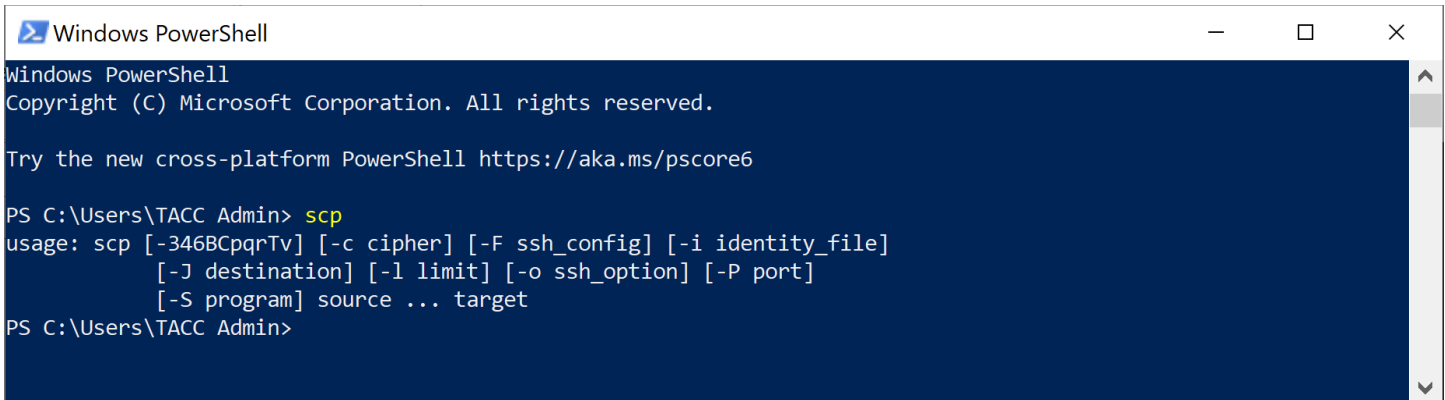


SCP with Windows

Copying data from a Windows system to a linux based system has been somewhat cumbersome in the past, but currently there are several tools, built-in or free, that make this process easier.

SCP with Windows using PowerShell

scp copies files between hosts on a network. It uses the same authentication and security as **ssh**. If you are using tools built-in to Windows, such as PowerShell (Note: if using **cmd**, it is highly recommended switching to **PowerShell**.), scp now works like it would in a linux terminal.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

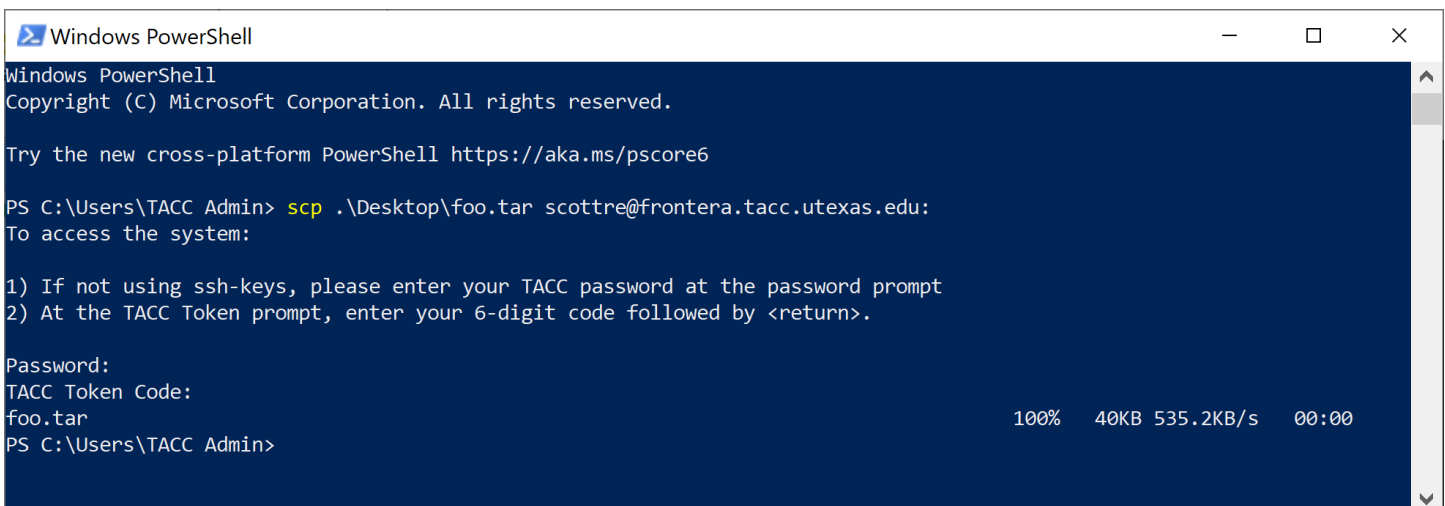
PS C:\Users\TACC Admin> scp
usage: scp [-346BCpqRTv] [-c cipher] [-F ssh_config] [-i identity_file]
          [-J destination] [-l limit] [-o ssh_option] [-P port]
          [-S program] source ... target
PS C:\Users\TACC Admin>
```

There are many websites with many examples of how to use the scp command and all of the available options. The purpose of these examples is to demonstrate how to copy files and directories from a local Windows system to a home directory on a TACC system.

For example, to copy a .tar file called **foo.tar** from the Windows Desktop on a personal laptop to your home directory on Frontera, this command would be used:

```
scp .\Desktop\foo.tar your_username@frontera.tacc.utexas.edu:
```

If successful, it should look like the example below.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\TACC Admin> scp .\Desktop\foo.tar scottre@frontera.tacc.utexas.edu:
To access the system:

1) If not using ssh-keys, please enter your TACC password at the password prompt
2) At the TACC Token prompt, enter your 6-digit code followed by <return>.

Password:
TACC Token Code:
foo.tar                                     100% 40KB 535.2KB/s 00:00
PS C:\Users\TACC Admin>
```

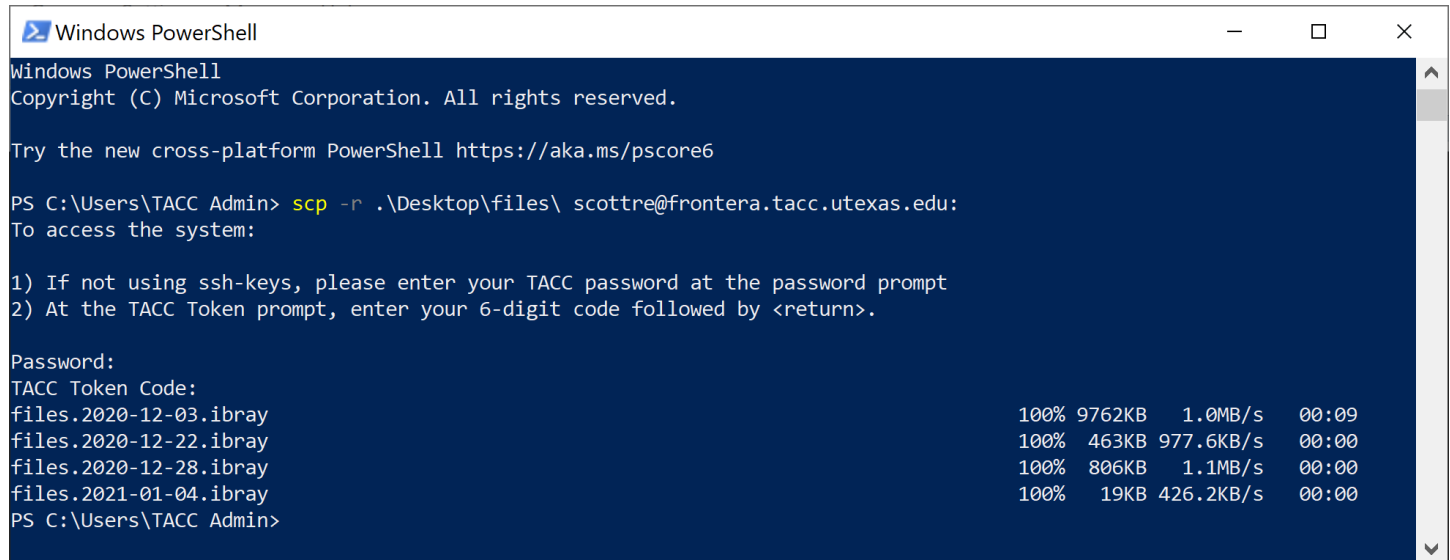
Note: The colon at the end of the command indicates that the target is a remote machine. After the colon, you can specify a path, either absolute or relative to your home directory.

```
scp your_username@frontera.tacc.utexas.edu:/absolute/path/
scp your_username@frontera.tacc.utexas.edu:relative/path
```

To copy a directory and its contents, use the **-r** option. For example, to copy a directory called **files** (that contains 4 files) from the Windows Desktop on a personal laptop to your home directory on Frontera, this command would be used:

```
scp -r .\Desktop\files\ your\_username@frontera.tacc.utexas.edu:
```

If successful, it should look like the example below:



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\TACC Admin> scp -r .\Desktop\files\ scottre@frontera.tacc.utexas.edu:
To access the system:

1) If not using ssh-keys, please enter your TACC password at the password prompt
2) At the TACC Token prompt, enter your 6-digit code followed by <return>.

Password:
TACC Token Code:
files.2020-12-03.ibray                                100% 9762KB   1.0MB/s   00:09
files.2020-12-22.ibray                                100%  463KB  977.6KB/s   00:00
files.2020-12-28.ibray                                100%  806KB   1.1MB/s   00:00
files.2021-01-04.ibray                                100%   19KB  426.2KB/s   00:00
PS C:\Users\TACC Admin>
```

Note: The period preceding the path to Desktop designates a path relative to your User directory in Windows.

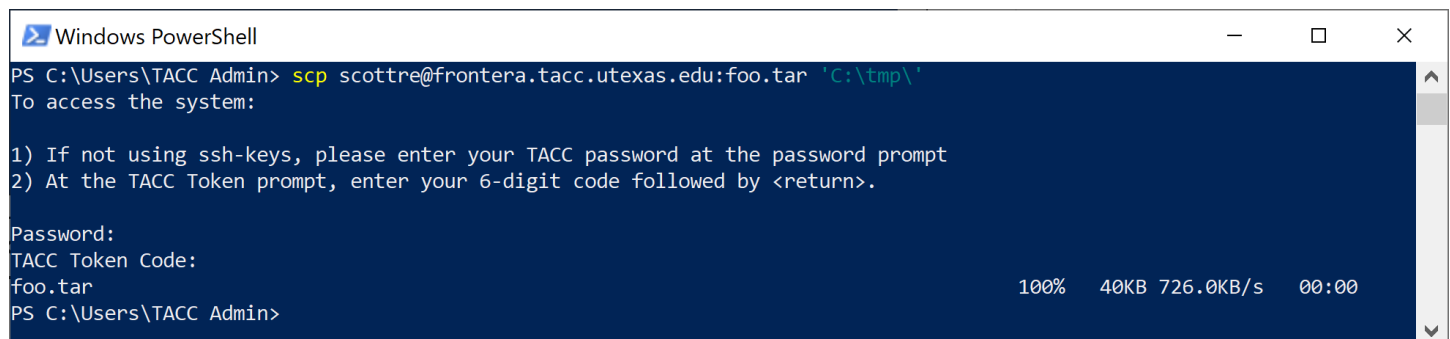
Full path: 'C:\User\You\Desktop\'

Relative path: .\Desktop\

To copy a file from Frontera to a local Windows system, the source would be a file or directory on Frontera, and the destination would be either an absolute path or a path relative to your user directory on your local Windows system.

For example, to copy a file called **foo.tar** from your home directory on Frontera to a directory called **tmp** on the local C: volume, the command below would be used. (Since the absolute path to the local Windows volume requires a colon, note the single quotes used to designate the destination is not a remote system.)

```
scp your\_username@frontera.tacc.utexas.edu:foo.tar 'C:\tmp'
```



```
Windows PowerShell

PS C:\Users\TACC Admin> scp scottre@frontera.tacc.utexas.edu:foo.tar 'C:\tmp\'
To access the system:

1) If not using ssh-keys, please enter your TACC password at the password prompt
2) At the TACC Token prompt, enter your 6-digit code followed by <return>.

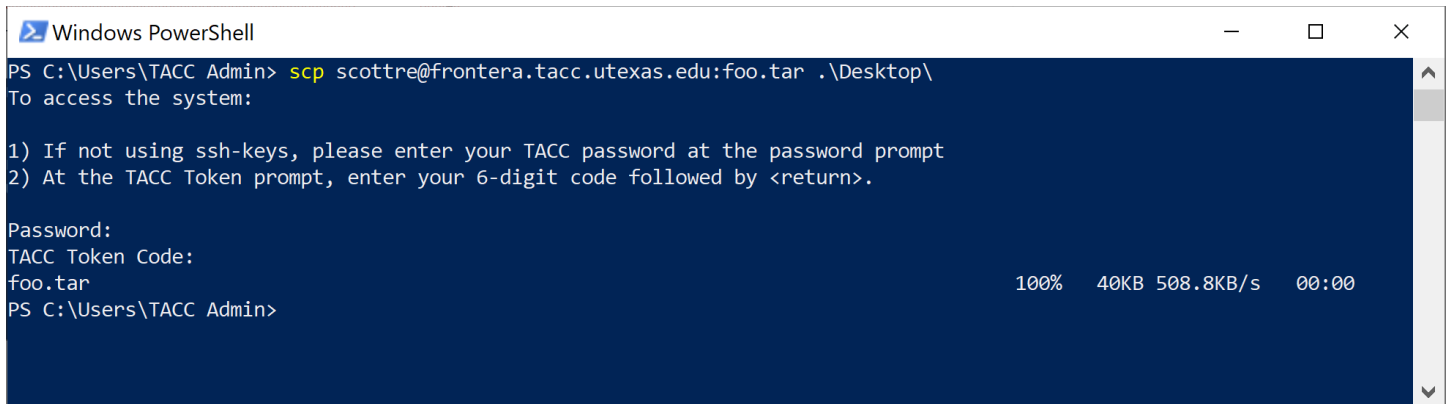
Password:
TACC Token Code:
foo.tar                                                100%   40KB 726.0KB/s   00:00
PS C:\Users\TACC Admin>
```

To copy a directory and all of its contents, use the **-r** option:

```
scp -r your\_username@frontera.tacc.utexas.edu:/path/to/directory 'C:\path\to\local\destination'
```

You can also use a path relative to your user directories in Windows, which uses a period to denote the relative path. For example, to copy a file called **foo.tar** from your home directory on Frontera to your Windows Desktop, this command would be used:

```
scp your_username@frontera.tacc.utexas.edu:foo.tar .\Desktop\
```



```
Windows PowerShell
PS C:\Users\TACC Admin> scp scottre@frontera.tacc.utexas.edu:foo.tar .\Desktop\
To access the system:
1) If not using ssh-keys, please enter your TACC password at the password prompt
2) At the TACC Token prompt, enter your 6-digit code followed by <return>.
Password:
TACC Token Code:
foo.tar                                     100%  40KB 508.8KB/s   00:00
PS C:\Users\TACC Admin>
```

Use the **-r** option to copy a directory and its contents:

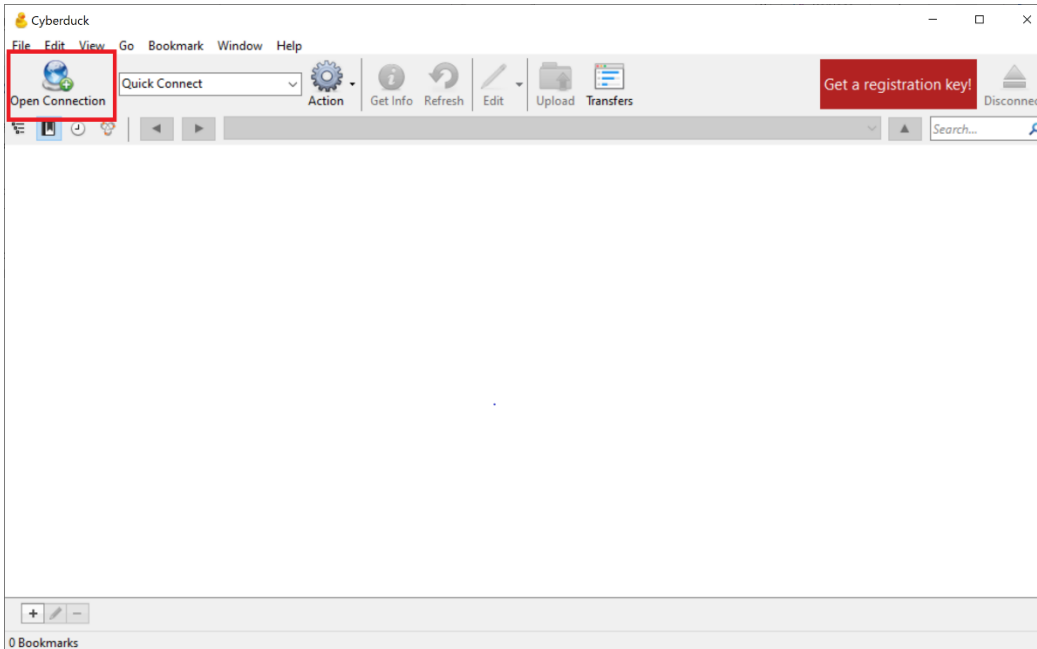
```
scp -r your_username@frontera.tacc.utexas.edu:foo.tar .\Desktop\
```

SFTP with Windows

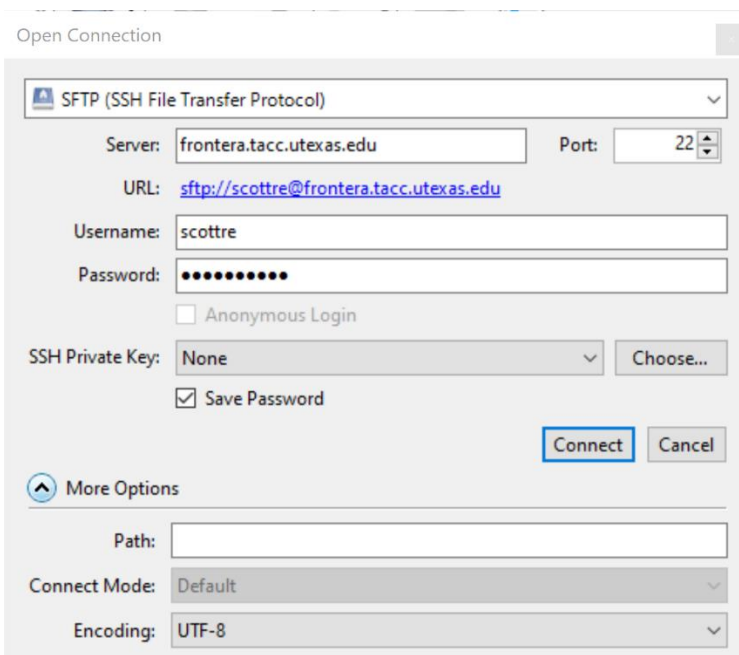
Copying files and directories from a Windows system to Frontera can also be achieved using a GUI, like CyberDuck or Filezilla. These are free applications that require them to be downloaded and installed to use. These applications allow you to view your local and remote filesystems and initiate transfers between them using a graphical interface.

CyberDuck: <https://cyberduck.io/>

Launch CyberDuck and click the “Open Connection” button.

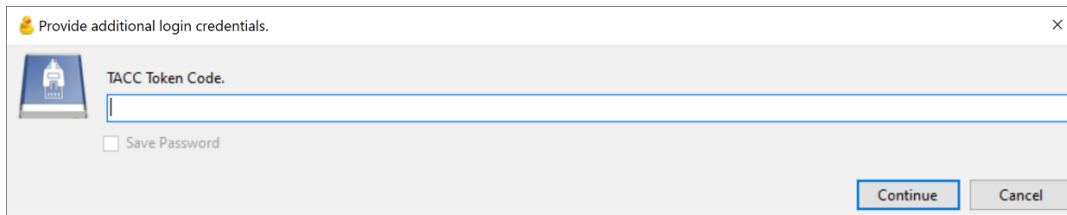


Change the connection type to **SFTP**, add “frontera.tacc.utexas.edu” to the Server field, input your TACC credentials, and click the “Connect” button.



(You may be prompted to accept a fingerprint to allow the connection if it is your first time connecting.)

Input your TACC MFA Token code and click the “Continue” button.



Provide additional login credentials.

TACC Token Code.

☐ Save Password

Continue Cancel

Once connected, the contents of your home directory on Frontera will be displayed. Use the “Upload” button to select files or directories to transfer from your local Windows system to your home directory on Frontera. You will be prompted to input your TACC MFA Token code to initiate the transfer after selecting the files to upload.

