

File permissions

Linux File Permission Cheatsheet

Basic File Permissions

brijkishore@terminal:~\$ ls -l

-rwx-rw-r--	2	brijkisharm	rajesharam	500	Nov 26 21:18	Data
-rwx-rw-r--	2	brijkishore	rajesharam	500	Nov 29 16:34	Data
--rwxr-xr-x	3	brijkishore	brijkishore	500	Nov 29 16:24	Data

Annotations:
 - File Type: -rwxr-xr-x
 - Number of Linked Hard-Links: 3
 - User Owner: brijkishore
 - Group Owner: brijkishore
 - File size in bytes: 500
 - File name: Data

r	Read	4
w	Write	2
x	Execute	1
7		

Chmod u+s file

r	Read	4
w	Write	2
c	No Permissions	1

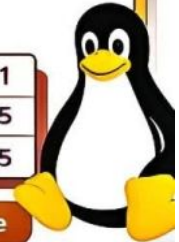
Chmod g+s file

r	Read	4
w	Write	2
c	Other Permissions	1

Chmod g+s file

r	Read	1
w	Execute	5
c	Other Permissions	5

Chmod +t dtene



Symbolic vs Numeric Representation

Binary	Octal	Permissions	Soabel
000	0	None (0-0+0)	----
001	1	Execute (0+0-)	--x
010	2	Write (0-1-0)	-w-
011	3	Write + Execute	-wx
100	4	Read (1-0+0)	r--
101	5	Read (1-0+1)	r-x
110	6	Read + Write	rw-
111	7	Read + Write + Execute	rwx

Capital 5 is an error if occurs if user has no execute bit (0) set

Capital T is an error if occurs if others have no execute bit (0) set but still have write bit (2) set



Special Permissions

SUID Permission
 -rwsr-xr-x-
 chmod u+s file

SGID Permission
 drwxrwsr-x-
 chmod g+s directory_name

Stick Bit Permission
 drwxrwxr-t--
 chmod +t directory_name

Sticky Permission
 drwxrwxr-t==
 chmod +t directory_name

Special Permissions

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SGID Permission
 drwxrwsr-x-
 chmod g+s directory_name

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