Jupyter on the HPC Cluster

Project Jupyter is a project with goals to develop open-source software, open standards, and services for interactive computing across multiple programming languages.

Jupyter Notebooks are interactive web tools known as a computational notebooks, which researchers can use to combine software code, explanatory text and multimedia resources, and computational output, in a single document. Jupyter has emerged as a de facto standard for data scientists and other scientific domains.

Project Jupyter has developed and supported the interactive computing products **Jupyter Notebook, JupyterLab and JupyterHub**.

Jupyter Notebook: The Classic Notebook Interface

The Jupyter Notebook is the original web application for creating and sharing computational documents. It offers a simple, streamlined, document-centric experience.

It is a server-client application that allows editing and running notebook documents via a web browser. The Jupyter Notebook can be executed on a local desktop requiring no internet access or can be installed on a remote server and accessed through the internet.

JupyterLab: A Next-Generation Notebook Interface

JupyterLab is the latest web-based interactive development environment for notebooks, code, and data. Its flexible interface allows users to configure and arrange workflows in data science, scientific computing, computational journalism, and machine learning.

JupyterHub

JupyterHub brings the power of notebooks to groups of users. It gives users access to computational environments and resources without burdening the users with installation and maintenance tasks. Users - including students, researchers, and data scientists - can get their work done in their own workspaces on shared resources which can be managed efficiently by system administrators.

JupyterHub runs in the cloud or on your own hardware, and makes it possible to serve a pre-configured data science environment to any user in the world. It is customizable and scalable, and is suitable for small and large teams, academic courses, and large-scale infrastructure.