



Project

# Linux Zero To Hero

By

LZH Team

## The Find Command



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The “find command“ is a great tool for searching your filesystem for files, it searches your filesystem live and that is the reason it is a bit slower than “locate command“ which searches the files through a database. However we can speed things up by mentioning fewer options which omits the unrequired searches.

With Find command we can search for filenames, ownership, permission, size, modification times, etc etc.

Example: As root

```
GenX:/home/salman # find /etc [ Will list all files in /etc directory ]
```



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Find files by Filename:

To find files by name, you can use the `-name` and `-iname` options.

Example:

```
[root@GenX]# find /etc -name httpd.conf  
/etc/httpd/conf/httpd.conf
```

or with `iname` using you can match any combination of upper and lower case e.g

```
[root@GenX]# find /etc -iname HTTPD.conf  
/etc/httpd/conf/httpd.conf
```



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Find files by User:

```
[root@GenX]# find /home -user sal
/home/sal
/home/sal/.bash_logout
/home/sal/.bash_profile
/home/sal/.bashrc
```



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List the files not owned by root in /etc

```
[root@GenX]# find /etc -not -user root -ls
202166913  0 drwx-----  2 polkitd  root           63 Apr 16  2015
/etc/polkit-1/rules.d
134576386  8 -rw-----  1 tss      tss           6411 Jun  9  2014
/etc/tcsd.conf
```

List Group owned by root

```
[root@GenX]# find /etc -group root -ls
```



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Finding files by filesize:

```
[root@GenX]# find /var/log/ -size +100M
/var/log/glusterfs/mnt-gluster.log
/var/log/glusterfs/glustershd.log.org
```

Combining the Size output with other command

Lets say we would like to know the log files greater than 100 M and also would like to know the size of them.

```
[root@GenX]# find /var/log/ -size +100M -exec du -sh {} \;
2.0G    /var/log/glusterfs/mnt-gluster.log
5.7G    /var/log/glusterfs/glustershd.log.org
```

[ Note {} is where the find command will put the files it has found i call it a palce holder]



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Finding files by Filepermission

```
[root@GenX]# find /etc -perm 644 -ls
```

The above will list the files which have permission of 644  
Searching with respect to files and directories.

```
[root@GenX]# find /etc -perm 640 -type f
```

The above will find the files whose permission is rw-r-----

```
[root@GenX]# find / -perm 000 -type d
```

```
[root@GenX]# ls -ld /run/systemd/inaccessible/
```

```
d----- 2 root root 40 Apr 20 2015 /run/systemd/inaccessible/
```

From above you can see that it will search for the directories with no permission at all.



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To check any changes in the file with respect to time.

Lets say you modified a file few minutes ago and you forgot the name of the file you created. You can run

```
find / -mmin 10
```

The above will list the files modified within 10 mins





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For Example, Lets create a file timetesting.txt in /home

And add something to it with echo " helo " > /home/timetesting.txt

```
[root@GenX /]# find /home/ -mmin -10
```

```
/home/
```

```
/home/timetesting.txt
```

```
[root@GenX /]#
```

To Check any change in permission change

```
[root@GenX /]# find /home/ -cmin -10
```

Now lets change permission of the file in /home

```
[root@GenX home]# chmod 600 timetesting.txt
```

```
[root@GenX /]# find /home/ -cmin -10
```

```
/home/timetesting.txt
```

We can see that its showing the file whose permission was changed in last 10 mins.



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We can also check with regard to number of day with -ctime

```
[root@GenX /]# find /bin /sbin -ctime -3
```

The above will look at the directories /bin and /sbin and check if any permission is changed in past 3 days.

To Check what files were accessed in 10 day or 100 days or any number of day we use atime e.g

```
[root@GenX /]# find /home/ -atime -100
```

```
/home/
```

```
/home/timetesting.txt
```

To Check what files were NOT accessed in 100 days

```
[root@GenX /]# find /home/ -atime +100
```

```
/home/sal/.bash_logout
```

```
/home/sal/.bashrc
```



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Finding the files and Executing the commands on those found files.

```
[root@GenX /]# ls -ltr /home/  
total 4  
drwx----- 2 sal sal 59 May 25 05:31 sal  
-rw----- 1 root root 5 May 27 02:09 timetesting.txt
```

Lets find the file timetesting.txt and remove it.

```
[root@GenX /]# find /home/ -name timetesting -exec rm {} \  
[root@GenX /]# ls -ltr /home/  
total 0  
drwx----- 2 sal sal 59 May 25 05:31 sal
```



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Now lets try with OK command [ OK means that it will ask before removing ]

```
[root@Genx home]# touch timetesting.txt
```

```
[root@GenX home]# ls
```

```
sal timetesting.txt
```

```
[root@backup1 home]# find /home/ -name timetesting.txt -ok rm -rf {} \;
```

```
< rm ... /home/timetesting.txt > ?
```

press y and it will be removed , if you only press enter it will not be removed.

```
[root@backup1 home]# ls -ltr
```

```
total 0
```

```
drwx----- 2 sal sal 59 May 25 05:31 sal
```



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END