LINUX COMMAND LINE CHEAT SHEET

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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

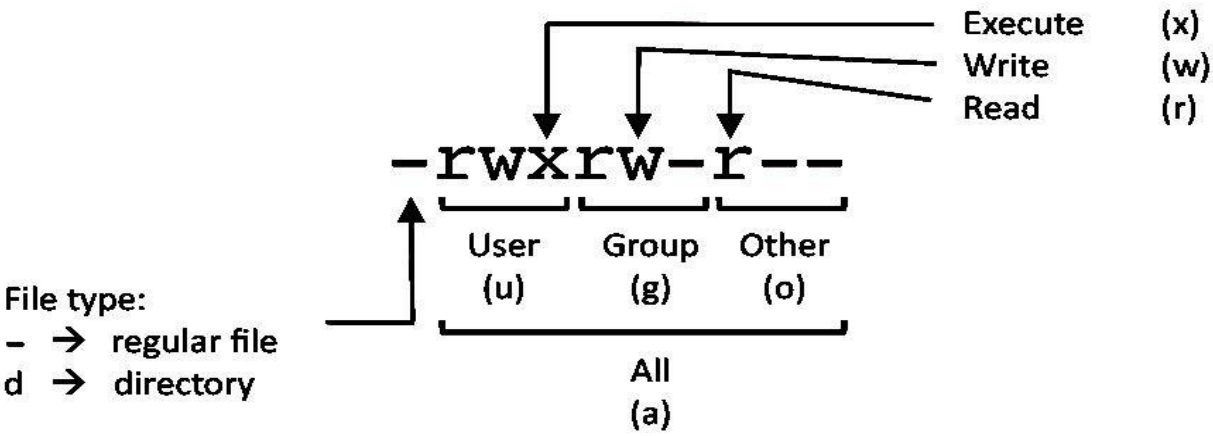
5 - FILE AND DIRECTORY COMMANDS

`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`	# Copy file1 to file2
`cp -r source_directory destination`	# 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 server:/backups/   # Synchronize files/directories between the local 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
```