Ubuntu Linux Command Line Cheat Sheet

Essential Commands

`sudo`	"Super User Do" gives you root access (administrative) access. It will be used at the beginning of most commands.
`man command`	Detailed manual for a command
`nano`	Open the Nano text editor
`nano file`	Open a file with Nano
`vi`	Open the Vi text editor
`vi file`	Open a file with Vi
`command -help or --help`	Display basic help about a command
`CTRL+c`	End or stop a command
`|`	Pipe used to combine command together
`clear`	Remove previous text and clear the screen

System Information

`uname -a`	Display Linux system information
`uname -r`	Display kernel release information
`cat /etc/os-release`	Show which version of Linux is installed
`uptime`	Show how long the system has been running + load
`hostname`	Show system host name
`hostname -I`	Display all local IP addresses of the host
`last reboot`	Show system reboot history
`date`	Show the current date and time
`cal`	Show this month's calendar
`echo "information"`	Print information to the screen
`shutdown now`	Gracefully shutdown the system immediately
`shutdown -r now`	Gracefully shutdown and reboot the system
`reboot`	Force a system restart
`systemctl [restart|reload|status] program`	Restart, reload, or get the status of an application
`program --version`	Show version information about an application
`pip3 freeze`	Show all packages install under PIP3

Directory Navigation

`cd ..`	To go up one level of the directory tree. (Change into the parent directory.)
`cd`	Go to the $HOME directory
`cd ~`	Go to the $HOME directory
`cd /`	Go to the $ROOT directory
`cd /path`	Change to the directory in the path

File and Directory Commands

`ls`	List file names in a block
`ls -la`	List all files in a long listing (detailed) format and permissions
`pwd`	Display the present working directory
`mkdir directory`	Create a directory
`touch file`	Create an empty file or update the access and modification times of file.
`rm -f file`	Force removal of file without prompting for confirmation
`rm -rf directory`	Forcefully remove directory recursively (plus all files and folders contained in that directory)
`cp file1 file2`	Copy file1 to file2
`cp -r source_directory destination_directory`	Copy source_directory recursively to destination. If destination exists, copy source_directory into destination, otherwise create destination with the contents of source_directory.
`mv file1 file2`	Rename or move file1 to file2. If file2 is an existing directory, move file1 into directory file2
`ln -s /path/to/file linkname`	Create symbolic link to linkname
`cat file`	View the contents of file
`less file`	Browse through a text file
`head file`	Display the first 10 lines of file
`tail file`	Display the last 10 lines of file

Ubuntu Linux Command Line Cheat Sheet

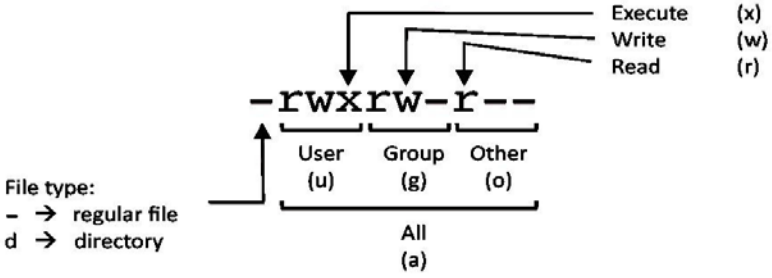
Performance and Process Monitoring

`top`	Display and manage the top processes
`htop`	Interactive process viewer (top alternative)
`tail -100 /var/log/syslog`	Display the last 100 syslog messages
`tcpdump -i eth0`	Capture and display all packets on interface eth0
`tcpdump -i eth0 'port 80'`	Monitor all traffic on port 80 (HTTP)
`lsof`	List all open files on the system
`lsof -u user`	List files opened by user
`free -h`	Display free and used memory (-h for human readable, -m for MB, -g for GB.)
`ps`	Display your currently running processes
`ps -ef`	Display all the currently running processes on the system.
`ps -ef | grep processname`	Display process information for processname
`kill pid`	Kill process with process ID of pid
`killall processname`	Kill all processes named processname

User Information and Management

`id`	Display the user and group IDs of your current user.
`last`	Display the last users who have logged onto the system.
`who`	Show who is logged into the system.
`w`	Display who is online
`whoami`	Who you are logged in as
`groupadd test`	Create a group named "test".
`adduser cisco`	Create an account names cisco (answer questions about password, name, etc.
`useradd -c "User Name" -m cisco`	Create an account named cisco, with a comment of "Cisco User" and create the user's home directory
`usermod -aG sudo cisco`	Add the cisco account to the sudo group
`sudo viduso`	Change account `cisco ALL=(ALL) NOPASSWD:ALL`
`su - cisco`	
`pkill -u cisco`	Stop all process running for this user
`userdel cisco sudo`	Delete the user account and group its associated with
`user del -remove-home cisco`	Delete the user account and its home directory
`passwd`	Change the password for the currect user

File and Directory Permissions



`chmod 777 filename`	rwx rwx rwx Allow all permissions - Use sparingly!!!
`chmod 775 filename`	rwx rwx r-x
`chmod 755 filename`	rwx r-x r-x
`chmod 770 filename`	rwx rwx ---
`chmod 664 filename`	rw- rw- r--
`chmod 644 filename`	rw- r-- r--
`chmod +r +w +x -r -w -x`	Turn On or Off a permission
`chown -R Ower Group /path/to/directory`	Change ownership of the file or directory

Ubuntu Linux Command Line Cheat Sheet

Networking

ip address	Display all network interfaces and IP address
ip addr show dev *eth0*	Display eth0 address and details
ethtool eth0	Query or control network driver and hardware settings
ping *host* or *ip_address*	Send ICMP echo request to host
whois *domain*	Display whois information for domain. Can be installed with `sudo apt install whois`
dig *domain*	Display DNS information for domain
dig -x *ip_address*	Reverse lookup of IP_ADDRESS
host *domain*	Display DNS IP address for domain
hostname -i	Display the network address of the host name.
hostname -I	Display all local IP addresses of the host.
wget http://domain.com/file	Download http://domain.com/file
netstat -nutlp	Display listening tcp and udp ports and corresponding programs. Can be installed with `sudo apt install net-tools`
traceroute *host* or *ip-address*	Find the route to a host. Can be install with `sudo apt install traceroute`

Installing Packages

apt update	Update the cache information about the packages
apt upgrade	Upgrade the system by installing/upgrading packages
apt full-upgrade	Upgrade the system by removing/installing/upgrading packages
apt dist-upgrade	Upgrade to the latest OS distribution
apt search *keyword*	Search for a package by keyword.
apt-cache search	Displays available information about installed and installable packages
apt install *package*	Install package.
apt remove *package*	Remove/uninstall package.
apt autoremove	Remove packages no longer needed
apt install python3	Install or update to the latest version of Python
apt install python3-pip	Install or update to the latest PIP3 package
pip3 install package	Use PIP3 to install a package

Search

grep pattern file	Search for pattern in file
grep -r pattern directory	Search recursively for pattern in directory
locate name	Find files and directories by name. It can be installed with `sudo apt install mlocate`
find /home/cisco -name 'prefix*'	Find files in /home/john that start with "prefix".
find /home -size +100M	Find files larger than 100MB in /home
dmesg | grep tty	Display only tty messages from the kernel

SSH and Telnet Logins

ssh *user@host*	Connect to host as user on the default port 22
ssh *user@host* -p *port*	Connect to host using a different port
telnet *host*	Connect to host using the default port 23. Telnet is not secure.
telnet *host port*	connect to host using a different port

Disk Usage

df -h	Show free and used space on mounted filesystems
df -i	Show free and used inodes on mounted filesystems
fdisk -l	Display disks partitions sizes and types
du -ah	Display disk usage for all files and directories in human readable format
du -sh	Display total disk usage off the current directory