

MOST USED LINUX COMMANDS	
pwd	Displays the current working directory path, starting from the root (/)
rm [file_name]	To remove files you no longer need
less [filename]	Shows a file's contents one screen at a time
cd [directory]	Is used to change the current working directory in Linux
ls	To list files or directories in Linux
grep [PATTERN] [FILE]	Used to search for a string of characters in a specified file
ls-a	Used to enlist the current directory including the hidden files
cp [file] [destination]	Copying files from one location to another
mv [file] [destination]	Used to move files and directories from one location to another
mkdir [directory]	Allows users to create or make new directories

LINUX DIRECTORY NAVIGATION	
cd -	Controls to the previous directory level
cd or cd ~	Used to change directory to the home directory
cd /	Used to change directory to the root directory
cd...	Used to move to the parent directory of current directory
cd [/path/to/directory]	Go directly to directory

LINUX FILE COMMANDS	
rm -r [directory_name]	Remove a directory and files recursively
cp -r [directory_name1] [directory_name2]	Used to copy a directory including all its content from a source directory to the destination directory.
mv [file_name1] [file_name2]	Move file_name1 to file_name2
tail [file_name]	Prints the last 10 lines from the file
ls -a	Used to enlist the current directory including the hidden files
cp [file_name1] [file_name2]	Used to copy files or group of files or directory
rm [file_name]	Deletes a file
pwd	Displays the current working directory path, starting from the root (/)
rmdir	It removes an empty directory on various operating systems
mkdir [directory]	Allows users to create or make new directories
curl [options] [URL]	A tool that enables data transfer over various network protocols. Supported protocols (HTTP, HTTPS, SCP, SFTP, FTP)
diff [file_name_1] [file_name_2]	Is used to display the differences in the files by comparing the files line by line
tar	Used to compress a group of files into an archive
locate [file_name]	Finds files in Linux using the file name
cat [file1] [file2]	It reads data from the file and gives their content as output
tar -cf	Creates or extracts archived files
wget [URL]	Used to download files from the internet.
echo [text]>>[file_name]	Used to display line of text/string that are passed as an argument
mv [file name /path/to/new/location]	Used to move files and directories from one location to another
tar -xvf [file_name]	Used to compress a group of files into an archive -x includes the eXtended attributes of the files (metadata) -v is verbose mode -f tells tar what file/archive you are unarchiving
gpg [file_name.gpg]	Encrypts the files securely

Linux SSH (Login)	
ssh -i ~/.ssh/specific_ssh_fkey	Distinguished other ssh key for connection
ssh user@server -p other_port	Operate a specific port declared in sshd_config
ssh [IP address]	Connect to a host
ssh-copy-id hostname_or_IP	Copy a unique key pair to server
ssh user@server	Connect to a server (default port)
ssh user@server [command to run]	Run a command on a remote server

Linux Network Diagnostics Commands	
ifup [options] -a [device]	Used to activate the specified network interface
hostname	Used to obtain the DNS name and set the system's hostname or NIS domain name
tracert [host]	Perform traceroute to [host]
ifdown [options] -a[device]	Disables a network interface
hostname -I (capital 'i')	Shows all IP addresses of computer
netstat	Displays information about different interface statistics,including open sockets, routing tables, and connection information
ifconfig/ip	Used to configure, control the queries from CLI and to enable or disable the IP address, view all network interfaces. Also to set up any/all the network interfaces such as Ethernet, wireless, modem and so on that are connected to your computer
dig [record type] [domain]	Gather information about a particular domain. Try “dig txt google.com”
nettop	Monitor network activity, showing a list of processes and corresponding process IDs with network connections
ping [address]	Send ICMP ECHO_REQUEST packets to network host at [address]
nslookup [address]	Use the IP address to discover a domain name, or vice versa.

Linux File Commands	
ln -s /path/to/[file_name] [link_name]	Creates a symbolic link to a file
touch [file_name]	Used to create, change and modify timestamps of a file
wc	Used to find out number of lines, word count, byte and characters count in the files
gpg -c [file_name]	Decrypts the files securely
head [file_name]	Allows you to easily get the top lines from the specified file or the standard input
ls	To list files or directories in Linux

Linux Pipes/Redirection	
<<	Launch a file and and captures user input until EOF
>	Represents output redirection and redirects output to a file and overwriting the file
ex. command_1 command_2 command_3	A Linux pipe is a form of redirection used to combine two or more commands where the output of one command acts as the input of the next command in the sequence.
>>	Redirects output to a file and appends the redirected output rather than overwrites
<	Represents input redirection and redirects the given input file

SYSTEM INFORMATION	
cat /proc/cpuinfo	Display detailed information about the CPU
ps tree	Display a tree of running processes
du	Return disk usage
df -m	Display free storage in megabytes
du -h [directory]	Return disk usage in a readable file size format Eg. 1.1K or 15M 1.5G (-m shows file in megabytes and -g shows a file in gigabytes)
lshw less	List all hardware and pipes to the less command for easy reading and pagination
swapon -s	Swap information
lsusb (or -v for verbose)	Show information about all usb devices.
pmap -x PID [pid]	Display memory information about a process
lspci (or -v for verbose)	Show information about all PCI
top	Display sorted information about processes
sudo systemctl restart [service_name]	Restart a service Eg. sudo systemctl restart apache2
dmidecode less	Summarize BIOS information
kill [pid]	Terminate a process. Use the 'top' command to find the pid of a process
cat /etc/issue	The cat command shows information about a given directory , in this cat /ect/issue.
free	Free shows system information such as free memory and swap in kibibytes

USER CONTROLS AND MANAGEMENT USER WARNING: SOME OF THESE COMMANDS CAN BE DANGEROUS. USE WITH CAUTION.	
(sudo) service ssh stop	Stop ssh service
(sudo) service ssh start	Start ssh service
(sudo) service ssh restart	Restart ssh service
(sudo) service ssh status	Check ssh service status
sudo passwd root	Set a new password for the root user, can be used to circumvent the sudo command
passwd	Change your password
useradd [user_name]	Create a new user
useradd -r [user_name]	Delete a user
finger [username]	Display information about a user
chmod [permission] [file_name]	Change the permissions of a file Eg. chmod 777 /path/to/file
groups [username]	Display the groups a user belongs to
chown user:group /path/to/file	Change ownership of a file
chown -R user:group /path/to /directory	Change the ownership of a directory and files
chroot [path] [command]	Change the root directory of a process
quit	Logout
w	Display currently logged in users

OTHER	
alias [new command name] =[command]	Create a temporary alias for a command
date	Display current system date and time
env	Display environment variables
[tab]	Autocomplete command you are typing, if autocomplete has been configured for your shell session.
history	Display prior used commands
shutdown	Turns a computer off
shutdown -r	Reboots a computer
at [-V] [-q queue] [-f file] [-mldbv] TIME	Run a command at a specific time
iostat	List CPU and I/O statistics
clear	Clear all information from the terminal window. Not useful for security.
crontab -e	Create a new crontab or edit an existing crontab
man [command name]	Display the manual or help file for a command
unset [variable_name]	Remove environment variable
export [variable_name] =[variable_value]	Create a new environment variable

100% Linux Hands-on Exercise on Linuxpath.org

These Linux exercises from Linuxpath.org will help you learn everything about Linux from the boot process to advanced networking