

System Information

General

<code>uname -a</code>	Linux system information
<code>cat /etc/redhat-release</code>	Linux distribution version
<code>hostname</code>	System host name
<code>hostname -I</code>	System IP address
<code>ifconfig -a</code>	Display network interfaces and ip address
<code>date</code>	Current date and time
<code>w</code>	Display who is logged into the server
<code>whoami</code>	Who are you logged in as

Hardware

<code>free -h</code>	Display free and used RAM/Memory
<code>df -h</code>	Display free and used space in file system
<code>fdisk -l</code>	Display the disk partitions size and types
<code>du -ah</code>	Display the disk usage for all files and directories

File and Directory Commands

Navigation

<code>pwd</code>	Display the current working directory
<code>cd ..</code>	Go up one level
<code>cd</code>	Go to your home directory
<code>cd /Downloads</code>	Go to the Downloads directory inside your home directory
<code>cd /dev/null</code>	Navigate to the /dev/null directory

Files

<code>ls -al</code>	Display all files in detail
<code>rm file_name</code>	Remove/delete a file
<code>rm -r directory_name</code>	Recursively remove a directory and its contents
<code>cp file1 file2</code>	Copy file1 to file2
<code>cp -r source_dir destination</code>	Copy source recursively to destination
<code>mv file1 file2</code>	Move file1 to file2
<code>ln -s /path/to/file linkname</code>	Create a symbolic link to linkname
<code>touch file_name</code>	Creates and empty file or updates the access info
<code>cat file</code>	See the contents of a file
<code>less file</code>	Scroll through the file
<code>head file</code>	Display the first 10 lines
<code>tail file</code>	Display the last 10 lines
<code>tail -f file</code>	-f follows the file as it is appended too

File Permissions

drwxr-xr-x				r - read w - write x - execute
Type	User	Group	Others	

Type indicates the file type. The most common values are:

- file
- d directory
- l symbolic link

Groups are collections of users. You can view the groups you belong too as follows:

- `id` Displays the user and group ids of the current user
 - `groups` Displays the groups of the current user
- Others or World permissions apply to any user on the system.

Permissions can be assigned as numbers or as characters.

	4	2	1	
0	-	-	-	no permissions
1	-	-	x	only execute
2	-	w	-	only write
3	-	w	x	write and execute
4	r	-	-	only read
5	r	-	x	read and execute
6	r	w	-	read and write
7	r	w	x	read, write and execute

<code>chmod 777 file_name</code>	Assigns rwx permissions to all three levels for file_name
<code>chmod 760 file_name</code>	Assigns rwx to user, rw- to group and — (no permissions) to other
<code>chmod 644 file_name</code>	Assigns rw- to users, r- to groups and others
Note	Use 777 carefully
<code>chgrp group_name file_name</code>	Change the group to group_name for file_name
<code>chgrp -R group_name directory</code>	Change the group recursively to directory and subdirectories

Searching

<code>grep pattern file_name</code>	Find the pattern in file_name
<code>grep -r pattern directory</code>	Find the pattern recursively in directory
<code>locate pattern</code>	Find files and directories by name
<code>find -name 'notes'</code>	find files in your home directory starting with notes

Archiving Files

<code>tar czf archive.tar.gz directory</code>	Create a gzip tar file named archive.tar.gz
<code>tar xzf archive.tar.gz</code>	Extract a gzip tar file
Note	Remove the z to create/extract a normal tar file.

Process Management

<code>ps -eF</code>	List all processes on the system
<code>ps -ejH</code>	Print the process tree
<code>ps -eLF</code>	List information about threads
<code>ps -eF grep process_name</code>	Prints information on process_name
<code>top</code>	Display the top processes - q to quit
<code>kill -9 PID</code>	Kills the process with id PID
<code>program &</code>	Starts the application program in the background
<code>bg</code>	Lists the stopped and background processes
<code>fg</code>	Brings the most recent background process to the foreground

SSH

Usage

<code>ssh host</code>	Connect to the host as your local username
<code>ssh user@host</code>	Connect to host as user
<code>ssh -p 999 user@host</code>	Connect to host at port 999 as user

Key Generation

<code>ssh-keygen ..</code>	Generate ssh key
<code>-t rsa -b 4096 -o</code>	4096 bit OpenSSH formatted RSA key
<code>-t ed25519</code>	Alternative to above using EdDSA encryption - OpenSSH 6.5+
<code>-a 100</code>	100 rounds of key derivations, makes password hard to break
<code>-f /.ssh/id_rsa.\$(date +%Y-%m-%d)</code>	file name for the key in the .ssh direcotry
<code>-C "Key for yeats"</code>	Comment related to the key
Note	Use a strong passphrase

Adding Keys

Transferring Files

Getting help

<code>man command_name</code>	Displays the manual page for the command
<code>Google it</code>	Search Google or stackexchange