USING SSH KEYS WITH PUTTY, WINSCP AND FILEZILLA ON WINDOWS

1. INSTALL PUTTY AND PUTTYGEN

The applications PuTTY and PuTTYgen have to be installed in order to ssh to Linux servers with private key on Windows. The installer can be found from https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

After installation, the two applications can be found as shown:



2. CONVERSION OF EXISTING PRIVATE KEYS

- 1. Save your id_rsa key to the Windows desktop.
- 2. Launch **PuTTYgen** and click "conversions" > "import key" to open your id_rsa key



3. After opening the key, click "Save private key"

Key comment:	imported-openssh-ke	/	
Key passphrase:			
Confirm passphrase:			
Actions			
Generate a public/priv	ate key pair		Generate
Load an existing privat	e key file		Load
Save the generated ke	ey	Save public key	Save private key

4. Click yes to save the key without passphrase as "id_rsa.ppk" on the desktop

PuTTYgen Warning X							
Are you sure you want to save this key without a passphrase to protect it?							
Yes No							

3. CONNECT TO LINUX SERVER WITH PRIVATE KEY

1. Launch **PuTTY** as shown

🕵 PuTTY Configuration		?	×
Category:			
Session Logging Terminal Keyboard Sestimate Ses	Basic options for your PI Specify the destination you want t Host Name (or IP address) Connection type: Ray I elnet O Rlogin Load, save or delete a stored sess Saved Sessions Default Settings Close window on egit: Always O Never C C	connect to <u>Port 22 SSH O S S</u>	e
<u>A</u> bout <u>H</u> elp	Open	n <u>C</u> ano	el

- 2. Fill in the "Hostname(or IP address)" textbox with target host's information
- 3. On the left-handed side navigation tree, click "connection">"SSH">"Auth"



4. Click Browse to select the converted private key "id_rsa.ppk" and click open.



5. Navigate back to "Session" in the navigation tree. Save your settings as a named session as shown:



6. Click open to log into the remote Linux server with the key.



4. SECURELY TRANSFER FILES BETWEEN SERVER AND WINDOWS USING WINSCP

1. Install WinSCP

The application WinSCP has to be installed in order to copy files between Linux Server and Windows with private key. The installer can be found from https://winscp.net/eng/download.php

2. Launch WinSCP and edit the details of the sessions

🌆 Login			- 🗆 X
Vew Site		Session File protocol: SFTP Host name: 202.88.99.86 User name: Pa swo r2_xox	Port number: 22 :
Tools 🔻	Manage	Login 🔻 Cl	ose Help

3. Click "Advanced", a new prompt window will popup. Select "SSH">"Authentication" on the lefthanded side. Click "..." on the right to choose your converted private key on the desktop. Finally click OK.

Advanced Site Settings		?	×
Environment — Directories — Recyde bin — Encryption — SFTP — Shell Connection — Proxy — Tunnel SSH — Key exchange — Authentication — Directories	□ Bypass authentication entirely Authentication options □ Attempt authentication using Pageant □ Attempt Tkeyboard-interactive' authentication □ Respond with password to the first prompt □ Attempt TIS or CryptoCard authentication (SSH-1) Authentication parameters □ Allow agent forwarding Private key file:	_	
Note	Display Public Key Tools GSSAPI Attempt GSSAPI authentication		
-	Allow GSSAPI credential delegation		
Color 🔻	OK Cancel	He	elp

4. Click "login" to log into the server

, 🛃 Login		- 🗆 X
New Site	Session File protocol: SFTP Host name: 202.88.99.86 User name: r2_xxxl Save	Port number:
Tools Manage Manage Manage	Login Close	e Help

5. Finally, the server side directories are shown on the right pane as shown:

🂑 r2 - r2@202.88.99.86 - WinSCP										-		×
Local Mark Files Commands Session	Options	Remote Help										
🕀 🔁 😓 Synchronize 🛛 🐙 💽	1	Queue 🝷	Transfer Settings Def	ault	t	- 🥔	•					
📮 r2@202.88.99.86 🗙 🚅 New Session												
🔮 My documents 🔹 🚰 🔹 🕎 🔹			🗈 🗈 🏠 🎜 🗞		r2	• 🚰 •	😨 • 🔷 • ⇒	- 🗈 🕯	2 🏠 🔁		Find Files	۲.
🕼 Upload 👻 📝 Edit 👻 🛃 🕞 Pi	roperties	🚰 New 🗸	+ - V		Download 👻	📝 Edit	- 🗙 🛃 🕞 Pro	perties (😚 New 🗸	Ð	- 🛛	
C:\Users\kwchui.AD\Documents\				/r								
Name Apowersoft Custom Office Templates MobaXterm Visit Zoom	Size	Type Parent dire File folder File folder File folder File folder File folder	Changed 7/7/2020 10:46 20/5/2020 2:14 25/3/2020 5:35 4/12/2020 5:05 7/7/2020 10:46 25/5/2020 3:25		lame analysis of the second se	Size	Changed 11/11/2202 0343 5/12/2020 12:10 4/12/2020 3:41 27/11/2020 4:54 29/11/2020 11:8 30/11/2020 11:8 2/12/2020 12:17 7/12/2020 12:17 7/12/2020 12:56	PWXF PWXF PWXF PWXF PWXF PWXF	r2 r2 r2 r2			
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ь ла Пара				_					SFTP-3	Ę	0:00:	44

5. SECURELY TRANSFER FILES BETWEEN SERVER AND WINDOWS USING FILEZILLA

1. Install FileZilla Client

Another FileZilla Client application may be used to transfer files between Linux Server and Windows with private key. The installer can be found from https://filezilla-project.org/

2. Launch FileZilla Client and click the "site manager" button on the menu bar. A new site manager window will popup. Click "New site" button to edit a new session.

🔁 FileZilla	– 🗆 X
Eile Felt View Transfer Server Bookmarks Help 	
Host: Site Manager	
Status: Select entry:	General Advanced Transfer Settings Charset
Status: My Sites	Protocol: FTP - File Transfer Protocol ~
Local si	Host: Port:
	Encryption:
	Logon Type: Ask for password
	Usen
	Password:
Filenam	
 .vsci 	Background color: None V
3D	Comments:
App New site New folder	^
App New Bookmark Rename	
la Con	<u>_</u>
8 files a	
Server/	Connect OK Cancel
Queued files Failed transfers Successful transfers	
	Queue: empty

3. Give a name to the session. Then select "SFTP" in the Protocol pull down menu. Fill in the IP of the host and finally select "Key file" in the Logon Type pull down menu as shown:

F File	Zilla	- 🗆 X	
File Ed	it View Transfer Server Bookmarks Help		
111 -	■ T T # Q # Q 1, 1 = Q #	A	a
Host:	Site Manager	>	×
Status:	Select entry:	General Advanced Transfer Settings Charset	
Status: Status:	My Sites	Protocol: SFTP - SSH File Transfer Protocol 🛛 🗸 🗸]
Local si		Host: 202.88.99.86	
		Logon Type: Ask for password V	
		User: Anonymous Normal	
		Password: Ask for password	
Filenam		Key file	D
 .vsc		Background color: None V	
3D (Comments:	
📕 anac	New site New folder	^	
App	New Bookmark Rename		
Coo 8 files a	Delete Duplicate	· · · · · · · · · · · · · · · · · · ·	

4. Browse and select your saved converted key file from Desktop. Fill in the username and finally click connect to login to the cluster.

Site Manager							×
Select entry:		General Adv	anced Tr	ansfer Settings	Charset		
My Sites		Protocol:	SFTP - S	SSH File Transfer	Protocol		\sim
		Host:	202.88	.99.86		Port:	
		Logon Type:	Key file				\sim
		User:	r2_xxxx				
		Key file:	C:\User	s\kwchui\Deskto	op\id_rsa.ppk	Br	owse
		Background Comments:	color: N	one ~			
New site	New folder						^
New Bookm	ark Rename						
Delete	Duplicate						~
				Connect	ОК		Cancel

5. Click Yes about the security warning. Then the Linux server side will be shown in the right pane as shown:

Toggles processing of	the transfer queue	Cive Drive Chakter				Queue: e	mpty		.13
Queued files Failed		transfers			0	2			
Server/Local file	Dire Remote file	Size Pri	o Sta	itus					
		,			ectories, iotal size: 2	to,790 bytes			_
	ries. Total size: 5,464,175		*	12 files and 12 div	ectories. Total size: 2	0 700 bytes		,	
Cookies	File folder	11/22/2020		,pki	File tol	11/25/20	urwxr	r2 vnpc.	~
Application Data	File folder File folder	12/8/2020 11/22/2020		nanorc		12/7/202 11/25/20			
AppData	File folder	11/22/2020		.mozilla		12/15/20			
anaconda3	File folder	11/22/2020		.config		12/5/202			
3D Objects	File folder	11/22/2020		.conda		11/29/20			
.vscode	File folder	11/22/2020		.cache		12/5/202			
				. .					
Filename	Filesize Filetype	Last modified	^	Filename	Filesize Filetype	Last mod	Permis	Owner/.	^
D: (DAT			~						_
B- Win				····· [2	Lin	ux Serve	er side		
F	Jublic Jser01			☐ ? home ☐ 12					
⊕- <mark>2</mark> k			^	₽-?/					
Local site: C:\Users\k			~	Remote site: /hor	me/r2				~
									ř
	listing of "/home/r2" su	ccessful							
	g directory listing rectory /home/r2								^
Host:	Username:	Password:		Port:	Quickconne	ct 💌			
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File Edit View Tran	sfer Server Bookmark								
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E cluster session -	sftp://r2@202.88.99.86	- FiloZilla					— Г] X	

THE END