# Downloading Time Series from a remote server into an EMpower project

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# **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. <u>www.example.com</u>)
    - 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
- Click on the 'Net' Channel (either by clicking on 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

letwork Settings				
Mode	Auto (DHCP)	•	File Transfe	r Server
IP Address			Method	RSync •
Network Mask			Server URL	s.com:/home/netdemo/data
Default Gateway			User Name	net demo
Nameservers		1	SSH Key	************************************
			Bandwidth	n Control
			Remote Cor	ntrol Server
			Server URL	
			User Name	
T	neserver here	4	Password	

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

🎦 Login			— — ×
😭 New Site		Session File protocol: SFTP ~ Host name:	Po <u>r</u> t number:
		User name: Save ▼	Password:
<u>T</u> ools <b>T</b>	Manage 🔻	🔁 Login 💌	Close Help

- 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

SSH Key exchange Authentication Bugs Note	Authentication parameters Allow agent <u>f</u> orwarding Private <u>k</u> ey file:		
	Display Public Key	Tools <b>–</b>	

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

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



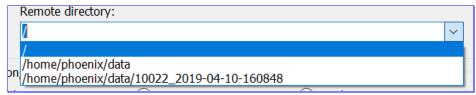
Testing file transfer

\*Use the connection Network that will be used on 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

🖺 data - phoenix@net.phoenix-geophysi	ics.com - WinSCP	
Local Mark Files Commands Session	Options Remote Help	
	🚳 🗐 Queue 🔹 Transfer Setting	as Default 🔹 🍠 🗸
phoenix@net.phoenix-geophysics.con	Synchronize	? ×
💶 Desktop 🔹 🚰 🕶 😭 🕶 😭	Directories	
	Local directory:	5
🛙 🗊 Upload 👻 📝 Edit 👻 🗶 📝 🕞 Pr	C:\Users\PCASTRO\Deskto	pp/V1.54
C:\Users\PCASTRO\Desktop\V1.54\	Remote directory:	
Name	/data	
<mark>⊾</mark>	/	
Test-29	Direction/Target directory	Browse For Folder ×
芦 Test-29-07	O Both OR	Select local directory.
💼 54.edi	0.00	/
a) config.json	Mode	/
P_Remote_R_Local_H_Test.plt	◯ Synchronize files ● M	
Test_Unedited.edi		> 3D Objects
Test_Workbench 1.edi	Synchronize options	> Desktop
Test3.png	Delete files	V 🖹 Documents
Test39_Workbench 2.edi	✓ Preview changes Se	> 🎽 Personal
Test39v2_Workbench 1.edi		📑 Server Test 🥌
💼 Test54-1.edi	Use same options next time	> 📑 SOLIDWORKSComposer
	Transfer settings	> 📑 xampp
	Transfer type: Binary	> 🕹 Downloads
	Transfer settings 💌	OK Cancel

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



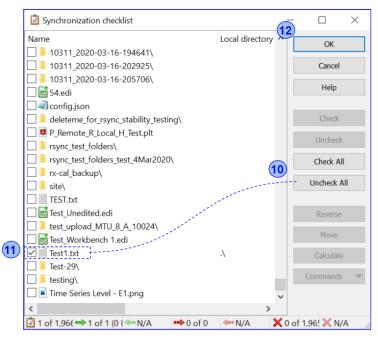


- 7. From Direction/Target directory, select Remote
- 8. Use Mirror files option from mode
- 9. Click OK to connect to the server

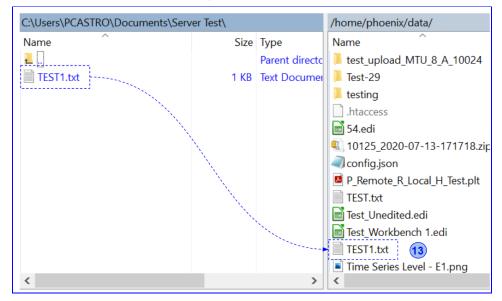
Synchror	nize			?	$\times$
Directo	ries				
	Local directory:				_
2	C:\Users\PCASTRO	\Documents\Server Test	~	Browse	
	Remote directory:				
	/home/phoenix/data	1			~
Directio	on/Target directory				
ОВо	th <b>7</b>	<ul> <li>Remote</li> </ul>	OLocal		
Mode					
⊖ Sy	nchronize files <b>8</b>	Mirror files	O Synchronize	timestamps	
Synchro	onize options		Comparison of	riteria	
De	elete files	Existing files only	✓ Modificat	ion time	
V Pre	eview changes	Selected files only	File size		
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0% Cor	mparing			?	$\times$
	Local:	C:\Users\PCASTRO\Do	cuments\Server	Test\	
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	re clupsed.	0.00100			
	<b>×</b> _				



- 10. Uncheck All from the WinSPC list
- 11. Select the Test1.txt file to be transfer to the server



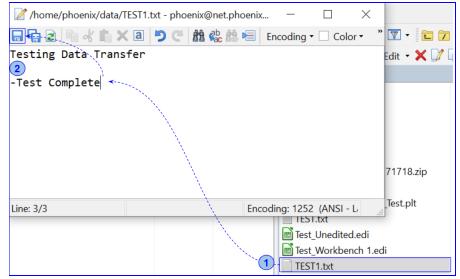
- 12. Click OK and the transfer will be complete
- 13. Review the list on the right side and find the TEST1.txt file



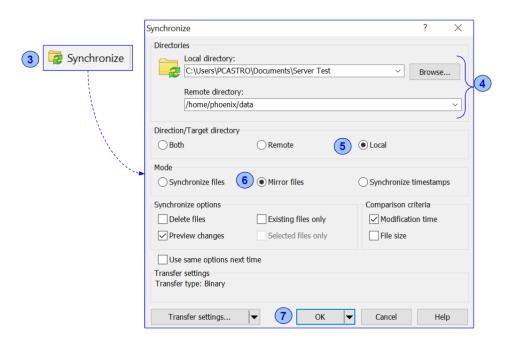


Once the transfer is complete, we will test the synchronization between the **Server** and the **Local** PC

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



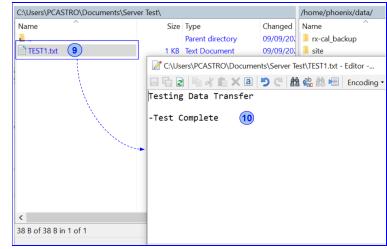
- 3. Click Synchronize button
- 4. Review the path for both are correct
- 5. Select Local from the Direction/ Target directory
- 6. Use Mirror files option from Mode
- 7. Click OK





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- 8. Repeat the point 10 to 12 (Page 8)
- **9.** Review the list on the left side and find theTEST1.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'

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:\Program Files\				netdemo/data/				
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rempl (2)	File folder	2019-03-25 7:54:27 PM		10250_2019-06-19-05		2019-06-19 1:51:16 AM	rwxr-xr-x	netdemo
Sublime Text 3	File folder	2019-04-15 10:42:14 AM		10250_2019-06-19-05		2019-06-19 1:53:56 AM	rwxr-xr-x	netdemo
TAP-Windows	File folder	2018-05-05 2:34:41 PM		10250_2019-06-19-06		2019-06-19 2:19:16 AM	rwxr-xr-x	netdem
TortoiseGit	File folder	2018-05-05 3:22:05 PM		10250_2019-06-20-02		2019-06-19 10:02:22 PM	rwxr-xr-x	netdem
UNP	File folder	2019-06-22 6:40:46 PM		10250_2019-06-21-02		2019-06-20 10:02:22 PM	rwxr-xr-x	netdem
VeraCrypt	File folder	2018-04-30 4:59:03 PM		10250_2019-06-22-02		2019-06-21 10:02:24 PM	rwxr-xr-x	netdemo
Waves	File folder	2019-06-20 9:42:37 PM		10250_2019-06-23-02		2019-06-22 10:02:22 PM	rwxr-xr-x	netdemo
Windows Defender	File folder	2019-06-21 1:09:33 AM		10250_2019-06-24-02		2019-06-23 10:02:22 PM	rwxr-xr-x	netdem
Windows Mail	File folder	2018-09-15 3:33:53 AM		10250_2019-06-25-02		2019-06-24 10:02:20 PM	rwxr-xr-x	netdem
Windows Media Player	File folder	2019-03-23 5:33:15 PM		10250_2019-06-26-02		2019-06-25 10:02:24 PM	rwxr-xr-x	netdemo
Windows Multimedia	File folder	2018-09-15 5:11:06 AM		10250_2019-06-27-02		2019-06-26 10:02:24 PM	rwxr-xr-x	netdemo
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Windows Security	File folder	2018-09-15 3:33:50 AM		10250_2019-07-01-02	11	2019-06-30 10:02:20 PM	rwxr-xr-x	netdemo
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WinRAR	File folder	2018-04-30 5:33:21 PM	~					. >



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

Synchronize		? ×
Directories		
Local directory: C:User\Doc	ument\Folder-Name	∽ Browse
Remote directory	r:	
/Server-Fold	der/Data	~
Direction/Target directory		-
OBoth	○ Remote	4 OLocal
Mode	_	
○ Synchronize files	5      Mirror files	○ Synchronize timestamps
Synchronize options		Comparison criteria
Delete files	Existing files only	✓ Modification time
Preview changes	Selected files only	File size
Use same options new Transfer settings Transfer type: Binary	dt time	
Transfer settings	Г (7) ОК	✓ Cancel Help

## 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

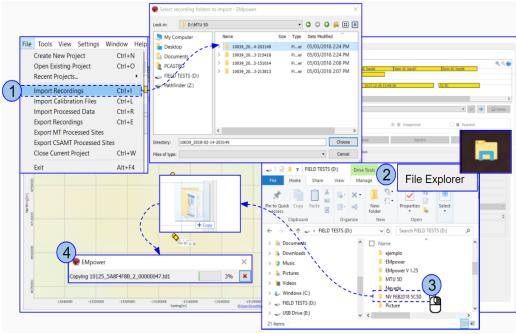
After downloading the data on your local computer, then EMpower / Manage module could be used to view/process the data

### Importing Data

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

#### Drag and drop

- 2. Select the recording file in the File Explorer window
- 3. Drag and drop the Recording data to the Timeline or Map
- 4. Wait until charging is completed



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



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

