Downloading Time Series from a remote server into an EMpower project

Objective

This manual provides information on how to use EMpower to configure a recording for remote data upload and how to download time-series and other metadata files from the server to your local computer.

To perform a secure file transfer between the remote server and local computer we will use **WinSCP** (an SFTP client for windows).

NOTE: This manual is intended for Windows users only

Before you start:

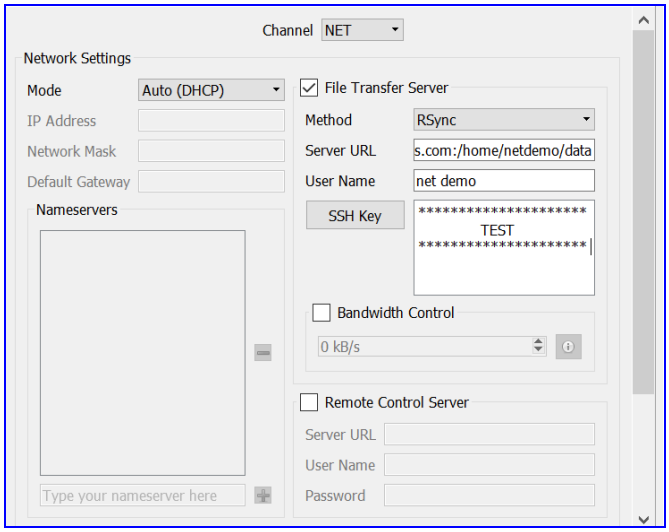
Before starting, make sure you have the following

1. Downloaded WinSCP in your computer
    a. https://winscp.net/eng/download.php
2. Be able to connect to the remote server
    a. Here is the information that will be needed to connect to the server:
        - **Host Name** of the server (i.e. *www.example.com*)
        - A **username** set up in the server (i.e. *testUser*)
        - **Password** of the username *testUser*. However, we recommend using a **private SSH key** instead.
            - Contact your server administrator for more on how to set up your ssh key.

How to configure a recording for remote data upload

Using Config Creator, you can set up a configuration file for remote data upload.

1. Configure all your recording parameters as desired
2. Click on the '*Net*' Channel (either by clicking on the receiver panel on the left side of the window or by switching the combo box at the top right of the window)
3. Configure the following:
   - Mode: *DHCP (Auto)*
   - File Transfer Method: *RSync*
   - Server URL: (*i.e. net.phoenix-geophysics.com:/home/netdemo/data)*
   - Username: *(i.e. netdemo)*
   - Provide the SSH private key
   - Define the Bandwidth Control, Rsync bandwidth limit, specified in KiloBytes per second. If disabled or 0 is entered, there is not limit



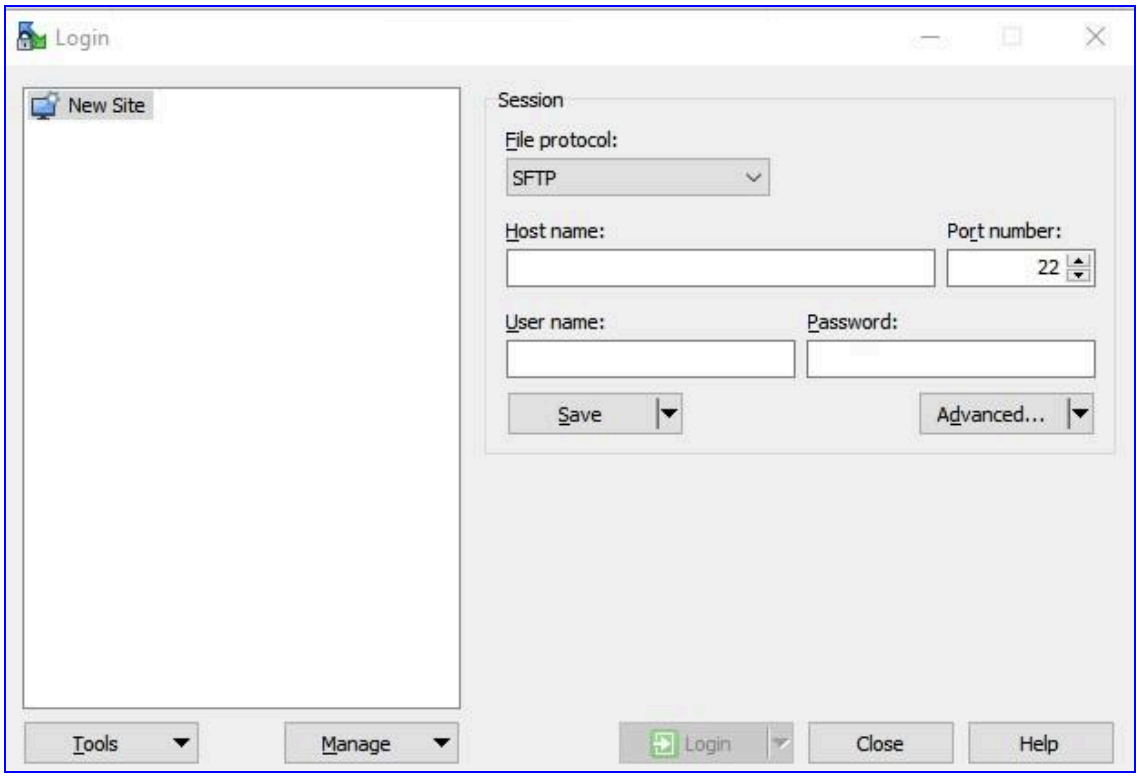
Note: Provide a valid ssh key!

4. Save the config file to SD card

How to download data from the server

Step 1:

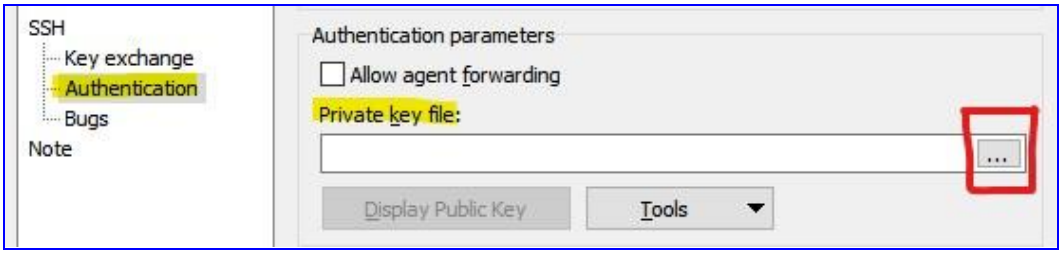
Creating a connection site to the remote server using WinSCP



1. Make sure File protocol is set to **SFTP**
2. Provide the **hostname** of your server
3. Leave the Port Number to **22** (default for ssh transferring)
4. Enter your **username** and **password**

NOTE: If an ssh key has been set up then no need to provide the password. Instead, do the following:

- Click on '*Advanced…*'
- On left Panel under SSH click on '*Authentication*'
- On the '*Private key file*' click on the button to locate your private key



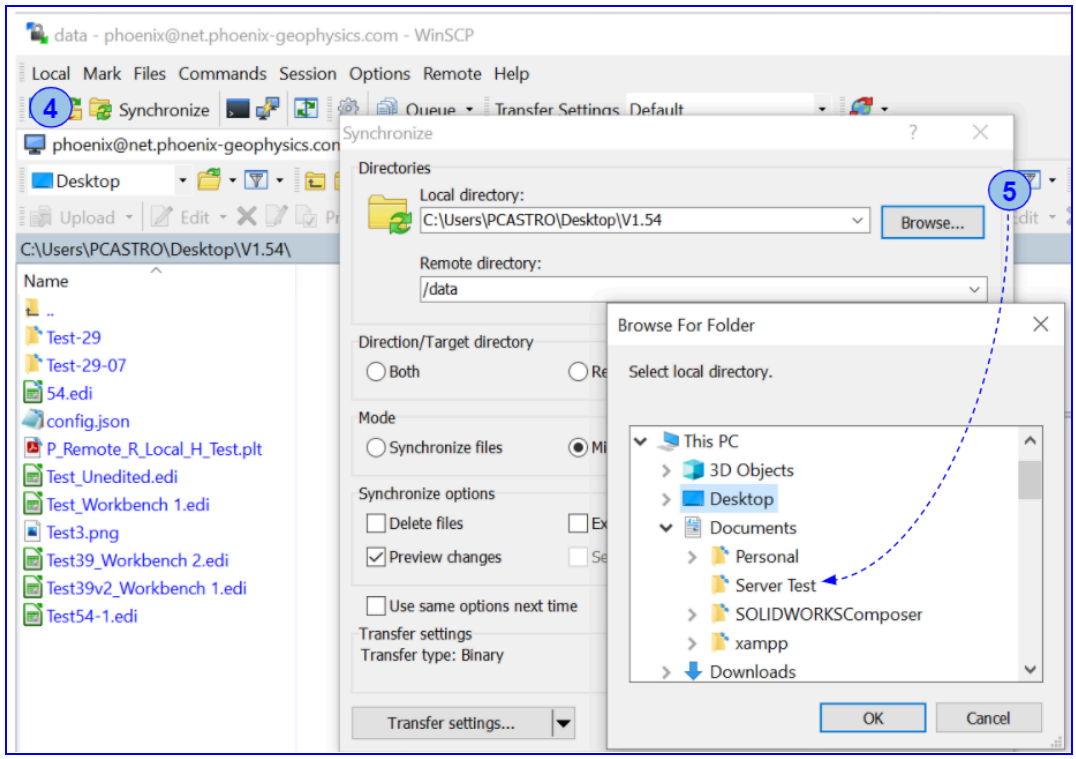
*If you get prompted to allow key conversion, click Ok

5. Save your site configuration by clicking '*Manage*' / '*Save As...*'
6. Click '*Login*'

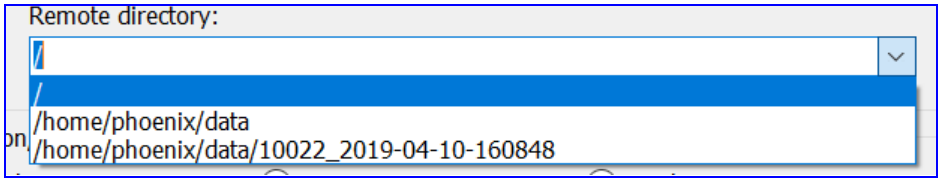
Testing file transfer

**Use the connection Network that will be used in the field*

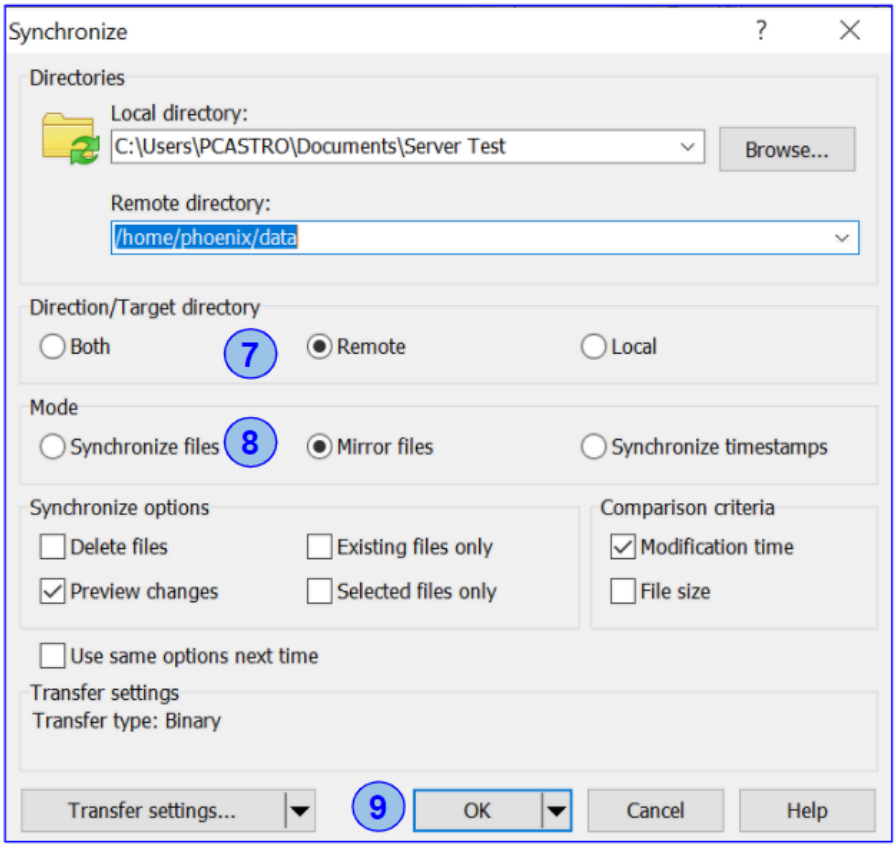
1. Create a Folder “Server Test” on **Local** desktop
2. Add a simple text file “Test.txt”
3. Add information to the field
4. Open WinSCP, click the Synchronize button
5. Use the Browse button to choose the Local path

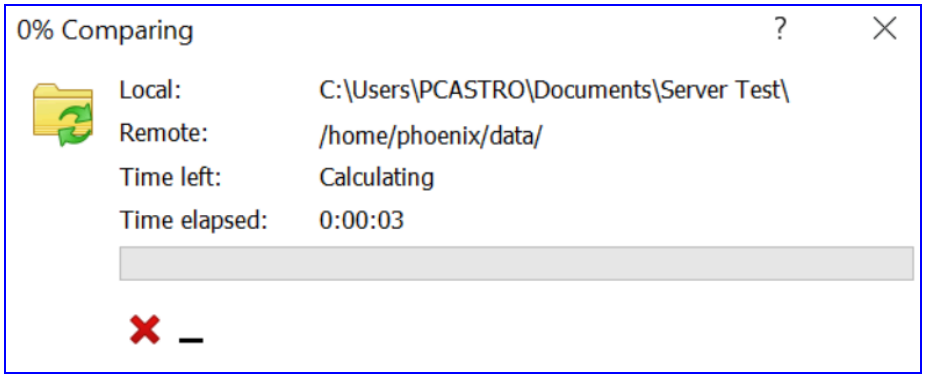


6. Select the folder on the server where you want to copy that data

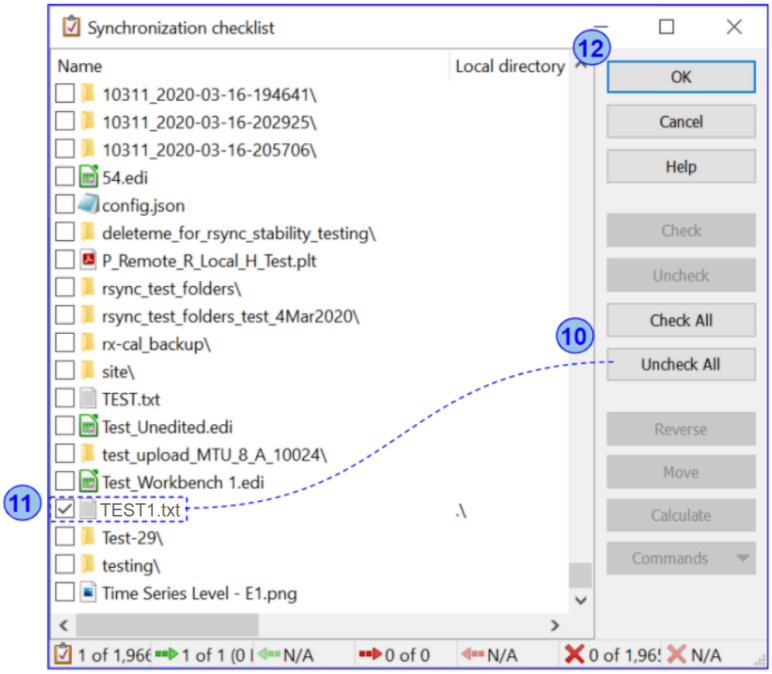


7. From Directories/Target directory, select **Remote**
8. Use **Mirror files** option from mode
9. Click **OK** to connect to the server

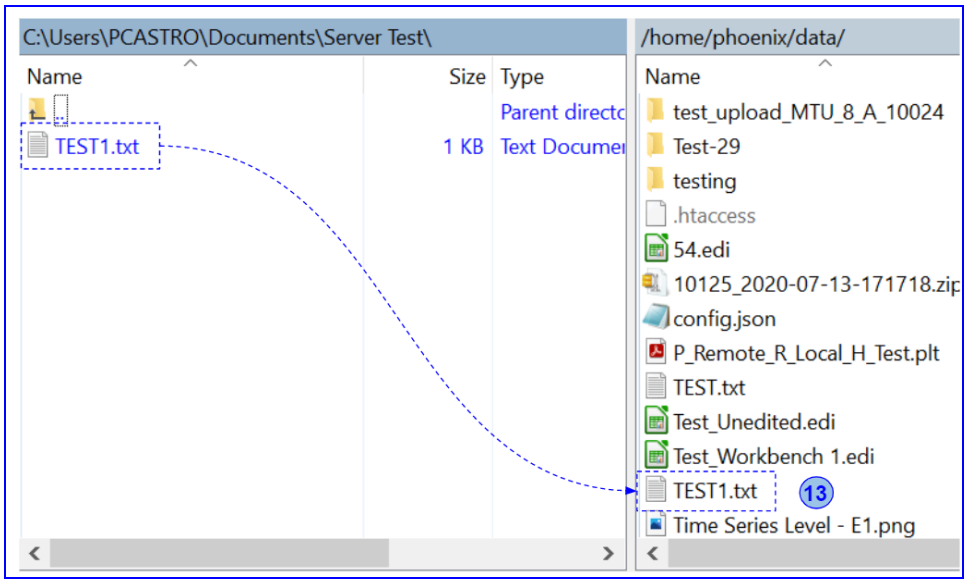




10. **Uncheck All** from the WinSPC list
11. Select the TEST1.txt file to be transferred to the server

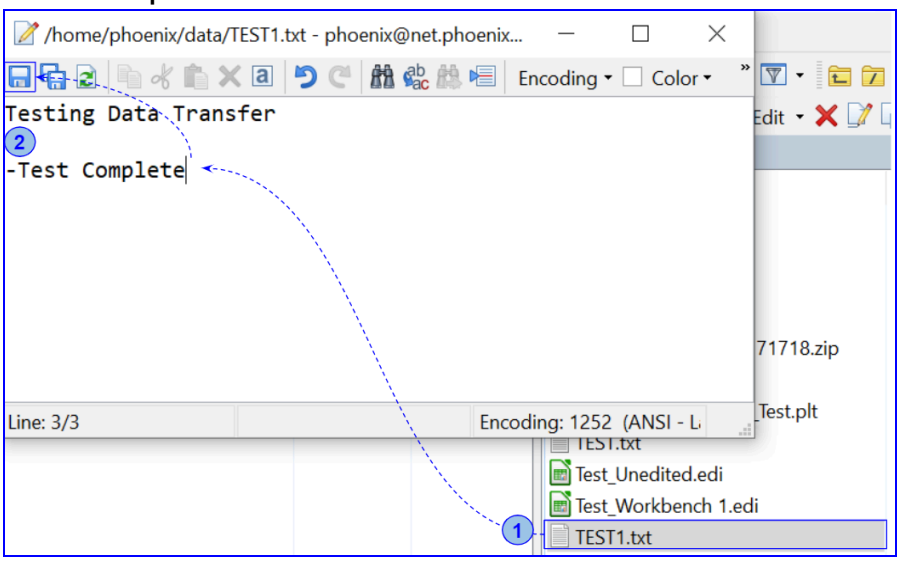


12. Click **OK** and the transfer will be complete
13. Review the list on the right side and find the TEST1.txt file

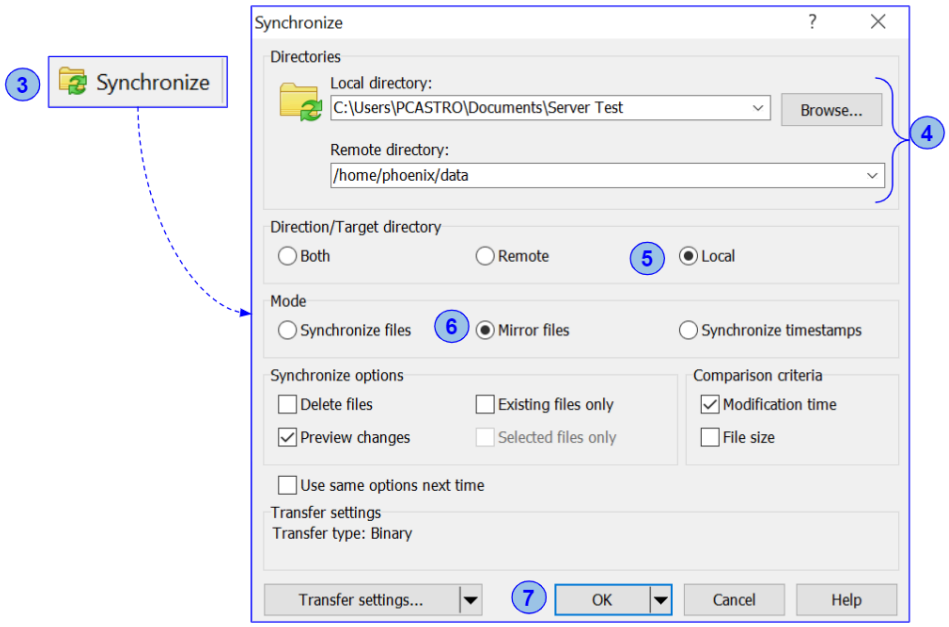


Once the transfer is complete, we will test the synchronization between the **Server** and the **Local** PC

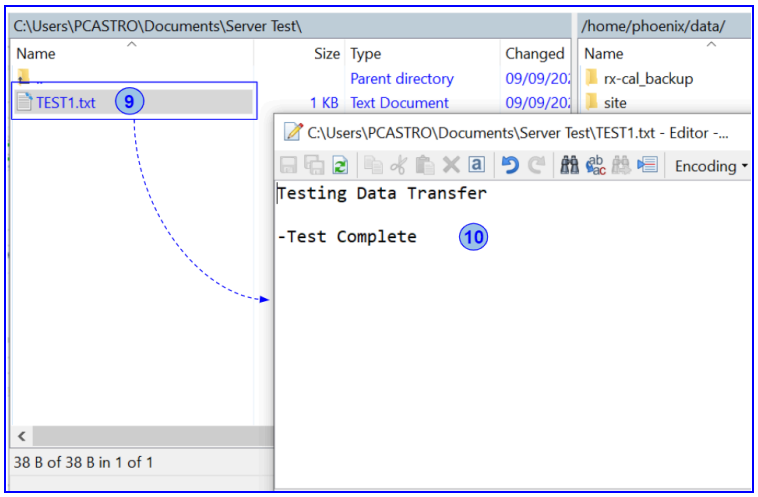
1. Open the TEST1.txt file on the Server (right side)
2. Add “- Test Complete” and save the file



3. Click **Synchronize** button
4. Review the path for both are correct
5. Select **Local** from the Direction/ Target directory
6. Use **Mirror files** option from Mode
7. Click **OK**



8. Repeat point 10 to 12 (Page 8)
9. Review the list on the left side and find the TEST1.txt file
10. Ensure that the changes on the server file were transferred to the local file



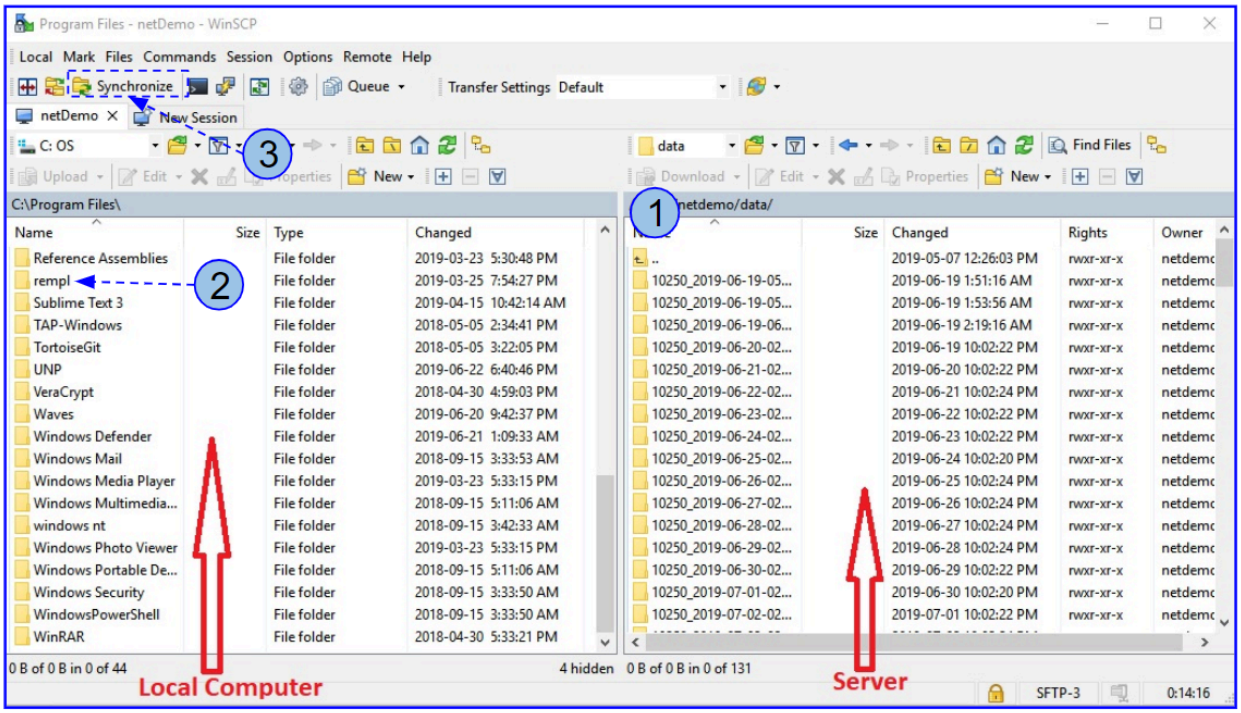
Step 2:

Set up synchronization between a local folder and remote data

Once you are logged in to your server through WinSCP, you should have something similar to the following.
Note that the left pane displays your local computer data, and the right pane displays the server data.

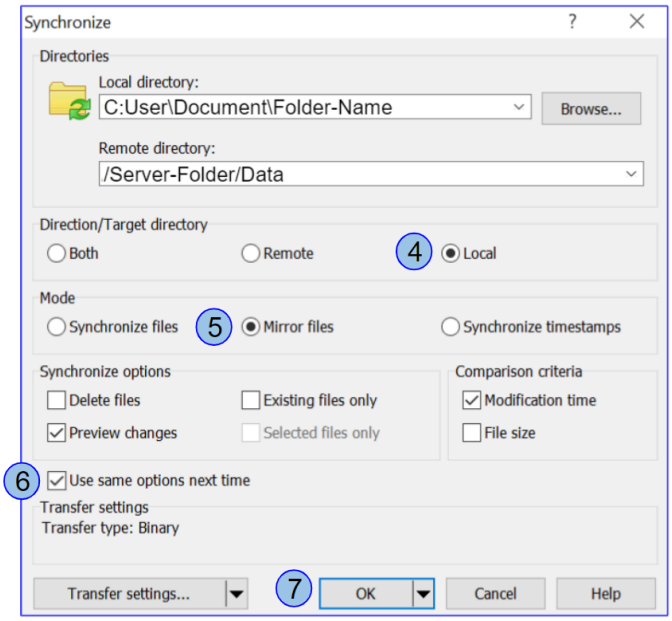
Now set up synchronization between data in the server and your local computer.

1. Navigate to the data directory on the server side (Right Pane)
2. Navigate to the local directory where you want to transfer the data
3. Click '*Synchronize*'



Use the following settings

4. Direction/Target directory: *Local*
5. Mode: *Mirror files*
6. Check the '*Use the same options the next time*'
7. Click '*Ok*' to initiate the transfer
    - Accept the key warning



Step 3:
Downloading new data from the server

1. Login to the site created in Step 1 (WinSCP)
2. Navigate to the data folder in server and local directory in your computer
3. Click '*Synchronize*', and all the new data will be securely copied over
    - Alternatively, you can select any particular recording to copy by
        - Multiselect recordings in the server-side panel
        - In the '*Synchronize*' dialog tick '*Selected Files Only*' under '*Synchronization options*'

Step 4:

Using the new data in EMpower

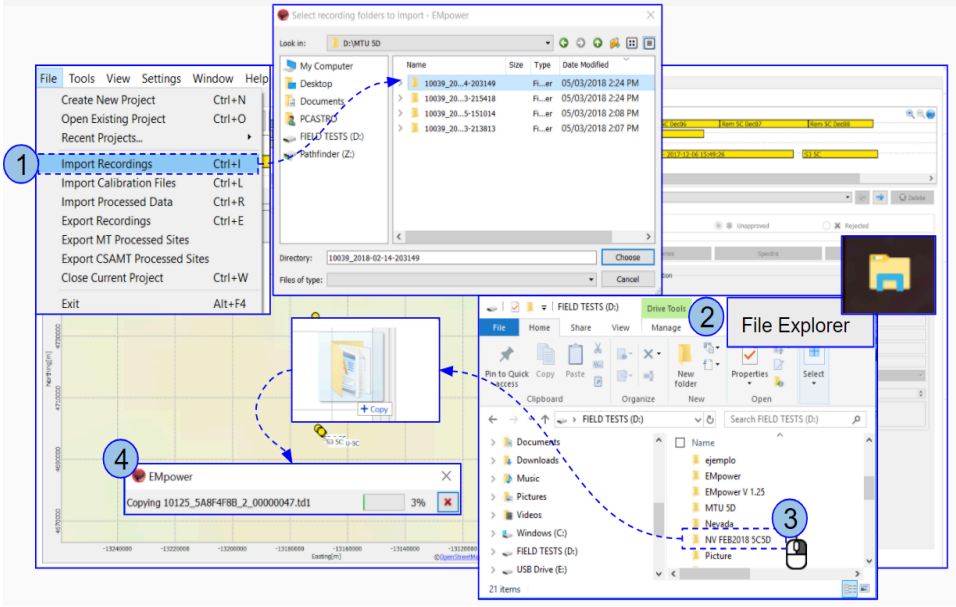
After downloading the data on your local computer, the EMpower / Manage module could be used to view/process the data

Importing Data

1. Select **Import Recordings** from the **File** menu
   - Select the recording and click **Choose**

Or

2. Select the **recording folder** in the **File Dialog** window
3. Drag and drop the **Recording** to the Timeline or Map
4. Wait until the import is complete



***** IMPORTANT **** Every time you synchronize new data, remember to delete the 'empower_recmeta.json' file from each updated recording.**

Please check out the FAQs *https://phoenixgeophysics.freshdesk.com/*
Or email us at: *support@phoenix-geophysics.com*