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Linux Commands Cheat Sheet

Did you know that there are literally hundreds of Linux commands? Even on a bare-bones Linux server install there are easily over 1,000 different commands.

The interesting thing is that most people only need to use a very small subset of those commands. Below you'll find a Linux "cheat sheet" that breaks down some of the most commonly used commands by category.

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Enjoy!

Contents [hide]

1 – SYSTEM INFORMATION

1 – SYSTEM INFORMATION

```
# Display Linux system information

uname -a


# Display kernel release information

uname -r


# Show which version of Red Hat installed
```

```
cat /etc/redhat-release


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


# Show system host name
hostname


# Display all local 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
```

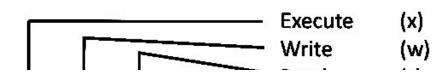# 5 – FILE AND DIRECTORY COMMANDS

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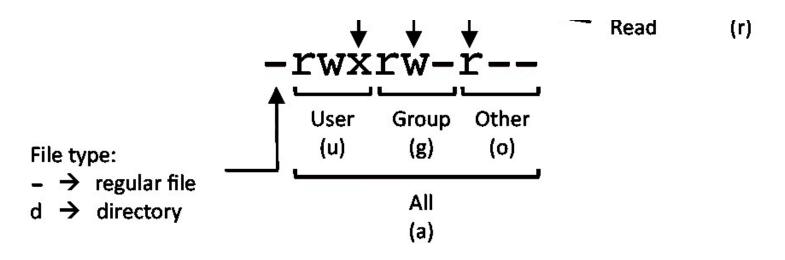
```
# Copy file1 to file2
cp file1 file2


# 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

Execute   (x)
Write   (w)

```
        PERMISSION          EXAMPLE


         U    G    W
        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
ip a

# Display eth0 address and details
ip addr show dev 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 of the host.
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
```

10 – INSTALLING PACKAGES

```
# 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
```

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