# Linux Shell Type

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There are several different shells available for Unix; the most popular are described here. You can use any one of these shells if they are available on your system. And you can switch between the different shells once you have found out if they are available.
Reference Link: http://unixhelp.ed.ac.uk/shell/oview2.html

## 1. Shell Type

- **Bourne shell (sh)**
  - This is the original Unix shell written by Steve Bourne of Bell Labs. It is available on all UNIX systems. This shell does not have the interactive facilites provided by modern shells such as the C shell and Korn shell. You are advised to to use another shell which has these features. The Bourne shell does provide an easy to use language with which you can write shell scripts.
  - | | Bourne | C | TC | Korn | BASH |
    |---|---|---|---|---|---|
    | command history | No | Yes | Yes | Yes | Yes |
    | command alias | No | Yes | Yes | Yes | Yes |
    | shell scripts | Yes | Yes | Yes | Yes | Yes |
    | filename completion | No | Yes* | Yes | Yes* | Yes |
    | command line editing | No | No | Yes | Yes* | Yes |
    | job control | No | Yes | Yes | Yes | Yes |

    * not the default setting for this shell

- **C shell (csh)**
  - This shell was written at the University of California, Berkeley. It provides a C-like language with which to write shell scripts - hence its name.
  - | | Bourne | C | TC | Korn | BASH |
    |---|---|---|---|---|---|
    | command history | No | Yes | Yes | Yes | Yes |
    | command alias | No | Yes | Yes | Yes | Yes |
    | shell scripts | Yes | Yes | Yes | Yes | Yes |
    | filename completion | No | Yes* | Yes | Yes* | Yes |
    | command line editing | No | No | Yes | Yes* | Yes |
    | job control | No | Yes | Yes | Yes | Yes |

    * not the default setting for this shell

- **TC shell (tcsh)**
  - This shell is available in the public domain. It provides all the features of the C shell together with emacs style editing of the command line.
  - | | Bourne | C | TC | Korn | BASH |
    |---|---|---|---|---|---|
    | command history | No | Yes | Yes | Yes | Yes |
    | command alias | No | Yes | Yes | Yes | Yes |
    | shell scripts | Yes | Yes | Yes | Yes | Yes |
    | filename completion | No | Yes* | Yes | Yes* | Yes |
    | command line editing | No | No | Yes | Yes* | Yes |
    | job control | No | Yes | Yes | Yes | Yes |

    * not the default setting for this shell

- **Korn shell (ksh)**
  - This shell was written by David Korn of Bell labs. It is now provided as the standard shell on Unix systems. It provides all the features of the C and TC shells together with a shell programming language similar to that of the original Bourne shell. It is the most efficient shell. Consider using this as your standard interactive shell.
  - | | Bourne | C | TC | Korn | BASH |
    |---|---|---|---|---|---|
    | command history | No | Yes | Yes | Yes | Yes |
    | command alias | No | Yes | Yes | Yes | Yes |
    | shell scripts | Yes | Yes | Yes | Yes | Yes |
    | filename completion | No | Yes* | Yes | Yes* | Yes |
    | command line editing | No | No | Yes | Yes* | Yes |
    | job control | No | Yes | Yes | Yes | Yes |

    * not the default setting for this shell

- **Bourne Again SHell (bash)**
  - This is a public domain shell written by the Free Software Foundation under their GNU initiative. Ultimately it is intended to be a full implementation of the IEEE Posix Shell and Tools specification. This shell is widely used within the academic commnity. bash provides all the interactive features of the C shell (csh) and the Korn shell (ksh). Its programming language is compatible with the Bourne shell (sh). If you use the Bourne shell (sh) for shell programming consider using bash as your complete shell environment.
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| | Bourne | C | TC | Korn | BASH |
|---|---|---|---|---|---|
| command history | No | Yes | Yes | Yes | Yes |
| command alias | No | Yes | Yes | Yes | Yes |
| shell scripts | Yes | Yes | Yes | Yes | Yes |
| filename completion | No | Yes* | Yes | Yes* | Yes |
| command line editing | No | No | Yes | Yes* | Yes |
| job control | No | Yes | Yes | Yes | Yes |

* not the default setting for this shell

## 2. Changing Shell

a. Find out which shell you are using:
   i. echo $SHELL #output: /bin/bash
   ii. echo $0 #output: -bash
   iii. ps -p $$ #output: PID TTY TIME CMD
   1447 tty1 00:00:01 bash

b. Switch to using another shell
You can switch to another shell for the remainder of your login session. To do this enter the shell command name at the system prompt.
For example:

```
ksh
 $
```

This switches you from your current shell to the Korn shell.

c. List all available shells on your systems
A quick way to see what shells are available on a your system is to display the file /etc/shells. For example:

```
cat /etc/shells
/bin/sh
/bin/csh
/usr/local/bin/Tcsh
/usr/local/bin/bash
```

This file contains the full pathnames for every shell that is available on your system.

d. Changing to another login shell
To change the shell that you enter whenever you log in to the system use the chsh (change shell) command. Next time you login you will use the new shell. You must reset any shell and environment variables that you set in your previous shell's startup file. If you do not they will no longer be in effect.

Example:
To change your login shell to the Korn shell (ksh):

```
chsh
Changing login shell for sarah.
Old shell name: /bin/csh
New shell: ksh
```

This changes the user's login shell from the C shell (csh) to the Korn shell (ksh).
If you mistype the name of the shell or specify a shell that is not available on your system:
- you will be given a list of all the shells that are available on your system.
- a message similar to the following will be displayed.
  *name is unacceptable as a new shell*