How to transfer files between Cirrus and a local machine

> **NOTE** Please note that the Cirrus Lustre storage is not designed for small files. Attempting to store or retrieve files less than a few megabytes will result in extremely poor performance for all users. If you wish to store lots of small files to massdata, please use a utility such as tar to combine them into a single, larger file.

rsync

To transfer files from your local machine to Cirrus, we recommend to use rsync. With appropriate options, rsync is resumable allowing the transfer to continue in case of drop mid-transfer. The recommended command line to use on your local machine is:

```
rsync -avPS src dst
```

where **src** his the path of the files on your local machine and **dst** will be the path to your destination on the appropriate host.

For example:

```
//1. Transfer files from local machine to cirrus.ncg.ingrid.pt:


rsync -avPS /home/myfiles user@cirrus.ncg.ingrid.pt:/data/unixgrp/my_folder/my_files
//where user is your CNCA username, and unixgrp is the unix group identifying your project.



//2. Transfer files from Cirrus to your local machine:
rsync -avPS user@cirrus.ncg.ingrid.pt:/data/unixgrp/my_folder/my_files /home/mylocalfolder/
//where user is your CNCA username, unixgrp is the unix group identifying your projec and
```

```
/home/mylocalfolder/ it's a local machine folder.
```

sshfs

The use of *sshfs* is a secure convenient way to share external volumes as long the user is able to open a *ssh* session.

Suppose we want to share a directory */remote/dir* from some remote server named *server.remote.pt* on the local user interface *cirrus* at subdirectory *mydata*. If the remote username is *remuser*, execute on CIRRUS user interface:

```
$ mkdir mydata
$ sshfs remuser@server.remote.pt:/remote/dir mydata
$ df
Filesystem                    1K-blocks     Used Available Use% Mounted on
server.remote.pt:/remote/dir 841572128 83471036 715328408  11% /users2/<group>/<user>/mydata
$ ls -l mydata
$ cp mydata/some_file local/workdir
```

when finish the user can unmount the remote volume with the command

```
$ fusermount -u mydata
```

The user will have on local mount directory the same permission to access the volume as on the remote server.

> The mount point will be available only on the local node. For example, if the user mount the volume on the user interface this directory content will not be available on the workernodes. This is a convenient way to access and copy files between sites but it is not suited to be used within a batch job, particularly on a MPI batch job with multiple nodes.

Revision #13
Created 2019-04-24 16:06:51 UTC by João Pina
Updated 2026-07-10 15:12:22 UTC by Jorge Gomes