Linux Command Cheat Sheet

Contents

1 – SYSTEM INFORMATION

```
# Display Linux system information
uname -a
```

```
# Display kernel release information
uname -r
```

```
# Show which version of redhat installed
cat /etc/redhat-release
```

```
# Show how long the system has been running + load
uptime
```

```
# Show system host name
hostname
```

```
# Display the IP addresses of the host
hostname -I
```

```
# Show system reboot history
last reboot
```

```
# Show the current date and time
date
```

```
# Show this month's calendar
cal
```

```
# Display who is online
w
```

```
# Who you are logged in as
whoami
```

2 – HARDWARE INFORMATION

```
# Display messages in kernel ring buffer
dmesg
```

```
# Display CPU information
cat /proc/cpuinfo
```

```
# Display memory information
cat /proc/meminfo
```

```
# Display free and used memory ( -h for human readable, -m for MB, -g for
GB.)
```

```
free -h
```

```
# Display PCI devices
lspci -tv
```

```
# Display USB devices
lsusb -tv
```

```
# Display DMI/SMBIOS (hardware info) from the BIOS
dmidecode
```

```
# Show info about disk sda
hdparm -i /dev/sda
```

```
# Perform a read speed test on disk sda
hdparm -tT /dev/sda
```

```
# Test for unreadable blocks on disk sda
badblocks -s /dev/sda
```

3 – PERFORMANCE MONITORING AND STATISTICS

```
# Display and manage the top processes
top
```

```
# Interactive process viewer (top alternative)
htop
```

```
# Display processor related statistics
mpstat 1
```

```
# Display virtual memory statistics
vmstat 1
```

```
# Display I/O statistics
iostat 1
```

```
# Display the last 100 syslog messages  (Use /var/log/syslog for Debian
based systems.)
tail 100 /var/log/messages
```

```
# Capture and display all packets on interface eth0
tcpdump -i eth0
```

```
# Monitor all traffic on port 80 ( HTTP )
tcpdump -i eth0 'port 80'
```

```
# List all open files on the system
lsof
```

```
# List files opened by user
lsof -u user
```

```
# Display free and used memory ( -h for human readable, -m for MB, -g for
GB.)
free -h
```

```
# Execute "df -h", showing periodic updates
watch df -h
```

4 – USER INFORMATION AND MANAGEMENT

```

```

```
# Display the user and group ids of your current user.
id
```

```
# Display the last users who have logged onto the system.
last
```

```
# Show who is logged into the system.
who
```

```
# Show who is logged in and what they are doing.
w
```

```
# Create a group named "test".
groupadd test
```

```
# Create an account named john, with a comment of "John Smith" and create
the user's home directory.
useradd -c "John Smith" -m john
```

```
# Delete the john account.
userdel john
```

```
# Add the john account to the sales group
usermod -aG sales john
```

5 – FILE AND DIRECTORY COMMANDS

```
# List all files in a long listing (detailed) format
ls -al
```

```
# Display the present working directory
pwd
```

```
# Create a directory
mkdir directory
```

```
# Remove (delete) file
rm file
```

```
# Remove the directory and its contents recursively
rm -r directory
```

```
# Force removal of file without prompting for confirmation
rm -f file
```

```
# Forcefully remove directory recursively
rm -rf directory
```

```
# Copy file1 to file2
cp file1 file2
```

```
# Copy source_directory recursively to destination. If destination exists,
copy source_directory into destination, otherwise create  destination with
the contents of source_directory.
cp -r source_directory destination
```

```
# Rename or move file1 to file2. If file2 is an existing directory, move
file1 into directory file2
mv file1 file2
```

```
# Create symbolic link to linkname
ln -s /path/to/file linkname
```

```
# Create an empty file or update the access and modification times of file.
touch file
```

```
# View the contents of file
cat file
```

```
# Browse through a text file
less file
```

```
# Display the first 10 lines of file
head file
```

```
# Display the last 10 lines of file
tail file
```

```
# Display the last 10 lines of file and "follow" the file as it grows.
tail -f file
```

6 – PROCESS MANAGEMENT

```
# Display your currently running processes
ps
```

```
# Display all the currently running processes on the system.
ps -ef
```

```
# Display process information for processname
ps -ef | grep processname
```

```
# Display and manage the top processes
top
```

```
# Interactive process viewer (top alternative)
htop
```

```
# Kill process with process ID of pid
kill pid
```

```
# Kill all processes named processname
killall processname
```

```
# Start program in the background
program &
```

```
# Display stopped or background jobs
bg
```

```
# Brings the most recent background job to foreground
fg
```

```
# Brings job n to the foreground
fg n
```

7 – FILE PERMISSIONS

Linux chmod example

PERMISSION	EXAMPLE
rwx rwx rwx	chmod 777 filename
rwx rwx r-x	chmod 775 filename
rwx r-x r-x	chmod 755 filename
rw- rw- r--	chmod 664 filename
rw- r-- r--	chmod 644 filename

> NOTE: Use 777 sparingly!

LEGEND U = User G = Group W = World

r = Read w = write x = execute - = no access

8 – NETWORKING

```
# Display all network interfaces and ip address
ifconfig -a
```

```
# Display eth0 address and details
ifconfig eth0
```

```
# Query or control network driver and hardware settings
ethtool eth0
```

```
# Send ICMP echo request to host
ping host
```

```
# Display whois information for domain
whois domain
```

```
# Display DNS information for domain
dig domain
```

```
# Reverse lookup of IP_ADDRESS
dig -x IP_ADDRESS
```

```
# Display DNS ip address for domain
host domain
```

```
# Display the network address of the host name.
hostname -i
```

```
# Display all local ip addresses
hostname -I
```

```
# Download http://domain.com/file
wget http://domain.com/file
```

```
# Display listening tcp and udp ports and corresponding programs
netstat -nutlp
```

9 – ARCHIVES (TAR FILES)

```
# Create tar named archive.tar containing directory.
tar cf archive.tar directory
```

```
# Extract the contents from archive.tar.
tar xf archive.tar
```

```
# Create a gzip compressed tar file name archive.tar.gz.
tar czf archive.tar.gz directory
```

```
# Extract a gzip compressed tar file.
tar xzf archive.tar.gz
```

```
# Create a tar file with bzip2 compression
tar cjf archive.tar.bz2 directory
```

```
# Extract a bzip2 compressed tar file.
tar xjf archive.tar.bz2
```

```
# Search for a package by keyword.
yum search keyword
```

```
# Install package.
yum install package
```

```
# Display description and summary information about package.
yum info package
```

```
# Install package from local file named package.rpm
rpm -i package.rpm
```

```
# Remove/uninstall package.
yum remove package
```

```
# Install software from source code.
tar zxvf sourcecode.tar.gz
cd sourcecode
./configure
make
make install
```

11 – SEARCH

```
# Search for pattern in file
grep pattern file
```

```
# Search recursively for pattern in directory
grep -r pattern directory
```

```
# Find files and directories by name
locate name
```

```
# Find files in /home/john that start with "prefix".
find /home/john -name 'prefix*'
```

```
# Find files larger than 100MB in /home
find /home -size +100M
```

12 – SSH LOGINS

```
# Connect to host as your local username.
ssh host
```

```
# Connect to host as user
ssh user@host
```

```
# Connect to host using port
ssh -p port user@host
```

13 – FILE TRANSFERS

```
# Secure copy file.txt to the /tmp folder on server
scp file.txt server:/tmp
```

```
# Copy *.html files from server to the local /tmp folder.
scp server:/var/www/*.html /tmp
```

```
# Copy all files and directories recursively from server to the current
system's /tmp folder.
scp -r server:/var/www /tmp
```

```
# Synchronize /home to /backups/home
rsync -a /home /backups/
```

```
# Synchronize files/directories between the local and remote system with
compression enabled
rsync -avz /home server:/backups/
```

14 – DISK USAGE

```
# Show free and used space on mounted filesystems
df -h
```

```
# Show free and used inodes on mounted filesystems
df -i
```

```
# Display disks partitions sizes and types
fdisk -l
```

```
# Display disk usage for all files and directories in human readable format
du -ah
```

```
# Display total disk usage off the current directory
du -sh
```

15 – DIRECTORY NAVIGATION

```
# To go up one level of the directory tree.  (Change into the parent
directory.)
cd ..
```

```
# Go to the $HOME directory
cd
```

```
# Change to the /etc directory
```cd /etc
```
```