

File Permissions and chmod

Original = <http://www.redbrick.dcu.ie/help>

Permission Binary Octal

rwX	111	7
rw-	110	6
r-x	101	5
r--	100	4
-wx	011	3
-w-	010	2
--x	001	1
---	000	0

For permission rw-----, use 600.

For permission rwx--x--x, use 711.

For permission rw-r--r--, use 644.

`chmod -R 600 files/directory`

Sticky Bit

Case: Take a website folder. We want two users to be able to both read/write into this folder. We can add both users to a new group on the server, and by setting the sgid we can have it so that any files created in that folder will be of the parent group (as opposed to the default user group). Take the following example:

```
groupadd testgroup
adduser existingusername1 testgroup
adduser existingusername1 testgroup
mkdir /srv/vhost/website
chown existingusername1:testgroup /srv/vhost/website
chmod 2775 /srv/vhost/website
su existingusername1
touch /srv/vhost/website/testfile
chmod 755 /srv/vhost/website/testfile
ls -la /srv/vhost/website

drwxrwsr-x 2 existinguser1 testgroup 4096 2008-05-24 00:04 .
drwxrwxr-x 6 root root 4096 2008-05-23 23:48 ..
-rwxrwxr-x 1 existinguser1 testgroup 0 2008-05-24 00:04 testfile
```

Any files created by either username will be created in the "testgroup" group.

Excellent SGID and SUID and Sticky explanation:

<http://www.zzee.com/solutions/linux-permissions.shtml#setuid>