

Linux Command Line Reference Tables

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Linux Command Line Reference Tables

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Linux File System Break Down

| Directory | Comments |
|-------------|--|
| / | The root directory, contains everything. |
| /bin | Contains all binaries that must be present for the system to boot and run. |
| /boot | Contains the Linux Kernel, initial RAM disk image, and the boot loader. |
| /dev | Special directory that contains the device nodes. Here is where the kernel keeps a list of all the devices that it understands. |
| /etc | System wide configuration files. Also contains shell scripts that start each of the system services at boot. everything in this directory should be readable text. |
| /home | Users home folders are stored here. |
| /lib | Contains shared libraries used by the core system programs. |
| /lost+found | Used to recover a filesystem. Should remain empty unless something bad happens to your system. |
| /media | Contains the mount points for removable media such as USB and CD-ROMs. |
| /mnt | Contains mount points for removable media that is mounted manually. |
| /opt | Optional software folder. mainly used to hold commercial software that is installed on your system. |
| /proc | This one is special. It is not a real filesystem in the sense that it holds files that are stored on the hard drive, instead it is maintained by the kernel and writes files that allow you to see how the kernel is performing. |
| /root | Super User folder. |
| /sbin | Contains system binaries. These programs perform vital system tasks. |
| /tmp | Used to store temporary files, usually emptied at shutdown. |

| | |
|------|--|
| /usr | The largest file tree in the system and contains all of the files and programs that are accessed by regular users. |
| /var | Stores data on directory changes and logs for programs such as apt. |

/Usr/ File Tree Break Down

| Directory | Comments |
|----------------|---|
| /usr/bin | Contains executable programs that were installed by your distribution. |
| /usr/lib | Shared libraries. |
| /usr/local | This is where programs that were not included with your distribution are kept that are intended for system-wide use. This folder will remain empty until the system admin puts something in it. |
| /usr/sbin | Contains more system administration programs. |
| /usr/share | This will contain all of the icons, files, etc that is used by shared system programs. |
| /usr/share/doc | Contains documentation on many of the installed programs. |

Wild Cards

| Term | Definition |
|---------------|--|
| * | Any characters |
| ? | Any single character |
| [characters] | Any character in the list |
| [!characters] | Any characters not in the list. |
| [[class]] | Any character that is a member of that class |

Classes

| Class | Explanation |
|-----------|--------------|
| [:alnum:] | Alphanumeric |
| [:alpha:] | Alphabetical |
| [:digit:] | Numeric |
| [:lower:] | Lowercase |
| [:upper:] | Uppercase |

Examples of Use

| Pattern | Matches |
|------------------------|---|
| * | All files |
| G* | All files starting with G |
| B*.txt | All .txt files starting with B |
| Data??? | Any file beginning with Data followed by three characters |
| [abc]* | Any file starting with a,b, or c |
| BACKUP.[0-9][0-9][0-9] | Any file starting with BACKUP and ending with three numerals |
| [:upper:] | Any files with an uppercase letter |
| [![:digit:]] | Any file with no numerals in it |
| *[[:lower:]]123 | Any file ending with a lowercase letter or the numerals 1,2, or 3 |

Man Page Break Down

1. User Commands
2. Program Interfaces for Kernel System Call
3. Program Interfaces C Library
4. Special Files Such as Drivers/Nodes
5. File Formats
6. Games and Amusement
7. Misc
8. System Admin

Standard Input/Output/Error

| File Descriptor | File Stream |
|-----------------|-------------|
| 0 | stdin |
| 1 | stdout |
| 2 | stderr |

Cursor Movement Commands

| Key | Action |
|--------|----------------------------------|
| CTRL+A | Move cursor to beginning of line |
| CTRL+E | Move cursor to end of line |
| CTRL+F | Move cursor forward one space |
| CTRL+B | Move cursor back one space |
| ALT+F | Move cursor forward one word |
| ALT+B | Move cursor back one word |
| CTRL+L | Clear screen |

Text Editing

| Key | Action |
|--------|---|
| CTRL+D | Delete character at location |
| CTRL+T | Transpose character at the cursor with one preceding it |
| ALT+T | Transpose word at cursor location with one preceding it |
| ALT-L | Convert characters from cursor location to end of word to lowercase |
| ALT+U | Convert characters from cursor location to end of word to uppercase |

Cut and Paste Commands

| Key | Action |
|---------------|---|
| CTRL+K | Kill text from cursor to end of line |
| CTRL+U | Kill text from cursor to beginning of |
| ALT+D | Kill text from cursor to end of word |
| ALT+BACKSPACE | Kill text from cursor to beginning of word |
| CTRL+Y | Yank text from kill-ring and insert at cursor |

History Search

| Key | Action |
|--------|--|
| CTRL+P | Same as up arrow |
| CTRL+N | Same as down arrow |
| ALT+< | Move to top of history |
| ALT+> | Move to bottom of history |
| CTRL+R | Reverse incremental search |
| ALT+P | Reverse search non-incremental |
| ALT+N | Forward search non-incremental |
| CTRL+O | Execute current line item in history and advance to next one |

History Expansion

| Sequence | Action |
|------------------|--|
| !! | Current command, same as enter |
| ! <i>number</i> | Executes history list item number |
| ! <i>string</i> | Executes history that matches string |
| ! <i>?string</i> | Executes last history item containing string |

File Attributes

| Attribute | File Type |
|-----------|---|
| - | A regular file |
| d | A directory |
| l | A symbolic link. (all other attributes will be dummy values) |
| c | A character special file. Refers to a device that handles data as a stream such as the terminal or a modem |
| b | A block special file. This file type refers to a device that handles data block such as a CD-ROM or hard drive. |

Permission Attributes

| Attribute | File | Directory |
|-----------|---|---|
| r | Allows a file to be opened and read | Allows a directory's contents to be listed if the executable attribute is also set |
| w | Allows a file to be written to or truncated; however, this attribute does not allow files to be renamed or deleted. The ability to delete or rename a file are based on the directory permissions | Allows files in a directory to be renamed, deleted, and created if the executable attribute is also set |
| x | Allows a file or program to be treated as a program and executed. Program files written in scripting languages must also be set as readable to be executed | Allows a directory to be entered Ex. cd directory |

Octal Permissions

| Octal | Binary | File Mode |
|-------|--------|-----------|
| 0 | 000 | --- |
| 1 | 001 | --x |
| 2 | 010 | -w- |
| 3 | 011 | -wx |
| 4 | 100 | r-- |
| 5 | 101 | r-x |
| 6 | 110 | rw- |
| 7 | 111 | rwx |