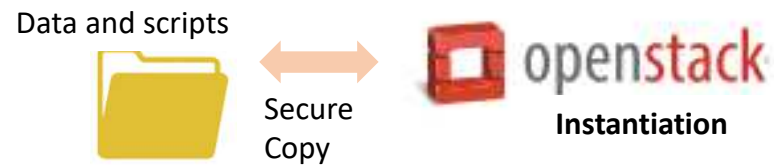
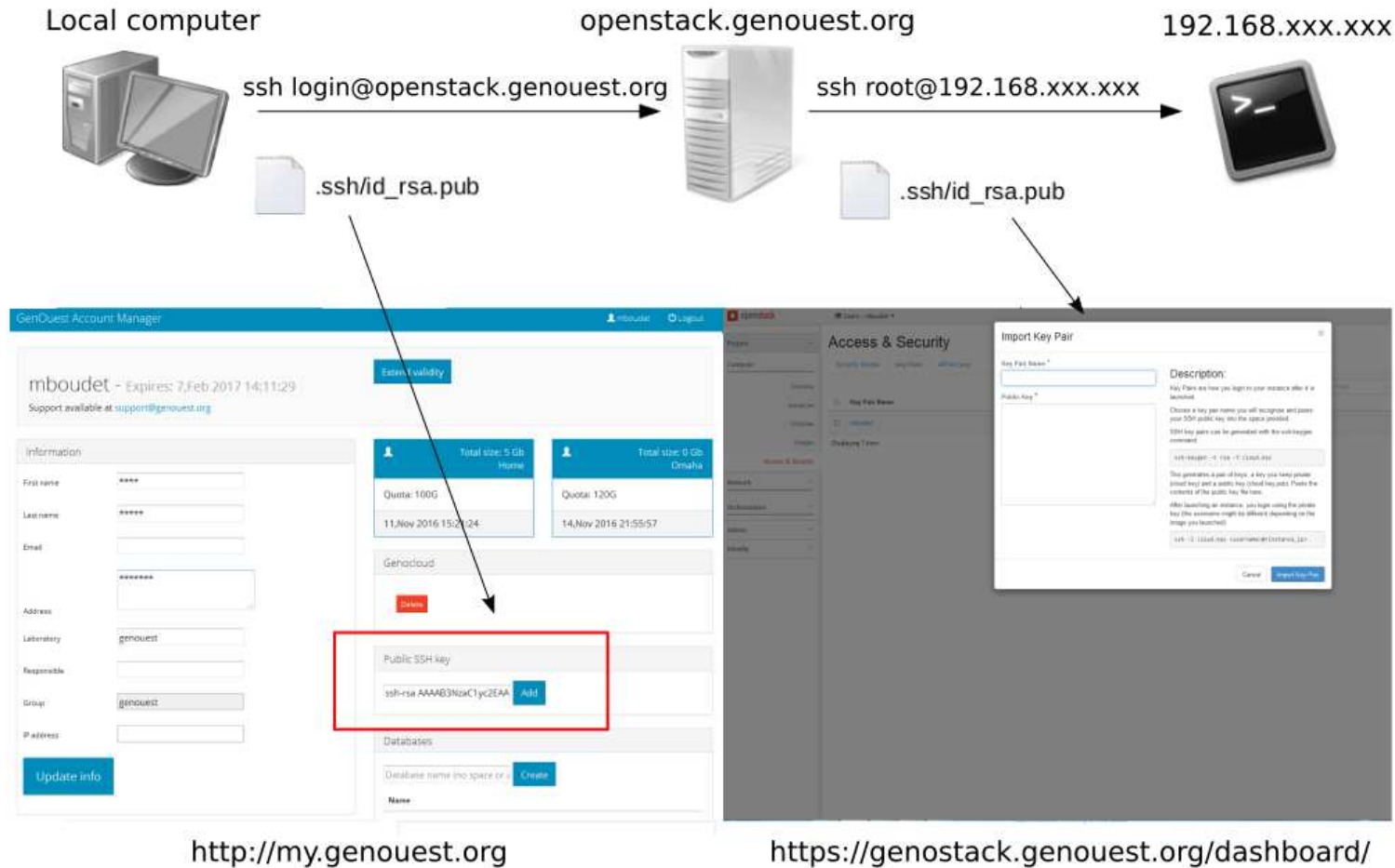


How to copy data, scripts and notebooks
to the *shared folder* of the Jupyterhub server
in a secure way (SCP)
using PuTTY and WinSCP.



First, configure your SSH Keys



See <https://www.genouest.org/outils/genostack/ssh-config.html>
<https://phoenixnap.com/kb/generate-ssh-key-windows-10>

Then ...

Create a private key file from your ssh id_rsa key

The image shows the PuTTYgen application interface. The 'Conversions' menu is open, with 'Import key' selected. A red arrow labeled '1' points from the 'Import key' menu item to the 'PuTTY Key Generator' dialog box. The dialog box is titled 'PuTTY Key Generator' and contains the following fields and buttons:

- Key:** A text area containing the public key for pasting into the OpenSSH authorized_keys file. The key is an ssh-rsa key with a fingerprint of `ssh-rsa 2048 dd:3b:b8:2e:85:04:06:e9:ab:ff:a8:0a:c0:04:6e:d6`.
- Key fingerprint:** A text box containing the fingerprint.
- Key comment:** A text box containing 'imported-openssh-key'.
- Key passphrase:** An empty text box.
- Confirm passphrase:** An empty text box.
- Actions:** A section with three buttons: 'Generate', 'Load', and 'Save private key' (which is highlighted with a blue box).
- Parameters:** A section with radio buttons for 'Type of key to generate' (RSA, DSA, ECDSA, ED25519, SSH-1 (RSA)) and a text box for 'Number of bits in a generated key' (2048).

Red arrows labeled '2' and '3' indicate the flow of information. Arrow '2' points from the public key text area to a file icon labeled 'id_rsa.pub' in a directory labeled '.ssh' under 'Home directory'. Arrow '3' points from the 'Save private key' button to a file icon labeled 'id_rsa_priv.ppk'.

Generate a private key file for genostack



PuTTY Key Generator

File Key Conversions Help

Key

Public key for pasting into OpenSSH authorized_keys file:

```
yyUecp4pzCGkivAlhyfHlFR61RGL  
+GPXQ2MWZWFYbAGyiYJnAmCP3NOTd0jMZEEnDkbUvxhMmBYSdETk1rRgm  
+R4LOzFUGaHqHDLKLX  
+FIPKcF96hrucXzcWylbEqE98OHlnVYCzRdK8jlgm8tehUc9c9WhQ== imported-  
openssh-key
```

Key fingerprint: ssh-rsa 2048 dd:3b:b8:2e:85:04:06:e9:ab:ff:a8:0a:c0:04:6e:d6

Key comment: imported-openssh-key

Key passphrase:

Confirm passphrase:

Actions

Generate a public/private key pair **1** Generate

Load an existing private key file Load

Save the generated key Save public key Save private key

Parameters

Type of key to generate:

RSA DSA ECDSA ED25519 SSH-1 (RSA)

Number of bits in a generated key:



Genostack

Free Academic Cloud Resource for Bioinformatics

Project

API Access

Compute

Overview

Instances

Images

Key Pairs

Server Groups

Key Pairs

Click here for filters or full text search.

+ Create Key Pair Import Public Key

Import Public Key

Key Pair Name * genostack ✓

Key Type * SSH Key

Load Public Key from a file

Choisir un fichier Aucun fichier choisi

Public Key * (Modified) Content size: 380 bytes of 16.00 KB

```
ssh-rsa  
AAAAB3NzaC1vc2EAAAABlwAAQEA6NF8iallvQVp22WDkTKyrtvp9eWW6A8YVr+kz4TjGYe7qHzlw+niNltGEFHzD  
+v112Y  
HfdOV0i  
P3NQ  
Td0jMZEEnDkbUvxhMmBYSdETk1rRgm+R4LOzFUGaHqHDLKLX+FIPKcF96hrucXzcWylbEqE98OHlnVYCzRdK8j  
lgm8tehUc9c9WhQ==
```

Cancel Import Public Key

3 copy-paste

2

genostack.ppk



SFTP connection on your VM via the proxy "openstack.genouest.org"

1/5

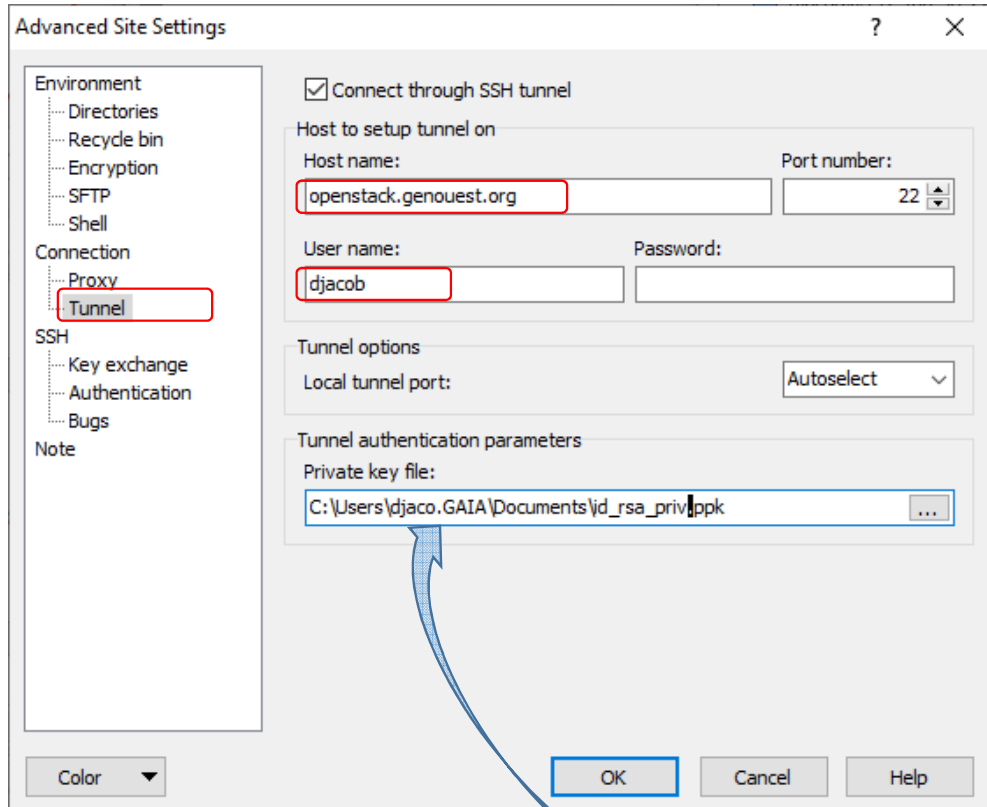
The Login dialog box in WinSCP shows a tree view on the left with 'New Site' and 'genostack2' folders. Under 'genostack2', there are two sub-items: 'djacobt@openstack-192-168-100-XX' and 'genostack'. The 'Session' section on the right is configured as follows: File protocol is 'SFTP'; Host name is '192.168.100.20'; Port number is '22'; User name is 'root'. The 'Advanced...' button is highlighted with a red box. At the bottom, there are 'Tools', 'Manage', 'Login', 'Close', and 'Help' buttons, and a checkbox for 'Show Login dialog on startup and when the last session is closed'.

The Advanced Site Settings dialog box shows a tree view on the left with categories: Environment, Connection, SSH, and Note. The 'Directories' sub-category is selected and highlighted with a red box. The 'Directories' section on the right includes: 'Synchronize browsing' (unchecked), 'Remember last used directory' (checked), 'Remote directory' set to '/media/sf_DATA', and 'Local directory' set to 'C:\DATA'. Below this, it states 'Local directory is not used with Explorer interface.' The 'Directory reading options' section includes: 'Cache visited remote directories' (checked), 'Cache directory changes' (checked), 'Resolve symbolic links' (checked), 'Permanent cache' (checked), and 'Follow symbolic links to directories' (unchecked). At the bottom, there are 'Color', 'OK', 'Cancel', and 'Help' buttons.

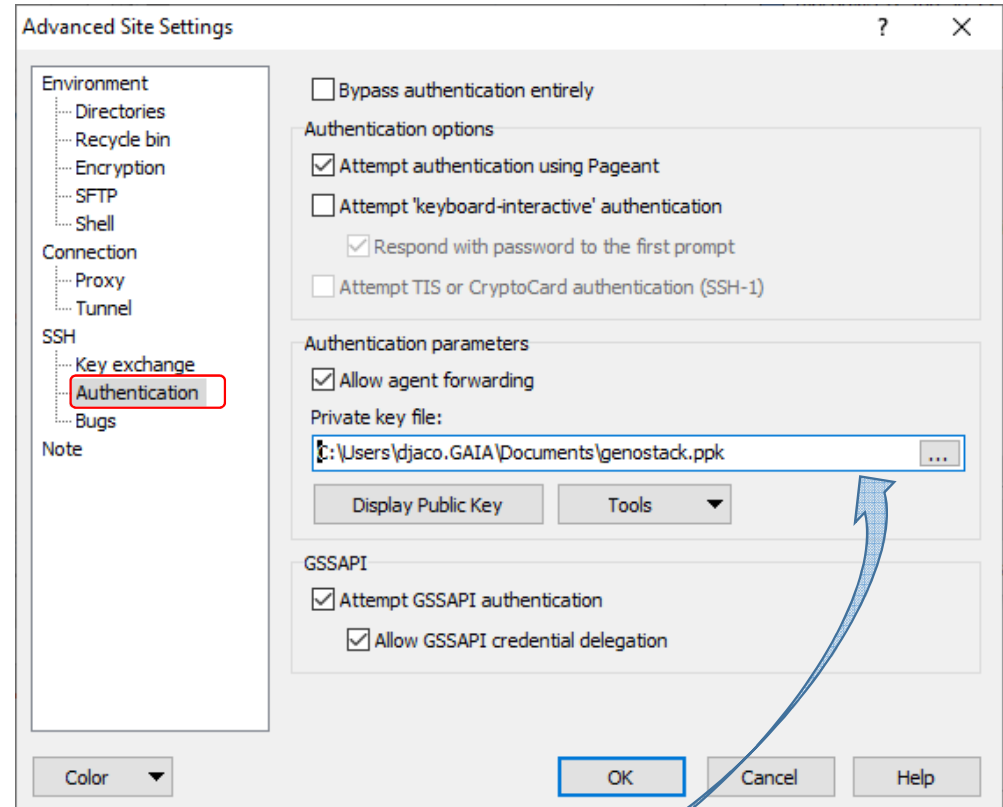


SFTP connection on your VM via the proxy "openstack.genouest.org"

2/5



id_rsa_priv.ppk
Your genouest private key



genostack.ppk
Your genostack private key



SFTP connection on your VM via the proxy "openstack.genouest.org"

3/5

The screenshot shows the WinSCP Login dialog box. On the left, a tree view shows a folder named 'genostack2' containing two entries: 'djacobt@openstack-192-168-100-XX' (highlighted) and 'genostack'. The 'Session' panel on the right contains the following fields: 'File protocol' set to 'SFTP', 'Host name' set to '192.168.100.20', 'Port number' set to '22', and 'User name' set to 'root'. The 'Password' field is empty. An 'Edit' button is located below these fields. At the bottom of the dialog, there are 'Tools' and 'Manage' dropdown menus, a 'Login' button with a green plus icon, and a 'Close' button. A hand cursor is pointing at the 'Login' button. Below the dialog, a log window titled 'genostack2/djacobt@openstack-192-168-100-XX' displays the following connection progress:

- Opening tunnel...
- Searching for host...
- Connecting to host...
- Authenticating...
- Using username "djacob".
- Authenticating with public key "imported-openssh-key" from agent.
- Authenticated.
- Connecting through tunnel...
- Searching for host...
- Connecting to host...



SFTP connection on your VM via the proxy "openstack.genouest.org"

The screenshot shows the WinSCP interface with two panes. The left pane shows the local directory structure, and the right pane shows the remote directory structure. A blue arrow points from the file 'Rodam_api_demo.ipynb' in the local view to the same file in the remote view.

Name	Size	Type	Changed
test.html	3 371 KB	Chrome HTML Do...	14/11/2019 13:40:44
Rodam_api_graphics.ipynb	3 308 KB	Fichier IPYNB	02/12/2019 16:35:09
Rodam_Drake_MBPCA.ipynb	1 149 KB	Fichier IPYNB	28/04/2020 15:32:09
PyPlotly_iplot.ipynb	458 KB	Fichier IPYNB	02/10/2019 16:11:44
PyODAM_api_demo.slides.html	333 KB	Chrome HTML Do...	11/10/2019 12:23:46
PyODAM_api_PCA.slides.html	304 KB	Chrome HTML Do...	11/10/2019 16:28:55
nmr_deconv.R.pdf	225 KB	Fichier PDF	14/11/2019 15:38:08
Rodam_api_demo.ipynb	207 KB	Fichier IPYNB	07/09/2021 11:27:01
R_Jupyter_Install.pdf	192 KB	Fichier PDF	25/11/2019 16:41:58
R_plotly_tests.pdf	103 KB	Fichier PDF	18/10/2019 07:11:19
PyODAM_api_PCA.ipynb	48 KB	Fichier IPYNB	24/07/2020 14:55:11
PyODAM_api_demo.ipynb	24 KB	Fichier IPYNB	07/09/2021 11:19:03
.Rhistory	23 KB	Fichier	
Untitled1.ipynb	7 KB	Fichier	
Untitled.ipynb	4 KB	Fichier	
PyODAM.py	4 KB	Fichier	
Untitled2.ipynb	3 KB	Fichier	
rpy2_tests.ipynb	3 KB	Fichier	
Rodam_Drake_MBPCA.R	3 KB	Fichier	
datapackage_tests.py	3 KB	Fichier PY	13/09/2021 10:00:24
PyODAM_pca.py	3 KB	Fichier PY	09/04/2020 16:55:36
datapackage_from_dataverse.R	2 KB	Fichier R	04/06/2020 19:43:00
PyODAM_api_demo.py	2 KB	Fichier PY	18/05/2020 11:22:14
ODAM-framework-blue.svg	1 KB	Chrome HTML Do...	24/10/2019 15:03:56
Rodam_MBPCA.md	1 KB	Markdown Docu...	09/10/2019 10:48:03

Name	Size	Changed	Rights	Owner	Type
Rodam_api_demo.ipynb	207 KB	07/09/2021 11:27:01	rw-r--r--	root	Fichier IPYNB
PyODAM_api_demo.ipynb	24 KB	07/09/2021 11:19:03	rw-r--r--	root	Fichier IPYNB
PyODAM.py	4 KB	26/07/2021 17:09:55	rw-r--r--	root	Fichier P
PyODAM_api_PCA.ipynb	48 KB	24/07/2020 14:55:11	rw-r--r--	root	Fichier IPYNB
PyODAM_pca.py	3 KB	09/04/2020 16:55:36	rw-r--r--	root	Fichier P
Rodam_api_graphics.ipynb	3 308 KB	02/12/2019 16:35:09	rw-r--r--	root	Fichier IPYNB

Data and scripts ↔ **Secure Copy** ↔ **openstack Instantiation**



The screenshot shows a web browser window with the URL `https://app-192-168-100-20.vm.openstack.genouest.org/user/admin/tree/shared_data`. The page header includes the JupyterHub logo and navigation buttons for "Se déconnecter" and "Control Panel". Below the header, there are tabs for "Fichiers", "Actifs", "Grappes", and "Nbextensions". A message says "Sélectionner des éléments pour leur appliquer des actions." with buttons for "Téléverser", "Nouveau", and a refresh icon. The main content is a table of files in the "shared_data" directory, sorted by name. The table has columns for "Nom", "Dernière modification", and "File size".

<input type="checkbox"/>	Nom	Dernière modification	File size
<input type="checkbox"/>	..	seconds ago	
<input type="checkbox"/>	PyODAM_api_demo.ipynb	2 days ago	24.3 kB
<input type="checkbox"/>	PyODAM_api_PCA.ipynb	a year ago	48.6 kB
<input type="checkbox"/>	Rodam_api_demo.ipynb	2 days ago	211 kB
<input type="checkbox"/>	Rodam_api_graphics.ipynb	2 years ago	3.39 MB
<input type="checkbox"/>	PyODAM.py	a month ago	3.15 kB
<input type="checkbox"/>	PyODAM_pca.py	a year ago	2.28 kB

Download PuTTY: latest release

<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Download WinSCP

<https://winscp.net/eng/download.php>