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Find the file permission without using ls -l command

Posted by [Vivek Gite](#) <vivek@nixcraft.com>

Q. I need to find file permission and store the same to a shell variable. How do I find out the file permission without parsing ls -l output?

A. Use GNU stat command to display file or file system status. It has option to display output in specific format.



[1]

Display stat for /etc/passwd file

Type the following command:

```
$ stat /etc/passwd
```

Output:

```
File: `/etc/passwd'
Size: 1675          Blocks: 8          IO Block: 4096   regular file
Device: 802h/2050d Inode: 7899368      Links: 1
Access: (0644/-rw-r--r--)  Uid: (   0/   root)   Gid: (   0/   root)
Access: 2007-12-05 08:20:31.000000000 +0530
Modify: 2007-12-04 23:36:50.000000000 +0530
Change: 2007-12-04 23:36:50.000000000 +0530
```

Print access rights in octal format:

```
$ stat -c %a /etc/passwd
```

Output:

```
644
```

Print access rights in human readable format, enter:

```
$ stat -c %A /etc/passwd
```

Output:

```
-rw-r--r--
```

Store access rights in octal format to a shell variable:

```
$ VAR=$(stat -c %a /etc/passwd)
$ echo $VAR
```

Other valid format sequences for files

- **%b** : Number of blocks allocated (see %B)
- **%B** : The size in bytes of each block reported
- **%d** : Device number in decimal
- **%C** : SELinux security context
- **%D** : Device number in hex
- **%f** : Raw mode in hex
- **%F** : File type
- **%g** : Group ID of owner

- **%G** : Group name of owner
- **%h** : Number of hard links
- **%i** : Inode number
- **%n** : File name
- **%N** : Quoted file name with dereference if symbolic link
- **%o** : I/O block size
- **%s** : Total size, in bytes
- **%t** : Major device type in hex
- **%T** : Minor device type in hex
- **%u** : User ID of owner
- **%U** : User name of owner
- **%x** : Time of last access
- **%X** : Time of last access as seconds since Epoch
- **%y** : Time of last modification
- **%Y** : Time of last modification as seconds since Epoch
- **%z** : Time of last change
- **%Z** : Time of last change as seconds since Epoch

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