What is Soft link?

A symbolic link, also known as symlink or soft link, is a special type of file that points to source file or directory in Linux.

It is like a shortcut in Windows which contains the path of the original file and not the contents.

#ln -s <sourcefile> <dest file>

#ln -s <sourcefile full path> <dest file path>

What is Hard link?

Hard link is a mirror copy of the original file. Deleting the original file will not impact anything, because the hard link file, will act as a mirror copy of the original file.

#ln <source file> <destination file>

#unlink <file/dir>

Difference B/W Soft and Hard link

Soft link

1. Soft link is similar to the file shortcut in Windows.

2.Changes in both the files will reflect simultaneously

3.Soft links can be created on different file systems

4.Soft link can be created to files and directories

5.It has different inode number and file permissions compared to the original file.

6.When the original file is removed, the link will be inaccessible because it points to a non-existent file. This is called the hanging link.

Hard link

1.Hard link is a mirror copy of the original file.

2.It is like a soft link.

3.Hard link can only be created on the same file system.

4.Only files can be linked

5.It has the same inode number and file permissions.

6.Nothing happens when the original file is removed.

What Is The Inode Number?

An inode is a data structure that is used to store information of files on your Linux system.

The number of inodes shows the number of files and directories you have on the system

Every inode in the Linux structure has a unique number identified with it.

It is also called the index number and has the following attributes:

Size

Owner

Date/time

Permissions and access control

Location on the disk

File types

Number of links

Additional metadata about the file

To check the list of inode numbers, use the following command:

#ls -li

#stat <file/dir>