

1 Project File Transfer

Anytime you are transferring copying/moving files there is a chance that files will be corrupted. To ensure that the file integrity is maintained. It is imperative that you use a methods that ensure file integrity.

Instead of utilizing the OS copy function, whether in GUI or commandline, you should always rely on `rsync` to copy files. While most OSs will not directly copy the data when moving files within a hardware partition filesystem, care must be taken because a folder often maps to a different bulk storage device, which will copy the data to the new partition using the OS default copy method. Therefore, anytime you are moving data - **use `rsync`**.

1.1 Using Rsync

Basic Usage: `rsync <options> <Source> <Destination>`

Common Options

Option	Description
-a	Arcive Mode - recursively transfer files/folders; copies symlinks as symlinks; preserve permissions; preserve modification times; preserve ownder, preserve group
-v	Verbose Mode
-h	Human readable output
--progress	Show transfer progress

For additional options, please consult the manpages: `man rsync`

Transferring Files to a new partition or folder

To transfer a file/folder to a local folder, `rsync` doesn't need to use SSH connection.

Usage: `rsync -avh --progress <File/Folder>`

Transfers to Remote Server

To transfer a file `test.txt` to a remote server via SSH the `user` could provide their login name, server URL, and destination directory.

Usage: `rsync -avh --progress <file> <username>@<server URL>:<destination folder>`

Example: `rsync -avh --progress test.txt user@local.com:/home/user/.`

This will transfer the local file from your computer to the remote server in the `/home/user/` directory.

Moving Multiple Files and Folders

If you want to transfer a directory or multiple files you can provide the directory or wildcard `*`.

To move all the files and folders in your local HOME directory to the remote server.

Example: `rsync -avh --progress /home/user user@local.com:/home`

Transferring Files from Remote Server to Local

Transfers the other direction is possible by merely ensuring that the `Source` is the remote server and the `Destination` is the local folder

Usage: `rsync -avh --progress <username>@<server URL>:<Source Directory/File> <Local Folder>`