File System Navigation

Command	Description
`ls`	List all the files in a directory
`ls -l`	List all files and their details (owner, mtime, size, etc)
`ls -a`	List all the files in a directory (including hidden files)
`pwd`	Show the present working directory
`cd`	Change directory to some other location
`file`	View the type of any file

View, Create, Edit, and Delete Files and Directories

Command	Description
`mkdir`	Create a new directory
`touch`	Create a new, empty file, or update the modified time of an existing

Command	Description
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`cat > file`	Create a new file with the text you type after
`cat file`	View the contents of a file
`grep`	View the contents of a file that match a pattern
`nano file`	Open a file (or create new one) in nano text editor
`vim file`	Open a file (or create new one) in vim text editor
`rm or rmdir`	Remove a file or empty directory
`rm -r`	Remove a directory that isn't empty
`mv`	Move or rename a file or directory
`cp`	Copy a file or directory
`rsync`	Synchronize the changes of one directory to another

Search for Files and Directories

Command	Description
`locate`	Quickly find a file or directory that has been cached
`find`	Seach for a file or directory based on name and other parameters

Basic Administration Commands

Command	Description
`whoami`	See which user you are currently logged in as
`sudo`	Execute a command with root permissions
`sudo apt install`	Install a package on Debian based systems
`sudo dnf install`	Install a package on Red Hat based systems
`sudo apt remove`	Remove a package on Debian based systems
`sudo dnf remove`	Remove a package on Red Hat based systems

Command	Description
reboot	Reboot the system
poweroff	Shut down the system

Hard Drive and Storage Commands

Command	Description
df or df -h	See the current storage usage of mounted partitions
sudo fdisk -l	See information for all attached storage devices
du	See disk usage of a directory's contents
tree	View the directory structure for a path
mount and umount	Mount and unmount a storage device or ISO file

Compression Commands

Command	Description
`tar cf my_dir.tar my_dir`	Create an uncompressed tar archive
`tar cfz my_dir.tar my_dir`	Create a tar archive with gzip compression
`gzip file`	Compress a file with gzip compression
`tar xf file`	Extract the contents of any type of tar archive
`gunzip file.gz`	Decompress a file that has gzip compression

Networking Commands

Command	Description
`ip a`	Show IP address and other information for all active interfaces
`ip r`	Show IP address of default gateway
`cat /etc/resolv.conf`	See what DNS servers your system is configured to use

Command	Description
ping	Send a ping request to a network device
traceroute	Trace the network path taken to a device
ssh	Login to a remote device with SSH

File Permissions and Ownership

Command	Description
chmod	Change the file permissions for a file or directory
chown	Change the owner of a file or directory
chgrp	Change the group of a file or directory

User Management Commands

Command	Description

Command	Description
useradd	Low level utility for adding new user accounts
adduser	High level utility for adding new user accounts
deluser	Delete a user account
usermod	Modify a user account
groupadd	Create a new group
delgroup	Delete a group

System Resource Management Commands

Command	Description
free -m	See how much memory is in use and free
top	See a list of processes and their resource usage
htop	A more human readable and interactive version of top

Command	Description
`nice`	Start a new process with a specified priority
`renice`	Change the nice value of a currently running process
`ps aux OR ps -ef`	View all of the currently running processes
`kill or killall`	Terminate a process
`kill -9 or killall -9`	Terminate a process with SIGKILL signal
`bg`	Send a task to the background
`fg`	Bring a task to the foreground

Environment Variable Commands

Command	Description
`printenv or printenv variable_name`	List all environment variables on a Linux system, or a specific one
`whereis and which`	Find where a command in PATH is located

Command	Description
export MY_SITE="linuxconfig.org"	Set a temporary environment variable (just an example, but use the same syntax)
echo $VARIABLE	Display the value of a variable
unset	Remove a variable

Kernel Information and Module Management

Command	Description
uname -a	Output detailed information about your kernel version and architecture
lsmod	Find what modules are currently loaded
modinfo module_name	Get information about any particular module
modprobe --remove module_name	Remove a module
modprobe module_name	Load a module into the kernel

Hardware Information Commands

Command	Description
`lspci`	See general information about host bridge, VGA controller, ethernet controller, USB controller, SATA controller, etc.
`dmidecode`	See some information about BIOS, motherboard, chassis, etc.
`cat /proc/cpuinfo`	Retrieve processor type, socket, speed, configured flags, etc.
`x86info or x86info -a`	See information about the CPU
`cat /proc/meminfo`	See detailed information about system RAM
`lshw`	List all hardware components and see their configuration details
`lshw -C memory -short`	Detect number of RAM slots used, speed, and size
`hwinfo`	List details for all hardware, including their device files and configuration options
`biosdecode`	Get some general information about your system's BIOS

Command	Description
`dmidecode -s bios-vendor`	Retrieve the name of your BIOS vendor with this simple command
`lsusb`	Get a list of USB devices plugged into your system
`ls -la /dev/disk/by-id/usb-*`	Retrieve a list of USB device files
`hdparm -I /dev/sdx`	Get information about your hard drive's make, model, serial number, firmware version, and configuration
`hdparm -tT /dev/sdx`	Show the speed of an installed hard drive – including cached reads and buffered disk reads
`wodim --devices`	Locate CD or DVD device file