Accessing Jupyter Notebook via Quakeworx Gateway

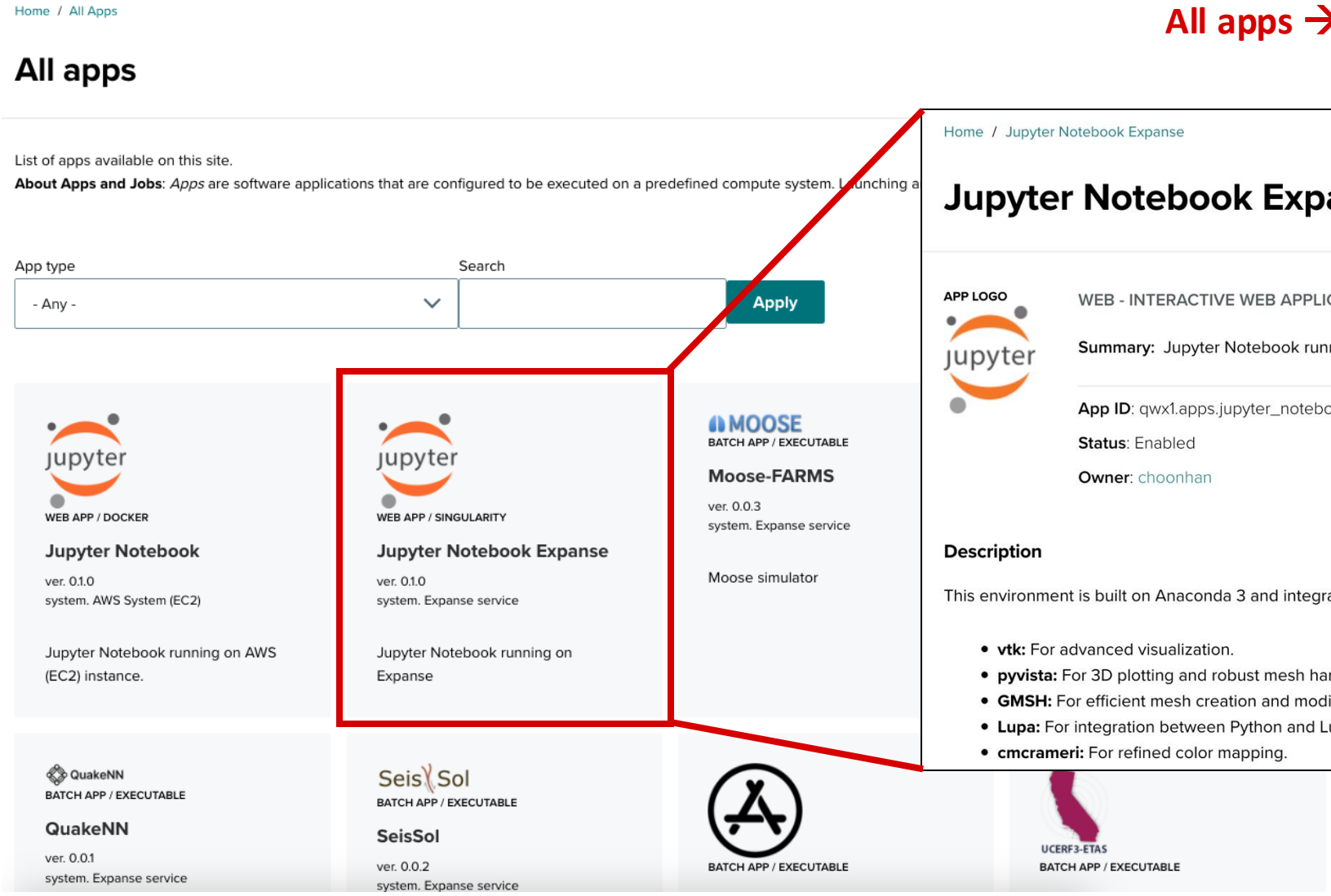
and

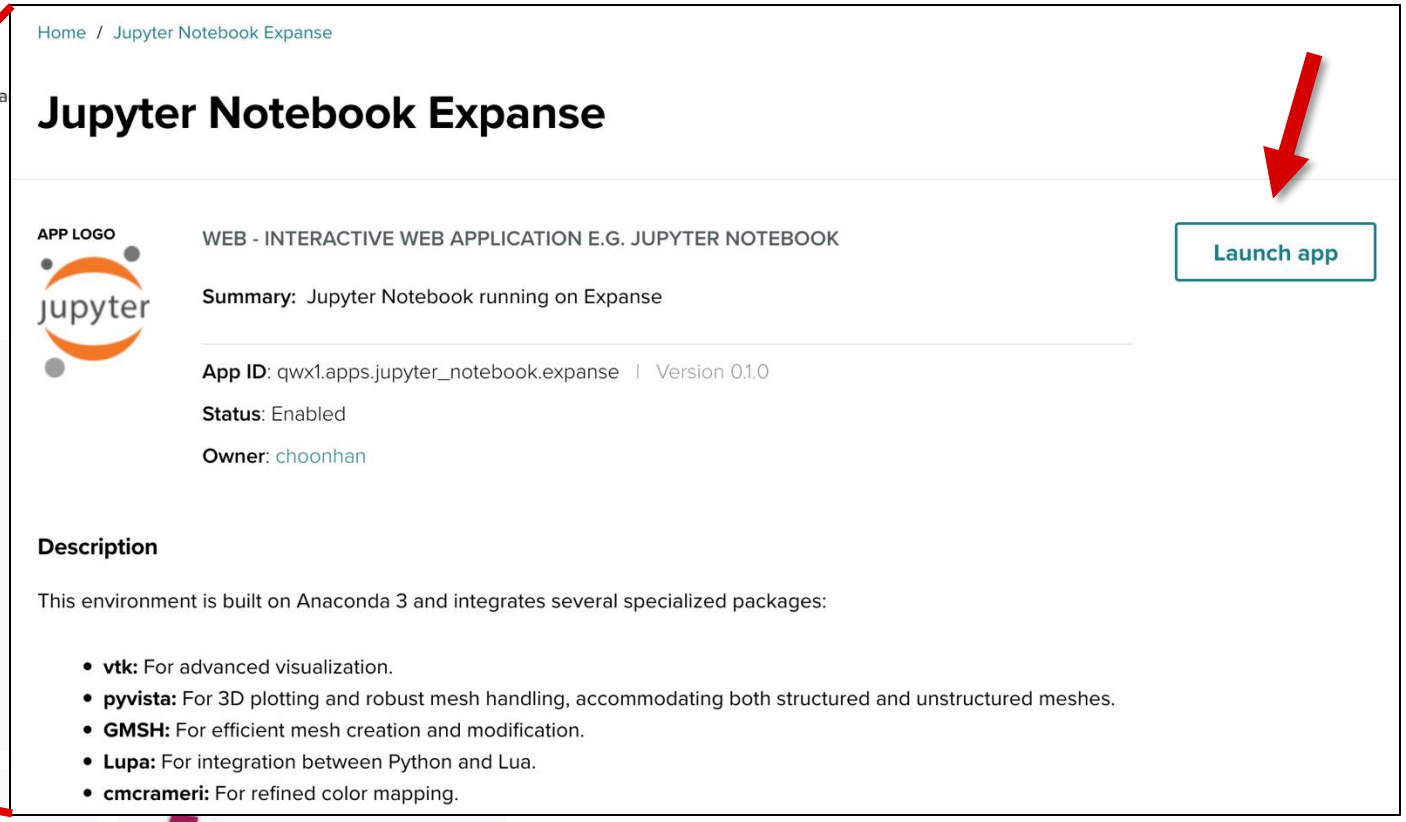
Plotting Tandem outputs

By Jeena Yun

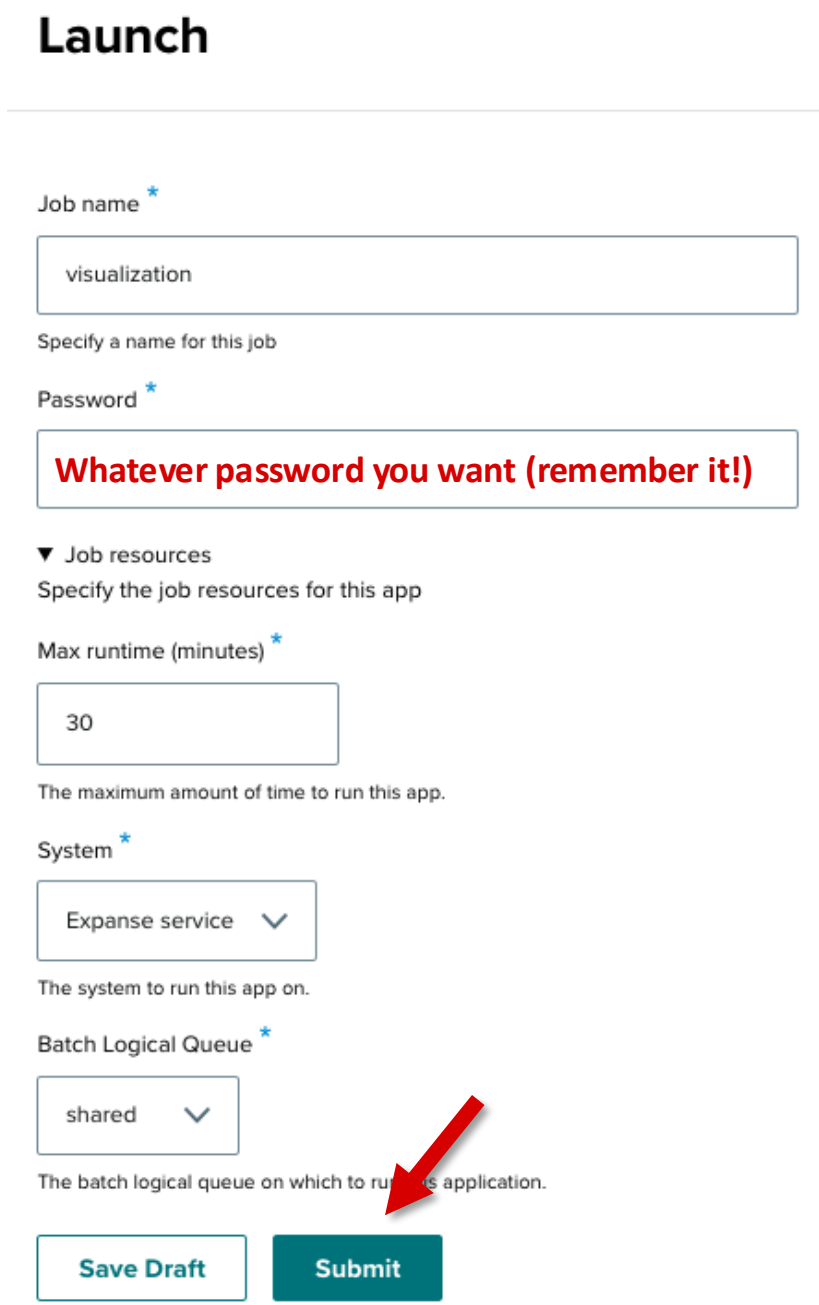
1. Launch Jupyter Notebook Expanse App

All apps → Jupyter Notebook Expanse → Launch app

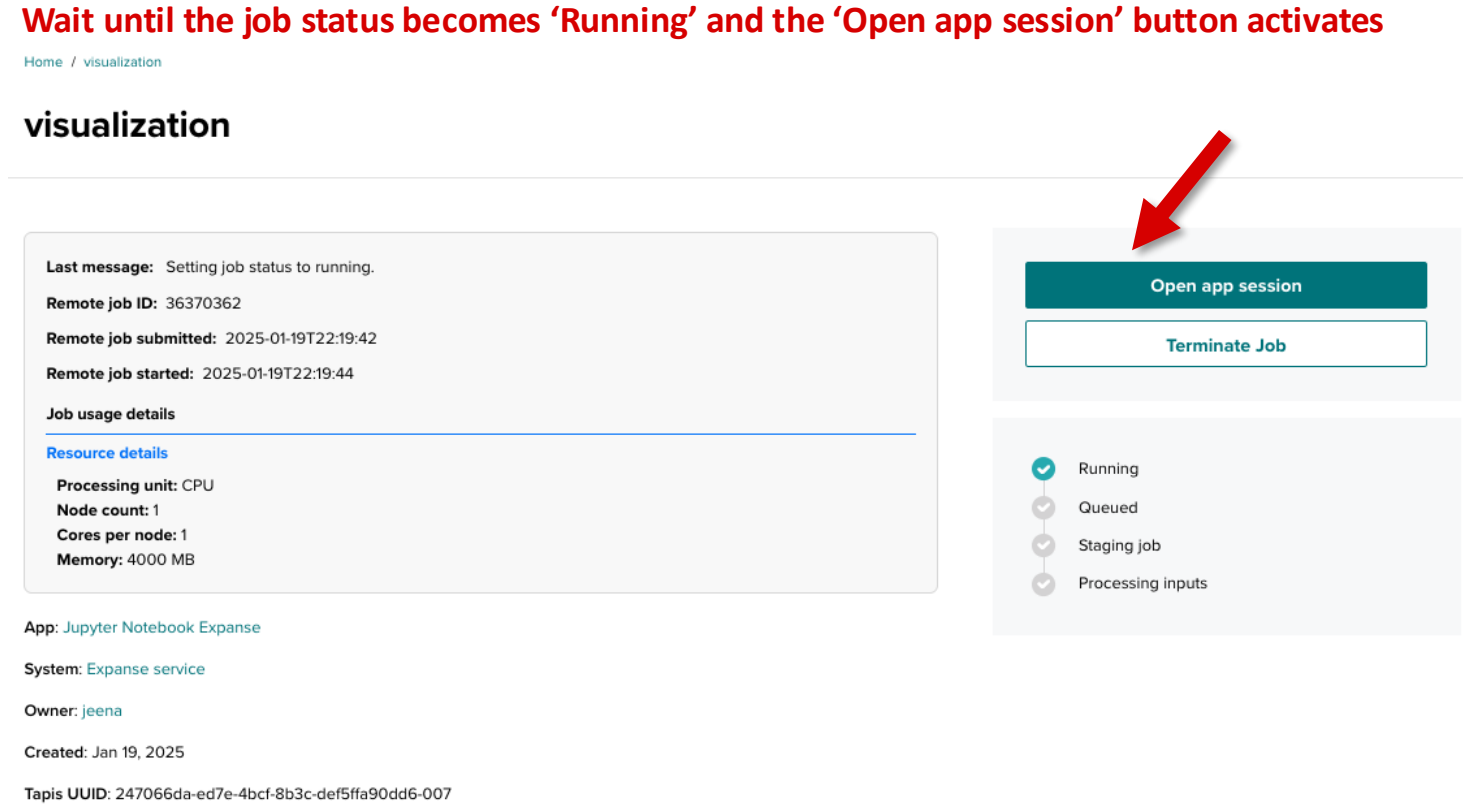




1. Launch Jupyter Notebook Expanse App



Wait until the job status becomes 'Running' and the 'Open app session' button activates



2. Open Jupyter Notebook App Session

jupyter

Password or token: The password you set Log in

Token authentication is enabled

If no password has been configured, you need to open the server with its login token in the URL, or paste it above. This requirement will be lifted if you enable a password.

The command:

```
jupyter server list
```

will show you the URLs of running servers with their tokens, which you can copy and paste into your browser. For example:

```
Currently running servers:
http://localhost:8888/?token=c8de56fa... :: /Users/you/notebooks
```

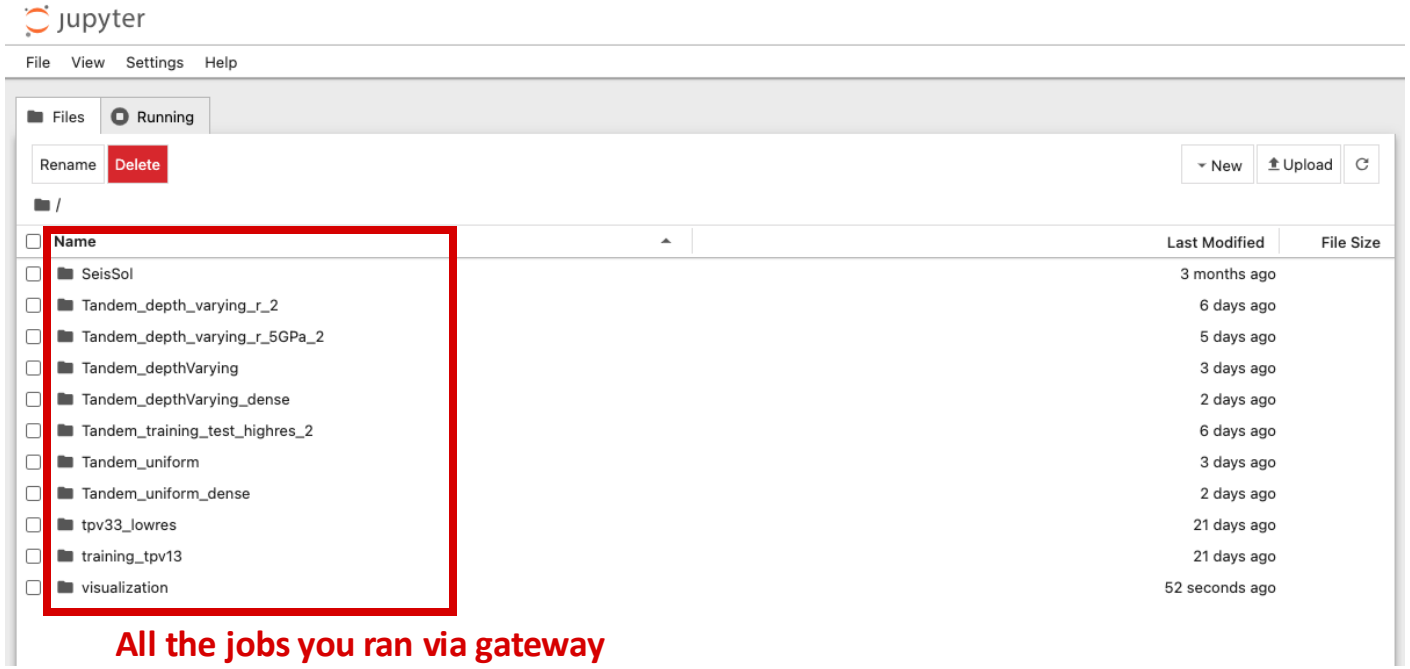
or you can paste just the token value into the password field on this page.

See the documentation on how to enable a password in place of token authentication, if you would like to avoid dealing with random tokens.

Cookies are required for authenticated access to the Jupyter server.

Setup a Password

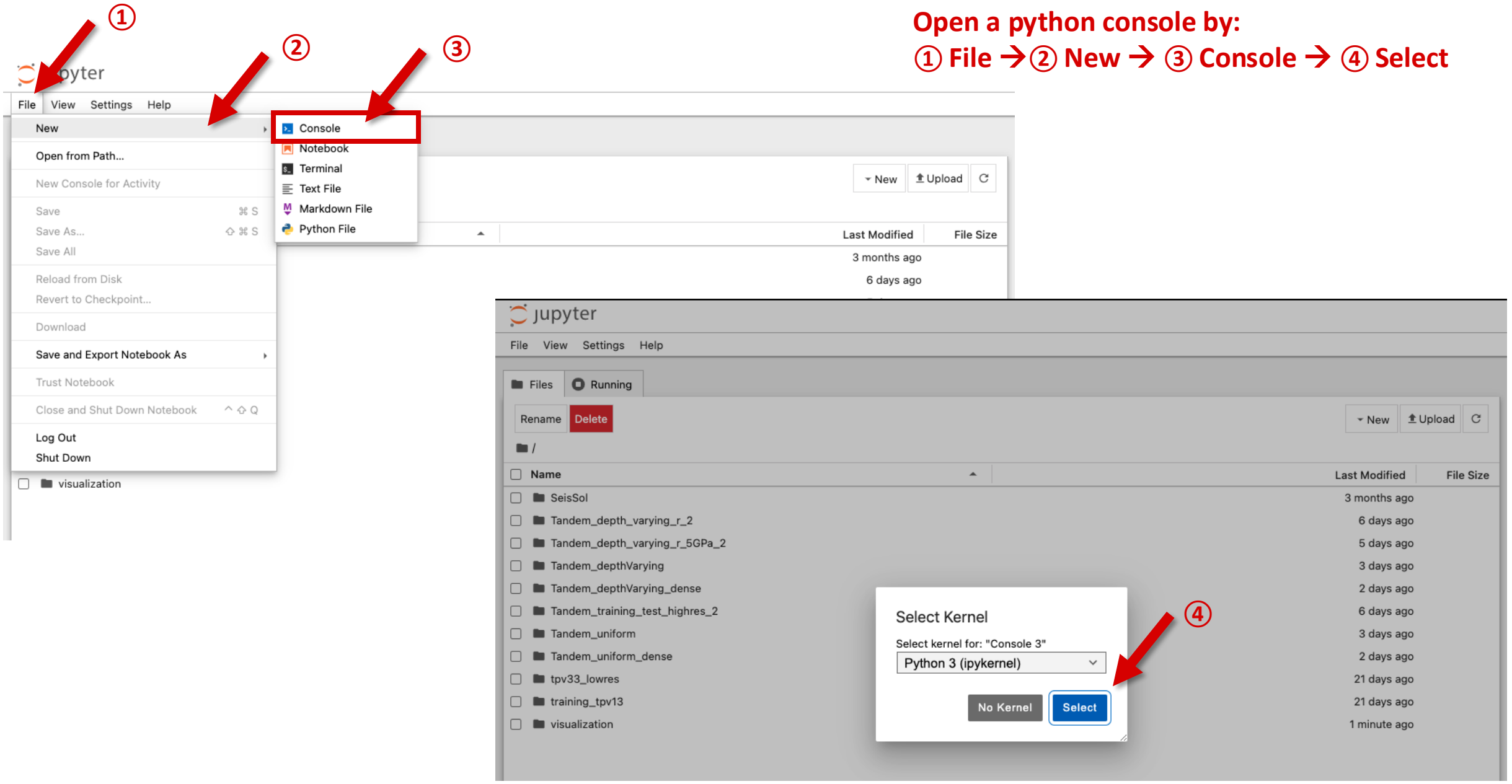
You can also setup a password by entering your token and a new password on the fields below:



All the jobs you ran via gateway

3. Clone the git repository containing plotting scripts

Open a python console by:
① File → ② New → ③ Console → ④ Select



3. Clone the git repository containing plotting scripts

jupyter

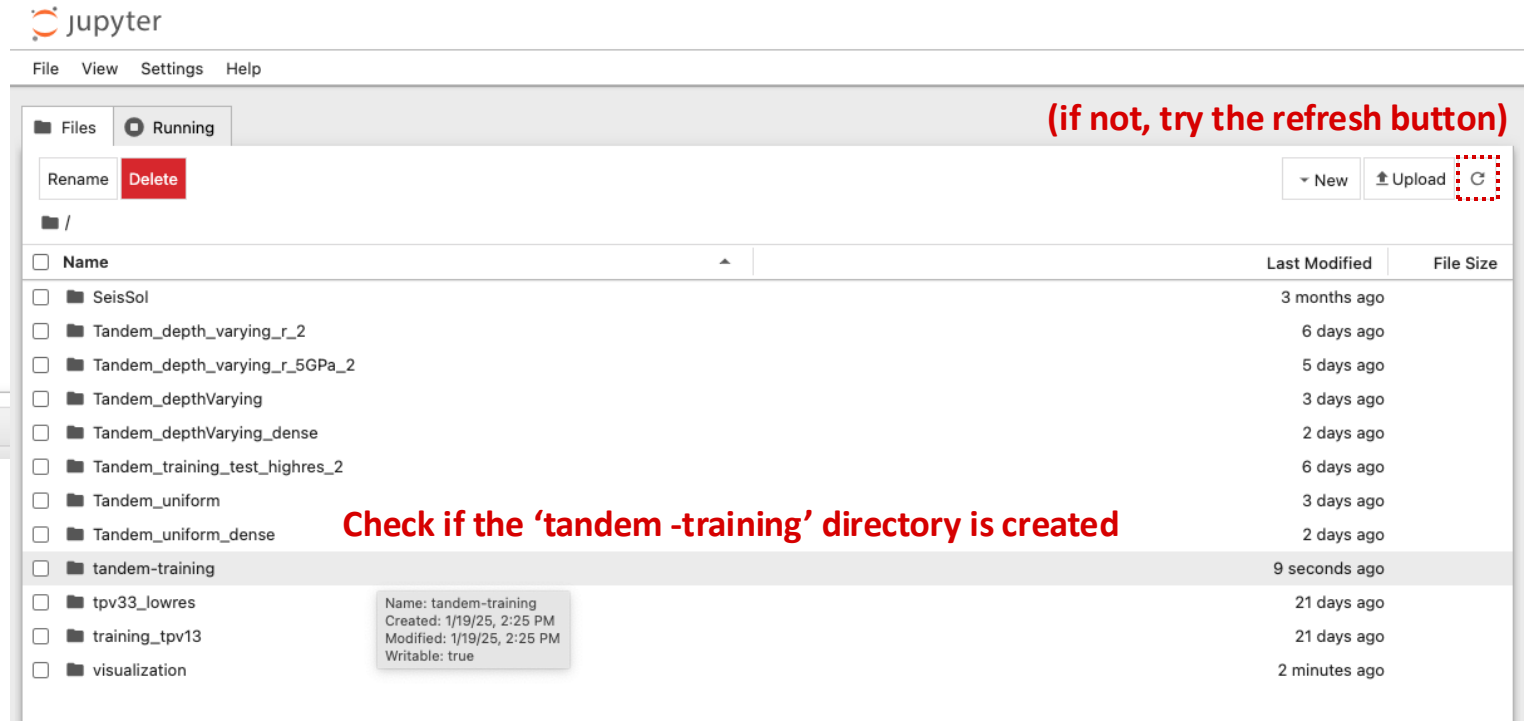
File View Settings Help

```
Python 3.12.2 | packaged by conda-forge | (main, Feb 16 2024, 20:50:58) [GCC 12.3.0]
Type 'copyright', 'credits' or 'license' for more information
IPython 8.27.0 -- An enhanced Interactive Python. Type '?' for help.

[1]: !ls

     SeisSol                    Tandem_depth_varying_r_5GPa_2   tpv33_lowres
     Tandem_depthVarying        Tandem_training_test_highres_2  training_tpv13
     Tandem_depthVarying_dense  Tandem_uniform                  visualization
     Tandem_depth_varying_r_2   Tandem_uniform_dense

[2]: !git clone https://github.com/TEAR-ERC/tandem-training.git

     Cloning into 'tandem-training'...
     remote: Enumerating objects: 43, done.
     remote: Counting objects: 100% (43/43), done.
     remote: Compressing objects: 100% (32/32), done.
     remote: Total 43 (delta 16), reused 31 (delta 7), pack-reused 0 (from 0)
     Receiving objects: 100% (43/43), 6.36 MiB | 7.75 MiB/s, done.
     Resolving deltas: 100% (16/16), done.

[3]: !ls

     SeisSol                    Tandem_depth_varying_r_5GPa_2   tandem-training
     Tandem_depthVarying        Tandem_training_test_highres_2  tpv33_lowres
     Tandem_depthVarying_dense  Tandem_uniform                  training_tpv13
     Tandem_depth_varying_r_2   Tandem_uniform_dense            visualization

[ ]:
```

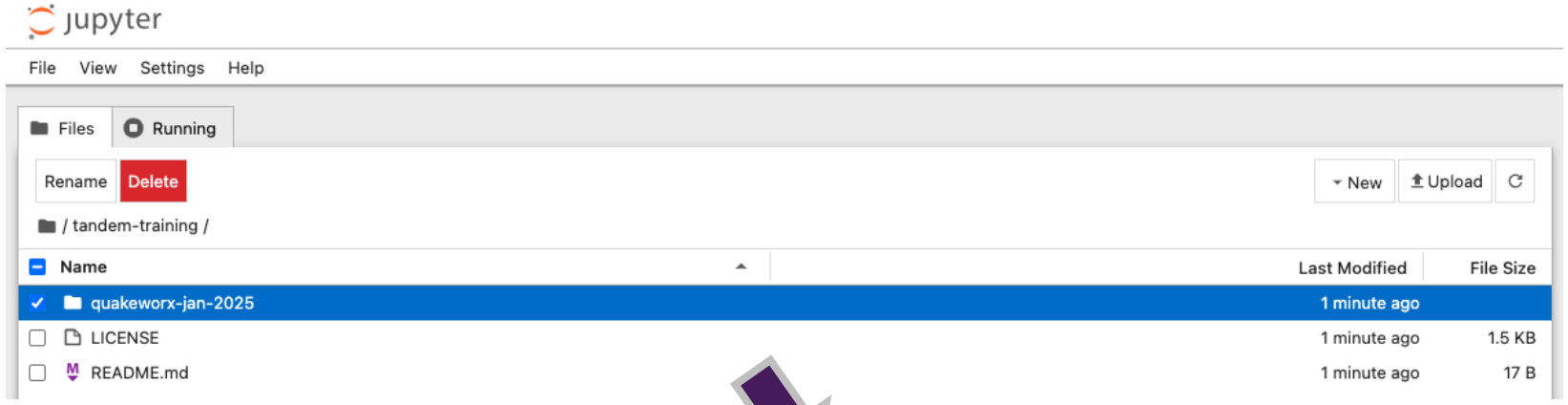
In the console, type (with the exclamation mark):

```
!git clone https://github.com/TEAR-ERC/tandem-training.git
```

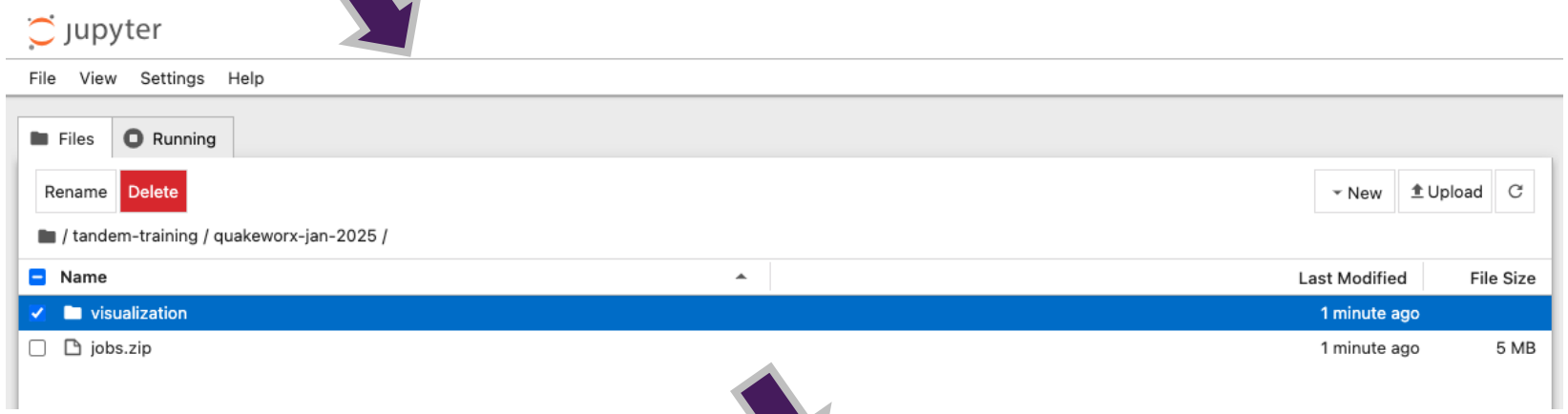
** **To run a command, use shift + enter**

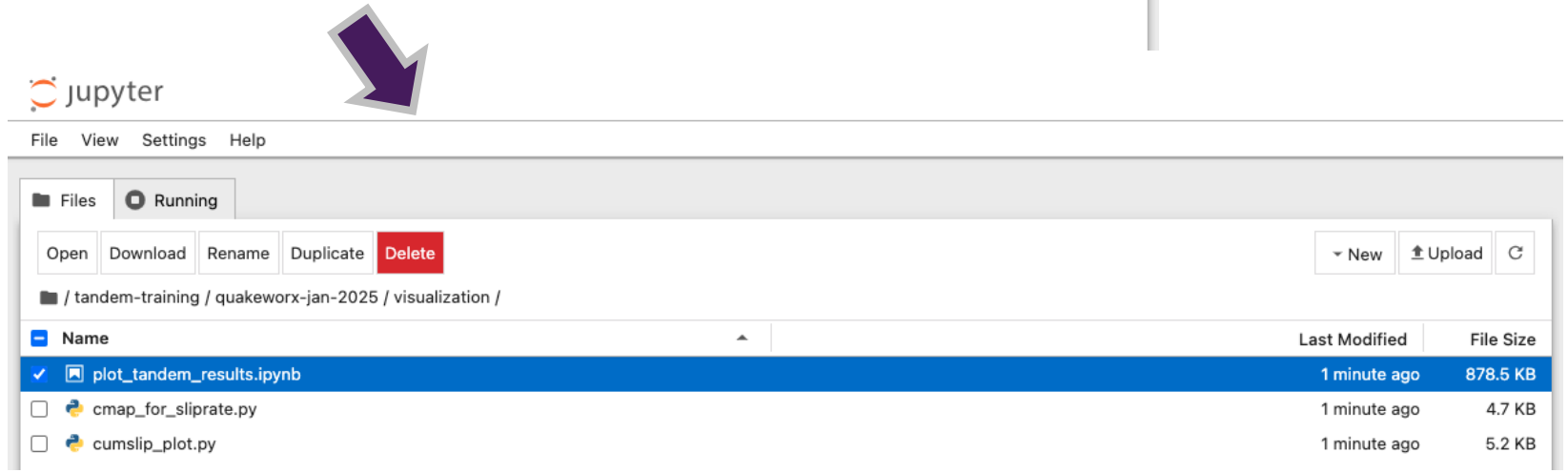


4. Open the Jupyter Notebook for plotting scripts



Under the 'tandem-training' get into…
quakeworx-jan-2025/visualization





… and open
plot_tandem_results.ipynb

Now, let's make some cool plots!

Tandem visualization and post-processing

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Did you successfully run Tandem? Now, we will learn about how to process Tandem outputs such that we can produce useful plots showing different aspects of rupture history.

Learning objectives

- Learn about output formats of Tandem
- Learn about how to visualize outputs at different time and depth
- Learn about the effects of changing material properties on the rupture characteristics

Contents