LINUX COMMAND LINE CHEAT SHEET

Table of Contents

1 - SYSTEM INFORMATION

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 addresses of the host
last reboot	# Show system reboot history
date	# Show the current date and time
cal	# Show this month's calendar
w	# Display who is online
whoami	# Who you are logged in as

2 - HARDWARE INFORMATION

dmesg	# Display messages in kernel ring buffer
cat /proc/cpuinfo	# Display CPU information
cat /proc/meminfo	# Display memory information
free -h	# Display free and used memory (-h for human readable, -m for MB, -g for GB.)
lspci -tv	# Display PCI devices
lsusb -tv	# Display USB devices
dmidecode	# Display DMI/SMBIOS (hardware info) from the BIOS
hdparm -i /dev/sda	# Show info about disk sda
hdparm -tT /dev/sda	# Perform a read speed test on disk sda
badblocks -s /dev/sda	# Test for unreadable blocks on disk sda

3 - PERFORMANCE MONITORING AND STATISTICS

`top`	# Display and manage the top processes
`htop`	# Interactive process viewer (top alternative)
`mpstat 1`	# Display processor related statistics
`vmstat 1`	# Display virtual memory statistics
`iostat 1`	# Display I/O statistics
`tail 100 /var/log/messages`	# Display the last 100 syslog messages (Use /var/log/syslog for Debian based systems.)
`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.)
`watch df -h`	# Execute "df -h", showing periodic updates

4 - 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`	# Show who is logged in and what they are doing.
`groupadd test`	# Create a group named "test".
`useradd -c "John Smith" -m john`	# Create an account named john, with a comment of "John Smith" and create the user's home directory.
`userdel john`	# Delete the john account.
`usermod -aG sales john`	# Add the john account to the sales group

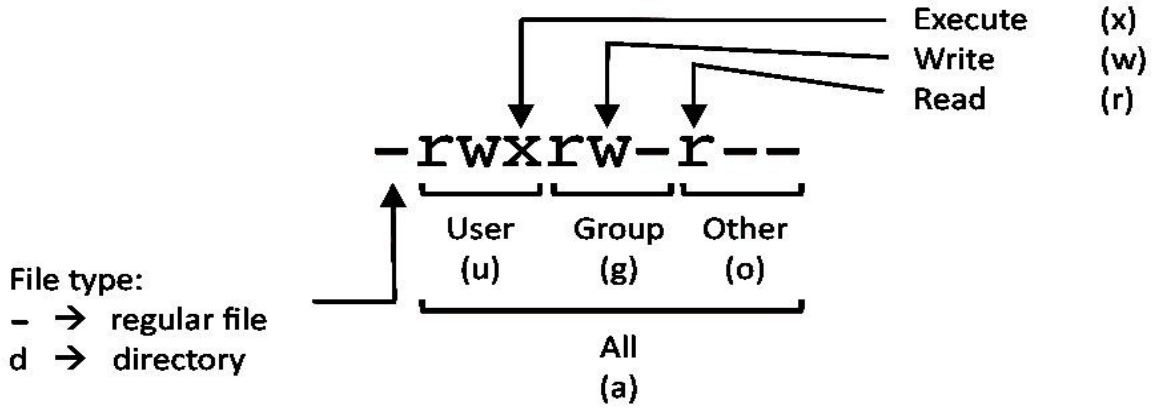
5 - FILE AND DIRECTORY COMMANDS

`ls -al`	# List all files in a long listing (detailed) format
`pwd`	# Display the present working directory
`mkdir directory`	# Create a directory
`rm file`	# Remove (delete) file
`rm -r directory`	# Remove the directory and its contents recursively
`rm -f file`	# Force removal of file without prompting for confirmation
`rm -rf directory`	# Forcefully remove directory recursively
`cp file1 file2` `cp -r source_directory destination`	# Copy file1 to file2 # 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`
`touch file`	# Create an empty file or update the access and modification times of file.
`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`
`tail -f file`	# Display the last 10 lines of `file` and "follow" the file as it grows.

6 - PROCESS MANAGEMENT

`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
`top`	# Display and manage the top processes
`htop`	# Interactive process viewer (top alternative)
`kill pid`	# Kill process with process ID of pid
`killall processname`	# Kill all processes named processname
`program &`	# Start program in the background
`bg`	# Display stopped or background jobs
`fg`	# Brings the most recent background job to foreground
`fg n`	# Brings job n to the foreground

7 - FILE PERMISSIONS



PERMISSION			EXAMPLE	
U	G	W		
rwx	rwx	rwx	`chmod 777 filename`	# Use sparingly!
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`	

LEGEND

U = User
G = Group
W = World

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

8 - NETWORKING

ifconfig -a	# Display all network interfaces and ip address
ifconfig eth0	# Display eth0 address and details
ethtool eth0	# Query or control network driver and hardware settings
ping host	# Send ICMP echo request to host
whois domain	# Display whois information for domain
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
wget http://domain.com/file	# Download http://domain.com/file
netstat -nutlp	# Display listening tcp and udp ports and corresponding programs

9 - ARCHIVES (TAR FILES)

tar cf archive.tar directory	# Create tar named archive.tar containing directory.
tar xf archive.tar	# Extract the contents from archive.tar.
tar czf archive.tar.gz directory	# Create a gzip compressed tar file name archive.tar.gz.

```
tar xzf archive.tar.gz          # Extract a gzip compressed tar file.
tar cjf archive.tar.bz2 directory  # Create a tar file with bzip2 compression
tar xjf archive.tar.bz2         # Extract a bzip2 compressed tar file.
```

10 - INSTALLING PACKAGES

```
yum search keyword              # Search for a package by keyword.
yum install package             # Install package.
yum info package                # Display description and summary information
                                about package.
rpm -i package.rpm              # Install package from local file named
                                package.rpm
yum remove package              # Remove/uninstall package.
tar zxvf sourcecode.tar.gz      # Install software from source code.
cd sourcecode
./configure
make
make install
```

11 - 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
find /home/john -name           # Find files in /home/john that start with "prefix".
'prefix*'
find /home -size +100M          # Find files larger than 100MB in /home
```

12 - SSH LOGINS

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

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

13 - FILE TRANSFERS

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

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

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

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

14 - 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
```

15 - DIRECTORY NAVIGATION

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

cd                             # Go to the $HOME directory

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