INSTALLATION OF STRUDEL

Introduction

Connecting to the USQ HPC - *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. VNC means "Virtual Network Computing".

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 a 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.

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- 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.
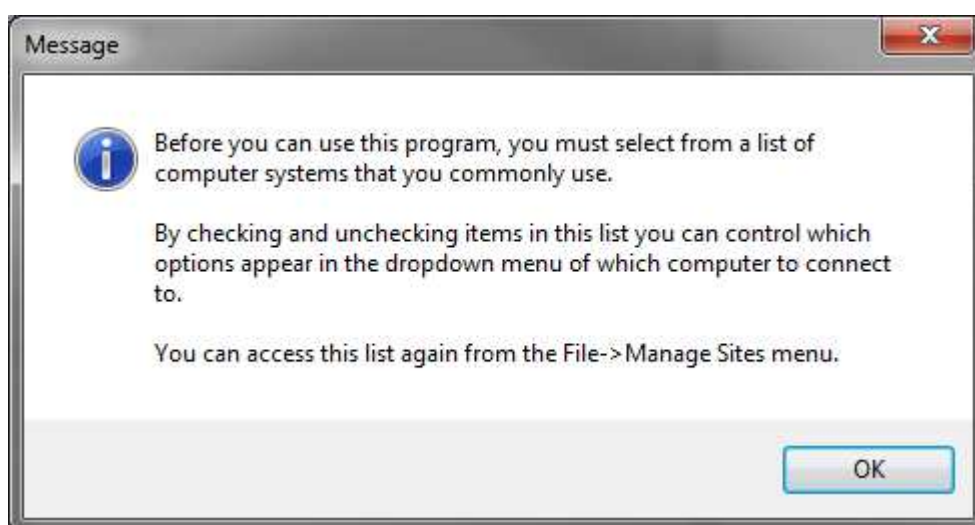
Installation of Software

- If you are using a USQ University's Windows Computer, you require three software packages:

  o PuTTY
  o TurboVNC
  o Strudel

- You can install PuTTY and TurboVNC software by going to ICT Software or https://kace.usq.edu.au. On the login screen enter your USQ username and password then select the "Download option".

- If you do not have access to the software server or you are not using a USQ University's Windows Computer, get the software from:

  o PuTTY - https://www.putty.org/
  o TurboVNC v 2.1.1 - https://sourceforge.net/projects/turbovnc/files/2.1.1/TurboVNC64-2.1.1.exe/download

- Download and install the Strudel software from:

  o Windows: Strudel for Windows v20180523
  o Mac OS X: Strudel for Mac OSX v20180523
  o A variety of Linux builds are available at the following link - https://cvl.massive.org.au/launcher_files/stable/
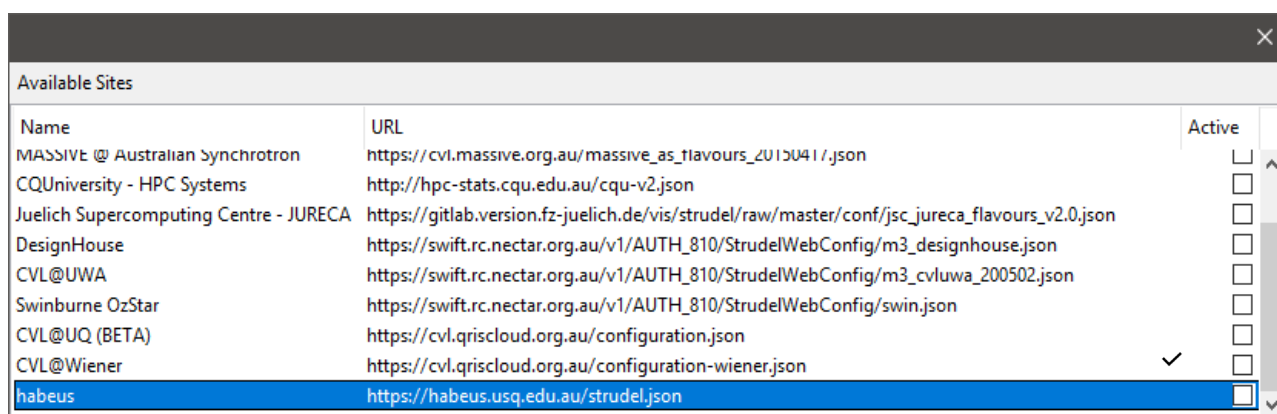
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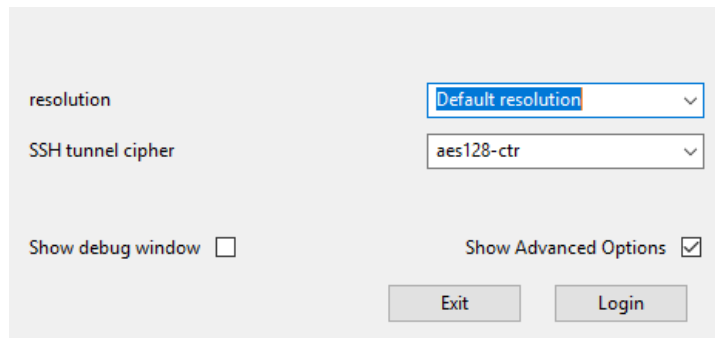## Running the Strudel Software

- Start the Strudel software.

- Enter the details of the configuration server, which has an URL of the visualisation node habeus http://habeus.usq.edu.au/strudel.json

Ensure all other options are deselected, as can been seen in the image above.

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- Click on "Show advanced options". Resolution: Default resolution (or you can change it if you have a large monitor). SSH tunnel cipher: aes128-ctr


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

  o GPU Interaction Session – in which you can enter your own values for Hours, Memory and PPN (Processors per node – or simply CPU's).
  o Standard Interaction Session – you need to enter values for Memory, hours and CPUs
  o Habeus interactive login, no need to provide resources these jobs can start on any of the compute nodes.

- Some things to be aware of:

  o You can only have a maximum of one GPU or Standard Session running at once. This is actually a feature – as it is preferred that users only have running one interactive session at a time. If you want to run lots of jobs, that's what the non-interactive job submissions (batch) are for.

- Depending on the option that is selected, you will enter Username (your USQ username) and other options such as Hours, Memory and CPUs. Then click on the login button.
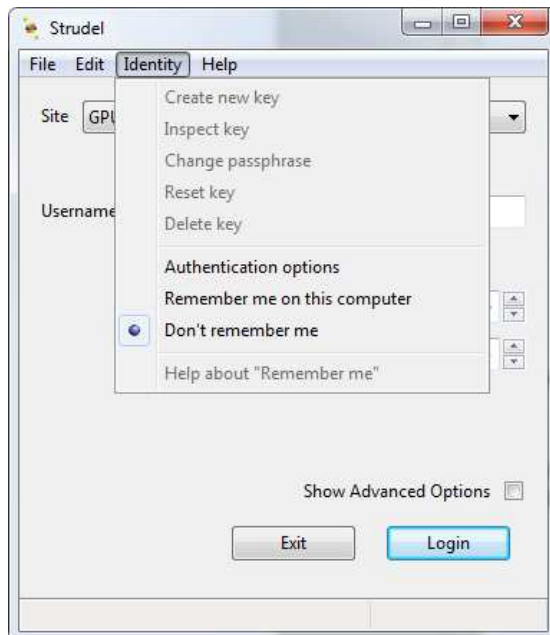
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- The first time you use the software, you will be required to select the authentication method.
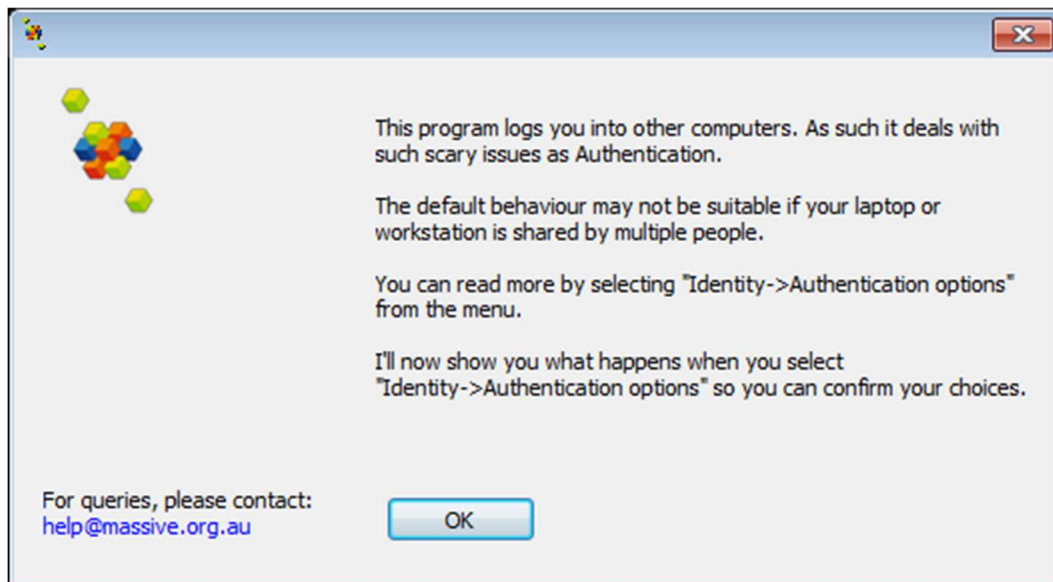

- Click on the "OK" button to continue.

- There are two authentication options:

  o Use of your login password, to use this method select the "*Identity -> Don't remember me*" option.

  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 required to enter a pass-phrase.

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- **Note**: you can also change the setting through Strudel's menu by selecting "Edit -> Preferences -> Authentication Tab", and then select the "*Don't remember me option*", this will allow you to use the password option, rather than using SSH keys.
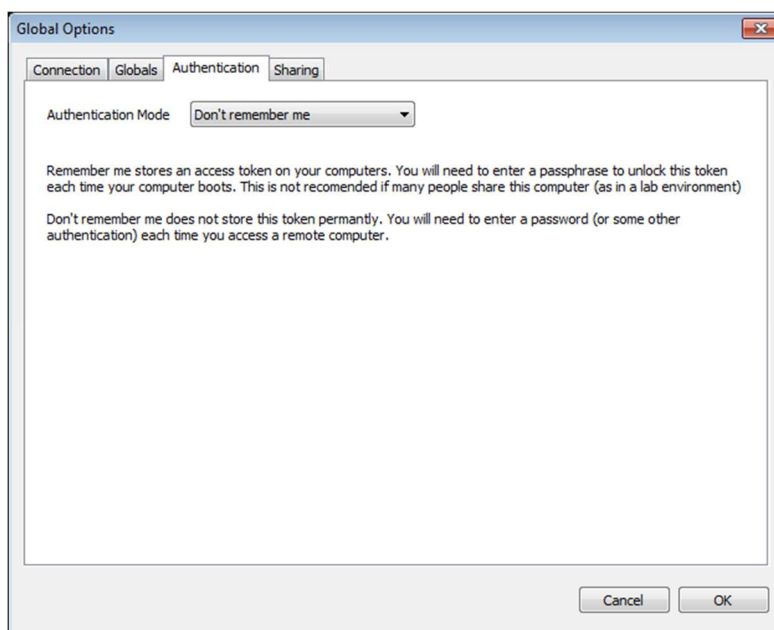
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- You will be asked to then enter your USQ password.

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

A new Virtual desktop will open

Once you have a "Virtual Desktop (VNC) session running, you will be asked to type Password for root, please click "Cancel" and proceed.
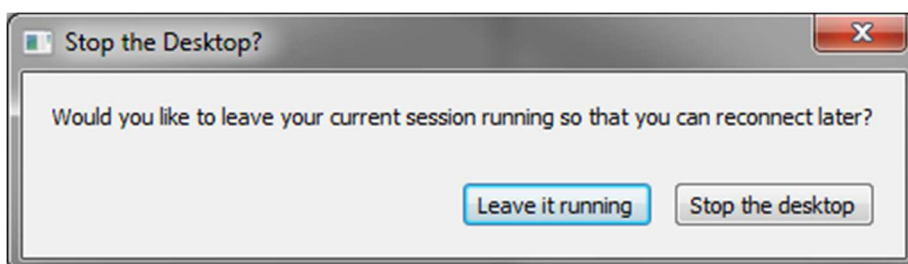
Returning to a Virtual desktop open

- If you already have a virtual desktop open you will be prompted 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.
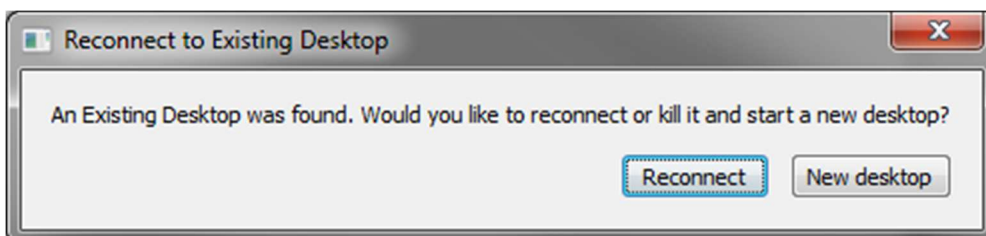
- When you are finished with the session (don't log out), simply close the Strudel application. The software will then ask if you would like to leave the session running or not, It is preferred that you 'Stop the desktop'.

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Stop the Desktop?

Would you like to leave your current session running so that you can reconnect later?

[Leave it running] [Stop the desktop]

References

Strudel, (n.d.), Retrieved November 16, 2016, from

https://www.massive.org.au/userguide/cluster-instructions/strudel now outdated

Graphical Connection to the HPC System, (n.d.). Retrieved November 16, 2016, from https://my.cqu.edu.au/web/eresearch/graphical-connection-to-the-hpc-system now outdated

MASSIVE CVL instructions to use strudel desktop. Retrieved October 16, 2020, from https://www.cvl.org.au/cvl-desktop/getting-started-with-the-cvl/strudel-cvl-desktop-application