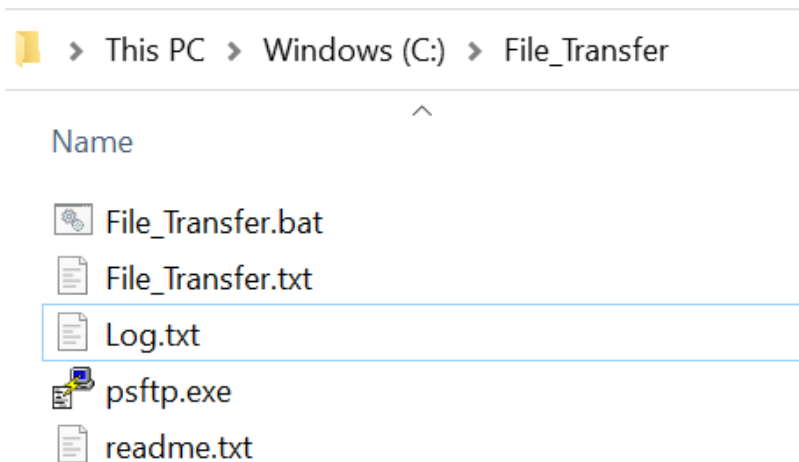# Psftp File Transfer Automation – A How to Guide


```
C:\File_Transfer\psftp.exe

psftp: no hostname specified; use "open host.name" to connect
psftp> open test.rebex.net
login as: demo
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Remote working directory is /
psftp>
```


> This PC > Windows (C:) > File_Transfer

Name

- File_Transfer.bat
- File_Transfer.txt
- Log.txt
- psftp.exe
- readme.txt

Introduction

This guide will demonstrate the steps to create a script which can move a file automatically from one computer to another. The steps in this guide are meant to serve as a template for future file transfer automation processes. The script in this guide will automatically connect to a file transfer server, download and file to your computer, list the folder on the file transfer server, and then close the connection. The steps will be logged to a file so you can make sure the steps completed as expected.

To accomplish this, the guide is broken into four parts.
- Installing the file transfer software.
- Writing the file transfer script.
- Testing the file transfer script.
- Finalizing the file transfer script.

To complete the steps, the following items are needed.
- A Windows[i] computer, connected to the internet.
- The Putty file transfer client[ii], downloaded from the internet.
- Rebex[iii] file transfer server information, provided here.
    - Server: test.rebex.net
    - Username: demo
    - Password: password

Terminology

There are several terms used in the guide that have specific meaning, please use these definitions to get an understanding of these terms.
- **Client**: The file transfer software that will initiate the connection. This software will be installed on your computer
- **Server**: The remote computer you will connect to with the file transfer client. This computer will have the information you will download to your computer.
- **File Explorer**: The application on your computer that displays the file system, it displays as a folder icon on your computer.

Caution

When creating a new file transfer, always verify the owner of the server before connecting to it. Do not connect to a server when you do not know the owner, and do not download any files to your system if you are not sure of their origin.

Troubleshooting

If you encounter errors that reference permissions, such as "access denied", attempt the operation with administrator permission by right clicking the item and choosing "Run as Administrator" from the menu.

If you receive security errors when trying to install PuTTY, choose the option to continue, even if you are warned about running the installation.

Installing the File Transfer Software

1. Open a File Explorer window and choose the View tab in the top ribbon menu.
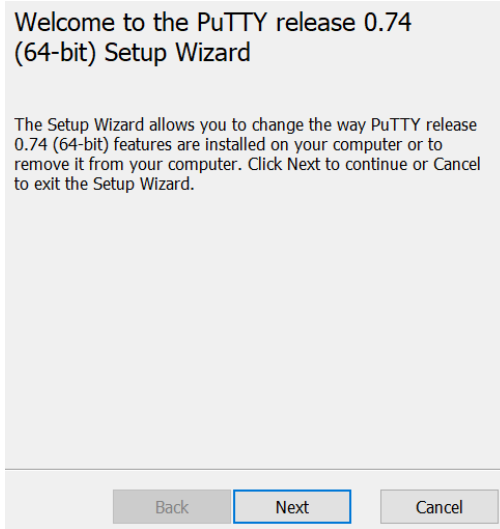2. In the View tab, find the check box labeled **File Name Extensions**, and check this box. Figure 1
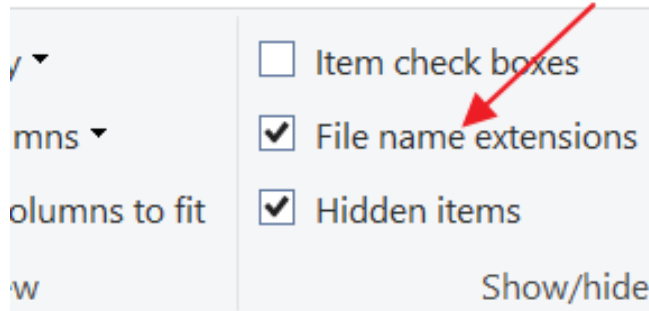
3. Click this link to open the file transfer software web page.
4. On the web page, find the heading **Package Files** and under the heading labeled **MSI** click to download the 64-bit option. Figure 2
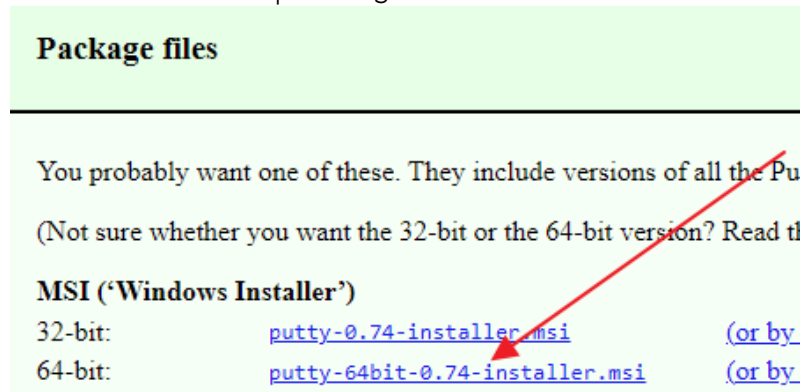
5. Find the installer file in the Downloads location, this location will be listed in File Explorer under the **Quick Access** section.
6. Double-click the downloaded file, **putty-64bit-0.74-installer.msi**, to begin the installation. Please note that the file name will differ based on the version of PuTTY.
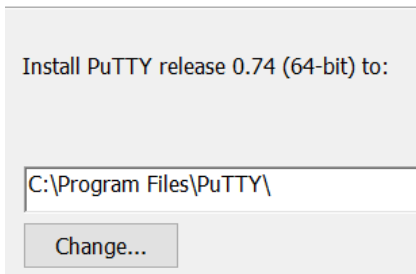
7. A new window will open to guide you through the install process. On the introductory page, click **Next** to continue. Figure 3

Welcome to the PuTTY release 0.74 (64-bit) Setup Wizard

The Setup Wizard allows you to change the way PuTTY release 0.74 (64-bit) features are installed on your computer or to remove it from your computer. Click Next to continue or Cancel to exit the Setup Wizard.
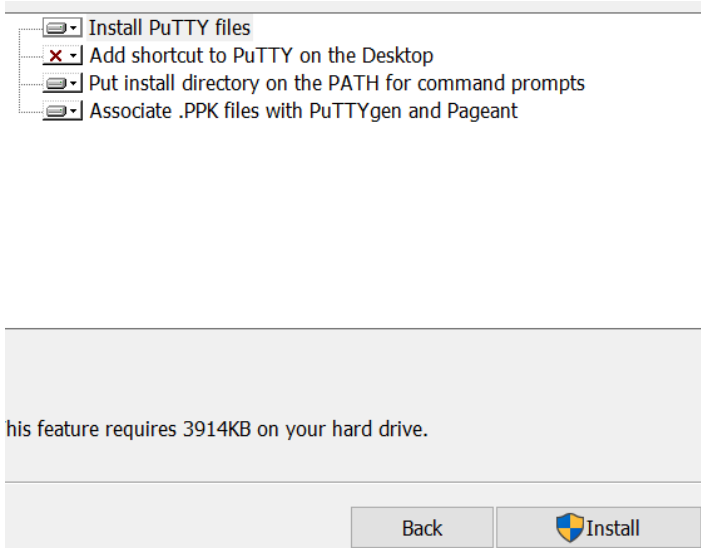
Back   Next   Cancel

8. On the Destination folder page, note the install path, **C:\Program Files\PuTTY**, and click Next to continue. Figure 4

Destination Folder

Click Next to install to the default folder

Install PuTTY release 0.74 (64-bit) to:

C:\Program Files\PuTTY\

Change...

9. On the Product Features page, accept the default options and click the **Install** button. Figure 5

Install PuTTY files
Add shortcut to PuTTY on the Desktop
Put install directory on the PATH for command prompts
Associate .PPK files with PuTTYgen and Pageant

his feature requires 3914KB on your hard drive.

Back   Install

10. Once the installation is complete, the Installation Complete page will display. Remove the check box beside View README file and click the **Finish** button. Figure 6

Completed the PuTTY release 0.74 (64-bit)
Setup Wizard

Click the Finish button to exit the Setup Wizard.

☐ View README file

11. Open a File Explorer window and browse to the installation path, C:\Program Files\PuTTY.
12. The folder should appear with all the application files present, LICENCE, pageant.exe, plink.exe, pscp.exe, psftp.exe, putty.chm, putty.exe, puttygen.exe, and README.txt. Figure 7

| Name	Date modified
LICENCE	6/21/2020 5:31 PM
pageant.exe	6/21/2020 5:37 PM
plink.exe	6/21/2020 5:37 PM
pscp.exe	6/21/2020 5:38 PM
psftp.exe	6/21/2020 5:38 PM
putty.chm	6/21/2020 5:30 PM
putty.exe	6/21/2020 5:39 PM
puttygen.exe	6/21/2020 5:39 PM
README.txt	6/21/2020 5:30 PM

13. Right-click the file named **psftp.exe** and select Copy.
14. Browse to the root of the C drive, C:\ and create a new folder named **File_Transfer**.
15. Right-click and paste the **psftp.exe** file into the **File_Transfer** folder. Figure 8

> This PC > Windows (C:) > File_Transfer

Name

psftp.exe
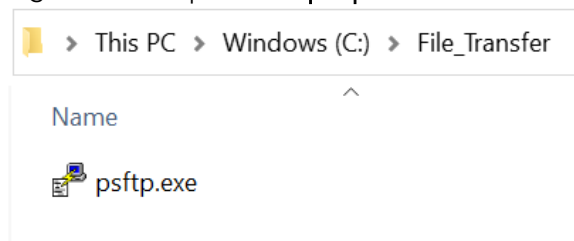
16. This completes the file transfer software installation; next you will move to writing the file transfer script.

Writing the File Transfer Script

1. Open a file explorer window and browse to the folder C:\File_Transfer.
2. From the top ribbon menu find the item labeled **New Item**.
3. Click New Item and from the menu select **New Text Document**. Figure 9
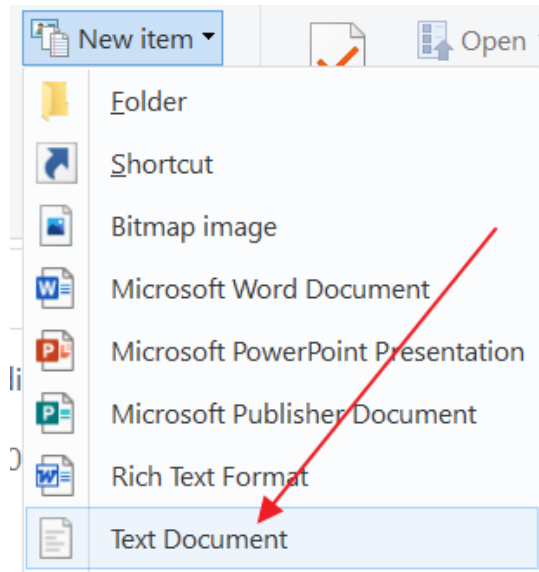
4. This will create a new Text document in the C:\File_Transfer folder, right-click this file and choose Rename, then name the file **File_Transfer.bat**.
5. Create another new text document and name it **File_Transfer.txt**.
6. The File_Transfer folder should now have three files, **File_Transfer.bat**, **File_Transfer.txt**, and **psftp.exe**. Figure 10
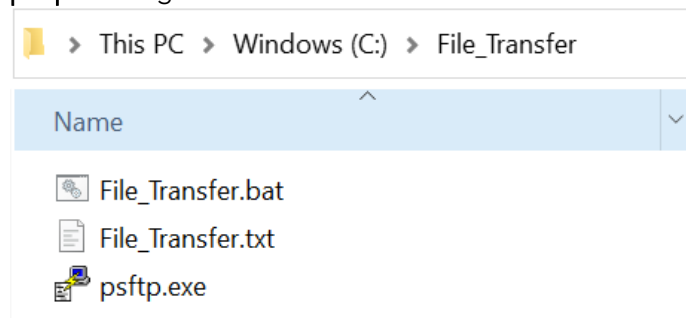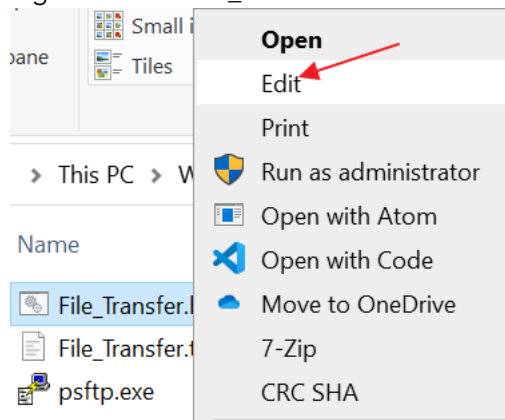
7. Right-click the file File_Transfer.bat and select **Edit**.
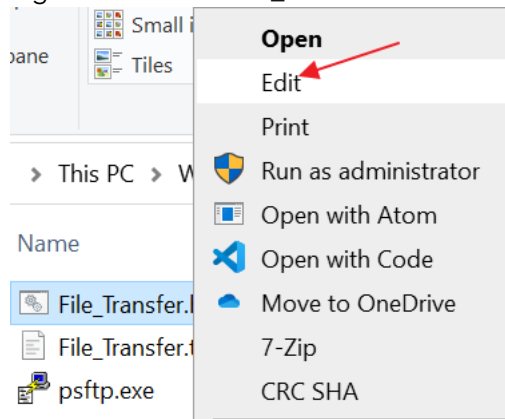
8. A new Notepad window will open for File_Transfer.bat, enter this information on line one of the file, **psftp.exe test.rebex.net -l demo -pw password -b File_Transfer.txt > "C:\File_Transfer\Log.txt"**. Figure 12
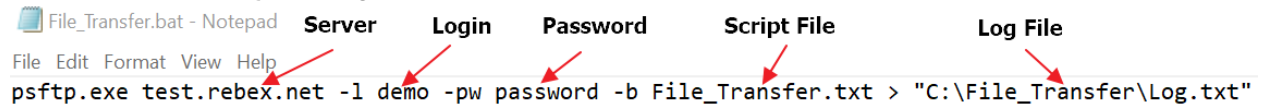
9. Then Save the file and close the Notepad window.
10. Right-click the File_Transfer.txt file and select **Edit**.

11. A new Notepad window will open for File_Transfer.txt. On line one of the file enter **get readme.txt**. On line two enter, **dir**, and on line three enter, **quit**. Save the file and close the Notepad window. Figure 13
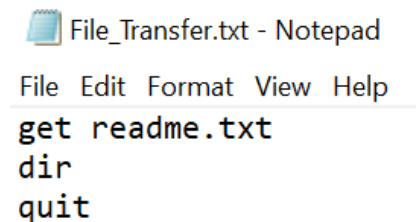
Testing the File Transfer Script

1. Before running the file transfer script, several testing steps must be taken.
2. Open the C:\File_Transfer folder. Double-click the file named psftp.exe. A new window for psftp.exe will open. In this window type **open test.rebex.net** and press the Enter key. Figure 14

C:\File_Transfer\psftp.exe

```
psftp: no hostname specified; use "open host.name" to connect
psftp> open test.rebex.net
```

3. Now a message will display asking you to accept the host key, type **y** and press Enter. Figure 15


```
The server's host key is not cached in the registry. You
have no guarantee that the server is the computer you
think it is.
The server's ssh-ed25519 key fingerprint is:
ssh-ed25519 255 e7:e4:45:c6:b8:e4:bb:d8:68:89:27:86:fd:01:58:f0
If you trust this host, enter "y" to add the key to
PuTTY's cache and carry on connecting.
If you want to carry on connecting just once, without
adding the key to the cache, enter "n".
If you do not trust this host, press Return to abandon the
connection.
Store key in cache? (y/n)
```

4. Next you will be prompted for the username, type **demo** and press Enter.
5. Then you will be prompted for the password, type **password** and press Enter. Figure 16

C:\File_Transfer\psftp.exe

```
psftp: no hostname specified; use "open host.name" to connect
psftp> open test.rebex.net
login as: demo
Keyboard-interactive authentication prompts from server:
| Password:
```

6. If the commands completed successfully, you would see a message that says Remote working directory is /. This confirms a successful connection to the server. Type **quit** and press Enter to end the connection.

C:\File_Transfer\psftp.exe

```
psftp: no hostname specified; use "open host.name" to connect
psftp> open test.rebex.net
login as: demo
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Remote working directory is /
psftp>
```

7. Return to the C:\File_Transfer folder and **double-click** the **File_Transfer.bat** file. This will execute the file transfer script you wrote in the previous section.
8. When the script executes, you will see a window briefly open and then close on its own and in the C:\File_Transfer folder, two additional files will now display, **Log.txt** and **readme.txt**. If the files display as expected the script was successful. Figure 17
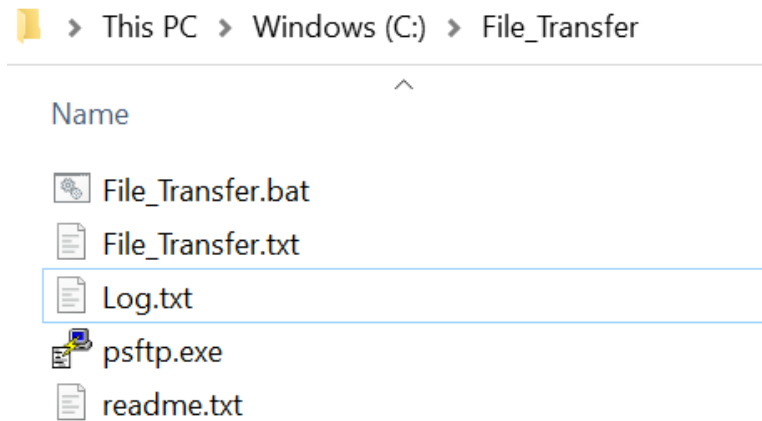
Finalizing the File Transfer Script

1. After the script has run successfully, there will be a Log.txt file in the C:\File_Transfer folder. This file contains a record of the steps taken by the script and can be used to verify success or troubleshoot any errors that arise. Figure 18

2. A successful file transfer log will contain a successful connection to the server, a local directory changes to C:\File_Transfer, a download of readme.txt, and list of the remote server folder. If all these items are present, congratulations, your file transfer automation setup is complete. If anything is missing, please refer to the troubleshooting section.
3. The file transfer automation script is now complete. The same setup steps and files can be used to connect to different servers and download or upload files. Thank you for your attention throughout this guide.

Endnotes

[i] Windows is a computer operating system provided by Microsoft.

[ii] PuTTY is a free implementation of SSH and Telnet for Windows and Unix platforms. It is written and maintained primarily by Simon Tatham. More information about PuTTY can be found here, https://www.chiark.greenend.org.uk/~sgtatham/putty.

[iii] Rebex maintains a free sftp server for testing, more about this server here, https://www.sftp.net/public-online-sftp-servers.