



Secure file transfer between Discover and your Windows workstation

NCCS

lunchtime series

Updated Spring 2018

another one of many lunchtime talks...

György (George) Fekete

Introduction

- Intended audience—
 - NCCS user with MS Windows
 - Need to transfer (several) files between NCCS hosts and your Windows machine
 - Tired of using the token/PASSCODE and password every time you open a connection
- Topics
 - Show you how to use the NCCS Login Bastion in proxy mode
 - Use your login credentials once
 - Transfer arbitrary number of files

Introduction

- The method
 - Use **WinSCP** in proxy mode
 - Show you every step in great detail
- You can follow along
 - Have laptop
 - Can connect to a Goddard wireless network
 - Have valid NCCS login credentials
 - for Discover, Dirac
 - Have your NASA SecurID token
 - For **WinSCP** proxy transfers you are
 - automatically authorized to use the NCCS Bastion Proxy Service

What do I need for proxy mode and WinSCP?

- Access to desired NCCS host(s)
 - RSA SecurID token or soft token on smart phone
 - LDAP user id/password
- WinSCP
 - Windows GUI secure file transfer utility
- PuTTY
 - has plink.exe, WinSCP needs it
 - ssh replacement for windows

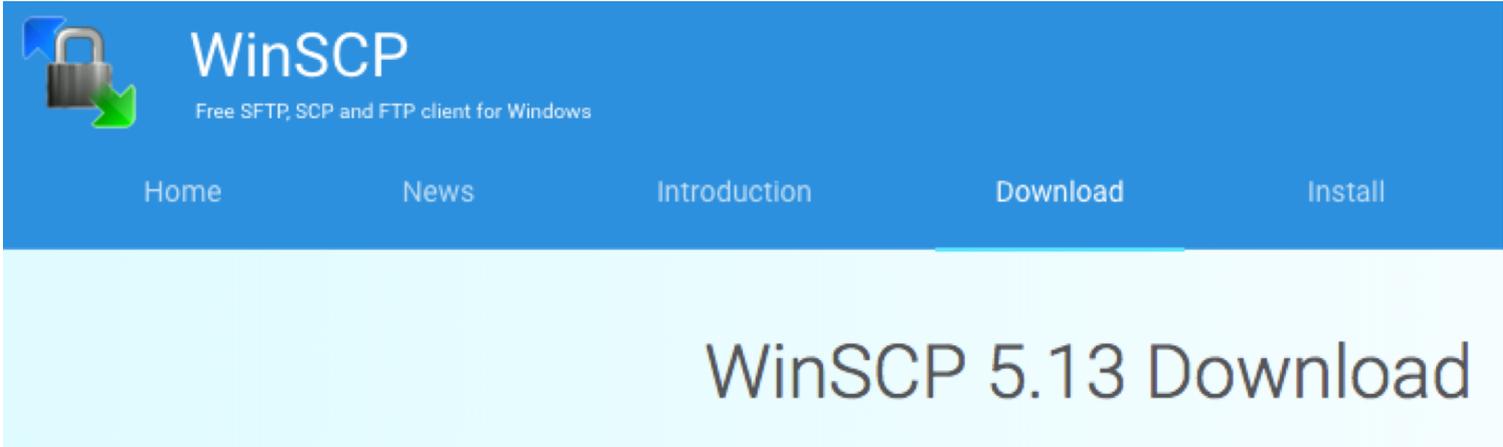


Install WinSCP and PuTTY



- Install **WinSCP**
<https://winscp.net/eng/download.php>
- Install **PuTTY** (get the Windows installer!)
<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Install WinSCP



The image shows the top portion of the WinSCP website. At the top left is the WinSCP logo, which consists of a padlock icon with a blue arrow pointing up and a green arrow pointing down. To the right of the logo, the text "WinSCP" is displayed in a large, white, sans-serif font. Below "WinSCP" is the tagline "Free SFTP, SCP and FTP client for Windows" in a smaller, white, sans-serif font. Below the tagline is a horizontal navigation menu with five items: "Home", "News", "Introduction", "Download", and "Install", all in white, sans-serif font. Below the navigation menu is a large, light blue rectangular area containing the text "WinSCP 5.13 Download" in a large, dark grey, sans-serif font.



A large, rounded rectangular button with a green gradient background and a white border. The text "DOWNLOAD WINSCP 5.13.1 (9.2 MB)" is centered on the button in a white, bold, sans-serif font.

Push this button

Install PuTTY

Package files

You probably want one of these. They include all the PuTTY utilities.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

MSI ('Windows Installer')

32-bit: [putty-0.70-installer.msi](#) (or by FTP) (

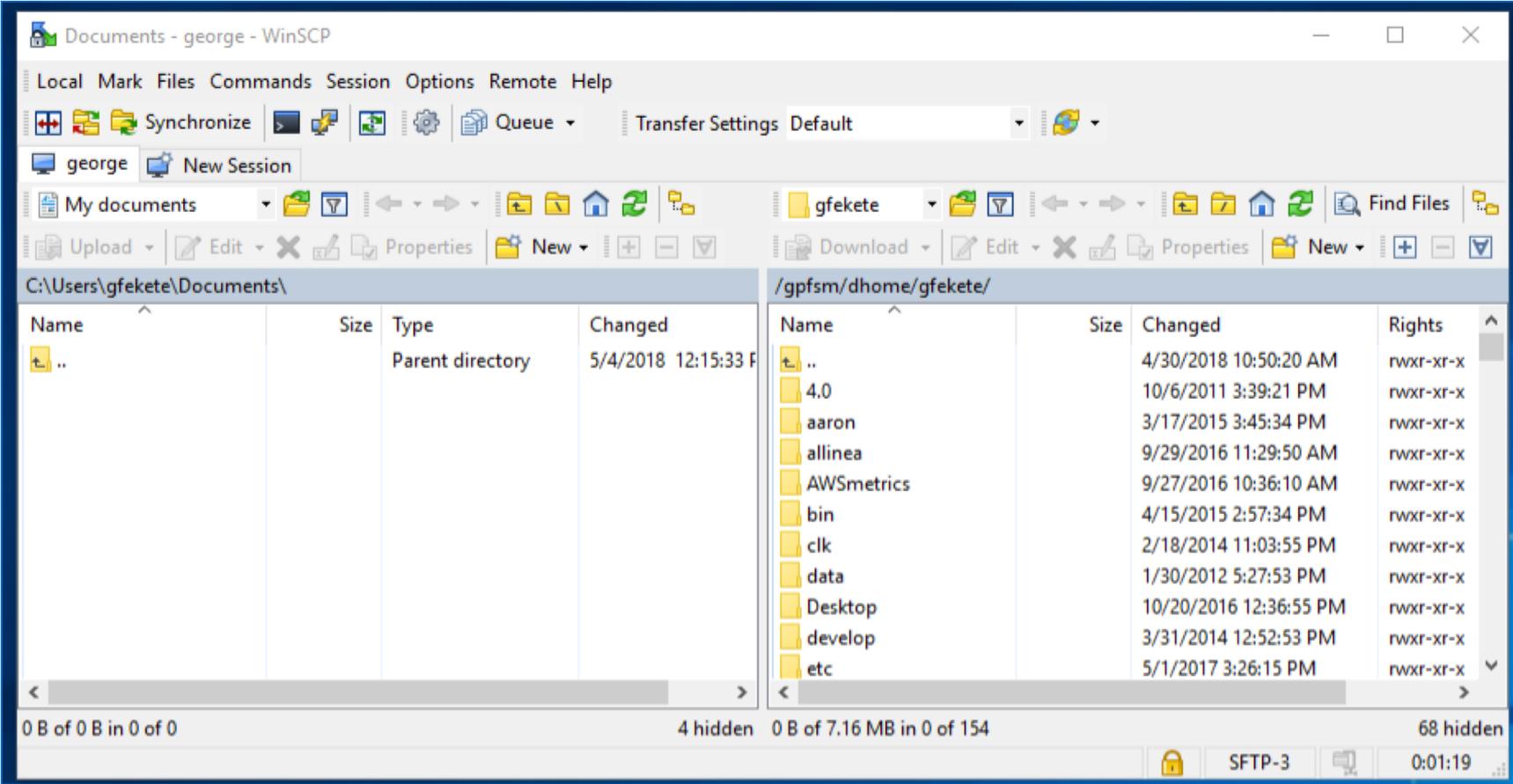
64-bit: [putty-64bit-0.70-installer.msi](#) (or by FTP) (

Install the 64 bit version

WinSCP installation notes

- Choose typical instead of custom
 - Commander interface (explorer interface)
 - Left pane: directory on your computer
 - Right pane: directory on the (remote) host

Commander interface



How can make sure I have authorization for proxy services ?

run the following command on any system in NCCS

```
$ ldapsearch -x uid=your_userid
```

...

```
authorizedService: login-dirac
```

```
authorizedService: login-discover
```

...



Look for
authorizedService in the
long list returned by
ldapsearch

Before using WinSCP

Checklist

- WinSCP installed
- PuTTY installed



Gather information

- user name
- hostname, e.g. `discover.nccs.nasa.gov`
- proxy host name: **`login.nccs.nasa.gov`**

or any host in
NCCS

the one
bastion
host

Start WinSCP

Login panel

enter

- Host name `discover.nccs.nasa.gov`
- User name

DO NOT ENTER Password

Proxy panel

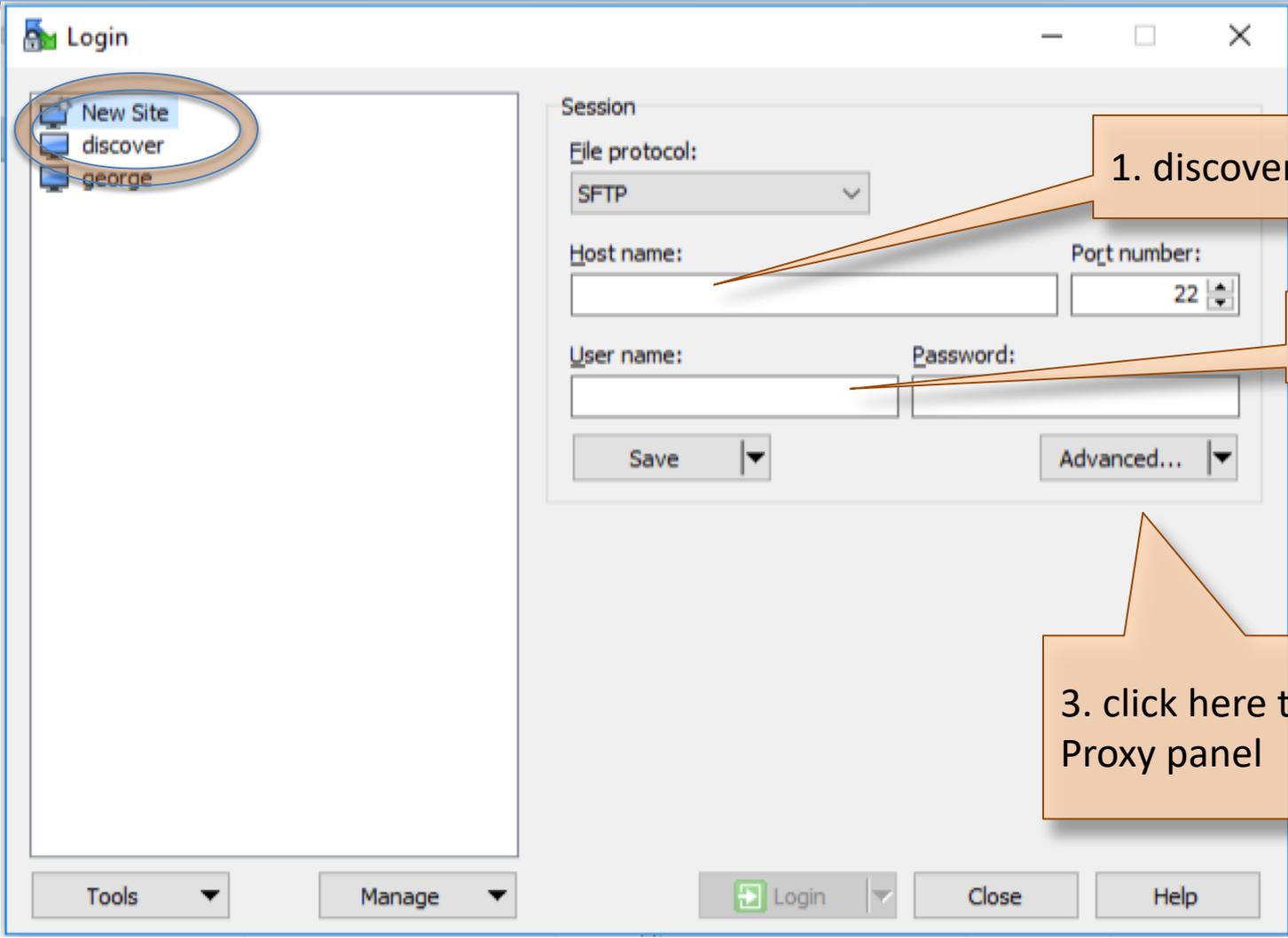
select Proxy type = local

enter

- Local proxy command
- Proxy host name `login.nccs.nasa.gov`
- User name (again)

DO NOT ENTER Password (not yet)

WinSCP Login panel

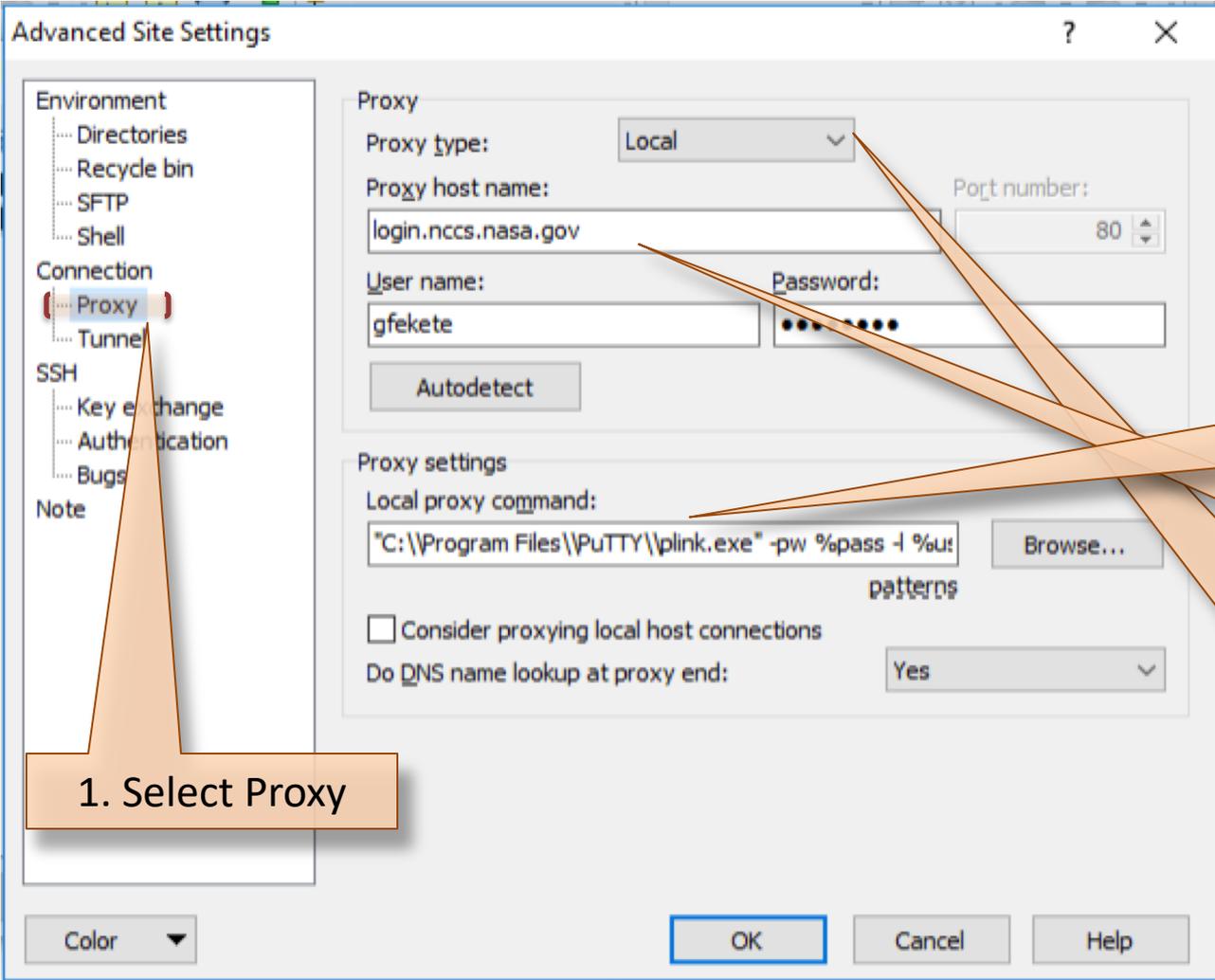


1. discover.nccs.nasa.gov

2. userid

3. click here to get to Proxy panel

WinSCP Proxy panel through Advanced Site Settings



Some fields may be disabled until proxy command is properly filled

2. Enter proxy command first!
(see next slide)

3. proxy host name and user name next

4. select "Local"

1. Select Proxy

WinSCP Proxy command: details

Proxy settings

Local proxy command:

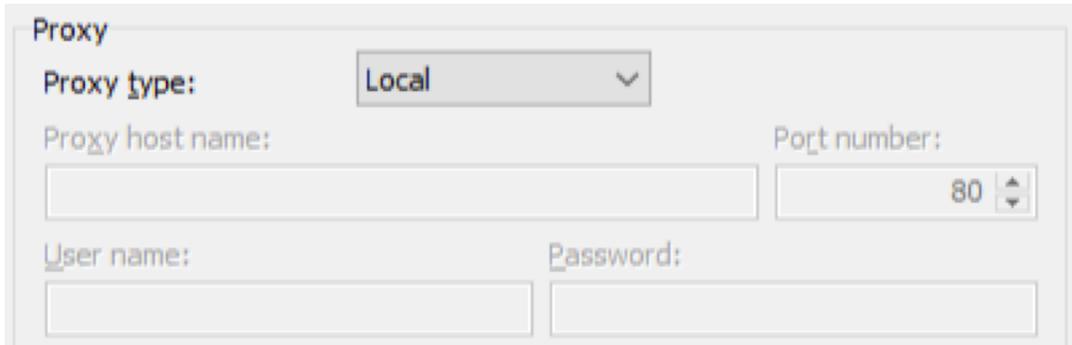
Make sure the following are right:

- proper pathname for plink.exe
- position of double quotes
- two backslashes everywhere

```
"C:\\Program Files\\PuTTY\\plink.exe" -pw %pass -l %user %proxyhost direct %host
```

symbol	meaning
%pass	password from panel
%user	user name from panel
%proxyhost	<i>you guessed it!</i>
%host	hostname from session panel

WinSCP Proxy command: details



Proxy

Proxy type: Local

Proxy host name:

Port number: 80

User name:

Password:

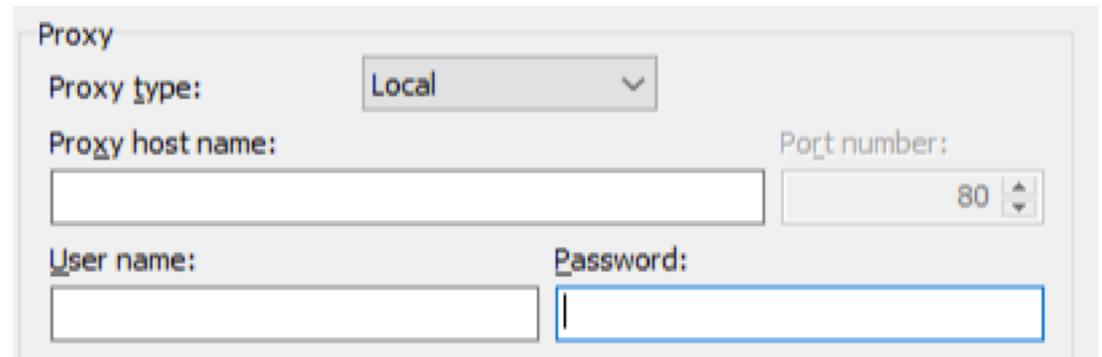
The dialog box shows a 'Proxy' section with a dropdown menu set to 'Local'. Below it are four input fields: 'Proxy host name', 'Port number' (set to 80), 'User name', and 'Password'. All these input fields are currently disabled (greyed out).

...as you type the proxy command
a disabled field is enabled as
soon as you type the
appropriate
%symbol

%proxyhost

%user

%pass



Proxy

Proxy type: Local

Proxy host name:

Port number: 80

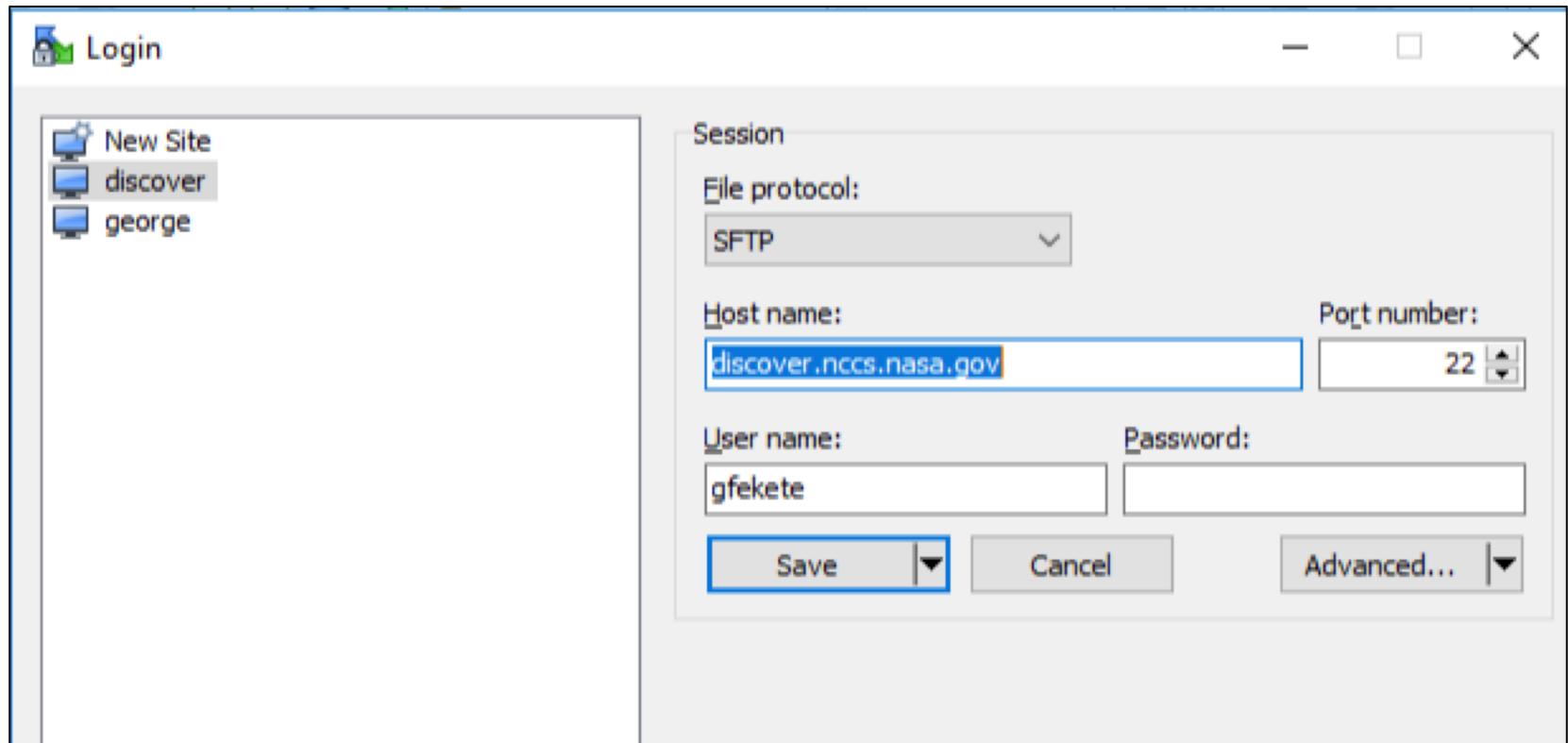
User name:

Password:

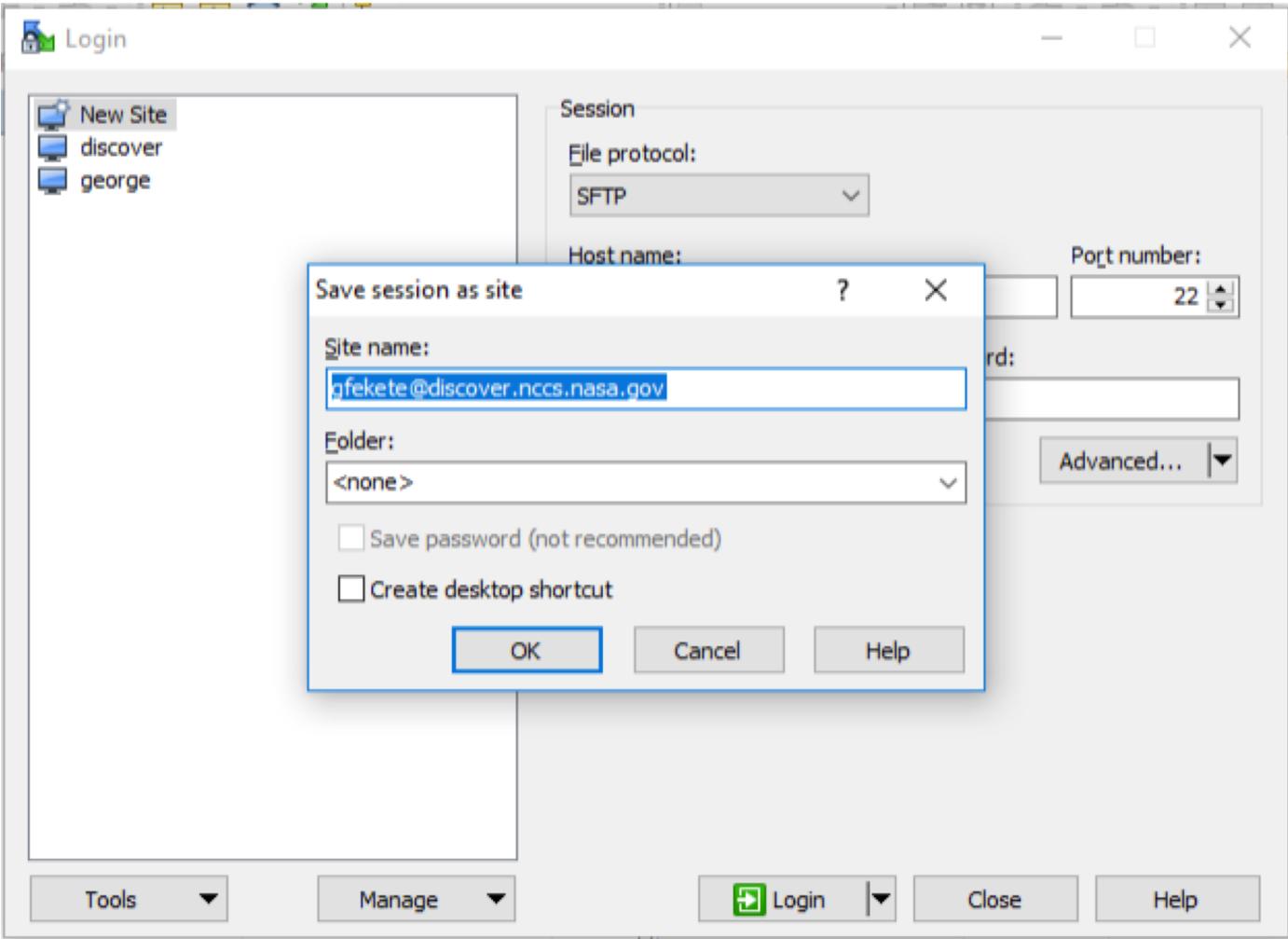
The dialog box is identical to the one above, but the 'Proxy host name' and 'Password' input fields are now enabled (white with a blue border). The 'User name' field remains disabled.

Save your WinSCP configuration (aka "session")

Default name for your session is `userid@hostname`, but you can give it any name you like



Save your WinSCP configuration (aka "session")



Ready to connect to host

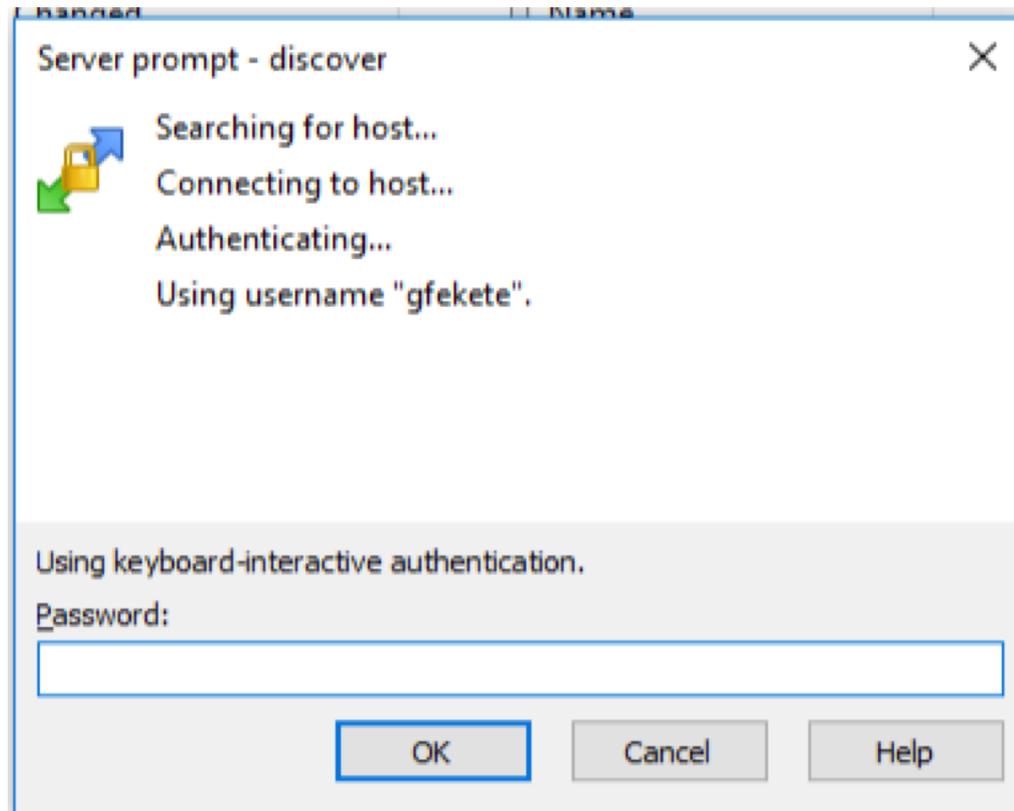
- Select your saved session from the Login panel
 - **Do not double-click! (that would start the login process)**
- Click 'Edit'
- Navigate to 'Proxy' panel as before
- Enter your fresh PASSCODE in the Password field in the Proxy panel (**NOT the Login panel!**)
 - PIN+6digits -or-
 - 8 digits from smartphone token
- The following 3 must be done quickly, else your PASSCODE may time out:
 - click "OK"
 - click "Save"
 - click "Login"
- Be ready to provide your LDAP password



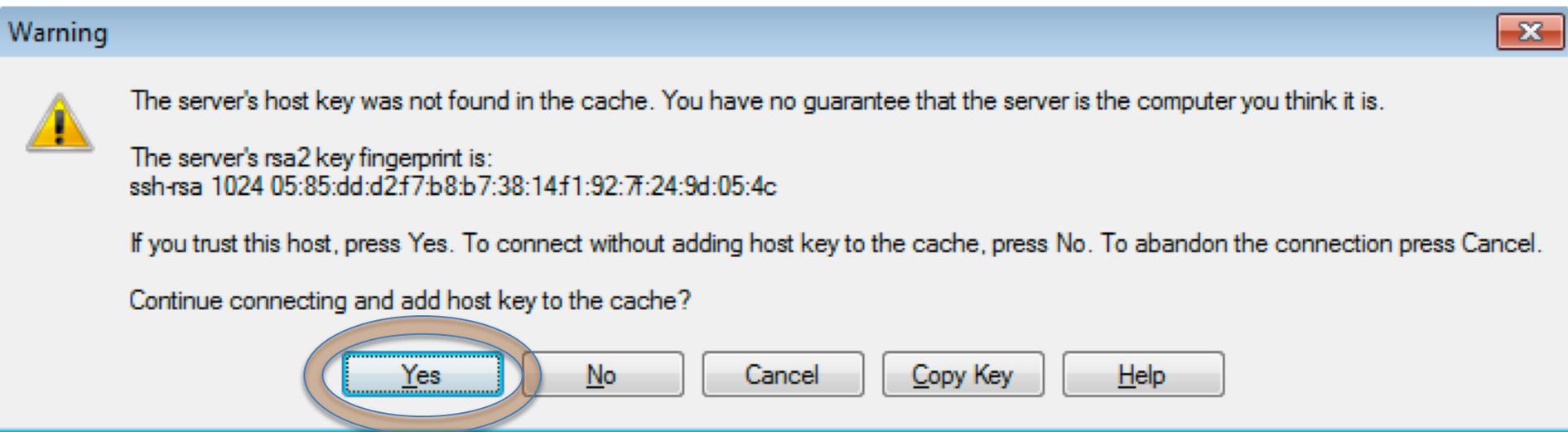
WinSCP displays NASA login banner



Provide your password



Possible one-time event (first use)



A warning dialog box with a blue title bar containing the word "Warning" and a close button. The main area has a light gray background and contains a yellow warning triangle icon on the left. The text inside the dialog reads: "The server's host key was not found in the cache. You have no guarantee that the server is the computer you think it is." followed by "The server's rsa2 key fingerprint is:" and the fingerprint string "ssh-rsa 1024 05:85:dd:d2f7:b8:b7:38:14f1:92:7f:24:9d:05:4c". Below this is the instruction: "If you trust this host, press Yes. To connect without adding host key to the cache, press No. To abandon the connection press Cancel." and the question "Continue connecting and add host key to the cache?". At the bottom, there are five buttons: "Yes", "No", "Cancel", "Copy Key", and "Help". The "Yes" button is highlighted with a blue dashed border and a brown oval.

Warning

The server's host key was not found in the cache. You have no guarantee that the server is the computer you think it is.

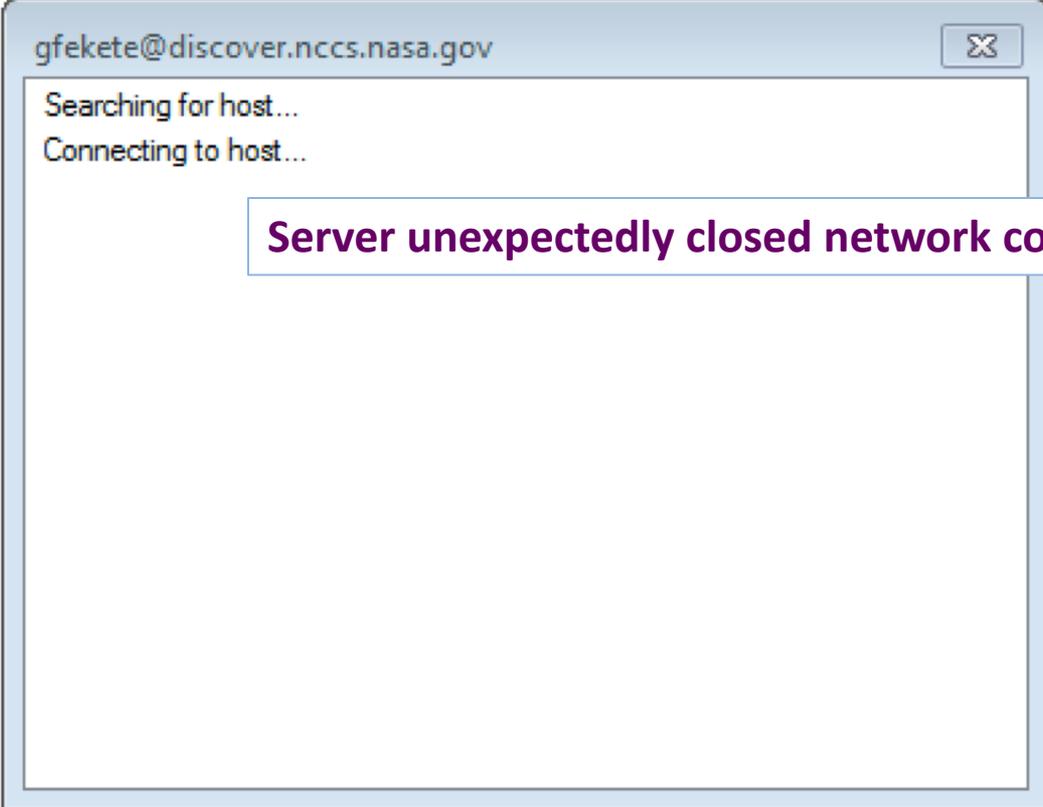
The server's rsa2 key fingerprint is:
ssh-rsa 1024 05:85:dd:d2f7:b8:b7:38:14f1:92:7f:24:9d:05:4c

If you trust this host, press Yes. To connect without adding host key to the cache, press No. To abandon the connection press Cancel.

Continue connecting and add host key to the cache?

Yes No Cancel Copy Key Help

Possible one-time failures

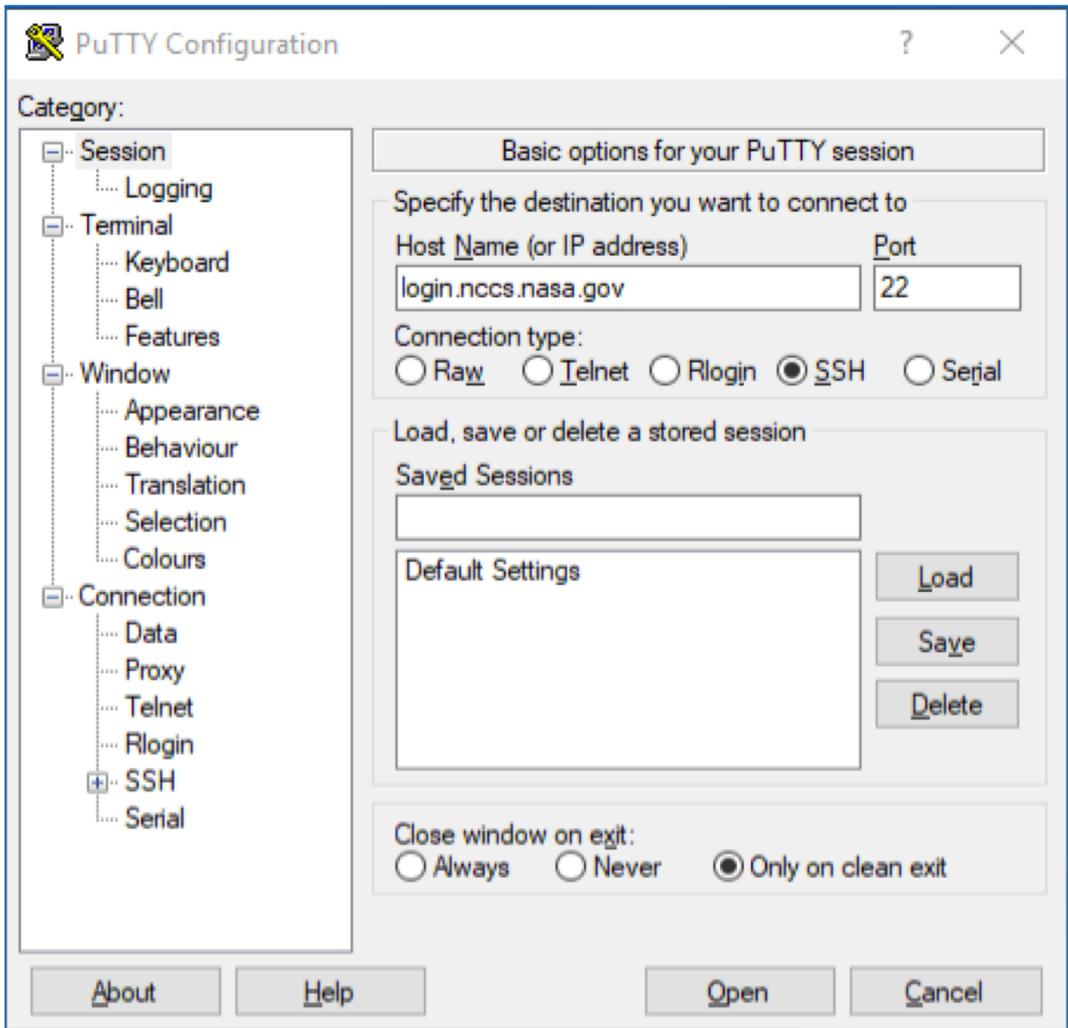


Server unexpectedly closed network connection

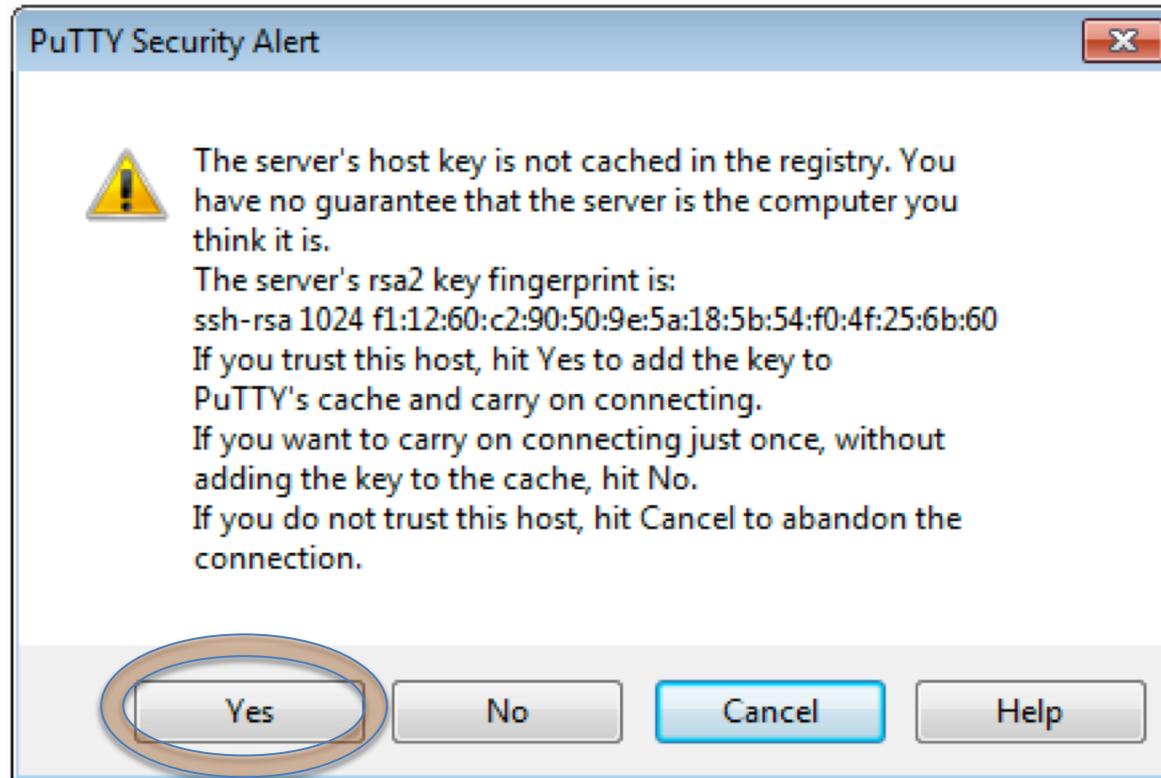
Login with PuTTY first



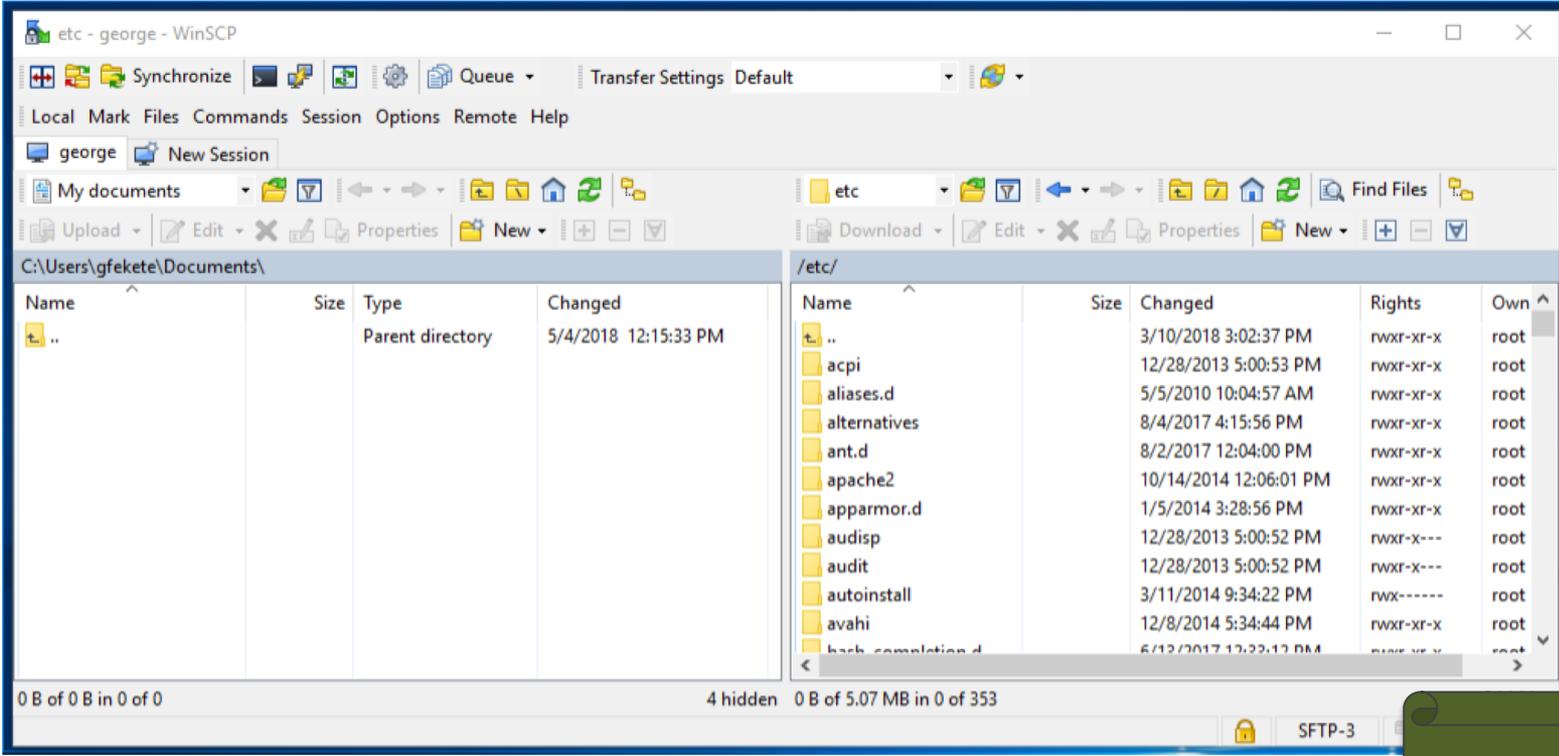
PuTTY Configuration



First-time login with PuTTY



Successful WinSCP connection



The End