UCLA SSCERT

Social Sciences Center for Education, Research, and Technology

v0.1, last updated 21 August 2024.

MATLAB

MATLAB licenses are currently supplied to the UCLA community, please see UCLA Software Central to obtain your license.

Prerequisites

Obtain a MATLAB license from UCLA Software Central. Activate your account with MathWorks.

Ensure that you have an X11 client installed on your system, such as Xming (Sourceforge), and that X11 forwarding is enabled before you connect to SSCERT HPC (SSHPCC).

Loading MATLAB

Familiarity with SSCERT HPC and the module loading system is assumed. After logging in, please run:

```
module use /opt/ohpc/pub/eb-gcc103/modules/all
module load MATLAB
```

Activating MATLAB

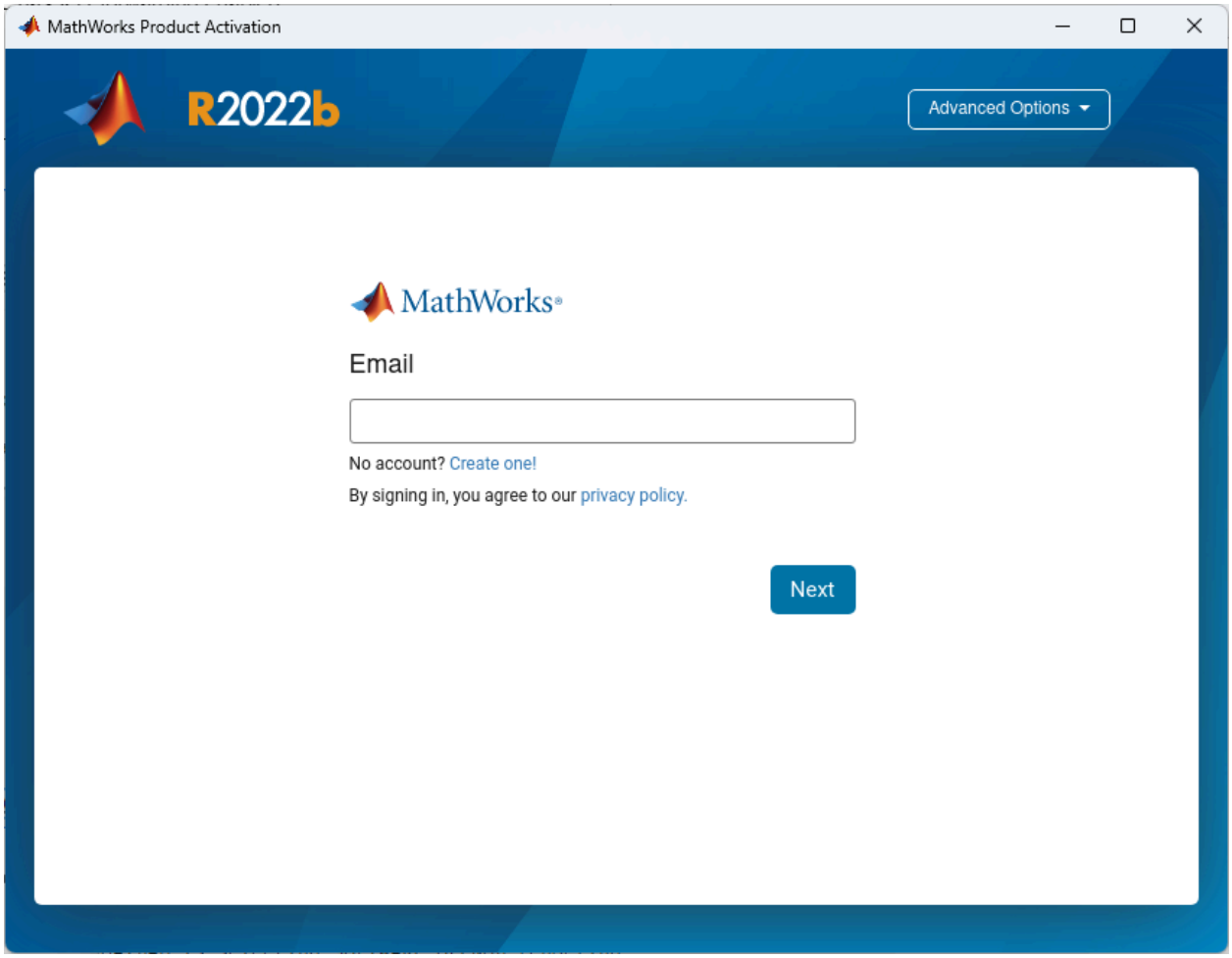
To run MATLAB R2022b after loading the appropriate modules:

```
[brian@sms ~]$ matlab
MATLAB is selecting software rendering
```

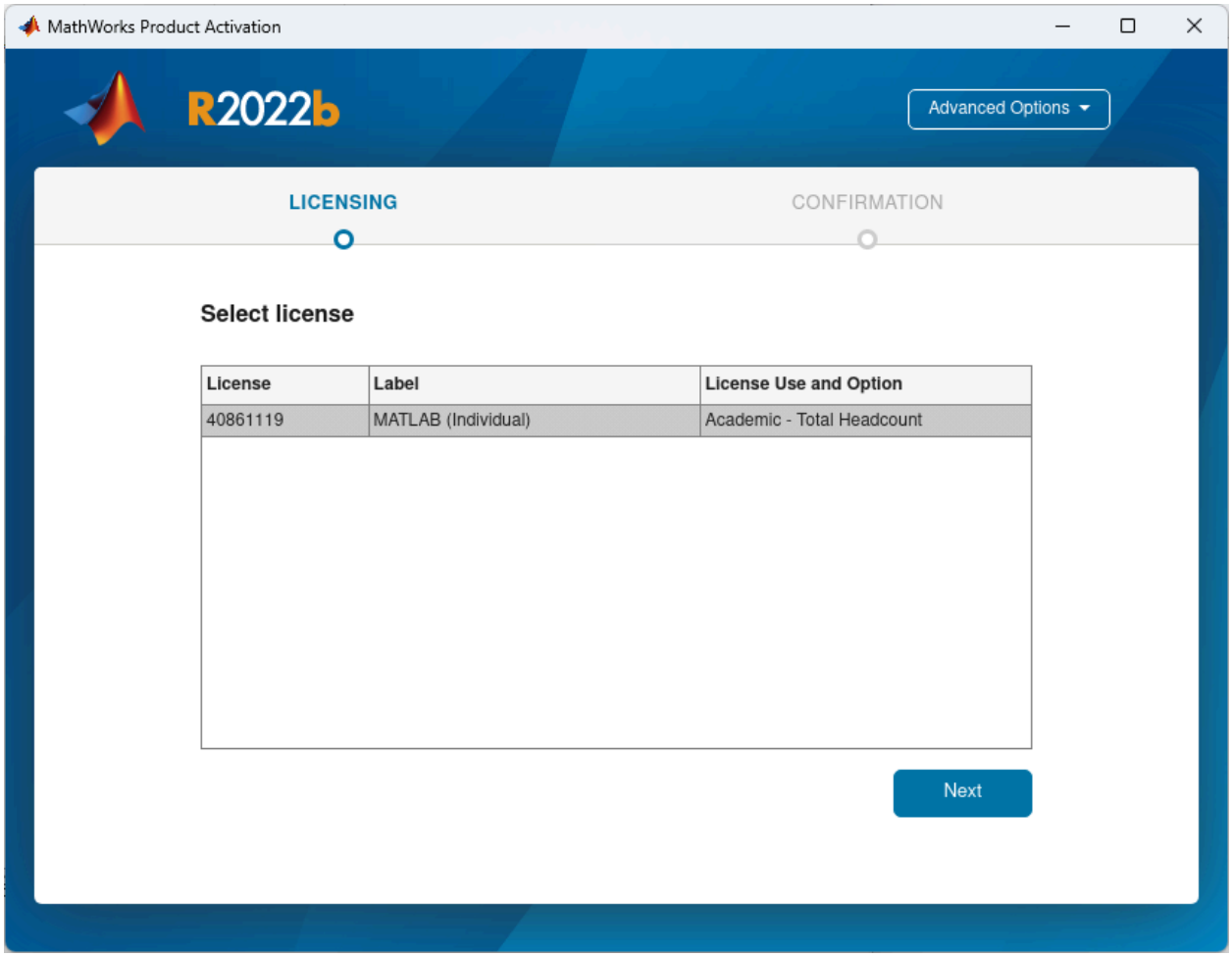
MATLAB's graphical user interface should now load and the MathWorks Product Activation screen will show.

Please sign in to your MathWorks account.

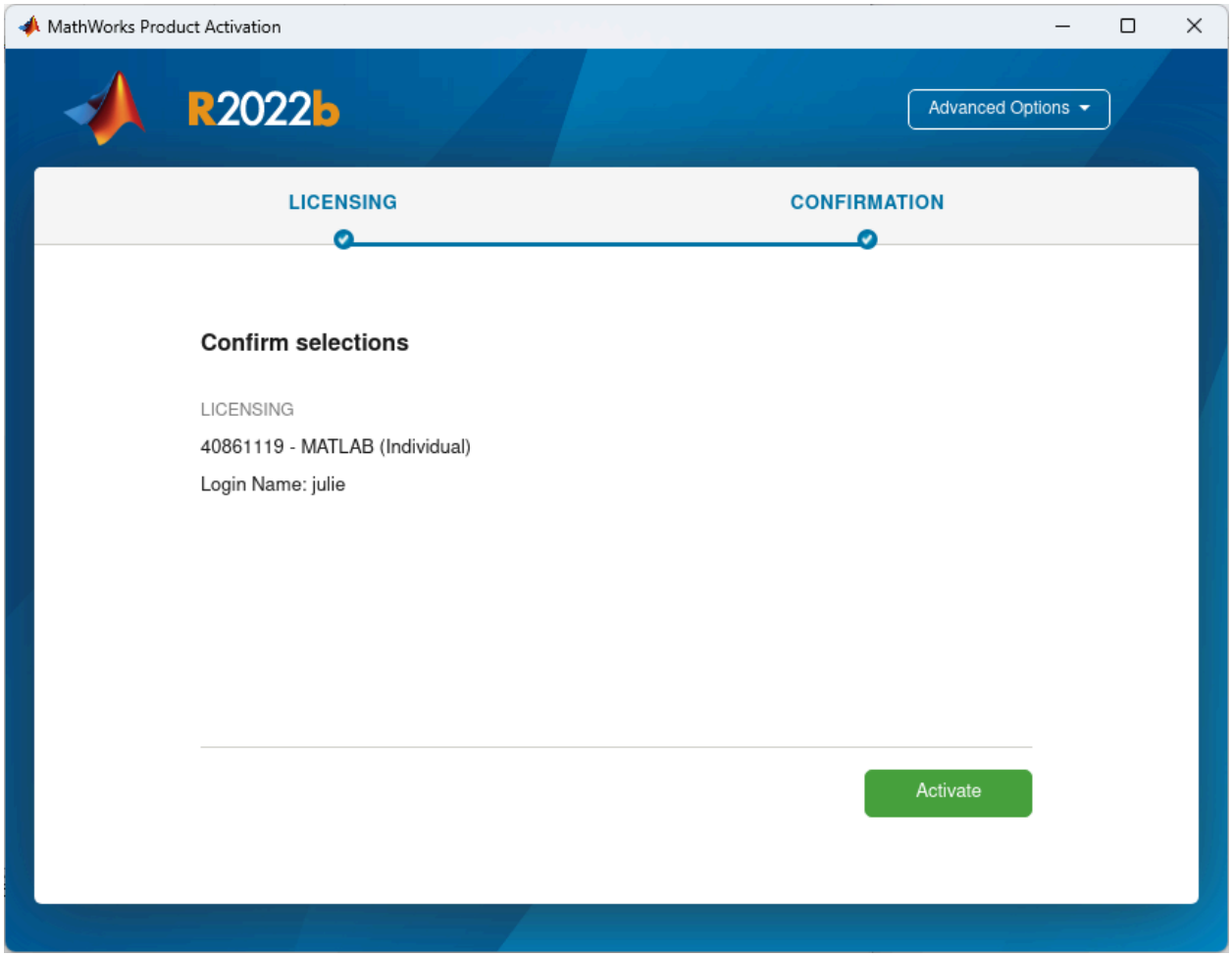
You may also create your your account at this step if you have not yet created your MathWorks account; please note your MathWorks account is entirely separate from your SSCERT HPC account.



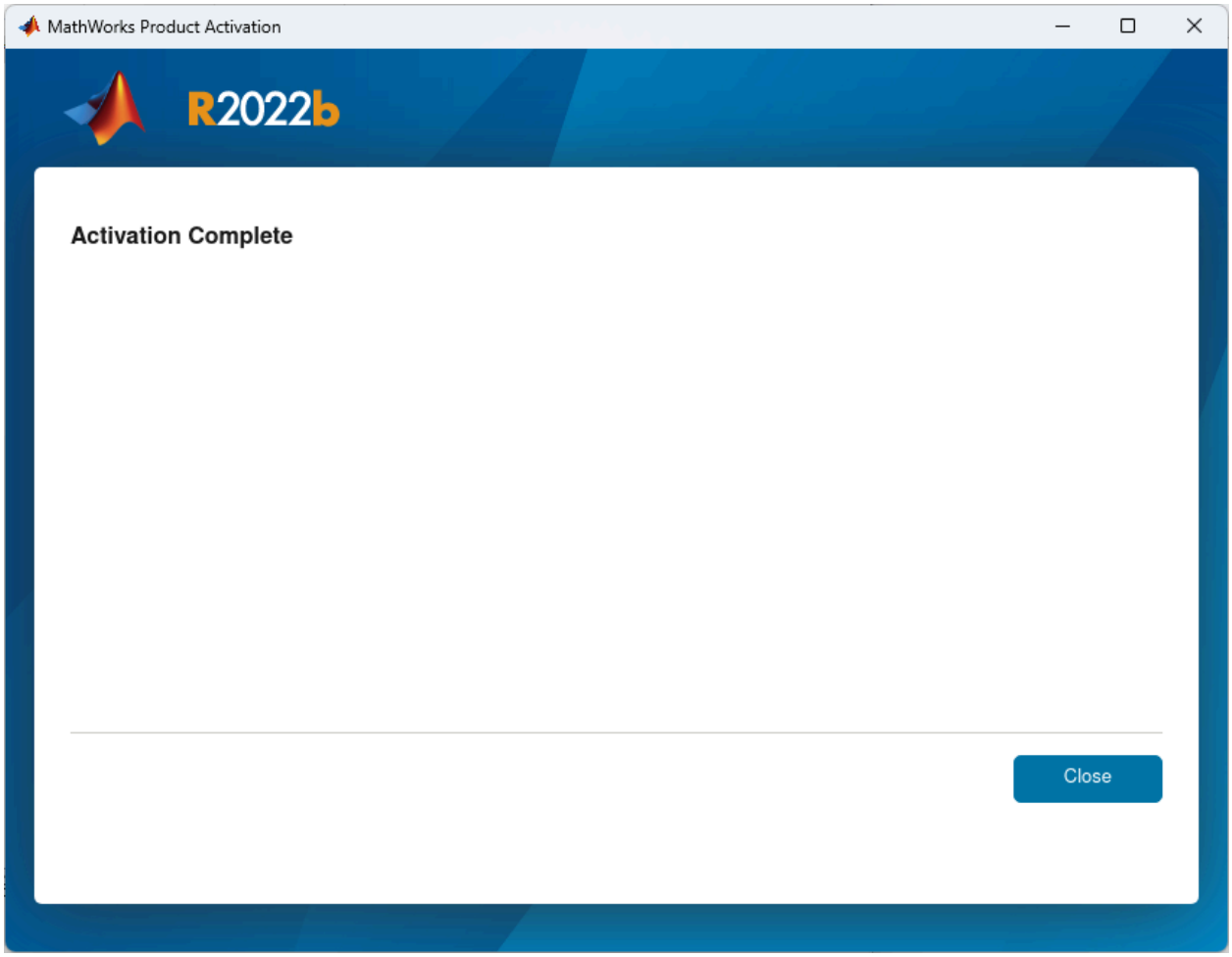
After login, MathWorks should see your MATLAB license. Assuming it shows correctly, please hit “next” to advance to the next screen:



The confirmation screen is next; please note your login name will be different from this example and unique to each user. Hit “Activate” if all information is as expected to proceed.



Activation will show as complete, hit “close”. MATLAB will close once activation is complete.



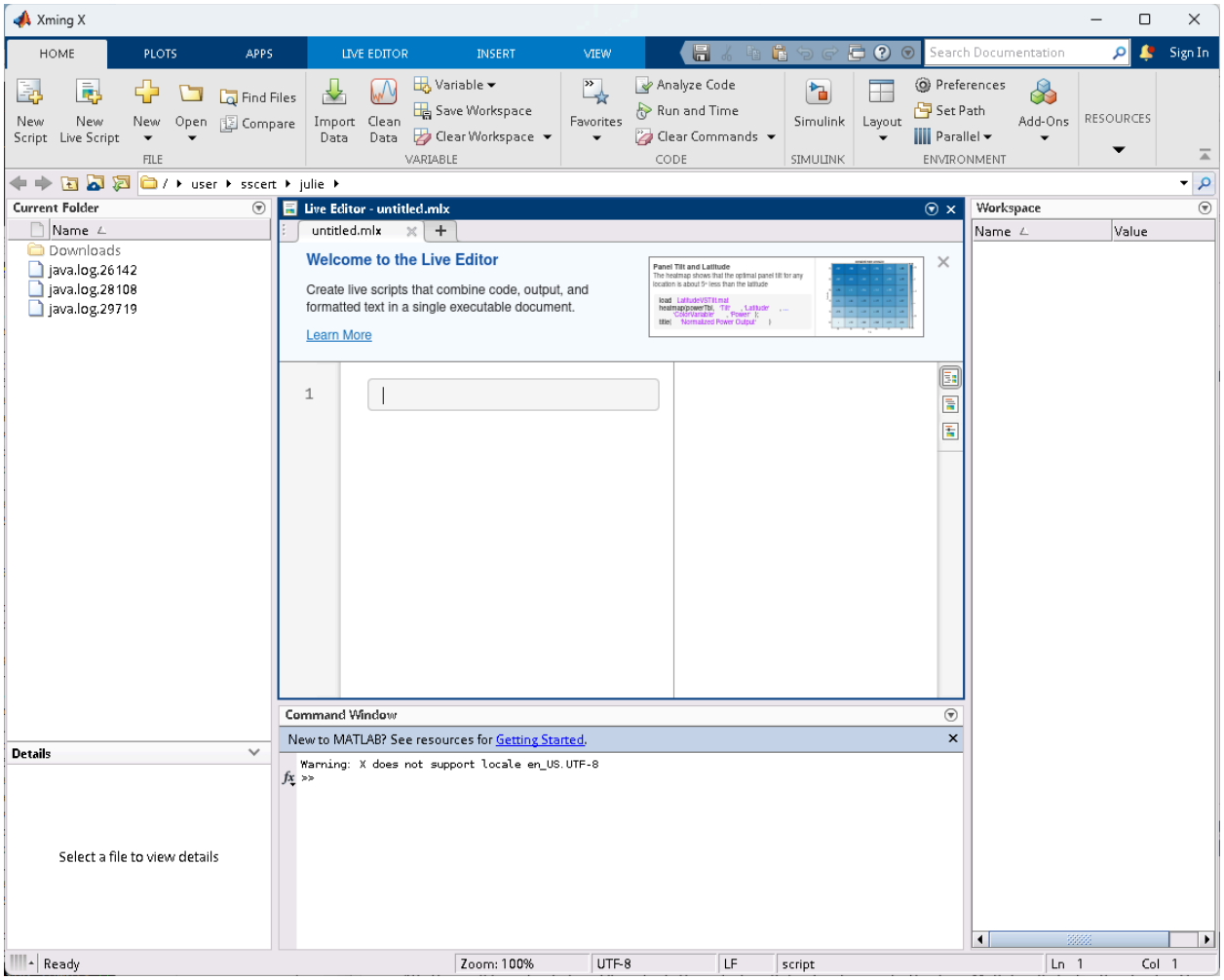
With your MATLAB license installed on SSCERT HPC, you will be able to run MATLAB. This step normally only needs to be done once.

Starting MATLAB

From your existing SSH session, start MATLAB again.

```
[brian@sms ~]$ matlab
MATLAB is selecting software rendering
```

MATLAB will start without requesting any login information.



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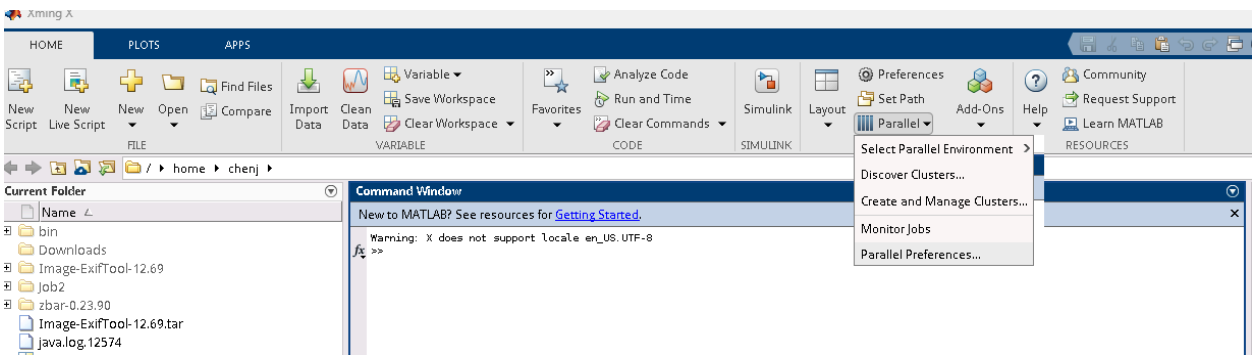
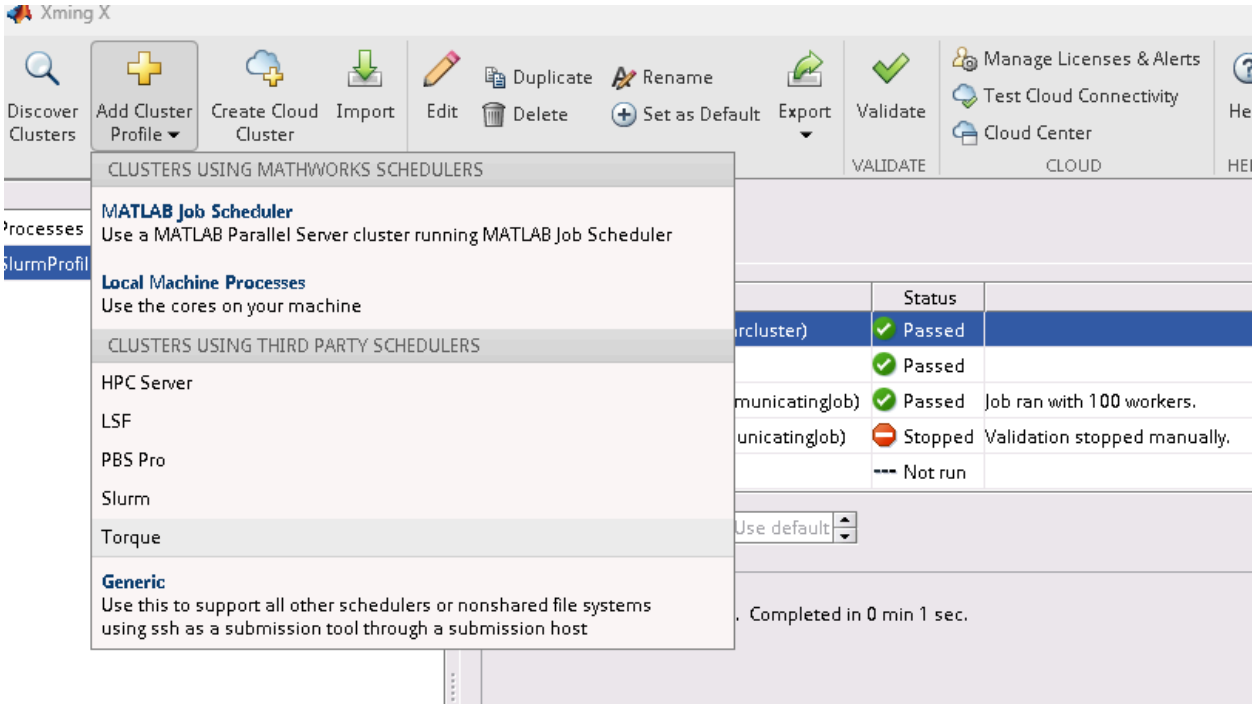
Configure SSCERT HPC on MATLAB

After you start matlab, click on *Parallel*, then select *Create and Manage Clusters*.



Click Add Cluster Profile, then select Slurm.

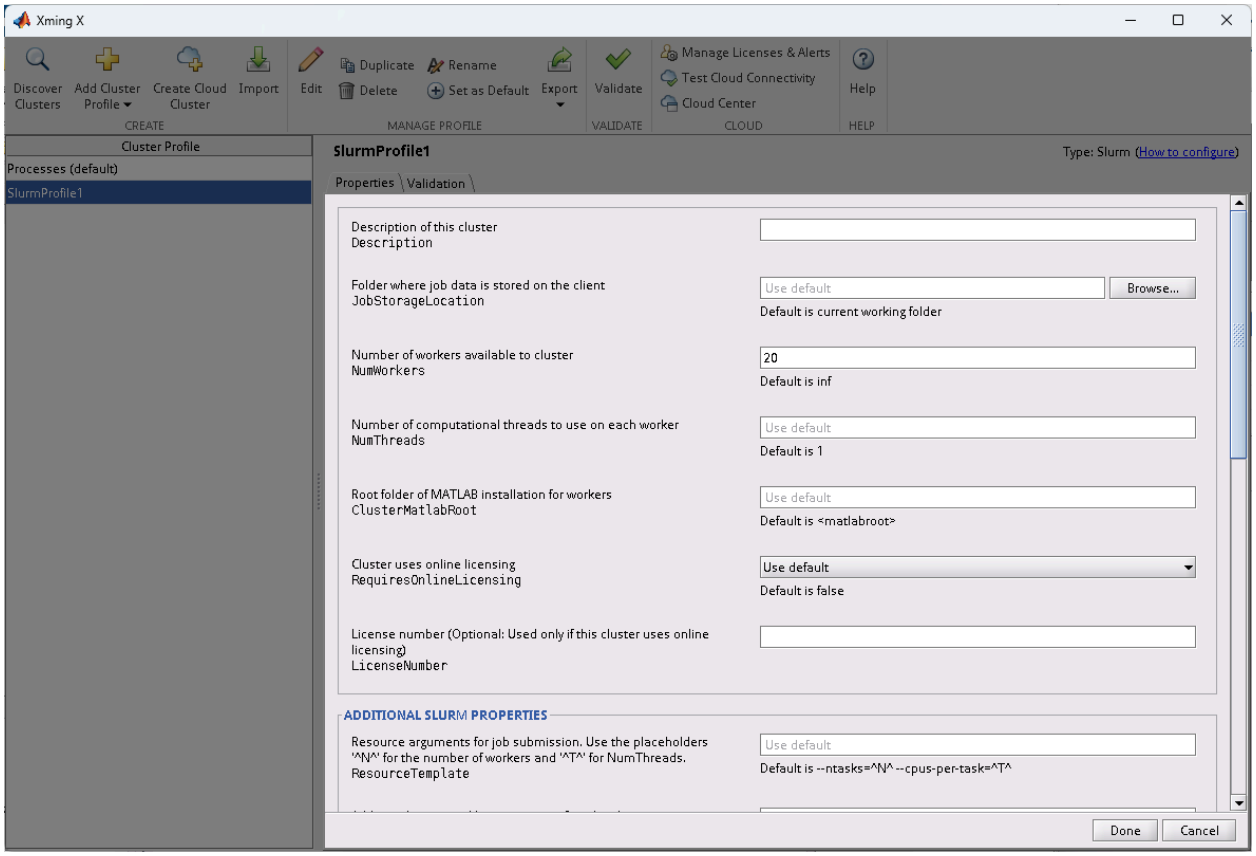


Set the *Description of this Cluster* to something that makes sense to you, in this case we call it: *SlurmProfile1*

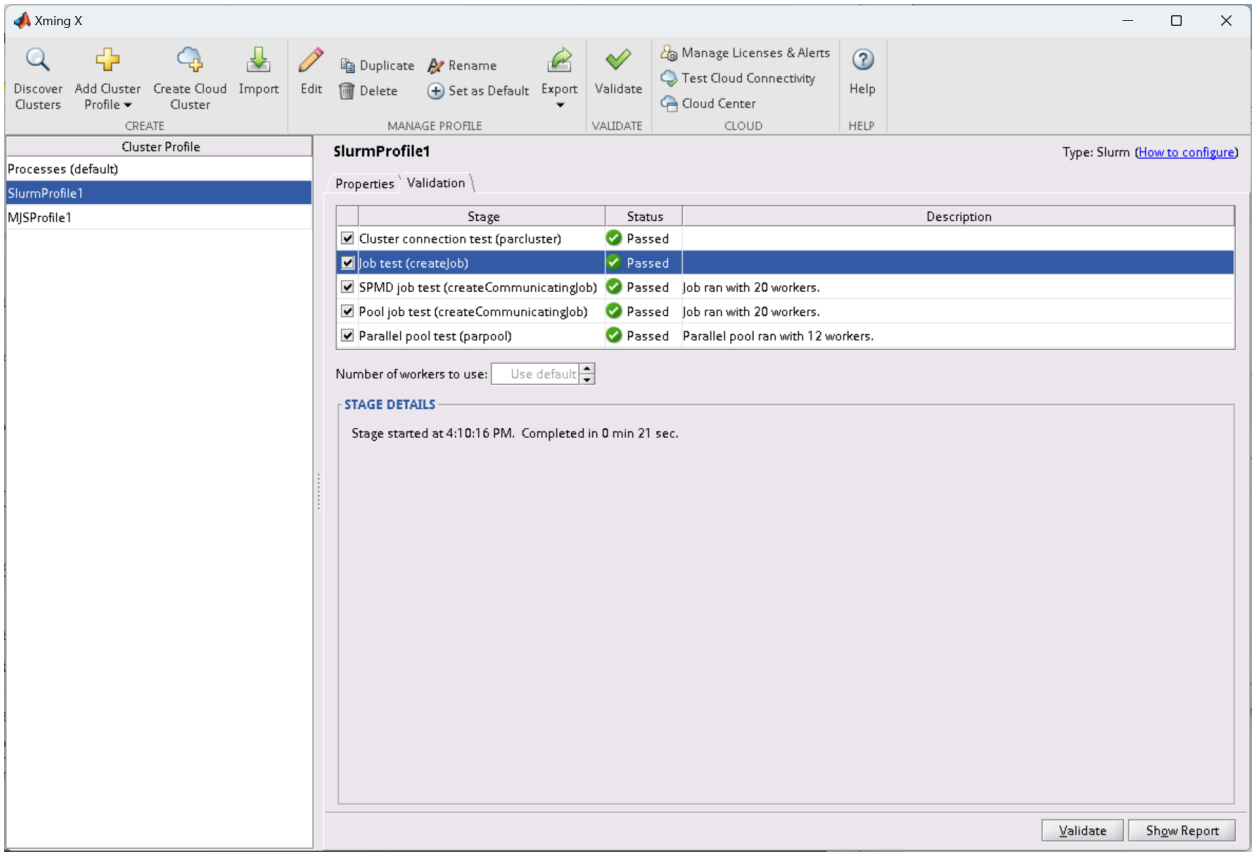
Change *Number of workers available to cluster* to *20* for testing; actual best settings here are to be determined on your individual workload needs.

Set *Folder where job data is stored on client* as needed for your data.

Then hit Done to save your settings.

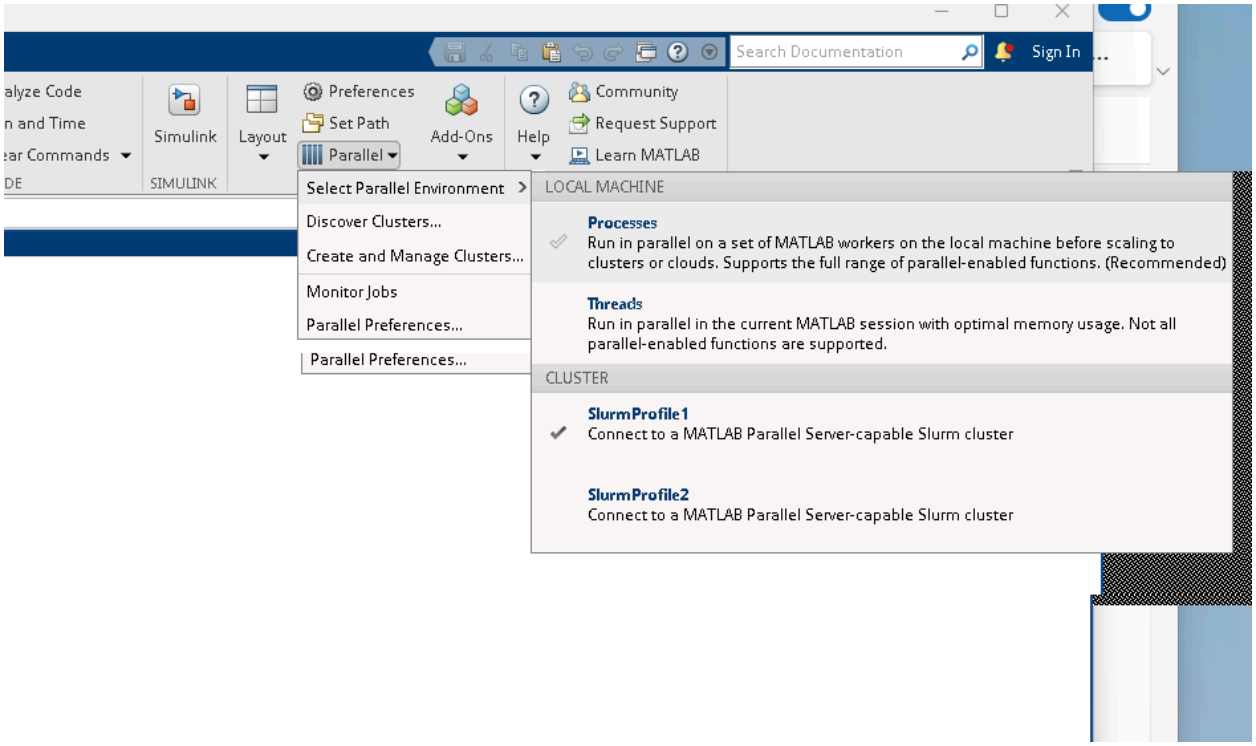


If needed, test your workload.



Subsequent use of MATLAB

For subsequent use of MATLAB, be it via command line (sbatch) for batch jobs; batch jobs submitted via GUI; or both, you may occasionally need to go back to the MATLAB GUI to confirm you have your Parallel environment set to the appropriate previously-created profile.



Examples

asdada

Reference

MathWorks

https://www.mathworks.com/help/matlab-parallel-server/configure-for-slurm-pbs-pro-lsf-torque.html