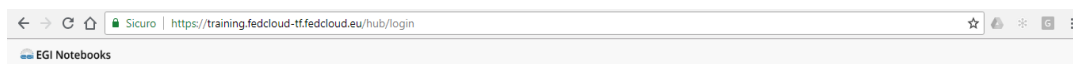# CODATA-RDA School of Research Data:
Instructions to access the EGI Jupyter Notebooks

This document provides the instructions to access the EGI hosted Jupyter Notebooks for data-intensive analysis on cloud resources, provided by the EGI Federation.

Access the EGI Jupyter Notebook

1. Enter the following URL in a browser: https://training.fedcloud-tf.fedcloud.eu

2. Start the authentication process by clicking on the "**Sign in with EGI Check-In**" button

3. Select the **Identity Provider** you belong to from the discovery page:
   a. Browse through the list of Identity Providers to find your Home Organisation;
   or, alternatively,
   b. Use one of your social accounts to login the server. Currently: *Google*, *Facebook* and *LinkedIn* and *ORCID* are supported. To register for an ORCID iD, use the registration form: https://orcid.org/register.
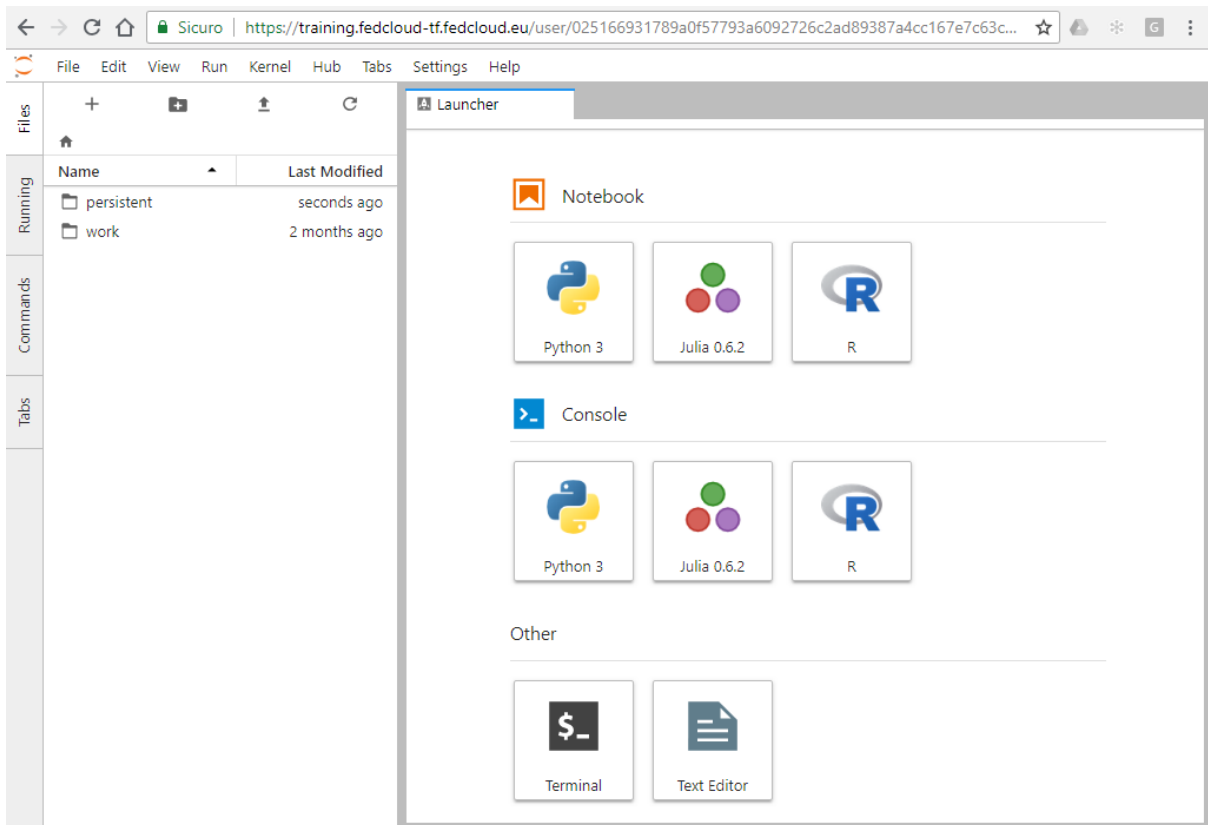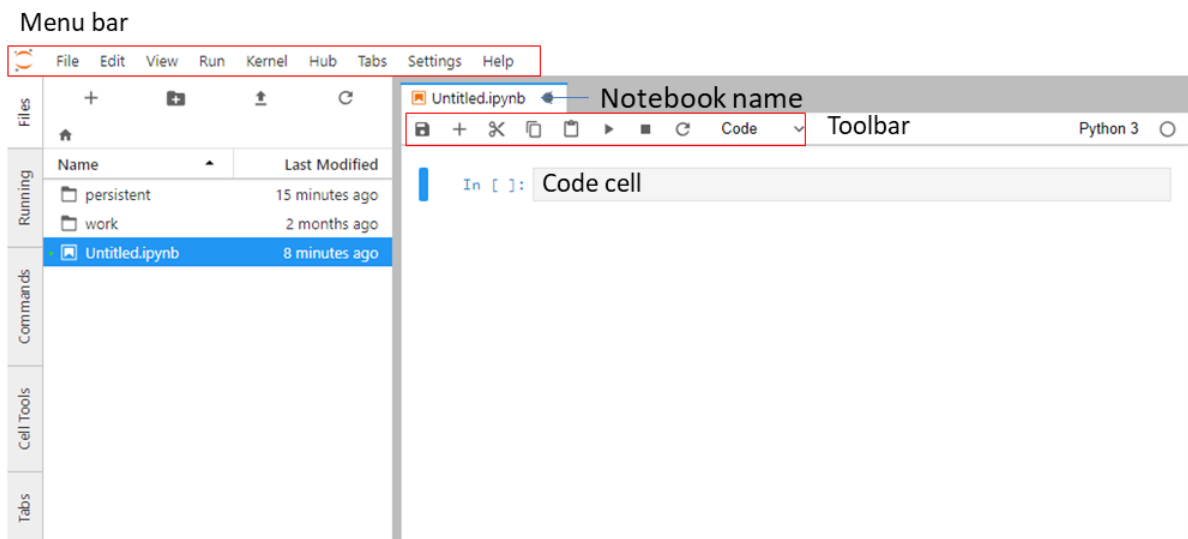
4. Following successful authentication, you will see the control panel:

5. Launch your Notebook, with the desired Kernel, and start working with it.

When you create a new notebook, you will be presented with the **notebook name**, a **menu bar**, a **tool bar** and an empty **code cell**.

Notebook name: The name displayed at the top of the page, next to the Jupyter logo, reflects the name of the .ipynb file.   Clicking on the notebook name brings up a dialog which allows you to rename it.   Thus, renaming a notebook from "Untitled" to "My first notebook" in the browser, renames the Untitled.ipynb file to My first notebook.ipynb.

Menu bar: The menu bar presents different options that may be used to manipulate the way the notebook functions.

Toolbar: The tool bar gives a quick way of performing the most-used operations within the notebook, by clicking on an icon.

Code cell: the default type of cell; read on for an explanation of cells.

Structure of a notebook document

The notebook consists of a sequence of cells. A cell is a multiline text input field, and its contents can be executed by using Shift-Enter, or by clicking either the "Play" button the toolbar, or Cell, Run in the menu bar. The execution behaviour of a cell is determined by the cell's type.

There are three types of cells: **cells**, **markdown**, and **raw cells**. Every cell starts off being a code cell, but its type can be changed by using a drop-down on the toolbar (which will be "Code", initially).

Code cells

A code cell allows you to edit and write new code, with full syntax highlighting and tab completion. The programming language you use depends on the kernel.

When a code cell is executed, its content is sent to the kernel associated with the notebook. The results that are returned from this computation are then displayed in the notebook as the cell's output. The output is not limited to text, with many other possible forms of output are also possible, including figures and HTML tables.

Markdown cells

You can document the computational process in a literate way, alternating descriptive text with code, using rich text. This is accomplished by marking up text with the Markdown language. The corresponding cells are called *Markdown cells*. The Markdown language provides a simple way to perform this text markup, that is, to specify which parts of the text should be emphasized (italics), bold, form lists, etc.

If you want to provide structure for your document, you can use markdown headings. Markdown headings consist of 1 to 6 hash # signs # followed by a space and the title of your section. The markdown heading will be converted to a clickable link for a section of the notebook. It is also used as a hint when exporting to other document formats, like PDF.

When a Markdown cell is executed, the Markdown code is converted into the corresponding formatted rich text. Markdown allows arbitrary HTML code for formatting.

Raw cells

Raw cells provide a place in which you can write output directly. Raw cells are not evaluated by the notebook.

Keyboard shortcuts

All actions in the notebook can be performed with the mouse, but keyboard shortcuts are also available for the most common ones.

The essential shortcuts to remember are the following:

- **Shift-Enter: run cell**. Execute the current cell, show any output, and jump to the next cell below. If Shift-Enter is invoked on the last cell, it makes a new cell below. This is equivalent to clicking the Cell, Run menu item, or the Play button in the toolbar.
- **Esc: Command mode**. In command mode, you can navigate around the notebook using keyboard shortcuts.
- **Enter: Edit mode**. In edit mode, you can edit text in cells.

Contacts:

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