

Keyboard Shortcuts

Shortcut	What It Does	Notes
Esc + .	Insert last argument entered	Repeat to go back to previous arguments
Up Arrow	Auto-fill last command entered	Repeat to go back to previous commands
Ctrl+D	Logout / Exit	
Ctrl+L	Clear terminal output	
Ctrl+Shift+T	Open new terminal tab	
Ctrl+Arrow (Right/Left)	Move to beginning/end of a word	

Wildcards & Shortcuts

Wildcard	What It Represents	Example
~	Current user's home directory	
.	The directory you're currently in	
..	Parent directory of your current directory	
*	All files in current directory	<code>ls i*</code> = all files starting with "i"
?	"Any character"	<code>f??e</code> matches anything with 4 characters that starts with "f" & ends with "e"
[aou]	Match to any one of the enclosed characters	<code>c[aou]t</code> matches to "cat", "-cot", and "cut"
!!	"Last command run" (inserts into current command)	<code>sudo !!</code> = rerun command as root
^x^y	Rerun last command but replace x with y	<code>ls /usr</code> followed by <code>^usr^tm</code> p will run <code>ls /tmp</code>
!3	Rerun 3rd command from command history	
!ls	Runs most recent command from history that had "ls" in it	

Important Directories & Files

Directory/File	(Stands For) Purpose
/root	Root user's home directory
/home	Normal users' home directories
/var	(Variables) Database locations, spool files for mail, etc.
/usr	(User System Resources) System resources used by users
— /usr/bin	(Binaries) Executables usable by normal users
— /usr/sbin	(System Binaries) Executables only usable by root user
— /usr/lib	32-bit libraries
— /usr/lib64	64-bit libraries
/etc	(Extended Text Configurations) Configuration files
— /etc/passwd	User account config files
— /etc/group	Group membership info & config files
— /etc/shadow	User password info & config files
— /etc/sudoers	Main file for sudo config
— /etc/sudoers.d/	Destination for sudo config "dropping files"
— /etc/login.defs	Defines default properties used for new user accounts

vim Editor Controls

--- Command Mode ---	
o	Starts new line and switches to Insert mode
cw	"Change word" - deletes word and switches to Insert mode
G	Go to end of file
dd	Delete or cut entire line
yy	Copy entire line
p	Paste copied text
x	Delete character cursor is on top of
dw	Delete word cursor is on top of
d\$	Delete from cursor to end of line
ZZ	Save & quit (existing files)
--- Extended Command Mode ---	
:w filename	Save (new files)
:wq	Save & quit (existing files)



Misc. Commands

date	
+%F	display current date in international format (YYYY-mm-dd)
+%R	display current time (24-hr clock)
+%s	display # of seconds since epoch
ssh user@ip.addr	Start ssh connection
-v	verbose; shows in detail what's happening while establishing connection
-Y	enables graphical application support
-p port#	connect to ssh service not listening on default port 22
-i keyfile	reads private key from identity file for public key authentication
echo	Creates output (equivalent of <code>print</code> in Python)
tmux	
ps -au	Show current processes & which user started them

Basic File/Directory Commands

ls dir1	List contents of dir1
-l	additional info (owner, perms, etc.)
-a	lists all, including hidden files
-i	adds file inode to info displayed
-d	info for directory itself (rather than its contents)
mkdir dir1	Create a new directory
-p	creates full path (multiple directories if needed)
-v	verbose (output shows action taken)
cp dir1 dir2	Copy dir1 into dir2
-r	recursively ("and its contents")
rm dir1	Removes (deletes) an empty directory
-r	
mv file1 dir1	Move file1 into dir1
-v	verbose (output shows action taken)
ln target link	Creates a hard link from file "link" to file "target"
-s	makes a symbolic link instead of a hard link



Users & Groups

Command	Options
<code>id user1</code>	Show UID, GID, & secondary groups (current user if not specified)
<code>getent passwd usr1</code>	Find out if usr1 is known to the system
<code>useradd user1</code>	Add a new user
<code>-u #</code>	set a specific UID
<code>-s /sbin/nologin</code>	
<code>usermod user1</code>	Change properties of existing user
<code>-c "text"</code>	adds text to comment field
<code>-g group1</code>	changes primary group to group1
<code>-G group1</code>	replaces supplementary group with group1
<code>-aG group1</code>	
<code>-L user1</code>	
<code>newgrp group1</code>	Change current user's primary group (temporary ; current session only)
<code>userdel user1</code>	Deletes user1 but not their home directory
<code>-r</code>	

Users & Groups (cont)

<code>groups user1</code>	Displays simple list of groups user1 is a member of
<code>passwd user1</code>	Set password for user1
<code>chage user1</code>	Change password aging properties for user
<code>-m days</code>	minimum # of days between password changes
<code>-M days</code>	maximum # of days between password changes
<code>-W days</code>	warning period before password expires
<code>-I days</code>	inactivity period (password usable after expiration)
<code>-d 0</code>	require password change on next login
<code>-E date</code>	date when account expires
<code>getent group grp1</code>	Find out if grp1 is known to the system
<code>groupadd group1</code>	Create a new group
<code>-g #</code>	set a specific GID
<code>-r</code>	create a system group
<code>groupmod group1</code>	Change properties of existing group
<code>-g #</code>	change GID to specified number

To set the number of days from today when user's **account** expires:
`chage -E $(date +%Y-%m-%d +days %Y-%m-%d)`

To give full admin privileges to a user or group:
`echo "[user1|%group1] ALL=(ALL) ALL" >> /etc/sudoers.d/name`

