Use Linux SFTP Command to Transfer Files on Remote Servers

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SFTP is a protocol that offers a secure and private channel for transfer of files between systems using encryption. A misconception exists about the acronym SFTP, with some thinking it stands for Secure File Transfer Protocol. It stands for SSH File Transfer Protocol. Where in 'FTPS' is different, FTPS client will first check if the ftps server's certificate is trusted and use Secure Sockets Layer protocol (TLS). Good to read on how to Configure VSFTPD SFTP with SSL/TLS on Ubuntu 18.04

One may be forgiven to think that SFTP and FTP are similar in terms of functionality but, the two employ varied protocols. You, therefore, cannot use a standard FTP client to connect to an SFTP server. In this guide, we will focus on the commonly used SFTP commands.

Read Also: 12 lftp Commands to Manage Files with Examples

The standard application of SFTP is to run on a command interface within its own environment. That is why in most cases you will notice the program interface changing to the prompt sftp>. The moment you have invoked the SFTP session, the usual system commands will not execute unless you call them using a specific language that is in the SFTP command line standard.

Not all computers can process SFTP commands. You can choose to use the graphical interface version of SFTP or the command line depending on the Operating System you are using. The GUI interface requires you to install an SFTP utility.

In this article, we will take you through some SFTP commands examples that you can use via the unix/linux command line.

How to Connect With SFTP

The SSH protocol used to establish communication are the same as those required by an SFTP channel. Most people prefer to use saved passwords set as defaults, but I would recommend the use of SSH keys that you can use when you need to access any system.

To start an SFTP session, you need a username and the remote hostname. Alternatively, you can use the IP address of the host name at the prompt like shown below:

```
~ # sftp sftpuser@216.200.116.229
sftpuser@216.200.116.229's password:
Connected to sftpuser@216.200.116.229.
```

In the above example, if there were a connection that allows the processing of the above command, you would expect a password prompt before gaining access.

1) How to Get Help at the Prompt

If you have no clue on the type or format that can be used on an SFTP command line, use the "?" or "help" at the prompt as follows

```
sftp ?
```

```
sftp> ?
Available commands:
bye                                Quit sftp
cd path                            Change remote directory to 'path'
chgrp grp path                     Change group of file 'path' to 'grp'
chmod mode path                    Change permissions of file 'path' to 'mode'
chown own path                     Change owner of file 'path' to 'own'
df [-hi] [path]                    Display statistics for current directory or
                                   filesystem containing 'path'
exit                               Quit sftp
get [-afPpRr] remote [local]       Download file
reget [-fPpRr] remote [local]      Resume download file
reput [-fPpRr] [local] remote      Resume upload file
help                               Display this help text
lcd path                           Change local directory to 'path'
lls [ls-options [path]]            Display local directory listing
lmkdir path                        Create local directory
ln [-s] oldpath newpath            Link remote file (-s for symlink)
lpwd                               Print local working directory
ls [-1afhlnrSt] [path]             Display remote directory listing
lumask umask                       Set local umask to 'umask'
mkdir path                         Create remote directory
progress                           Toggle display of progress meter
put [-afPpRr] local [remote]       Upload file
pwd                                Display remote working directory
quit                               Quit sftp
rename oldpath newpath             Rename remote file
rm path                            Delete remote file
rmdir path                         Remove remote directory
symlink oldpath newpath            Symlink remote file
version                            Show SFTP version
!command                           Execute 'command' in local shell
```

2) Confirm the Working Directory

Using the command **lpwd** will give more information on the working directory. The **pwd** is used to check the remote working directory.

```
sftp> lpwd
```

Output

```
Local working directory: /root
```

```
sftp> pwd
```

Output

```
Remote working directory: /upload
```

3) Listing Files

At the SFTP command prompt, you list both remote and local files using different commands.

Remote listing

```
sftp> ls
```

Local listing

```
sftp> lls
```

4) Uploading Files

Uploading can take place by placing single or multiple files on the remote host.

Single file on the remote host use,

```
sftp> put Hello-World.txt
```

Output

```
Uploading Hello-World.txt to /upload/Hello-World.txt
Hello-World.txt
```

Multiple files on the remote host

```
sftp> mput *.txt
```

Output

```
Uploading Hello-World.txt to /upload/Hello-World.txt
Hello-World.txt 100% 0 0.0KB/s 00:00
Uploading file1.txt to /upload/file1.txt
file1.txt 100% 0 0.0KB/s 00:00
Uploading file2.txt to /upload/file2.txt
file2.txt 100% 0 0.0KB/s 00:00
Uploading file3.txt to /upload/file3.txt
file3.txt 100% 0 0.0KB/s 00:00
Uploading file4.txt to /upload/file4.txt
file4.txt 100% 0 0.0KB/s 00:00
```

5) Downloading Files

You will be able to download single or multiple files in a local-path or system.

```
sftp> get file1.pdf
```

Output

```
Fetching /upload/file1.pdf to file1.pdf
```

Download multiple files on a local-path or system

```
sftp> mget * .pdf
```

Output

```
Fetching /upload/file1.pdf to file1.pdf
Fetching /upload/file2.pdf to file2.pdf
Fetching /upload/file3.pdf to file3.pdf
Fetching /upload/file4.pdf to file4.pdf
Fetching /upload/file5.pdf to file5.pdf
```

It is evident that when downloading a file in the local system is done using the same name. When you want to use a different name on a remote file download, the name should be specified at the end of the command.

6) Switching Directories

On the remote server, you use the command,

```
sftp> cd test
```

On the local machine, you use the command,

```
sftp> lcd Documents
```

7) Creating directories

[Creating directories](#) on both remote and local paths is possible

A new directory on the local path

```
sftp> mkdir test
```

A new directory on a remote host

```
sftp> lmkdir Documents
```

8) Removing Directories

Removing a directory or file in remote hosts

Removing a file in remote hosts

```
sftp> rm Report.xls
```

Removing directory in remote hosts

```
sftp> rmdir Department
```

Note: This command will only work if the target directory is empty

9) Exiting the Command Shell

The exclamation mark! (known as a command in this case) is used to get out of the SFTP command prompt as shown in the following example.

```
sftp>!

[root@sftp ~]# exit
Shell exited with status 1
sftp>
```

As simple as it may look like, SFTP is a very powerful tool used for administering servers and managing file transfers between hosts. The utility can be used on both remote and local servers.

Read Also:

- [How to Use SCP Command for A File/Directory Transfer in Linux](#)