INSTALLATION OF STRUDEL - MAC

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Introduction

Connecting to *Fawkes* using a Graphical Interface is easy using "ScienTific Remote User DEsktop Launcher", or Strudel for short.

The Strudel software is an open source package developed by the Monash eResearch Team. Strudel makes it simple to connect to HPC facilities, by simplifying the VNC Server process for the end users.
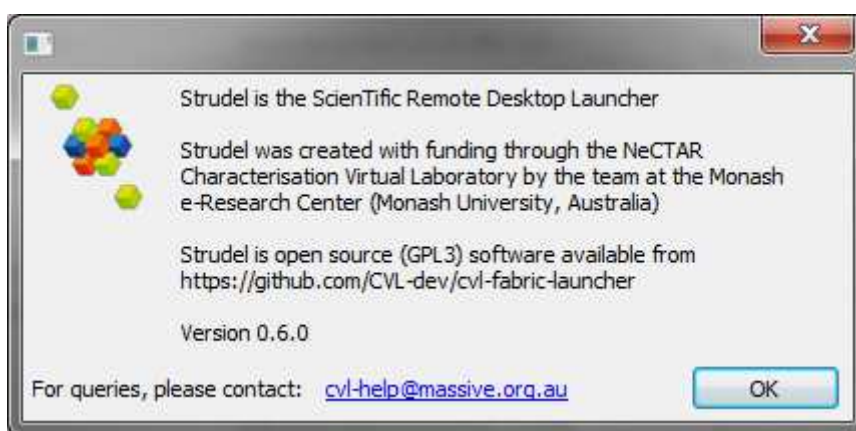
Some of the functionality Strudel provide includes:

- Automatically detecting the VNC Display Number – users no longer need to worry about this if the display number ever changes - especially after the host computer is rebooted.
- Configures and implements an SSH tunnel, making it highly secure, without the need for a separate ssh or putty session running in the background.
- Configures the "X Windows" manager to default to using Gnome.
- No need to remember the "VNC Password", as it automatically generates one for you. Therefore, you only need to worry about your USQ username and password.

Installation of Software

The following instructions are specific to installing Strudel on a Mac, whether a desktop or laptop. To get Strudel to work, three software packages are required to be installed and in the following order because of software dependencies:
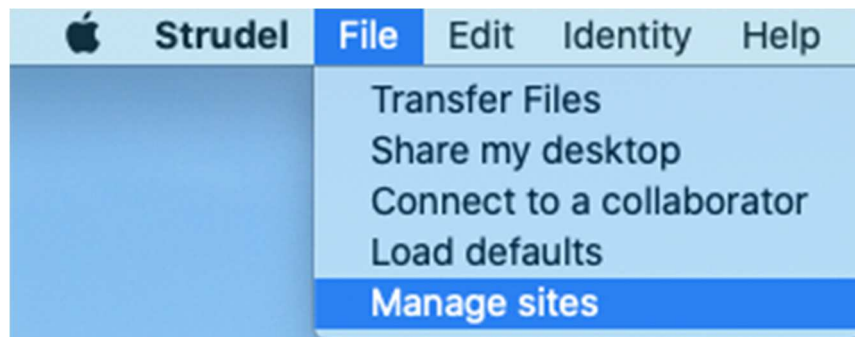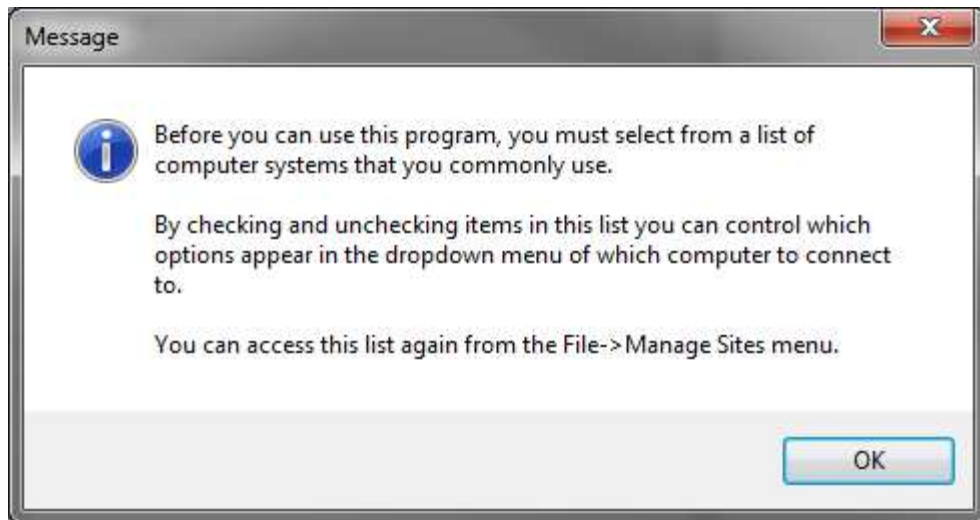
- o [OpenJDK-JRE](#)   (jre-8u251-macosx-x64.dmf)
- o [TurboVNC](#)   (TurboVNC-2.2.5-dmg)
- o [Strudel](#)   (Strudel_0.6.0_20200616-signed.dmg)

If you are installing Strudel on a USQ computer, the software above might be available from MAC Extra.
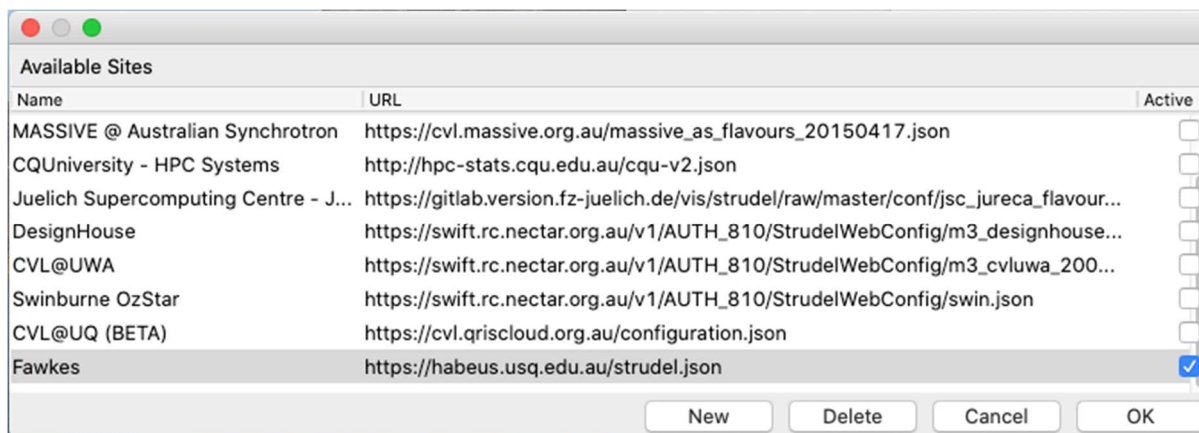
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Running the Strudel Software

- Start the Strudel software.

- To access the resources available on *Fawkes,* you will need to enter the details of the configuration server, which has an URL of https://habeus.usq.edu.au/strudel.json , as below:
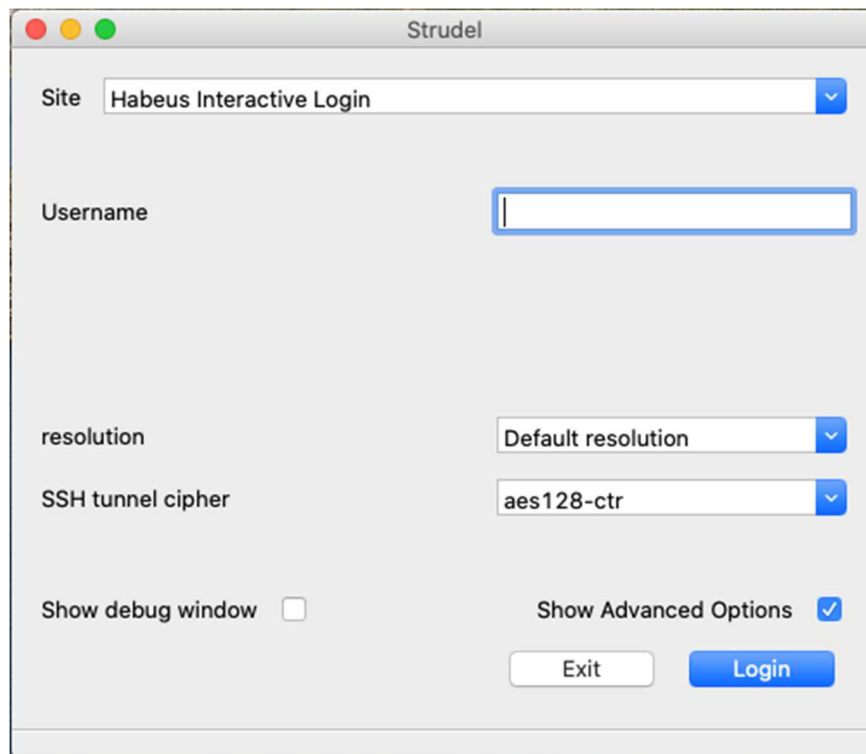
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- Ensure all other options are deselected, as can been seen in the image above.

- Within Strudel, you can select the type of job you would like to run. The options are:

  o GPU Interactive Session – in which you can enter your own values for Memory and PPN (Processors per node – or simply CPU's).
  o Standard Interactive Session - which is similar to the GPU session, without the need to request a GPU node, so these jobs can start on any compute node.
  o Habeus Interactive Login – creates an interactive session on Habeus, but unlike the other two options, no resources need to be selected.
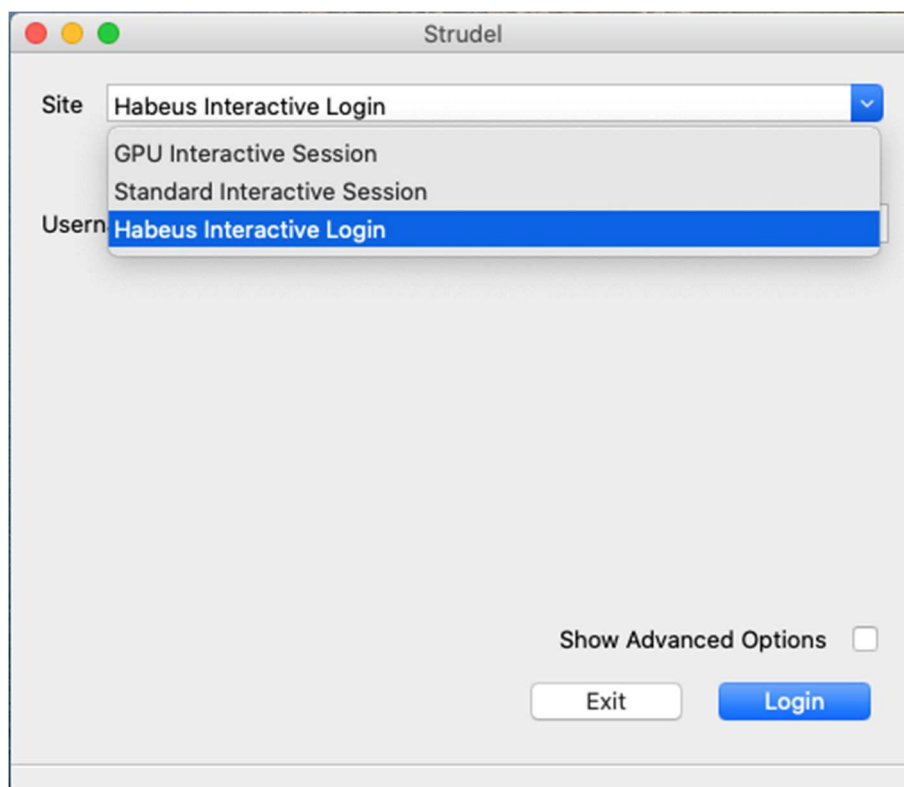
- Some things to be aware of:

  o You can only have a maximum of one GPU or Standard Session or Habeus running at once. This is actually a feature – as it is preferred that users only have running one interactive session running at a time. If you want to run lots of HPC jobs, submit non-interactive batch jobs the via the command-line.
  o For security, the SSH ciphers available to connect to Fawkes are limited. To connect to *Fawkes* the cipher needs to be changed to "aes128-ctr". To do this select "Show Advanced Options -> SSH tunnel cipher -> aes128-ctr", see image below:


  Once selected, the cipher will be saved and won't have to be selected in the future.

- Depending on the option that is selected, you will enter Username (your USQ username) and other options such as Memory and CPUs. Then click on the login button.

- The first time you use the software, you will be required to select the authentication method.
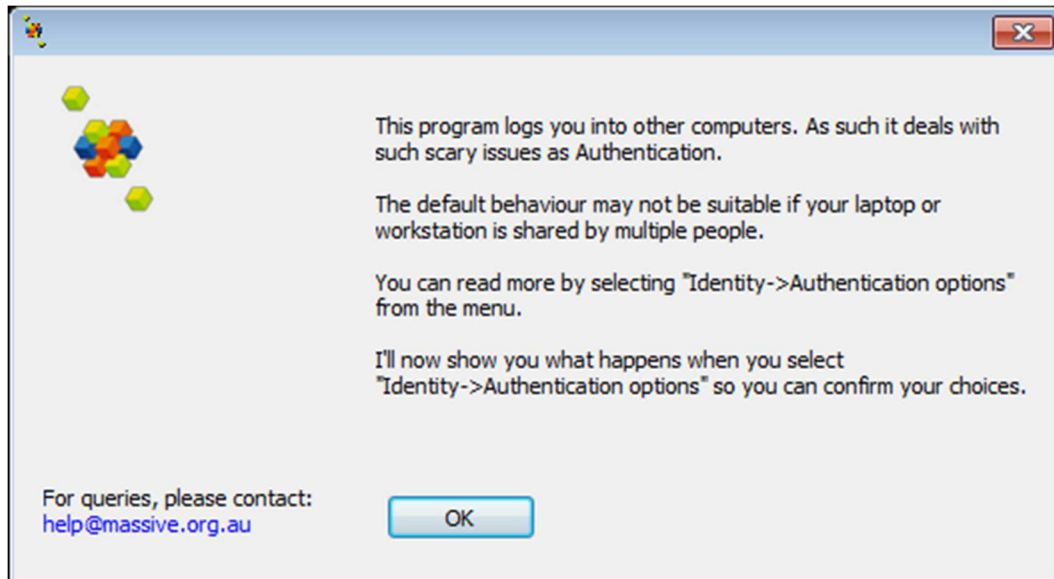
- Click on the "OK" button to continue.

- There are two authentication options:

  o Strudel generated SSH keys, this is the default. To use this method select the "*Identity -> Remember me on this computer*" option. With this method you are only required to enter a SSH pass-phrase.
  o Use of your login password, to use this method select the "*Identity -> Don't remember me*" option.
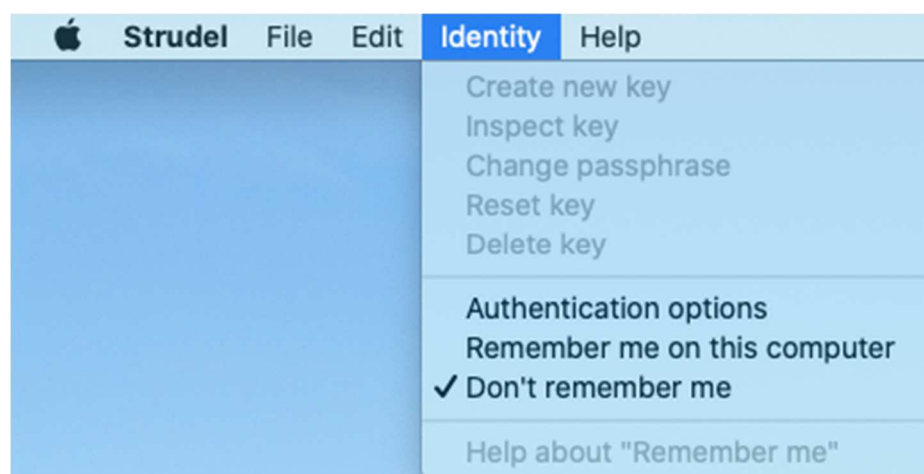
- **Note**: you can also change the setting through Strudel's menu by selecting "Edit -> Preferences -> Authentication Tab" or "Identity -> Authentication Options" and then select the required option.

- If you select the *"Remember me on this computer"* option, Strudel will generate and use SSH keys to connect to *Fawkes*, removing having to enter your USQ password whenever you run an interactive job.

- If you selected "*Don't remember option*" option, Strudel you will be asked to then enter your USQ password.


- If you already have a "Virtual Desktop (VNC) session running, you will be asked to "Reconnect" if you would like to connect to an existing session, or "New Desktop" if you would like to kill the previous session and start a new session.
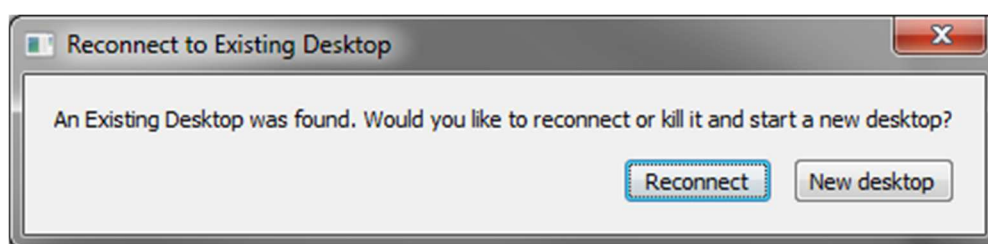
- When you are finished with the session (don't log out), simply close the Strudel application. The software will then ask if you would like to leave the session running or not. Depending on the session running, it is recommended to:

  o GPU Interaction Session – once your program has completed its execution, it is recommended to "Stop the desktop'"
  o Standard Interaction Session - once your program has completed its execution, it is recommended to "Stop the desktop".
  o Habeus Interactive Session – once your program has completed its execution, it is recommended to "Stop the desktop".
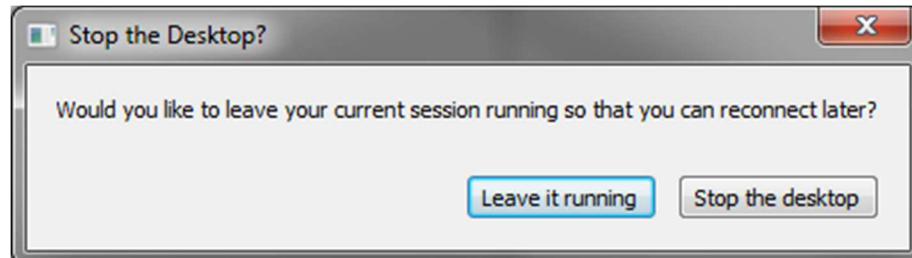
References

Graphical Connection to the HPC System, (n.d.), viewed 16 Nov 2016,
https://www.cqu.edu.au/eresearch/high-performance-computing/hpc-user-guides-and-faqs/graphical-connection-to-the-hpc-system

Connecting to a CVL@M3 desktop using the Strudel Desktop application, (n.d.), viewed 17 June 2020, https://www.cvl.org.au/cvl-desktop/getting-started-with-the-cvl/strudel-cvl-desktop-application