phoenixNAP GLOBAL IT SERVICES

Linux Commands Cheat Sheet

Keyboard Shortcuts

Ctrl + C	Kill process running in the terminal.
Ctrl + Z	Stop the current process. The process can be resumed in the foreground with **fg** or in the background with **bg**.
Ctrl + W	Cut one word before the cursor and add it to the clipboard.
Ctrl + U	Cut part of the line before the cursor and add it to the clipboard.
Ctrl + K	Cut part of the line after the cursor and add it to the clipboard.
Ctrl + Y	Paste from clipboard.
Ctrl + R	Recall the last command that matches the provided characters.
Ctrl + O	Run the previously recalled command.
Ctrl + G	Exit command history without running a command.
clear	Clear the terminal screen.
!!	Run the last command again.
exit	Log out of the current session.

Searching

find [path] -name [search_pattern]	Find files and directories that match the specified pattern in a specified location.
find [path] -size [+100M]	See files and directories larger than a specified size in a directory.
grep [search_pattern] [file_name]	Search for a specific pattern in a file with grep.
grep -r [search_pattern] [directory_name]	Recursively search for a pattern in a directory.
locate [name]	Locate all files and directories related to a particular name.
which [command]	Search the command path in the **$PATH** environment variable.
whereis [command]	Find the source, binary, and manual page for a command.
awk '[search_pattern] {print $0}' [file_name]	Print all lines matching a pattern in a file. See also the gawk command, the GNU version of **awk**.
sed 's/[old_text]/[new_text]/' [file_name]	Find and replace text in a specified file.

Directory Navigation

ls	List files and directories in the current directory.
ls -a	List all files and directories in the current directory (shows hidden files).
ls -l	List files and directories in long format.
pwd	Show the directory you are currently working in.
cd cd ~	Change directory to **$HOME**.
cd ..	Move up one directory level.
cd -	Change to the previous directory.
cd [directory_path]	Change location to a specified directory.
dirs	Show current directory stack.

Packages (Debian/Ubuntu)

sudo apt-get install [package_name]	Install an APT package using the apt-get package utility.
sudo apt install [package_name]	Install an APT package using a newer APT package manager.
apt search [keyword]	Search for a package in the APT repositories.
apt list	List packages installed with APT.
apt show [package_name]	Show information about a package.
sudo dpkg -i [package_name.deb]	Install a *.deb* package with the Debian package manager.
sudo dpkg -l	List packages installed with dpkg.

Users and Groups

id	See details about the active users.
last	Show the last system logins.
who	Display who is currently logged into the system.
w	Show which users are logged in and their activity.
finger [user_name]	Show user information.
sudo useradd [user_name]	Create a new user account.
sudo adduser [user_name]	Create a new user account through the adduser command interface.
sudo userdel [user_name]	Delete a user account.
sudo usermod -aG [group_name] [user_name]	Modify user information (add a user to a group).
passwd sudo passwd [user_name]	Change the current user's or another user's password.
sudo groupadd [group_name]	Add a new group.
sudo groupdel [group_name]	Delete a group.
sudo groupmod -n [new_name] [old_name]	Modify a user group (change group name).
sudo [command]	Temporarily elevate user privileges to superuser or root.
su - [user_name]	Switch the user account or become a superuser.
chgrp [group_name] [file/directory]	Change file or directory group.

SSH Login

ssh [user_name]@[host]	Connect to a remote host as a user via SSH.
ssh [host]	Securely connect to a host via SSH default port 22.
ssh -p [port] [user_name]@[host]	Connect to the host using a particular port.
ssh-keygen	Generate SSH key pairs.
sudo service sshd start	Start SSH server daemon.
scp [file_name] [user_name]@[host]:[remote_path]	Securely copy files between local and remote systems via SSH.
sftp [user_name]@[host]	Interactive file transfer over encrypted SSH session using SFTP protocol.
telnet [host]	Connect to the host via Telnet default port 23.

File Permissions

chmod 777 [file_name]	Assign read, write, and execute file permission to everyone (**rwxrwxrwx**).
chmod 755 [file_name]	Give read, write, and execute permission to owner, and read and execute permission to group and others (**rwxr-xr-x**).
chmod 766 [file_name]	Assign full permission to the owner, and read and write permission to the group and others (**rwxrw-rw-**).
chown [user_name] [file_name]	Change the ownership of a file with chown command.
chown [user_name]:[group_name] [file_name]	Change the owner and group ownership of a file.

Packages (Red Hat, CentOS, Fedora)

sudo yum install [package_name]	Install a package using the YUM package manager.
yum search [keyword]	Find a package in the YUM repositories based on the provided keyword.
yum list installed	List all packages installed with YUM.
yum info [package_name]	Show package information for a package.
sudo dnf install [package_name]	Install a package using the DNF package manager.
sudo rpm -i [package_name.rpm]	Install a *.rpm* package from a local file.

Files

mkdir [directory_name]	Create a new directory.
rm [file_name]	Remove a file.
rm -r [directory_name]	Remove a directory recursively.
rm -rf [directory_name]	Recursively remove a directory without requiring confirmation.
cp [source_file] [destination_file]	Copy the contents of one file to another file.
cp -r [source_directory] [destination_directory]	Recursively copy a directory to a second directory.
mv [source_file] [destination_file]	Move or rename files or directories.
ln -s [path]/[file_name] [link_name]	Create a symbolic link to a file.
touch [file_name]	Create a new file.
cat [file_name]	Show the contents of a file.
cat [source_file] >> [destination_file]	Append file contents to another file.
head [file_name]	Show the first ten lines of a file.
tail [file_name]	Show the last ten lines of a file.
more [file_name]	Display contents of a file page by page.
less [file_name]	Show the contents of a file with navigation.
nano [file_name]	Open or create a file using the nano text editor.
vi [file_name] vim [file_name]	Open or create a file using the Vi/Vim text editor.
gpg -c [file_name]	Encrypt a file.
gpg [file_name].gpg	Decrypt an encrypted *.gpg* file.
wc -w [file_name]	Show the number of words, lines, and bytes in a file.
ls | xargs wc	List the number of lines/words/characters in each file in a directory.
cut -d [delimiter] [file_name]	Cut a section of a file and print the result to standard output.
[data] | cut -d [delimiter]	Cut a section of piped data and print the result to standard output.
shred -u [file_name]	Overwrite a file to prevent its recovery, then delete it.
diff [first_file] [second_file]	Compare two files and display differences.
source [file_name]	Read and execute the file content in the current shell.
[command] | tee [file_name] >/dev/null	Store the command output in a file and skip the terminal output.

Disk Usage

df -h	Check free and used space on mounted systems.
df -i	Show free inodes on mounted file systems.
fdisk -l	Display disk partitions, sizes, and types with the command.
du -ah	See disk usage for all files and directories.
du -sh	Show disk usage of the current directory.
mount	Show currently mounted file systems.
findmnt	Display target mount point for all file systems.
mount [device_path] [mount_point]	Mount a device.

Packages (Universal)

tar zxvf [file_name.tar.gz] cd [extracted_directory] ./configure make make install	Install software from source code.
sudo snap install [package_name]	Install a Snap package.
sudo snap find [keyword]	Search for a package in the Snap store.
sudo snap list	List installed Snap packages.
flatpak install [package_name]	Install a Flatpak package.
flatpak search [keyword]	Search for a Flatpak application in repositories.
flatpak list	List installed Flatpack packages.

System Management

uname -r	Show system information via uname command.
uname -a	See kernel release information.
uptime	Display how long the system has been running, including the load average.
hostname	View system hostname.
hostname -i	Show the IP address of the system.
last reboot	List system reboot history.
date	See current time and date.
timedatectl	Query and change the system clock.
cal	Show current calendar (month and day).
w	List logged-in users.
whoami	See which user you are using.
finger [user_name]	Show information about a particular user.
ulimit [flags] [limit]	View or limit system resource amounts.
shutdown [hh:mm]	Schedule a system shutdown.
shutdown now	Shut down the system immediately.
modprobe [module_name]	Add a new kernel module.
dmesg	Show bootup messages.

Network

ip addr show	List IP addresses and network interfaces.
ip address add [IP_address]	Assign an IP address to interface **eth0**.
ifconfig	Display IP addresses of all network interfaces.
ping [remote_host]	Ping remote host.
netstat -pnltu	See active (listening) ports with the netstat command.
netstat -tuln	Show TCP and UDP ports and their programs.
whois [domain_name]	Display more information about a domain.
dig [domain_name]	Show DNS information about a domain using the dig command.
dig -x [domain_name]	Do a reverse DNS lookup on the domain.
dig -x [IP_address]	Do a reverse DNS lookup of an IP address.
host [domain_name]	Perform an IP lookup for a domain.
hostname -I	Show the local IP address
nslookup [domain_name]	Receive information about an internet domain.

File Compression

tar cf [archive.tar] [file/directory]	Archive an existing file or directory.
tar xf [archive.tar]	Extract an archived file.
tar czf [archive.tar.gz]	Create a *.gz* compressed tar archive.
gzip [file_name] gunzip [file_name.gz]	Compress or decompress *.gz* files.
bzip2 [file_name] bunzip2 [file_name.bz2]	Compress or decompress .bz2 files.

File Transfer

scp [source_file] [user]@[remote_host]:[destination_path]	Copy a file to a server directory securely.
rsync -a [source_directory] [user]@[remote_host]:[destination_directory]	Synchronize the contents of a directory with a backup directory.
wget [link]	Download files from FTP or web servers.
curl -O [link]	Transfer data to or from a server with various protocols.
ftp [remote_host]	Transfer files between local and remote systems interactively using FTP.
sftp [user]@[remote_host]	Securely transfer between local and remote hosts using SFTP.

Processes

ps	List active processes.
pstree	Show processes in a tree-like diagram.
pmap	Display a memory usage map of processes.
top	See all running processes.
htop	Interactive and colorful process viewer.
kill [process_id]	Terminate a Linux process under a given ID.
pkill [process_name]	Terminate a process under a specific name.
killall [label]	Terminate all processes with a given label.
prgrep [keyword]	List processes based on the provided keyword.
pidof [process_name]	Show the PID of a process.
bg	List and resume stopped jobs in the background.
fg	Bring the most recently suspended job to the foreground.
fg [job]	Bring a particular job to the foreground.
lsof	List files opened by running processes.
trap "[commands]" [signal]	Catch a system error signal in a shell script. Executes provided commands when the signal is caught.
wait	Pause the terminal or a Bash script until a running process is completed.
nohup [command] &	Run a Linux process in the background.

Hardware Information

lscpu	See CPU information.
lsblk	See information about block devices.
lspci -tv	Show PCI devices in a tree-like diagram.
lsusb -tv	Display USB devices in a tree-like diagram.
lshw	List hardware configuration information.
cat /proc/cpuinfo	Show detailed CPU information.
cat /proc/meminfo	View detailed system memory information.
cat /proc/mounts	See mounted file systems.
free -h	Display free and used memory.
sudo dmidecode	Show hardware information from the BIOS.
hdparm -i /dev/[device_name]	Display disk data information.
hdparm -tT /dev/[device_name]	Conduct a read speed test on the device/disk.
badblocks -s /dev/[device_name]	Test for unreadable blocks on the device/disk.
fsck /dev/[device_name]	Run a disk check on an unmounted disk or partition.

Shell Commands

alias [alias-name]='[command]'	Create an alias for a command.
watch -n [interval-in-seconds] [command]	Set a custom interval to run a user-defined command.
sleep [time-interval] && [command]	Postpone the execution of a command.
at [hh:mm]	Create a job to be executed at a certain time (**Ctrl+D** to exit prompt after command).
man [command]	Display a built-in manual for a command.
history	Print the command history used in the terminal.

Variables

let "[variable_name]=[value]"	Assign an integer value to a variable.
export [variable_name]	Export a Bash variable.
declare [variable-name]="[value]"	Declare a Bash variable.
set	List the names of all the shell variables and functions.
unset [variable_name]	Remove an environment variable.
echo $[variable-name]	Display the value of a variable.