about, bring that up: Then, point out (if true) that you are a hard

working quick learner.

**44: What qualities do you look for in a boss?**

**Answer:**

Be generic and positive. Safe qualities are knowledgeable, a  
sense of

humor, fair, loyal to subordinates and holder of high standards. All

bosses think they have these traits.

**45: Tell me about a time when you helped resolve a dispute**

**between others.**

**Answer:**

Pick a specific incident. Concentrate on your problem solving

technique and not the dispute you settled.

**46: What position do you prefer on a team working on a project?**

**Answer:**

Be honest. If you are comfortable in different roles, point that out.

**47: Describe your work ethic.**

**Answer:**

Emphasize benefits to the organization. Things like, determination to

get the job done and work hard but enjoy your work are good.

**48: What has been your biggest professional disappointment?**

**Answer:**

Be sure that you refer to something that was beyond your control.

r  
Show acceptance and no negative feelings.

**49: Tell me about the most fun you have had on the job.**

**Answer**:

Talk about having fun by accomplishing something for the

organization.

**50: What would you do for us? (What can you do for us that**

**someone else can’t?)**

**Answer:**

a) Relate past experiences that represent success in Working for your

previous employer.

b) Talk about your fresh perspective and the relevant experience you

can bring to the company.

c) Highlight your track record of providing creative, Workable

solutions.

**51: Do you have any questions for me?**

**Answer:**

Always have some questions prepared. Questions prepared where you

will be an asset to the organization are good. How soon will I be able

to be productive? What type of projects will I be able to assist on?  
r

And Finally Good Luck!

\*\*\*\*\*

**INDEX**

**Linux System Administrator Questions**

**General Questions**

1: What is the difference between telnet and SSH?

2: When you need to edit a file by a system command (like *crontab -*

*e*) how do you change the default editor that the system opens the file

with to nano?

3: While using X, you encounter issues and cannot quit the X server,

how can you force it to restart?

4: What would be the result of the key combination *ALT+9*then

pressing m?

5: Which TCP ports do you need to keep open for FTP, SSH, SMTP,

POP3, HTTP and HTTPS respectively?

6: What is the difference between the commands *ping*and *ping6?*

7: What does an open mail relay server means?

**General Tools**

8: You want to find all of the “.tmp” files in /home/\* and delete them,

how can  
you do it in a command?

9: How can you add an “auto correction” that will automatically fix

“cd /homr” to “cd /home”?

10: How do you get additional information about a command – for

example get information about *mail*?

11: You are running a crontab command and doesn’t want the

command to send an output to the crontab service, how can you

handle it?

12: How can you list the arp cache table of the current machine?

13: How can you eject your cdrom drive from the console?

14: You see a process “./myApplication” with PID 44556, how can

you know where was the file executed from?

15: You are doing an installation and want to record your commands

and outputs for later review, how can you do that?

16: How can you get a view of the calendar of January 2004 on a

Linux console?

17: You have 100 .txt files in a directory, you want to know in which

file you have the string “Error Found”, how can  
you do it?

18: What command is used to get the IP address(es) of the domain

name Google.com in Linux?

19: What will be the outcome of the following command – touch -m

myFile?

20: Given the directory “myImportantFiles” how can you create a tar

file “myImportantTar.tar” containing this folder?

21: How can you know, without checking the logs, which Kernel

version is currently loaded to the system?

22: What is the equivalent of “Norton commander” or “Windows

Commander” for Linux console?

23: How can you change a password of a different user (john), when

you have root access?

24: How do you make sure that your computer date & time are always

aligned?

25: You have a tar file (myFile.tar), how do you convert it to a gzip

file on best compression?

26: How can you disable eth1 during runtime?

27: How can you get the current username that you are logged in

with?

28: Using the  
apt-get application, how can you install gcc compiler?

29: How do you run the internal “remote-desktop” VNC application

on Linux?

30: How can you find all lines *starting*with the word “Error” in the

log file “mylog.log”, with a single command?

31: You have a file that you want to randomize its lines and create

permutations of it for distinctive file list, how can you create a

permutation of the file “myfile” into “mynewfile”?

32: You have moved a file from one server to another, but you are not

sure that the file has been perfectly moved, how can you verify that

the file has not been corrupted?

33: How would you copy the file “file.txt” owned by root using

secure ftp from 10.1.1.1 on /root/ to your local folder in one

command?

34: How will you change all the ownership of /home/user1 to user2

(recursively)?

35: How can you check how long is the system running since the last

restart  
and the load average on it?

36: How can you check what processes a specified user (tom) is

currently running?

37: How can you see all the running processes at the system and their

resources use on a live auto-refreshing view?

38: What is the tool provided with gzip for decompression?

39: You are waiting for a file to finish upload (newFile.tar.gz) by a

user to your directory and you know that the file size is 100M – how

can you sample the file every 5 seconds to see if it was changed?

40: How would you see the contents of a gzip compressed contents

without decompressing it first?

41: You have found a command on /bin/ that you don’t know what it

does, and you want a brief explanation about it, what do you do in

order to find it?

42: What is the difference between *locate*and *slocate*?

43: What does the command *locate*expecting in order to provide

successful results?

n44: How can you search for the word “FindMe” in all of the “.txt”

files in the current directory, recursively?

45: How can you send a message “Hello everyone” to everyone who

is currently connected to the system?

46: Create a crontab that will run once a day at 3am and write the

output of ls into /tmp/ls\_result (truncate the file) ?

47: How do you create a symbolic link between /bin/runme to the

new file /bin/runmetoo?

**Advanced Tools**

48: How can you make the file untouchable.txt to be immutable (unalterable)

so it will not be able to be changed or deleted by any user

including root?

49: How can you run a PHP statement from the command line

without creating a file?

50: How can you find the usage time of all the users on the machine

(individually)?

51: How can you use variables as a part of your command? For

example, set pipeline=”|” and run *ps aux $pipeline grep root em>*

52: You want to create network statistics and graphs for your server,

which tool would you use (most common)?

53: How can you send the BIOS a query message directly from the

command line?

54: How can you manipulate partitions on a Linux system?

55: What is the result of the *lsmod*command?

56: How can you find your hardware configuration and description of

the local machine?

57: How can you mount an NTFS partition on Linux?

58: What is the LD\_LIBRARY\_PATH environment variable?

59: How can you get the Access, Modify and Change date & time of

the file “myFile”?

60: You want to save the mysql DB “mySQLDB” to a file

“mySQLDB.sql”, how can you do it?

61: How can you prioritize system resources per *running process*?

62: How can you get the NS records of the domain “google.com”

from the terminal command line?

63: You are running a tail -f on /var/log/messages file and  
looking for

specific error, you want only the log that you saw to be printed into a

local file “found.log” in order to search it later on a smaller file, how

can you do it?

64: How do you check all the services that start/stop on each

runlevel?

65: How can you allow a user to run superuser commands without

knowing the root password?

66: How can you check which libraries are being used and needed for

the binary file /bin/vi?

67: You want to install a new PERL module, what is the correct way

to do it?

68: How can you enable jumbo-frame (9000) on a network interface

eth0 in Linux?

69: Explain the following command: “*iptables -A OUTPUT -p icmp*

*–icmp-type echo-request -j DROP*”

70: What does the *wine*application does on Linux system?

71: What is the Nagios system?

72: You need to generate a random number in the console, how can

you do it without any random  
application?

73: You have a very secret file “TOP-SECRET.txt”, which needs to be

deleted “for good”, how can you do it?

74: You are in a directory /home/user/downloaded/ and you want to

share the files in this directory quickly over web without configuring

an *httpd*server, how can you do it with python?

75: While running a command interactively, how do you send the

command into background?

76: How can you compile a regular c application “myprog.c” and

create a binary “myprog”?

**Files Manipulation**

77: You have an application that creates a log file“myApplication.log”

that grows 1GB a day. You want to save only the last 3 days, on

100MB file each, how would you do that?

78: Given a file unformattedLetters.txt containing text in the form of

“tHiS iS AN UnForMatteD tEXt”, how can you change in one

command all the letters to lower case and output it to

formattedLetters.  
txt?

79: How would you connect the files first.txt, second.txt and third.txt

to one file all.txt?

80: You have a file (myfriends.txt) with names list, and you want to

know how many unique names you have in that file, how can you do

that?

81: You want to run a binary file, you have permissions to it, but it

gives you “Access Denied”, what do you need to do?

82: Given a CSV file “a.csv” , how can you get the first column, of all

the rows, into a new file called “result.log”?

83: You want to create files 1-100.log with the same text “Hello This

is a test” in it, how can you do it?

84: You have an xml file (myXML.xml) which is all in one line, how

do you convert the xml into a well-formatted XML?

85: Given the text file “MyLog.log”, which is written backwards, how

can you invert the order of the lines?

86: How can you find and display *only the differences*between

myconfig.new and  
myconfig.old?

**Linux Understanding**

87: How can you set KDE to be the default desktop manager?

88: When will you encounter a kernel panic issue?

89: what is an intrid image?

90: What is the minimum partitions do you need for a Linux

installation?

91: What is the recommended size for the swap partition to be

(minimum size) if you have 2GB RAM?

92: How can you add special commands to run after the init process

has been completed?

93: Explain the following statement: *ls -lhrS | grep -i $USER | tail -3*

*| awk ‘{ print $5, $9; }*‘

94: You want to set global environment and startup programs for all

users, where can you set it?

95: In which configuration can you set the user prompt automatically

to all bash users to look like [user@host][~]#?

96: What would the command “ls -d /root” as a regular user give you

as an output?

97: What would be the result  
of the command “#reboot now”?

98: What would be the result of the command *“!l*” after running “*ls*”

then “*id*” then “*who”*?

99: what would be the result of *type for*?

100: How can you identify, using environment variables, which shell

are you currently using?

101: What is the difference between “su root” and “su – root”?

102: What is the difference between the commands “cd /tmp &&

pwd” and “(cd /tmp && pwd)”?

103: What are the most common steps in the procedure of installing a

source tarball?

104: You are working on a demo site “mydomain.cool” which the

domain does not exist, but it is configured on your local server apache

that runs on the IP 10.10.10.1, how can you change it to work from

your local browser?

105: In bash shell, how can you change your command prompt of root

to look like [User][Host]{path} #

106: How can you delete a  
file called “–test”?

107: You want to change the Message Of The Day, How can you do

it?

108: What is the minimum memory required in order to run XFree86

109: How do you create a new file system using a command?

110: Which are the valid wildcards in Linux?

111: How would you send a command into the background?

112: How do you redirect a command STDERR response into

STDOUT

113: What is the difference between `*echo Hello > tmp.log*` and `*echo*

*Hello >> tmp.log*`?

114: What is the limit of a Linux file name?

115: How do you send a SIGKILL to a process?

116: What is a Linux ISO?

117: Given the text “fileone,filetwo,filethree,filefour”, you need to

delete all of the .sh files with those names (fileone.sh filetwo.sh…),

how can you do it with brace expansion?

118: You have a scripts directory called /scripts/ and you want to add

it temporarily to your  
executable path, how can you do that?

119: If I have configured the parameter TTL in my domain

configuration file (named) to 14400, what does it mean?

120: You want to encrypt and password-protect a password file

“mysecret.txt”, how can you do it with GPG and then decrypt it to

view the contents?

121: You want to traceroute a remote server with an interactive

interface and fast resolution (more than traceroute) how can you do

it?

**Server Administration**

122: How can you find which of the users (residing in /home/) are

using the most HD space?

123: How can you change your server timezone to a Europe/France

timezone?

124: How do you change the user tom’s login shell to /bin/sh?

125: What is the difference between “kill <PID>” and “kill -9

<PID>”?

126: How do you add a virtual network interface on eth0 with the ip

10.10.10.1 on class C?

127: How can you  
define the log level of the messages that are

written to /var/log/messages?

128: How can you turn your Linux server into a router?

129: What is the difference between a swap file and a swap partition?

130: Given installed RPM file “xinetd-2.3.14-10.el5” how can you

know which files on the system belongs to this rpm?

131: Given a local file /usr/bin/pstree” on the HD, how can you

identify if it came from an RPM?

132: What is the LVM and where can you find its configuration?

133: How can you get the status of all the services configured on your

Linux machine?

134: How can you change the system library paths?

135: How can you disable all ping responses from the Linux

machine?

136: You want to force the user john to change his password after 90

days, how can you do that?

137: How can you list all of the USB buses and devices that are

connected?

138: Your hardware clock and your system  
clock are not the same,

how can you sync between your system clock and the hardware

clock?

139: How can you check the status of bad blocks on your hard drive?

140: How do you show all the current mounts and their stats?

141: How can you check the memory and paging status (free, used,

cached)?

142: How can you get cpu and harddrive activities average report?

143: If you want to get statistical information about your server for

the previous days, how can you do that?

144: How can you get CPU statistics, per CPU or Core?

145: How can you find which of the directories (top level) on the

current directory is the heaviest (kb).

146: Where does the Linux system save its passwords?

147: You’re using a Linux system and you’re not sure which

distribution you’re using right now, how do you check it.

148: How can you check how many ports are currently being used

(listening) on the local machine, and  
which application is listening on

each port?

149: You’ve forget the root password, How can you login to your

system in order to change it?

150: How can you change the behavior of the Linux DNS search to

first look for DNS and only then in the hosts files?

151: How can you find, who was logged in to the system, the dates,

and the amount of time they were logged in?

152: How can you find out which process is using the port 80 on your

Linux?

153: Where can you find the following configuration: “%admin

ALL=(ALL) ALL”

154: What is the major change between the ext2 and ext3 file

systems?

155: How can you manipulate incoming and outgoing packets in

Linux?

156: On a default Linux installation, your root UMASK value is 022 -

what does it mean?

157: Where can you find information about your Linux server CPU?

158: If you want to trace (attach to) a process and trace its system

ncalls and signals (file/memory access), how can you do it?

159: How can you dump the server boot messages into a local log file

“myboot.log”

160: Someone is trying to hack your system (valid and invalid users),

write a command that will show you failed ssh logins to the system

and its date & ip as “Jul 8 12:00:00 username 192.168.10.10”

161: You have a DNS server and you have updated your configuration

- how do you tell the named to reload the configuration with the DNS

admin tool?

162: What is the difference between the “crontab” and the “at”

functionality?

163: How can you add a file system (partition) that will be mounted

automatically when the Linux is booting?

164: You have decided to add 80.161.161.1 to your DNS servers (for

DNS resolving), which file should be edited and what should be

added to this file?

165: How can you set the eth0 interface to auto-negotiation on?

166: How  
can you display your server routing table (IP view)?

167: You want to run the application *heavyapplication*with a low

priority so it will not take all the resources from the system and run at

the lowest priority there is, how can you do it during the application

start?

168: How can you change the default init runlevel to 5?

169: You have an application crashes, but there is no core file created,

what should you do?

170: The time is 1:00 PM, you have upgraded the kernel and need to

reboot, but you won’t be here at night, how can you tell the system to

shutdown at 1AM?

171: How do you check the *seLinux*status?

**Services & Daemons**

172: What is the purpose of an exim service on a server?

173: What solution will you use for a reverse proxy in Linux?

174: What is the purpose of a NIS server?

175: If you would like to use the apache tools in order to benchmark

nyour apache service that holds [http://www.google.com](http://www.google.com/) using 5 concurrent

requests over 20 overall requests, what tool would you use and how?

176: What does each of the error codes 200,300,400 and 500 in

apache means?

177: Create a new Apache VirtualHost configuration for the host

[http://www.google.com](http://www.google.com/) that sits at /home/google/public\_html/ and default

logs on /var/log/httpd/

178: How do you stop the Apache HTTPD service, through its control

script?

179: How can you enable, on a default Linux installation, root remote

access through SSH?

180: What is the difference between “*apachectl restart”*and

“*apachectl graceful*”?

181: How can you add the service sshd to start when starting at INIT

level 3?

182: How can you dump all the packets of http traffic into http.out?

183: You want to check a slow download from a remote server to

check long download sessions, how can you do it?

184: How  
can you check the mail queue of an exim mail server?

185:How do you configure the nfs exports/mounts of your machine?

**Scripts**

186: How can you create a script that will wait for specific output and

will act according to it? – for instance, wait for “username:” before

sending the username.

187: You want to add logger to your script, how can you send logging

messages to the /var/log/messages for your script “MyCoolScript”?

188: Using perl, write a command that will print all the IPs, Bcasts

and Masks configured on the server line by line.

189: Write a shell script that checks if a file (as an argument) has

write permissions – if it’s available print “write access approved” else

print “no write access”.

190: You have a bash script that does not produce the expected result,

how can you debug it?

191: You have a regular user access to a server, with no root

permissions, but you need to  
create a script that requires root

permissions to run – how can you manipulate the system to think that

you have root permissions, without a real superuser access?

192: Write a script that receives one parameters (file name) and

checks if the file exists or not – If it does, print “Roger that!” else,

print “Huston we’ve got a problem!”

193: Write a script that checks if a file, given as an argument, has

more than 10 lines or not, if it does – print “Over 10”, else print “Less

than 10”

194: You want to create a backup script called “backupMyFiles” and

it will run every hour, how do you make sure that your script is not

already running when you run the script – write a short script that will

handle this issue and exit with the message “Previous <command> is

still running” in case the script is still in the background.

195: create a Fibonacci function (Fn=Fn-1+Fn-2) using awk (until

F20).

196:  
Write a script that will go over all the users on the system and

will write the last login date of the user – if we don’t have information

about the last login, write “No data for <username>”

197: How can you check what are the most common commands that

you have used in the Linux shell?

198: Write a script that goes to <http://www.whatismyip.org/> and

writes “Your IP is: <Result from site>”

199: Create a small calculator in bash script which will have an

internal function “dosomething” that will receive a math function as

an input – *mycalc*4+4\*4.

200: Create a script called KillUserProcs that will get a username as

an input and will kill all his processes?

\*\*\*\*\*

**HR Questions**

1: Tell me about yourself.

2: Why did you leave your last job?

3: What experience do you have in this field?

4: Do you consider yourself successful?

5: What do co-workers say  
about you?

6: What do you know about this organization?

7: What have you done to improve your knowledge in the last year?

8: Are you applying for other jobs?

9: Why do you want to work for this organization?

10: Do you know anyone who works for us?

11: What kind of salary do you need?

12: Are you a team player?

13: How long would you expect to work for us if hired?

14: Have you ever had to fire anyone? How did you feel about that?

15: What is your philosophy towards work?

16: If you had enough money to retire right now, would you?

17: Have you ever been asked to leave a position?

18: Explain how you would be an asset to this organization.

19: Why should we hire you?

20: Tell me about a suggestion you have made.

21: What irritates you about co-workers?

22: What is your greatest strength?

23: Tell me about your dream job or what are you looking for in a

job?

24: Why do you  
think you would do well at this job?

25: What do you find the most attractive about this position? (Least

attractive?)

26: What kind of person would you refuse to work with?

27: What is more important to you: the money or the work?

28: What would your previous supervisor say your strongest point is?

29: Tell me about a problem you had with a supervisor.

30: What has disappointed you about a job?

31: Tell me about your ability to work under pressure.

32: Do your skills match this job or another job more closely?

33: What motivates you to do your best on the job?

34: Are you willing to work overtime? Nights? Weekends?

35: How would you know you were successful on this job?

36: Would you be willing to relocate if required?

37: Are you willing to put the interests of the organization ahead of

your own?

38: Describe your management style.

39: What have you learned from mistakes on the job?

n40: Do you have any blind spots?

41: If you were hiring a person for this job, what would you look for?

42: Do you think you are overqualified for this position?

43: How do you propose to compensate for your lack of experience?

44: What qualities do you look for in a boss?

45: Tell me about a time when you helped resolve a dispute between

others.

46: What position do you prefer on a team working on a project?

47: Describe your work ethic.

48: What has been your biggest professional disappointment?

49: Tell me about the most fun you have had on the job.

50: What would you do for us? (What can you do for us that someone

else can’t?)

51: Do you have any questions for me?