

Getting Started on JASMIN

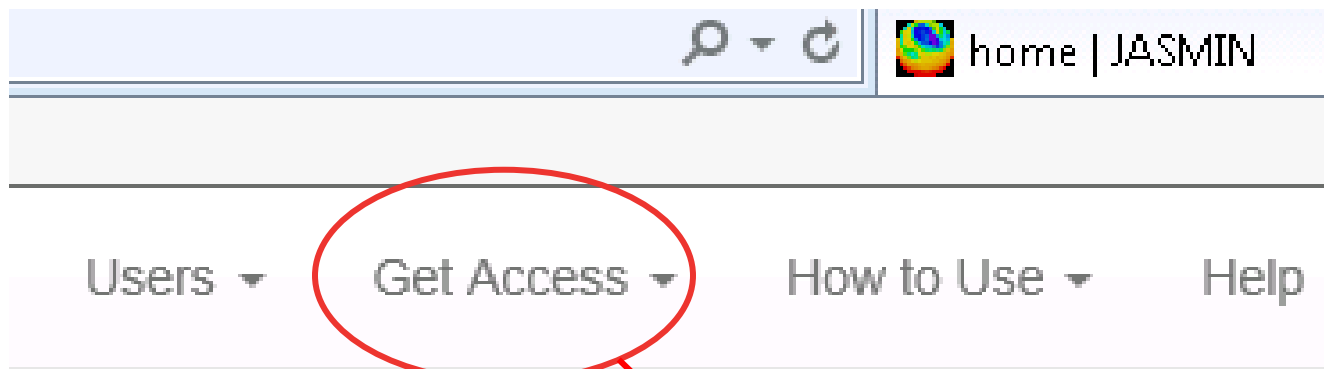
February 2015

Overview

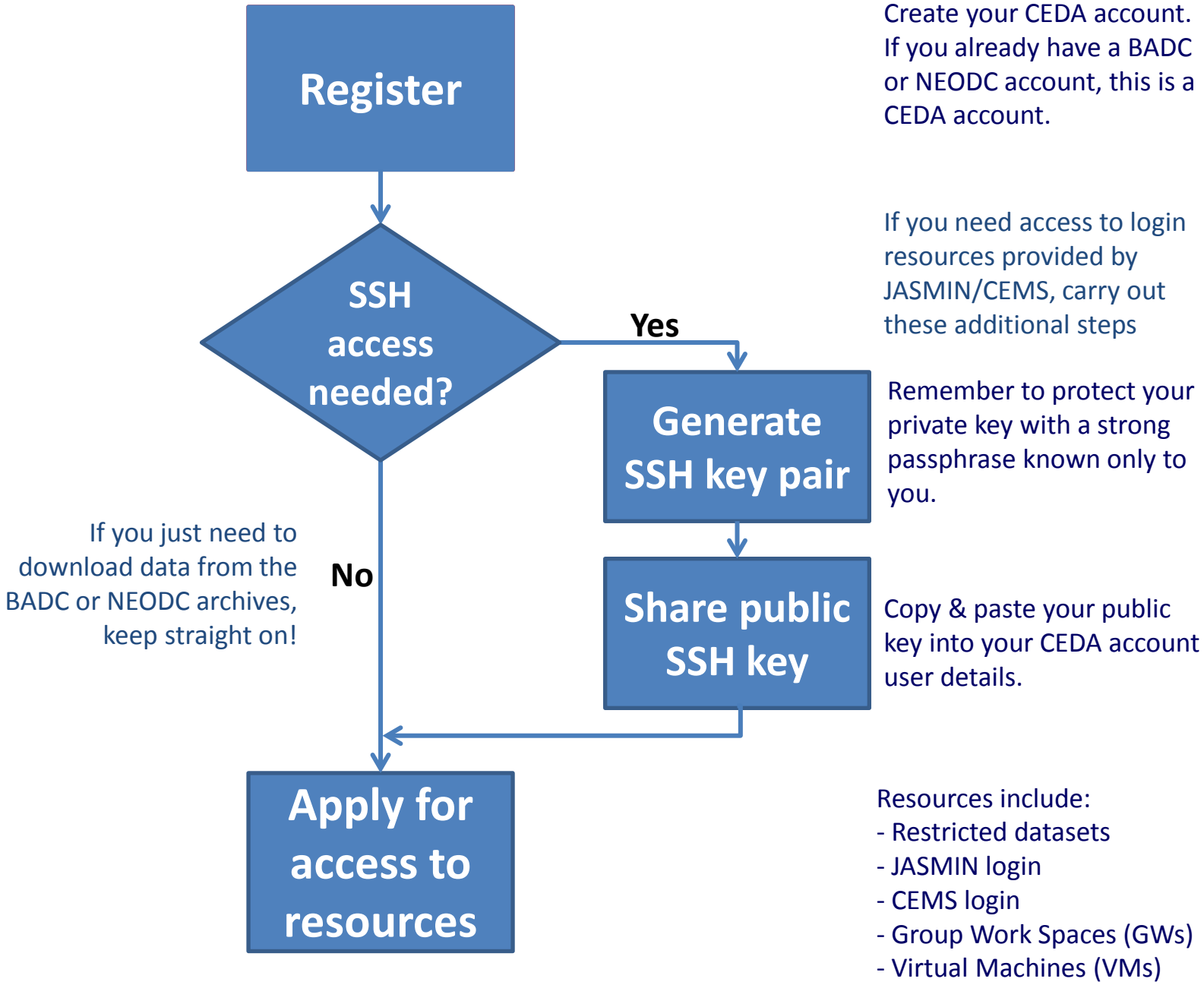
- The JASMIN website
 - Registering as a CEDA user
 - SSH Public Key Authentication
 - Generating a pair of SSH keys
 - Applying for an account on JASMIN/CEMS
 - Applying for access to project resources
 - Your IP address
- Login session
 - Transferring data to and from JASMIN
 - Help and information

The JASMIN website

<http://www.jasmin.ac.uk>



Hover over this item in top bar to see all access documentation

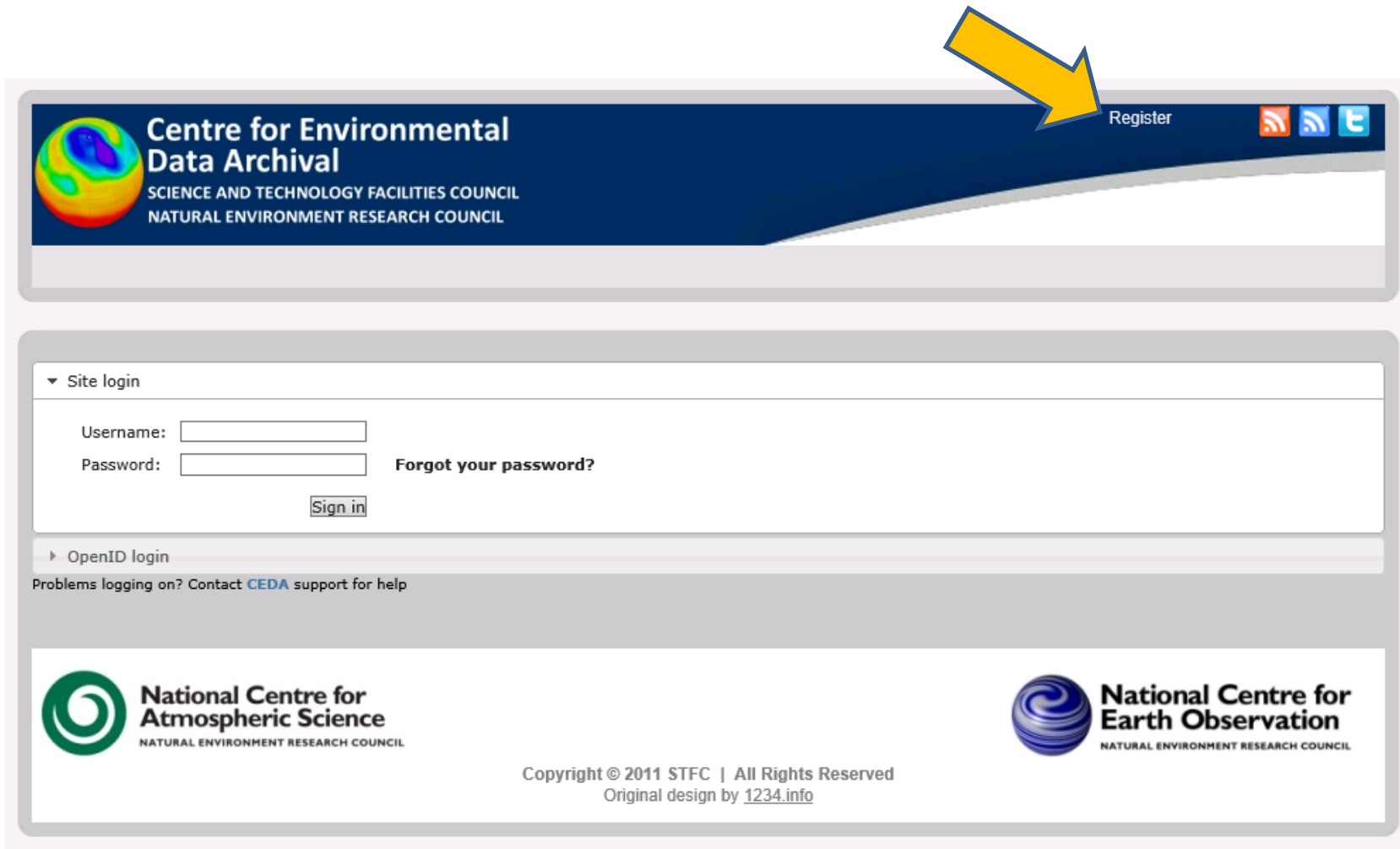


Are you a registered CEDA User ?

- You **must** be a CEDA registered user to get a JASMIN or CEMS login.
- Existing BADC or NEODC accounts are now CEDA accounts
- The same CEDA account also gives access to unrestricted BADC and NEODC datasets and allows you to submit jobs to the LOTUS computing cluster
- Registration is once and for all – no need to re-register when applying for additional access to resources

Registering as a new CEDA User

Go to: <http://services.ceda.ac.uk/cedasite/myceda/user/>



The screenshot shows the top navigation bar of the CEDA website. On the left, there is a logo for the Centre for Environmental Data Archival, which includes a globe with a color gradient. To the right of the logo, the text reads "Centre for Environmental Data Archival" in a large font, followed by "SCIENCE AND TECHNOLOGY FACILITIES COUNCIL" and "NATURAL ENVIRONMENT RESEARCH COUNCIL" in smaller fonts. In the top right corner of the navigation bar, there is a "Register" link, which is highlighted by a yellow arrow. To the right of the "Register" link are three social media icons: RSS, Facebook, and Twitter.

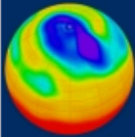
Below the navigation bar, there is a "Site login" section. It contains a dropdown menu labeled "Site login" with a downward arrow. Below the dropdown, there are two input fields: "Username:" and "Password:". To the right of the "Password:" field is a link that says "Forgot your password?". Below the input fields is a "Sign in" button.

Below the "Site login" section, there is an "OpenID login" section. It contains a link that says "Problems logging on? Contact CEDA support for help".

At the bottom of the page, there are two logos for the National Centre for Atmospheric Science and the National Centre for Earth Observation, both of which are part of the Natural Environment Research Council. The text "National Centre for Atmospheric Science" and "National Centre for Earth Observation" are in a large font, with "NATURAL ENVIRONMENT RESEARCH COUNCIL" in smaller font below them.




At the very bottom of the page, there is a copyright notice: "Copyright © 2011 STFC | All Rights Reserved" and "Original design by 1234.info".

Providing Your User Details



Centre for Environmental Data Archival
SCIENCE AND TECHNOLOGY FACILITIES COUNCIL
NATURAL ENVIRONMENT RESEARCH COUNCIL

Welcome. [Sign In](#) or [Register](#)



[Contact Us](#) [CEDA News](#)











► [Home](#) ► [myceda](#) ► [Register](#)

[Main CEDA Site](#) [Datasets and Services](#) [MyCEDA](#) [Help](#) [Contact Us](#)

User Registration

Please enter your details below and then select the "Next" button. Our policy on privacy and cookies can be found [here](#) and what we do with this information can be found [here](#).

Bold labels imply required fields

Title		<input type="text" value="-----"/>
Surname		<input type="text" value="Other"/>
Other names		<input type="text" value="An"/>
Email Address		<input type="text" value="AnOther@stfc.ac.uk"/>
Telephone number		<input type="text"/>
Discipline		<input type="text" value="Atmospheric Physics"/>
Degree you are studying for		<input type="text" value="-----"/>
Supervisor's name		<input type="text"/>
Institute Name		<input type="text" value="STFC Rutherford Appleton Laboratory"/>
Department		<input type="text"/>

Problems with registering? Contact (support@ceda.ac.uk)

Checking and updating your user details

The screenshot shows the MyCEDA user interface. At the top, there is a navigation bar with links for 'Main CEDA Site', 'Datasets and Services', 'MyCEDA', 'Help', and 'Contact Us'. Below this is a 'Welcome to the MyCEDA page' section. The user's current details are displayed: Name: Dr An Other, Username: aother. A link to the privacy policy is provided. A tabbed interface shows 'My details' as the active tab, with 'My Datasets and Services' as an alternative. Two buttons, 'Edit' and 'Change Password', are visible. A list of profile fields follows, each with an information icon and a value.

Main CEDA Site Datasets and Services MyCEDA Help Contact Us

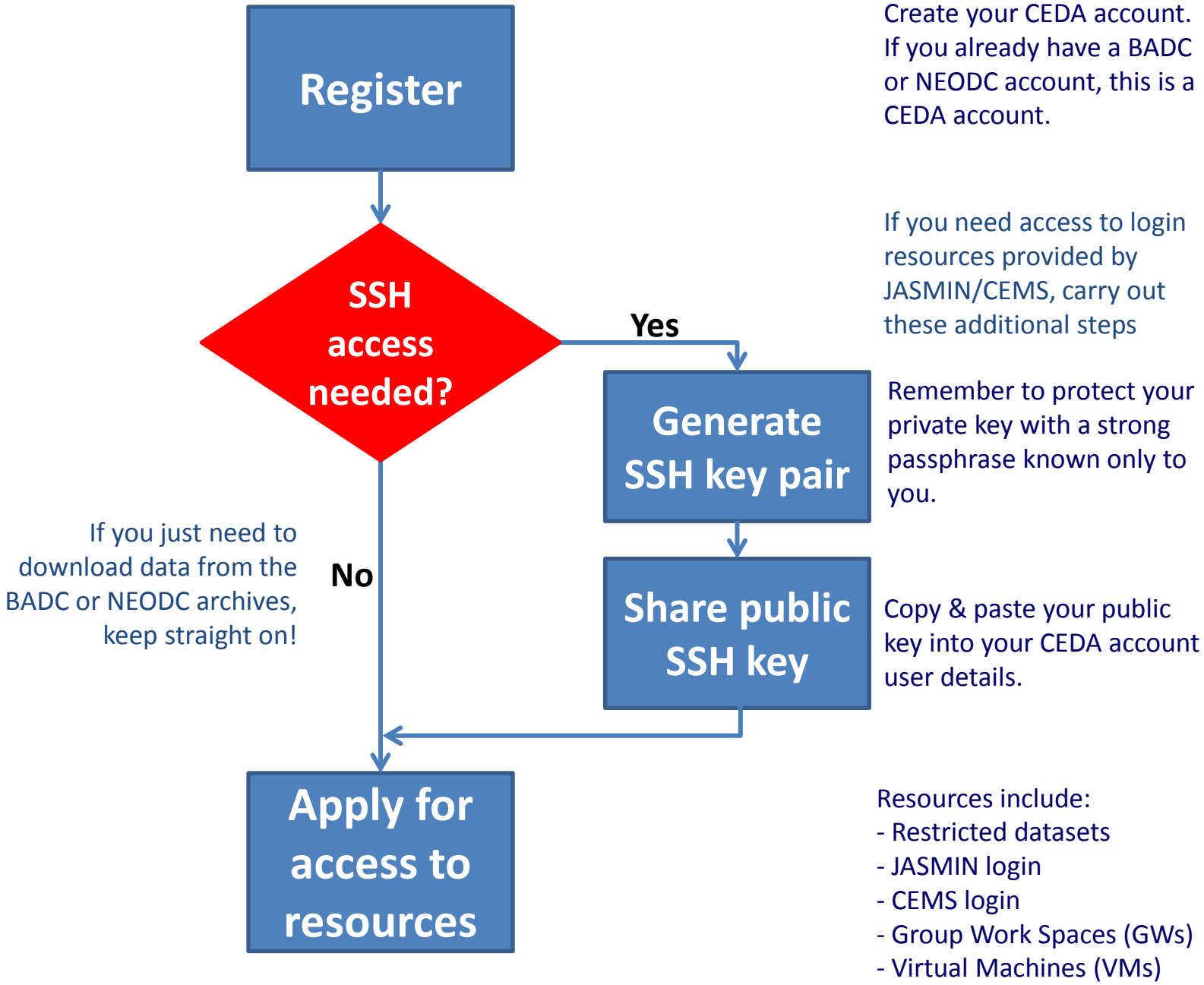
Welcome to the MyCEDA page

Name: Dr An Other
Username: aother

Our policy on privacy and cookies can be found [here](#).

My details My Datasets and Services

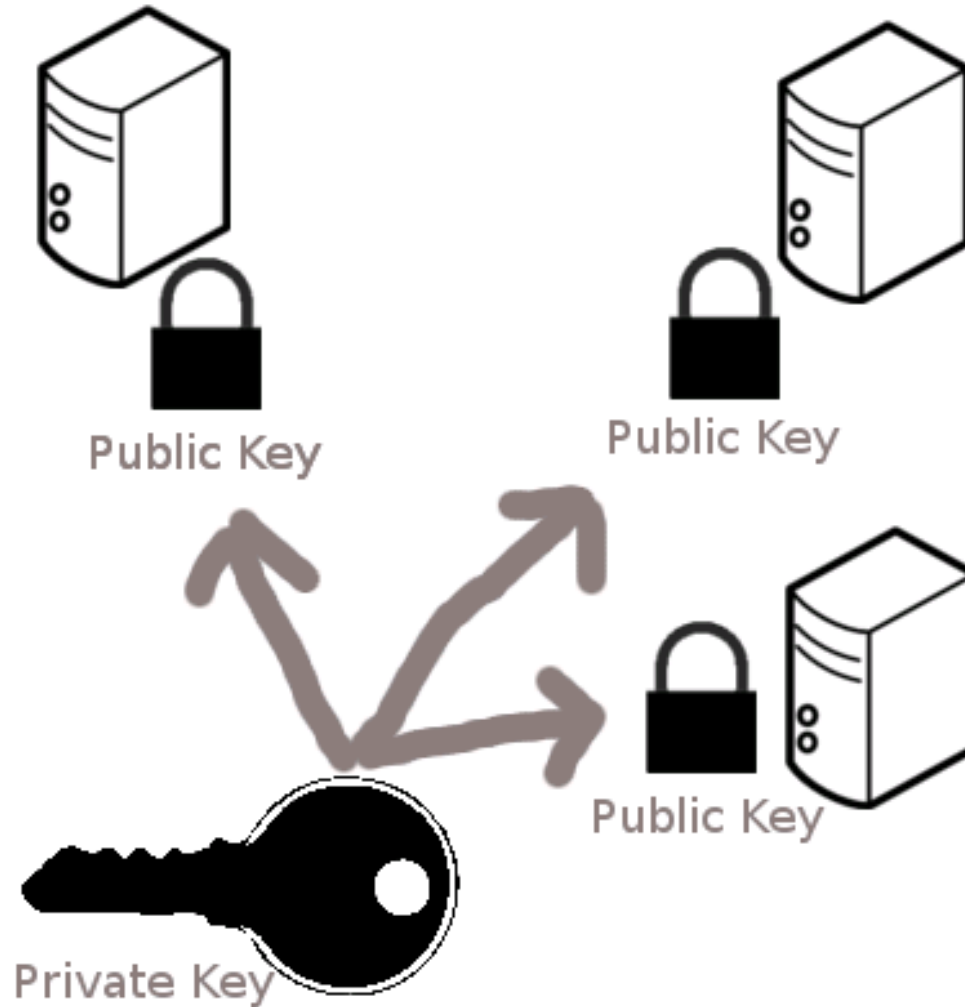
Title	Dr
Surname	Other
Other names	An
Email Address	Alison.Pamment@stfc.ac.uk
Discipline	Atmospheric Physics
Telephone number	
Degree you are studying for	
Supervisor's name	
Openid	https://ceda.ac.uk/openid/An.Other

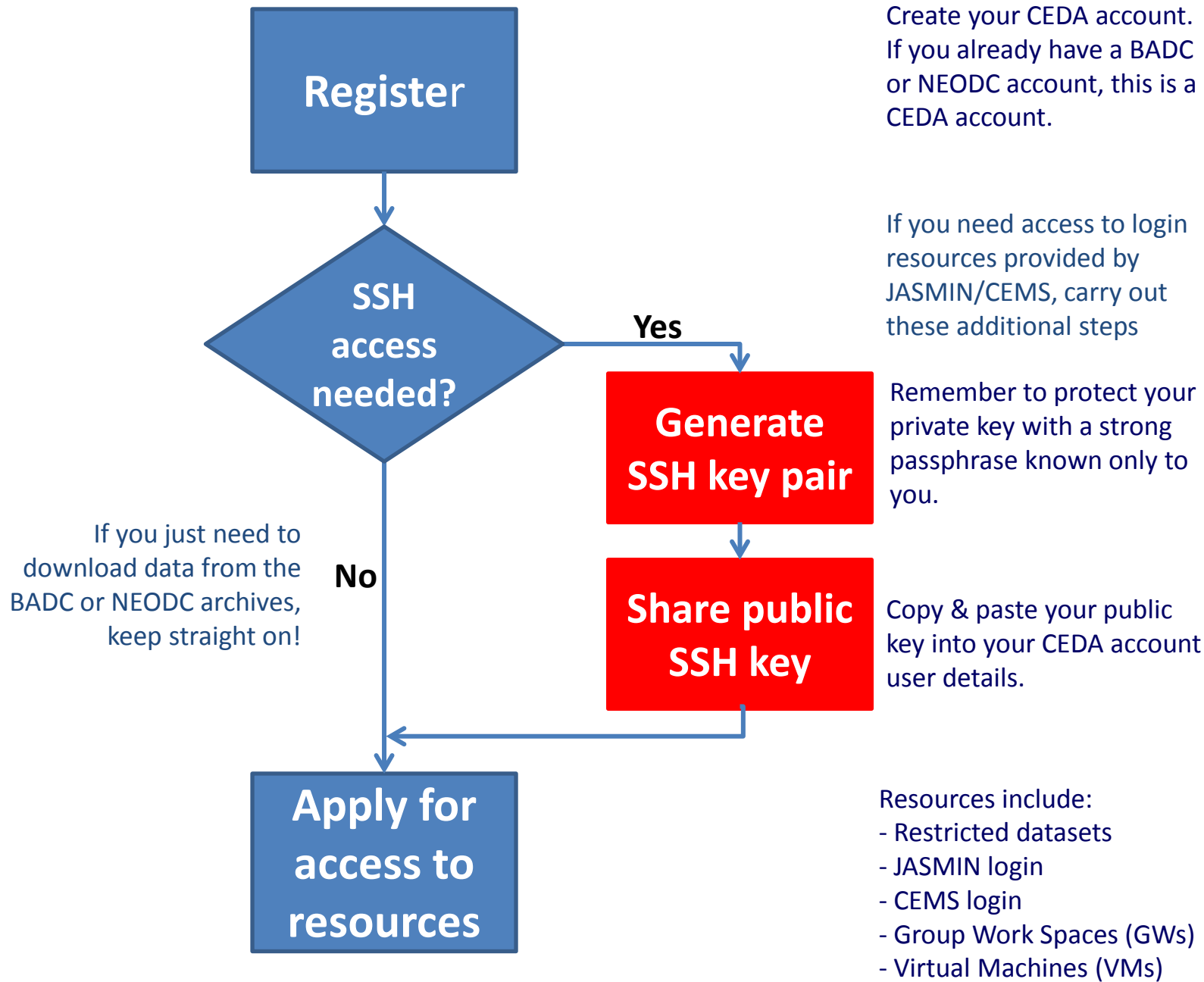


What is ssh public key authentication?

- An alternative means of identifying yourself to a login server instead of typing a password
- More secure and more flexible, but
 - perhaps less familiar to some users
 - takes longer to set up initially
- Consists of a “key pair” – one public and one private

SSH Authentication





Generating SSH public/private key pair

- Method depends on your computer's operating system (Linux, Windows or Mac)
- Detailed instructions at <http://www.jasmin.ac.uk/workflow/ssh-keys/>
- Once the keys are generated, update your myCEDA page with your **public** key

Checking and updating your user details

The screenshot shows the MyCEDA user interface. At the top, there is a navigation bar with links for 'Main CEDA Site', 'Datasets and Services', 'MyCEDA', 'Help', and 'Contact Us'. Below this is a 'Welcome to the MyCEDA page' section. The user's profile information is displayed, including 'Name: Dr An Other' and 'Username: aother'. A link to the privacy policy is provided. A red box with the text 'Use the "Edit" button' is positioned over the 'Edit' button in the 'My details' section. The 'My details' section is currently active, showing a list of user attributes with information icons next to each.

Main CEDA Site Datasets and Services MyCEDA Help Contact Us

Welcome to the MyCEDA page

Name: Dr An Other
Username: aother

Our policy on privacy and cookies can be found [here](#).

My details My Datasets and Services

Title	i Dr
Surname	i Other
Other names	i An
Email Address	i Alison.Pamment@stfc.ac.uk
Discipline	i Atmospheric Physics
Telephone number	i
Degree you are studying for	i
Supervisor's name	i
Openid	i https://ceda.ac.uk/openid/An.Other

Bold labels imply required fields.

Save Cancel

User Name	<input type="text" value="aother"/>
Openid	<input type="text" value="https://ceda.ac.uk/openid/An.Other"/>
Title	<input type="text" value="Dr"/>
Surname	<input type="text" value="Other"/>
Other names	<input type="text" value="An"/>
Email Address	<input type="text" value="Alison.Pamment@stfc.ac.uk"/>
Telephone number	<input type="text"/>
Discipline	<input type="text" value="Atmospheric Physics"/>
Degree you are studying for	<input type="text" value="-----"/>
Supervisor's name	<input type="text"/>
Public Key	<div style="border: 1px solid #ccc; height: 100px; width: 100%;"></div>
Department	<input type="text"/>
Institute Name	STFC Rutherford Appleton Laboratory
Institute Country	UK
Institute type	NERC

Use the "Save" button

Copy and paste your public key

Generating SSH public/private key pair

Linux/Mac

- Use the ssh-keygen command

```
$ ssh-keygen -t rsa -C "your email address" -f ~/.ssh/id_rsa_jasmin
```

- You will be prompted to enter a passphrase.

Please do so!

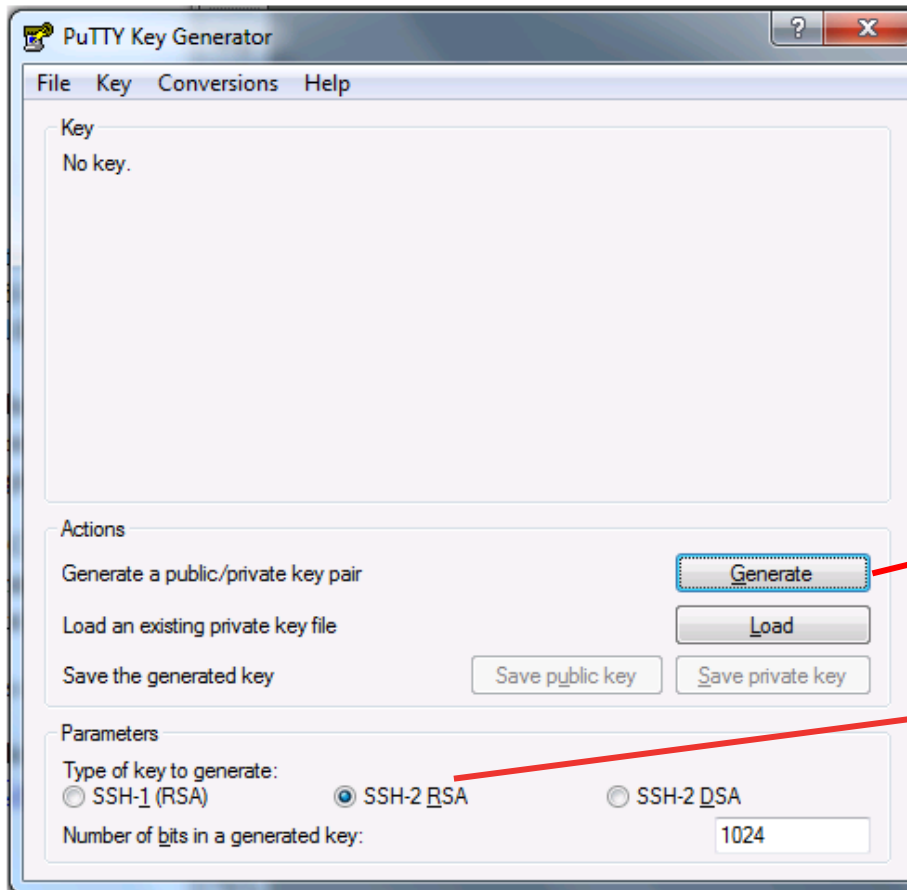
- The result will be two files in your **\$HOME/.ssh** directory
 - id_rsa_jasmin
 - id_rsa_jasmin.pub ← **PUBLIC KEY**
- Copy and paste the contents of **id_rsa.pub** into your MyCEDA account

Generating SSH public/private key pair

Windows

- Download and run the PuTTYgen tool

(<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>)

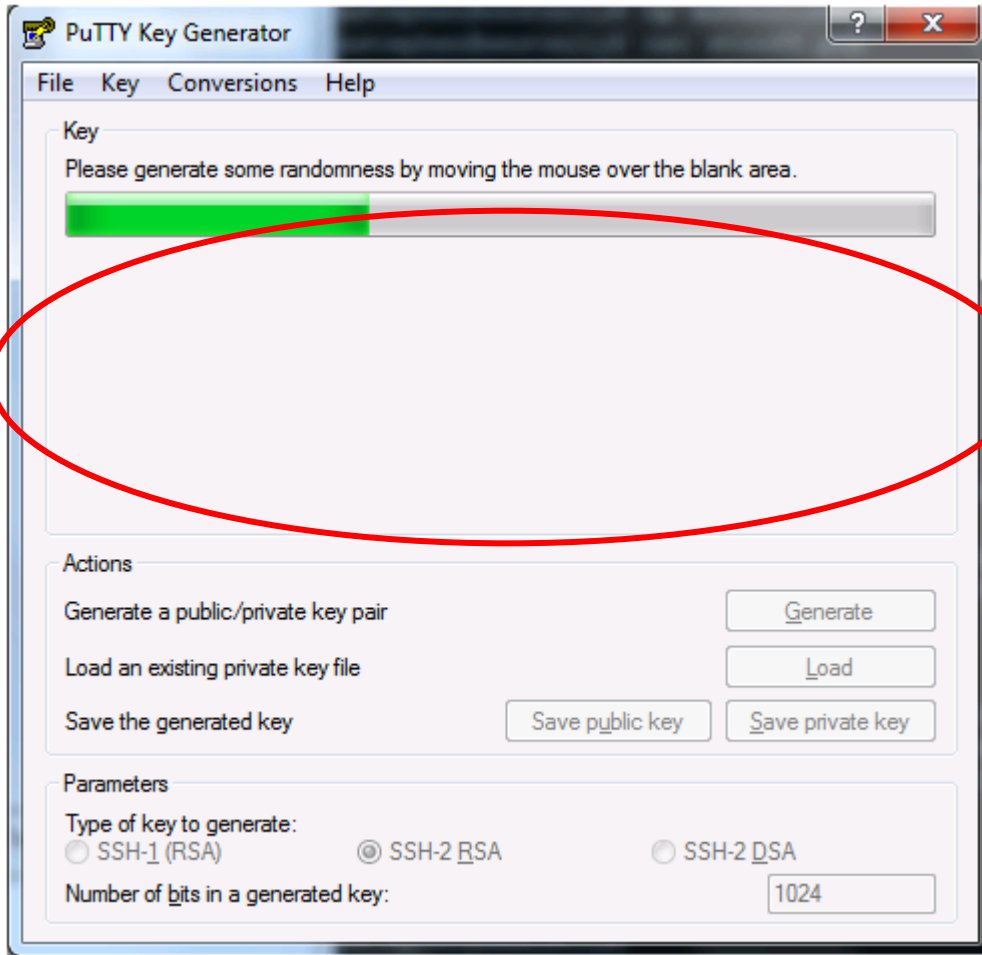


Click on "Generate"

Select SSH-2 RSA

Generating SSH public/private key pair

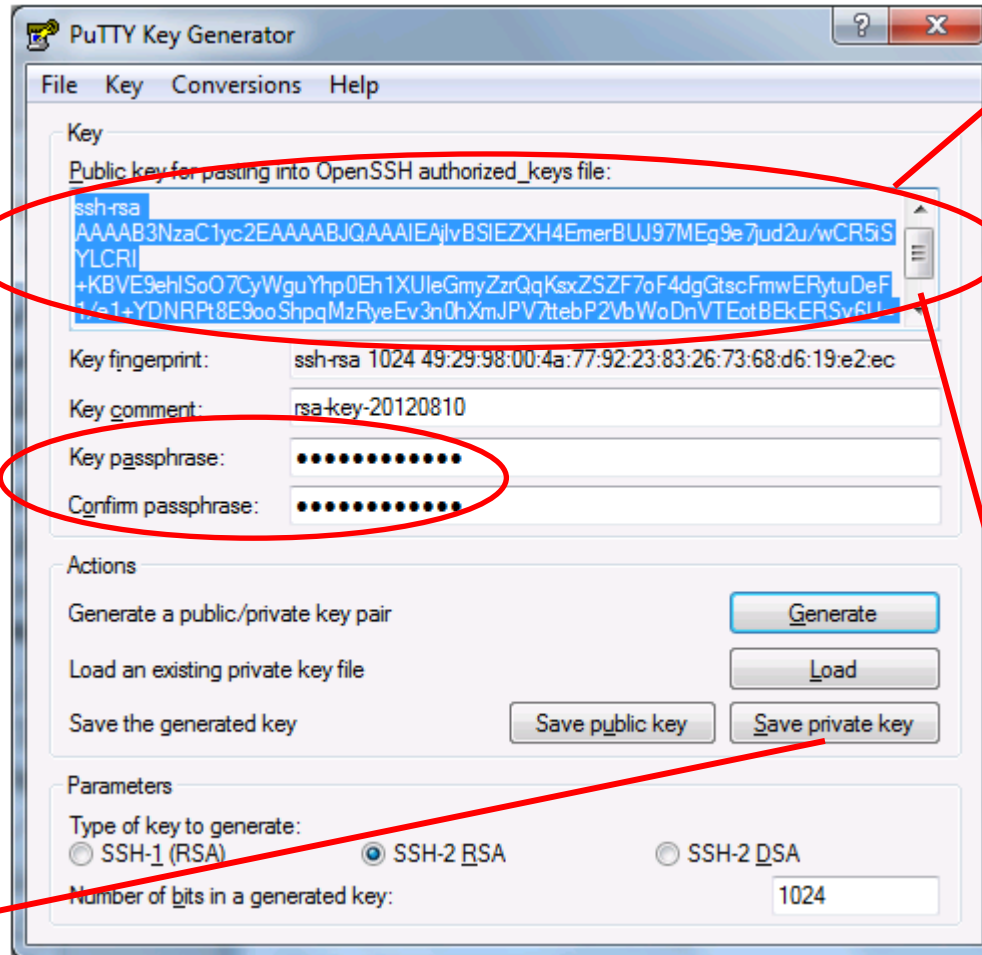
Windows



Use the mouse to move the cursor randomly in this space until the progress bar reaches 100%

Generating SSH public/private key pair

Windows



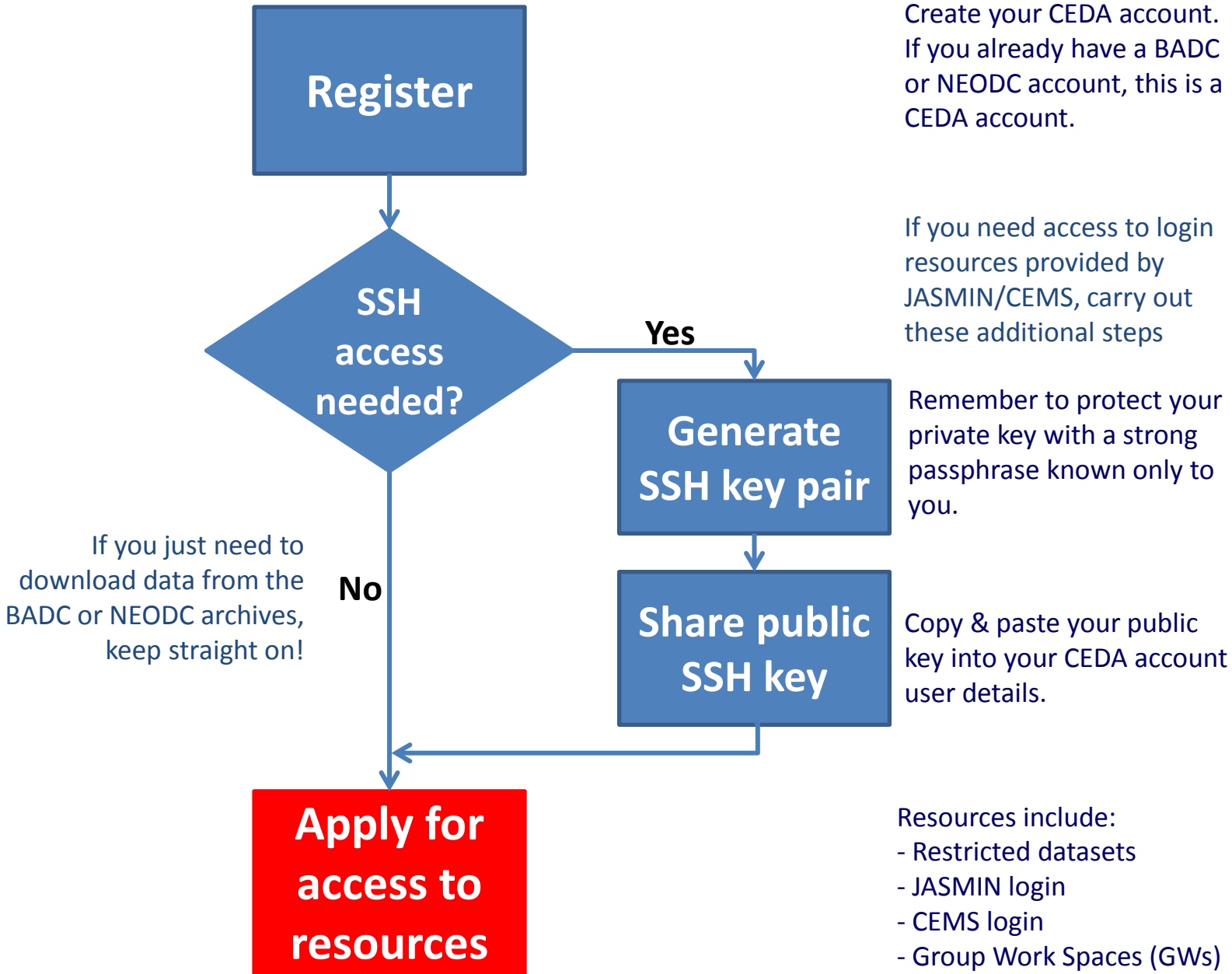
Copy and paste the public key string into a text file

Enter and confirm the passphrase to protect your private key

Paste the public key into your MyCEDA account

Click "Save private key" with .ppk file extension

Close PuTTYgen



Create your CEDA account. If you already have a BADC or NEODC account, this is a CEDA account.

If you need access to login resources provided by JASMIN/CEMS, carry out these additional steps

Remember to protect your private key with a strong passphrase known only to you.

Copy & paste your public key into your CEDA account user details.

If you just need to download data from the BADC or NEODC archives, keep straight on!

- Resources include:
- Restricted datasets
 - JASMIN login
 - CEMS login
 - Group Work Spaces (GWs)
 - Virtual Machines (VMs)

Applying for an account on JASMIN/CEMS

- Users working in the atmospheric science community should apply for a JASMIN account:
<http://www.jasmin.ac.uk/workflow/get-jasmin-account/>
- Users working in the Earth observation community should apply for a CEMS account:
<http://www.jasmin.ac.uk/workflow/get-cems-account/>
- Or simply go to <http://www.jasmin.ac.uk/> and choose from the “Get Access” menu (top bar)

Applying for an account on JASMIN/CEMS

- Read the terms and conditions and click “Apply”
- Notifies CEDA help desk that you have requested access to the computing facilities
- Provide IP address (only necessary in some cases)
- Help desk staff will arrange for your [login account](#) to be created. They will contact you by email if any further information is needed.
- To make practical use of JASMIN/CEMS you will then need to apply for access to [further resources](#)

IP Address

- Due to firewall restrictions, you can only connect to JASMIN if CEDA has the IP address or hostname of the machine you are logging in from
- Often the domain name (e.g. myuniversity.ac.uk) will already be on our “whitelist”. (This is true for the Met Office)
- You are required to connect from a host with a **reverse DNS lookup** – check this by going to:
<http://www.lawrencegoetz.com/programs/ipinfo/>
- Email your IP address to the CEDA Helpdesk:
support@ceda.ac.uk

Applying for access to project resources

- Group workspaces

<http://www.jasmin.ac.uk/workflow/apply-group-workspace/>

- Dedicated project Virtual Machines

<http://www.jasmin.ac.uk/workflow/apply-for-dedicated-virtual-machine/>

- Or simply go to <http://www.jasmin.ac.uk/> and choose from the “Get Access” menu

- Applications automatically forwarded to associated authorizer, who will instruct CEDA whether or not to grant you access to the resource

Overview

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- Login session
- Transferring data to JASMIN
- Help and information

Login session

Linux/Mac

- First you need to tell your own machine to use your private ssh key

```
$ exec ssh-agent $SHELL
```

```
$ ssh-add ~/.ssh/id_rsa_jasmin
```

- Enter your passphrase when prompted

Login session

Linux/Mac

- Login first to jasmin-login1 or cems-login1

```
$ ssh -A <userid>@jasmin-login1.ceda.ac.uk
```

```
$ ssh -A <userid>@cems-login1.cems.rl.ac.uk
```

- Next, login to the machine where you will carry out your work:

```
$ ssh <userid>@jasmin-sci1.ceda.ac.uk
```

```
$ ssh <userid>@<yourVM>
```

```
$ ssh <userid>@nrt-ash.cems.rl.ac.uk
```

[Optionally, you can forward an X-connection by adding the “-X” argument]

Login session

Windows

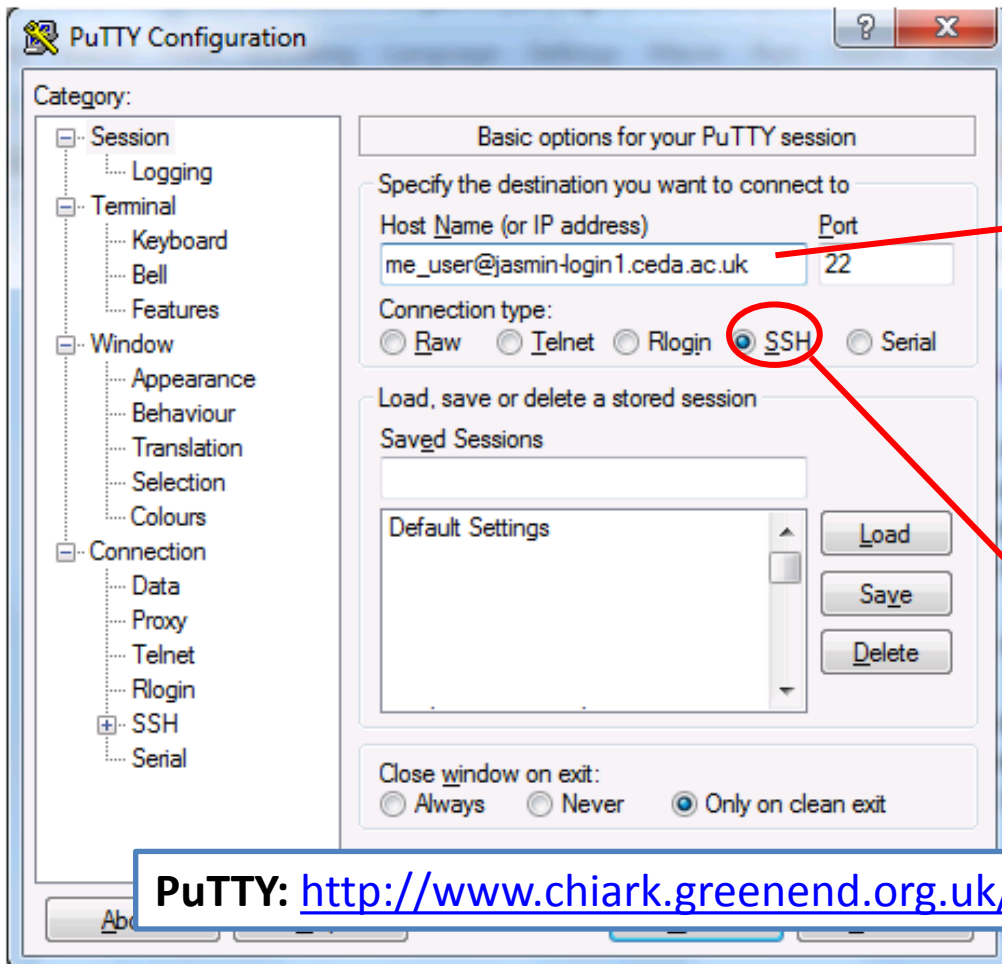
- **Pageant** is an SSH Authentication Agent for Windows
- Install and start the Pageant application, click the **Add key** button and select your SSH private key file (the .ppk file created by PuTTYgen)
- Click **Close**. The Pageant session will remain open (with the Pageant icon in the Notification Area of the Taskbar).

Pageant: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Login session

Windows

- Use PuTTY to connect to a remote host via SSH



Fill in your username and the hostname you are connecting to, eg, `<userid>@jasmin-login1.ceda.ac.uk`

Select the 'SSH' connection type

PuTTY: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Login session

Windows

- Configure PuTTY to "**Allow agent forwarding**" before opening the ssh session (use: Connection → SSH → Auth)
- Click "Open" to start the ssh connection
- A linux style terminal window will appear which you can use to log in to your analysis machine:

```
$ ssh <userid>@jasmin-sci1.ceda.ac.uk
```
- PuTTY allows connections to be configured in great detail. See the [documentation](#) for more details.

Transferring data to and from JASMIN

- Direct file transfers to/from group workspaces can only be done using hosts:

jasmin-xfer1.ceda.ac.uk

cems-xfer1.cems.rl.ac.uk

- For linux or Mac use rsync or scp to transfer files using an ssh connection

[N.B. The destination directory must already exist]

Transferring data to and from JASMIN

Linux/Mac

Rsync example:

```
$ exec ssh-agent $SHELL
```

```
$ ssh-add ~/.ssh/id_rsa_jasmin
```

```
$ rsync myfile <userid>@jasmin-  
xfer1.ceda.ac.uk:/group_workspaces/jasmin/<my  
project>/<mydir>/
```


Transferring data to and from JASMIN

Windows

- Use WinSCP:

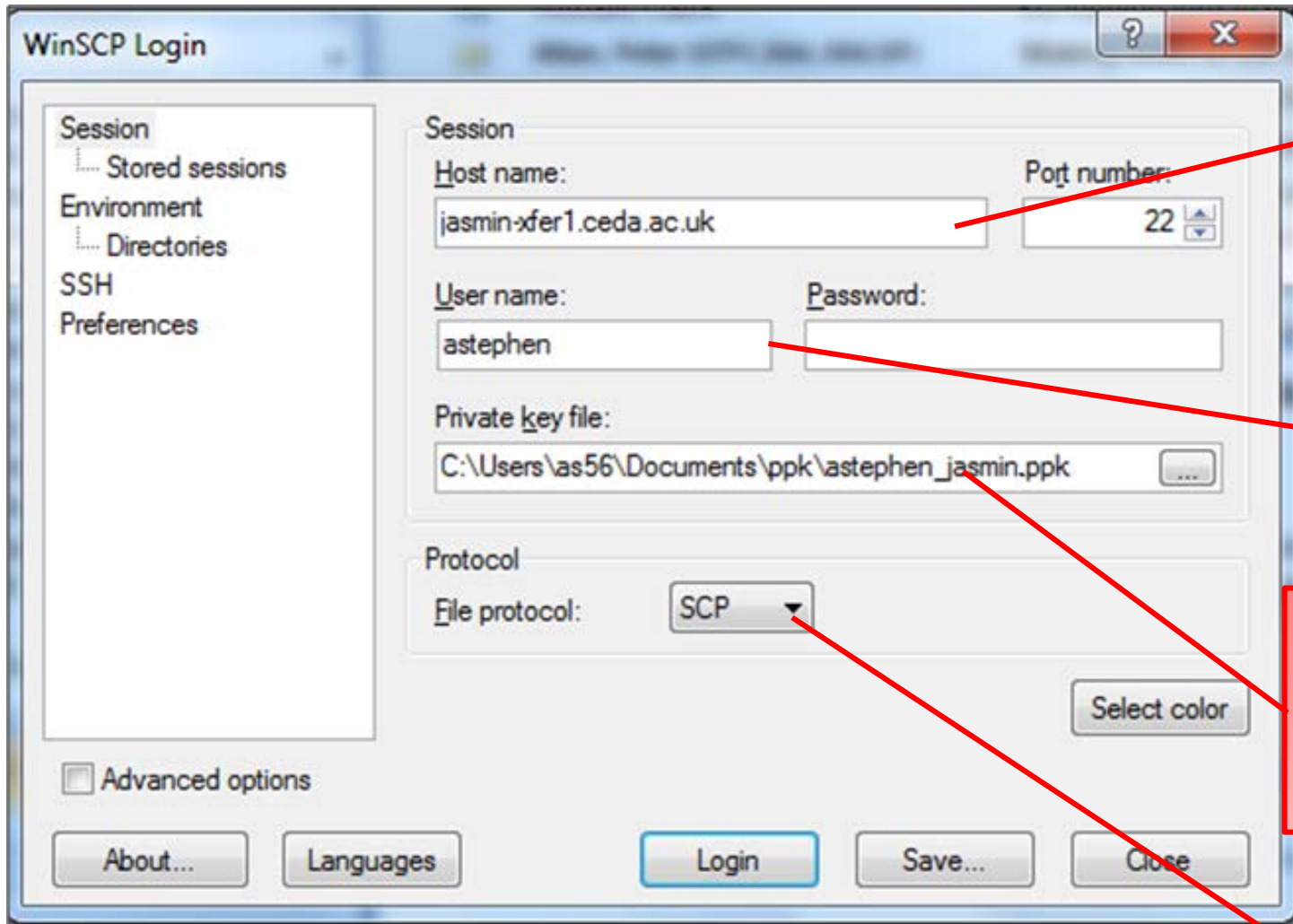
<http://winscp.net/eng/download.php>

- Easy to use Graphical User Interface as shown at:

<http://winscp.net/eng/docs/interfaces>

- The simplest method is to start WinSCP and then click to create a "New" session

Transferring data to and from JASMIN



hostname

username

Path to
private key
file (.ppk)

SCP

Transferring data to and from JASMIN

For large data transfers to/from remote sites, you may choose to use a tool that runs parallel transfer processes such as Bbcp or GridFTP:

Using Bbcp

<http://proj.badc.rl.ac.uk/cedaservices/wiki/JASMIN/Bbcp>

Using GridFTP

<http://proj.badc.rl.ac.uk/cedaservices/wiki/JASMIN/GridFTP>

High Performance transfer service

- Users can apply for the access to the JASMIN/CEMS High Performance data transfer service:

<http://www.jasmin.ac.uk/workflow/apply-high-performance-transfer/>

- Or simply go to <http://www.jasmin.ac.uk/> and choose from the “Get Access” menu

Information and Help

- CEDA maintains a distribution-only mailing list for all JASMIN Users
- New JASMIN users are automatically subscribed
- Used to inform of new services or warn of upcoming service disruption
- All JASMIN enquiries should be sent to CEDA help desk:
 - Email: support@ceda.ac.uk
 - Twitter: [@CEDAnews](https://twitter.com/CEDAnews)
 - Phone/Voicemail: +44 (0) 1235 44 64 32