

chmod (change file permissions)

The *chmod* ("change mode bits") command is used to edit a file's access permissions. It should go without saying that only a file's owner is allowed to change its permissions. An exception to this is root, who may edit the status of any file. The most general form of *chmod* is this:

```
chmod ugo=rwx FILE
```

This gives the file's user/owner (*u*), group (*g*) and all others (*o*) the permission to read (*r*), write (*w*) and execute (*x*) *FILE*. You should not use this combination of options for two reasons. First, there is a shorthand for giving everybody the right to do everything with *FILE*:

```
chmod a=rwx FILE
```

The letter *a* is for "all", that is, user, group and others. Second, you should usually assign permissions more selectively. A good default value is *rxr-xr-x*, where the file's user has all rights, while group and others are not allowed to edit or delete the file. You can set these permissions like this:

```
chmod u=rwx,go=rx
```

Sometimes it's faster to remove or add particular permissions. This is done using the plus (+) and minus (-) operators. For example:

```
chmod o-r FILE
```

This will remove others' permission to read *FILE*. Finally, have a look at this particularly common example:

```
chmod a+x FILE
```

When you download a program from the Internet, you can use *chmod a+x* to make it executable.