

QUICK REFERENCE GUIDE
LINUX COMMANDS

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1-SYSTEM

# uname -a	# Display linux system information
# uname -r	# Display kernel release information
# cat /etc/redhat_release	# Show which version of redhat installed
# uptime	# Show how long the system has been running + load
# hostname	# Show system host name
# hostname -I	# Display the IP address of the host
# last reboot	# Show system reboot history
# date	# Show the current date and time
# cal	# Show this month calendar
# w	# Display who is online
# whoami	# Who you are logged in as
# finger user	# Display information about user

2-HARDWARE

# dmesg	# Detected hardware and boot messages
# cat /proc/cpuinfo	# CPU model
# cat /proc/meminfo	# Hardware memory
# free -m	# Used and free memory (-m for MB)
# lspci -tv	# Show PCI devices
# lsusb -tv	# Show USB devices
# lshal	# Show a list of all devices with their properties
# dmidecode	# Show DMI/SMBIOS: hw info from the BIOS
# hdparm -l /dev/sda	# Show info about disk sda
# hdparm -tT /dev/sda	# Do a read speed test on disk sda
# badblocks -s /dev/sda	# Test for unreadable blocks on disk sda

3-STATISTICS

# top	# Display and update the top cpu processes
# mpstat 1	# Display processors related statistics
# vmstat 2	# Display virtual memory statistics
# iostat 2	# Display I/O statistics (2sec Intervals)
# tail -n 500 /var/log/messages	# Last 10 kernel/syslog messages

# tcpdump -i eth1	# Capture all packets flows on interface eth1
# tcpdump -i eth0 'port 80'	# Monitor all traffic on port 80 (HTTP)
# lsof	# List all open files belonging to all active processes.
# lsof -u testuser	# List files opened by specific user
# free -m	# Show amount of RAM
# watch df -h	# Watch changeable data continuously

4-USERS

# id	# id
# last	# last
# who	# who
# groupadd admin	# groupadd admin
# useradd -c "Sam Tomshi" -g admin -m sam	# useradd -c "Sam Tomshi" -g admin -m sam
# userdel sam	# userdel sam
# adduser sam	# adduser sam
# usermod	# usermod

5-FILE COMMANDS

# ls -al	# Display all information about files/ directories
# pwd	# Show the path of current directory
# mkdir directory-name	# Create a directory
# rm file-name	# Delete file
# rm -r directory-name	# Delete directory recursively
# rm -f file-name	# Forcefully remove file
# rm -rf directory-name	# Forcefully remove directory recursively
# cp file1 file2	# Copy file1 to file2
# cp -r dir1 dir2	# Copy dir1 to dir2, create dir2 if it doesn't exist
# 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-name link-name	# Create symbolic link to file-name
# touch file	# Create or update file
# cat > file	# Place standard input into file
# more file	# Output the contents of file
# head file	# Output the first 10 lines of file

```
# tail file # Output the last 10 lines of file
# tail -f file # Output the contents of file as it grows starting
# gpg -c file # Encrypt file
# gpg file.gpg # Decrypt file
```

6-PROCESS RELATED

```
# ps # Display your currently active processes
# ps aux | grep 'telnet' # Find all process id related to telnet process
# pmap # Memory map of process
# top # Display all running processes
# kill pid # Kill process with mentioned pid id
# killall proc # Kill all processes named proc
# bg # Lists stopped or background jobs
# fg # Brings the most recent job to foreground
# fg n # Brings job n to the foreground
```

7-FILE PERMISSION RELATED

```
# chmod octal file-name # Change the permissions of file to octal ,
which can be found separately for user, group and world
```

Octal value

4 - read

2 - write

1 - execute

Example

```
# chmod 777 /data/test.c
```

```
# Shows rwx permission for owner,rwx permission for group,
```

```
rwx permission for world
```

```
# chmod 755 /data/test.c
```

```
# Shows rwx permission for owner,rw for group and world
```

```
# chown owner-user file
```

```
# Change owner of the file
```

```
# chown owner-user:owner-group file-name
```

```
# Change owner and group owner of the file
```

```
# chown owner-user:owner-group directory
```

```
# Change owner and group owner of the directory
```

Example:

```
# chown bobbin:expertslogin test.txt
```

```
# ls -l test.txt
```

```
-rw-r--r-- 1 bobbin expertslogin 0 Mar 04 08:56 test.txt
```


8-NETWORK

# ifconfig -a	# Display all network ports and ip address
# ifconfig eth0	# Display specific ethernet port ip address and details
# ethtool eth0	# Linux tool to show ethernet status
# mii-tool eth0	# Linux tool to show ethernet status
# ping host	# Send echo request to test connection
# whois domain	# Get who is information for domain
# dig domain	# Get DNS information for domain
# dig -x host	# Reverse lookup host
# host google.com	# Lookup DNS ip address for the name
# hostname -i	# Lookup local ip address
# wget file	# Download file
# netstat -tupl	# List active connections to / from system

9-COMPRESSION / ARCHIVES

# tar cf home.tar home	# Create tar named home.tar containing home/
# tar xf file.tar	# Extract the files from file.tar
# tar czf file.tar.gz files	# Create a tar with gzip compression
# tar xzf file.tar.gz	# Extract a tar using gzip
# tar cjf file.tar.bz2 -	# Create a tar with bzip2 compression
# gzip file	# Compress file and renames it to file.gz

10-INSTALL PACKAGE

# rpm -I pkgname.rpm	# Install rpm based package
# rpm -e pkgname	# Remove package
Install from source	
./configure	
make	
make install	

11-SEARCH

# grep pattern files	# Search for pattern in files
#grep -r pattern dir	# Search recursively for pattern in dir
# locate file	# Find all instances of file
# find /home/tom -name 'index*'	# Find files names that start with "index"
# find /home -size +10000k	# Find files larger than 10000k in /home

12-LOGIN (SSH AND TELNET)

# ssh user@host	# Connect to host as user
# ssh -p port user@host	# Connect to host using specific port
# telnet host	# Connect to the system using telnet port

13-FILE TRANSFER

scp

# scp file.txt server2:/tmp	# Secure copy file.txt to remote host /tmp folder
# scp nixsavy@server2:/www/*.html /www/tmp	# Copy *.html files from remote host to current system /www/tmp folder
# scp -r nixsavy@server2:/www /www/tmp rsync	# Copy all files and folders recursively from remote server to the current system /www/tmp folder
# rsync -a /home/apps /backup/	# Synchronize source to destination
# rsync -avz /home/apps expertslogin@ 192.168.10.1:/backup	# Synchronize files/directories between the local and remote system with compression enabled

14-DISK USAGE

# df -h	# Show free space on mounted filesystems
# df -i	# Show free inodes on mounted filesystems
# fdisk -l	# Show disks partitions sizes and types (run as root)
# du -ah	# Display disk usage in human readable form
# du -sh	# Display total disk usage on the current directory

15-DIRECTORY TRAVERSE

# cd ..	# To go up one level of the directory tree
# cd	# Go to \$HOME directory
# cd /test	# Change to /test directory