**Find**

find command in UNIX is a command line utility for walking a file hierarchy. It can be used to find files and directories and perform subsequent operations on them. It supports searching by file, folder, name, creation date, modification date, owner and permissions. By using the ‘-exec’ other UNIX commands can be executed on files or folders found.

**Syntax:**

$ find [where to start searching from] [expression determines what to find] [-options] [what to find]

**Options:**

* -exec CMD: The file being searched which meets the above criteria and returns 0 for as its exit status for sucessful command execution.
* -ok CMD : It works same as -exec except the user is prompted first.
* -inum N : Search for files with inode number ‘N’.
* -links N : Search for files with ‘N’ links.
* -name demo : Search for files that are specified by ‘demo’.
* -newer file : Search for files that were modified/created after ‘file’.
* -perm octal : Search for the file if permission is ‘octal’.
* -print : Display the path name of the files found by using the rest of the criteria.
* -empty : Search for empty files and directories.
* -size +N/-N : Search for files of ‘N’ blocks; ‘N’ followed by ‘c’can be used to measure size in characters; ‘+N’ means size > ‘N’ blocks and ‘-N’ means size < 'N' blocks.
* -user name : Search for files owned by user name or ID ‘name’.
* \(expr \) : True if ‘expr’ is true; used for grouping criteria combined with OR or AND.
* ! expr : True if ‘expr’ is false.

find /dir\_name -type d(or f) -iname(or -name) filename -exec command

find /dir\_name -type d/f -perm permission -exec command

find /dir\_name -user(or -group) username -iname(or -name) filename

find /dir\_name -mtime(or -atime or -ctime) timeduration

find /dir\_name -size sizeoffile

# Basic Find Commands for Finding Files with Names

**find /dir\_name -type d(or f) -iname(or -name) filename -exec command**

find . -name tecmint.txt # Find Files Using Name in Current Directory

find /home -name tecmint.txt # Find Files Under Home Directory

find /home -iname tecmint.txt # Find Files Using Name and Ignoring Case

find / -type d -name Tecmint # Find Directories Using Name

find . -type f -name tecmint.php# Find PHP Files Using Name

find . -type f -name "\*.php" # Find all PHP Files in Directory

find /tmp -type f -empty # To find all empty files under certain path

find /tmp -type d -empty # To file all empty directories under certain path

find /tmp -type f -name ".\*" # To find all hidden files, use below command

find . -type f -name "tecmint.txt" -exec rm -f {} \;

# To find a single file called tecmint.txt and remove it

find . -type f -name "\*.txt" -exec rm -f {} \; # To find and remove multiple files

# Find Files Based on their Permissions

**find /dir\_name -type d/f -perm permission -exec command**

find . -type f -perm 0777 -print # Find Files With 777 Permissions

find / -type f ! -perm 777 # Find Files Without 777 Permissions

find / -perm 2644 # Find SGID Files with 644 Permissions

find / -perm 1551

# Find all the Sticky Bit set files whose permission are 551

find / -perm /u=s # Find all SUID set files

find / -perm /g=s # Find all SGID set files

find / -perm /u=r # Find all Read Only files

find / -perm /a=x # Find all Executable files

find / -type f -perm 0777 -print -exec chmod 644 {} \;

# Find all 777 permission files and use chmod command to set permissions to 644

find / -type d -perm 777 -print -exec chmod 755 {} \;

# Find all 777 permission directories and use chmod command to set permissions to 755

# Search Files Based On Owners and Groups

**find /dir\_name -user(or -group) username -iname(or -name) filename**

find / -user root -name tecmint.txt

# To find all or single file called tecmint.txt under / root directory of owner root

find /home -user tecmint

# To find all files that belongs to user Tecmint under /home directory

find /home -group developer

# To find all files that belongs to group Developer under /home directory

find /home -user tecmint -iname "\*.txt"

# To find all .txt files of user Tecmint under /home directory

# Find Files and Directories Based on Date and Time

**find /dir\_name -mtime(or -atime or -ctime) timeduration**

find / -mtime 50 # To find all the files which are modified 50 days back

find / -atime 50 # To find all the files which are accessed 50 days back

find / -mtime +50 –mtime -100 # To find all the files which are modified more than 50 days back and less than 100 days

find / -cmin -60 # To find all the files which are changed in last 1 hour

find / -mmin -60 # To find all the files which are modified in last 1 hour

find / -amin -60 # To find all the files which are accessed in last 1 hour

# Find Files and Directories Based on Size

**find /dir\_name -size sizeoffile**

find / -size 50M # To find all 50MB files

find / -size +50M -size -100M

# To find all the files which are greater than 50MB and less than 100MB

find / -size +100M -exec rm -rf {} \; # Find and Delete 100MB Files

find / -type f -name \*.mp3 -size +10M -exec rm {} \;

# Find Specific Files and Delete