1. **Instructions for Accessing your Team’s Jupyter Notebook**

Each Team has its own Jupyter notebook. These are labelled t1..t42

The password on all notebooks is set to “hackathon” (without the quotation marks)



Users can change their password by first logging into their account and then visiting the url: hackathon.oilfieldinternational.eu/hub/auth/change-password

If a user forgets the password, admin can reset it.

1. **Maximum Number of Users at a time**

The server can accommodate five users simultaneously running full reservoir simulations, which each take about 15 minutes for 50 years.

Above five simultaneous users, the CPU of the server is maxed out and the system will be very slow for all users, and might crash. Therefore, we will put a schedule on Discord like the example below, for all teams to complete. Each user can have two x two hour sessions in the four day period. We will review whether there is a need for more days

There will usually be an administrator monitoring Discord over the four days between 8.00 and 18.00. if you have a problem, please tell us on Discord and the administrator will try to help.



Running Darts full simulation model

Each user’s file space has the necessary files and notebooks already loaded. You should open and edit only the one called “Main.ipynb”. If you amend the other files, your simulation will not work.

Double click on “Main” and a new instance of JupyterHub will open in your browser with the “Main” Jupyter notebook.

You will see a section for user, which you should amend to reflect your development plans/ data gathering:-

# user introduced wells

new\_well\_list = ['I11', 'P11', 'I12', 'P12', 'I13', 'P13', 'I14', 'P14']

new\_well\_x = [ 20, 20, 100, 100, 150, 150, 1, 1 ]

new\_well\_y = [ 20, 40, 100, 120, 150, 170, 1, 2 ]

Note that I14 and P14 will intentionally throw up a warning in the initialisation step since only 6 extra wells are allowed (18 wells in total).

To run the simulation, navigate to “cell, run all”, or “run”. Under the kernel menu item, you can choose between six kernels, all python3.9.

Take a note of any errors and notify the administrator if you can’t fix them.

The output can be written to either pkl or excel file in your folder, example includes time\_data.pkl and time\_data.xlsx. For a package run, make sure the name of files is alternating.