VRE On-boarding

VRE bi-weekly meetings

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Virtual Research Environment

Common and collaborative Open Source platform/environment:
- To access all the digital content related with a scientific result/project

VRE main building block: **DLaaS**.
- A Jupyter environment that connects the ESCAPE Data Lake with a computing facility.

Created by WP2 to:
- Provide **easier interaction** with the RUCIO instance
- Connect DL with **compute** resources + **storage** resources
- Start **collecting** ESCAPE services under a JupyterHub (server) environment

Services and accounts around VRE

You will need to request the following IT ESCAPE services: https://indico.in2p3.fr/event/19138/

- Rocket chat: https://chat.projectescape.eu
- ESCAPE Indico: https://indico.in2p3.fr/category/841/
- ESCAPE IAM: https://iam-escape.cloud.cnaf.infn.it/login

Join the following email list: vre-taskforce@cern.ch

- VRE Scientific bi-weekly meeting, Tuesdays @ 14h00

VRE GitLab instance: https://gitlab.in2p3.fr/escape2020/virtual-environment

- Need to request a new account or sign in with EduGAIN: https://gitlab.in2p3.fr/users/sign_in
- Import existing project or create new ones

VRE data - ESCAPE Data Lake

ESCAPE Data Lake uses RUCIO: distributed stored infrastructure.

- DLaaS connected to the ESCAPE RUCIO instance.
- Tutorial on how to upload data to the DL (and ask for all the certificates): https://datalake-rucio.docs.cern.ch/

Once data is in the the DL, it can be "included" into a Jupyter Notebook (for example), without the need of downloading this data.

VRE software - ESCAPE OSSR

For the moment, not an "easy" way of bringing code/software to the platform

- A Zenodo (OSSR) - JupyterLab extension is under construction.
- You would need to "bring" code manually:
  - git clone..., conda install ..., pip install ...

VRE (DLaaS) environments

Built in the VRE GitLab instance: https://gitlab.in2p3.fr/escape2020/virtual-environment/docker-images

- Later spawned by the DLaaS to provide an specific development environment
    - Loads your "conda" or "python/myenv" environment with all your software specifications
- Docker Base layer: Jupyter-Rucio plugin.

Most probable this will be evolve/change in the future.

VRE entry point webpage

https://escape2020.pages.in2p3.fr/virtual-environment/home/

- Public website to show/publicitate the VRE idea.
- Place where all the digital content of a project should be linked/included.
- Each SP should have one page ➜ You should start adding information to this repo: https://gitlab.in2p3.fr/escape2020/virtual-environment/home
  - Use the following template to get inspired or based on: ATLAS open data https://escape2020.pages.in2p3.fr/virtual-environment/home/tsp-higgs/

VRE limitations

Current VRE (DLaaS) platform is a VM @ CERN. ;

- Computing resources are limited (to be evolved with EOSC Future).
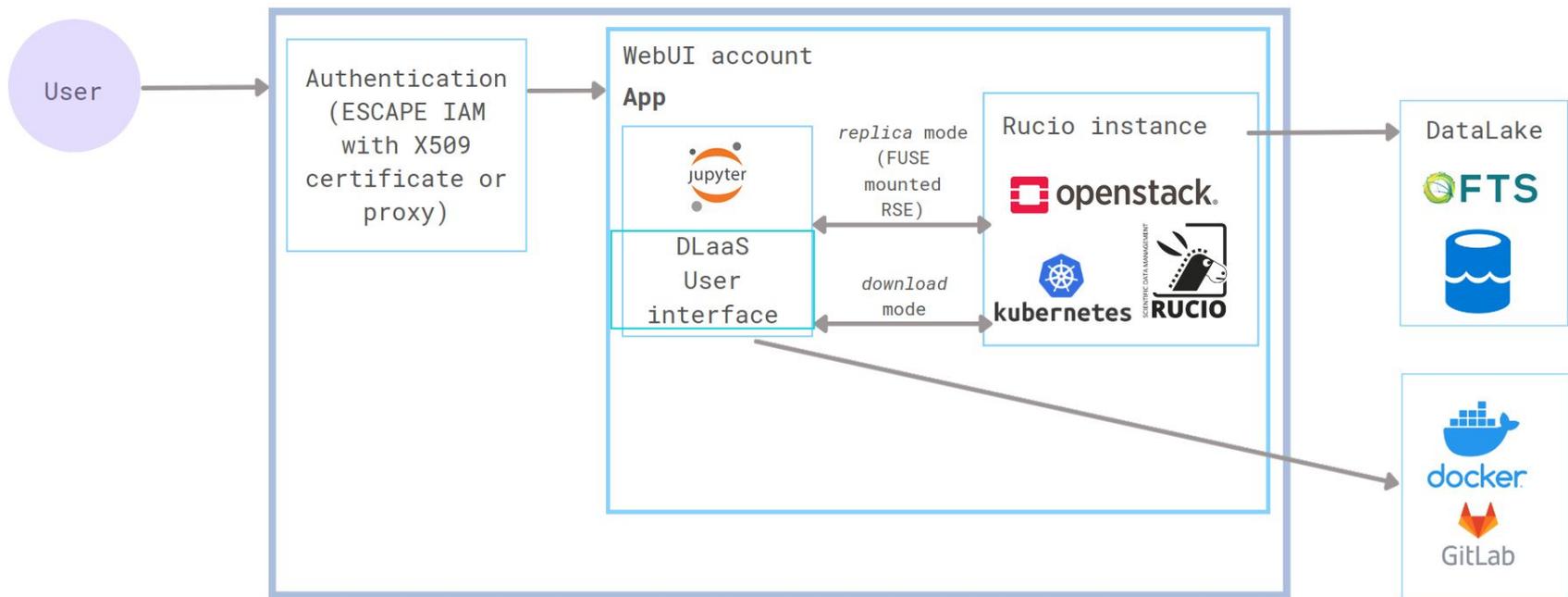
VRE **OK** for:

- Show power of a collaborative platform and the connection of ESCAPE services
- (re)Run "light"/small scientific analyses that do not imply large amounts of computing resources.
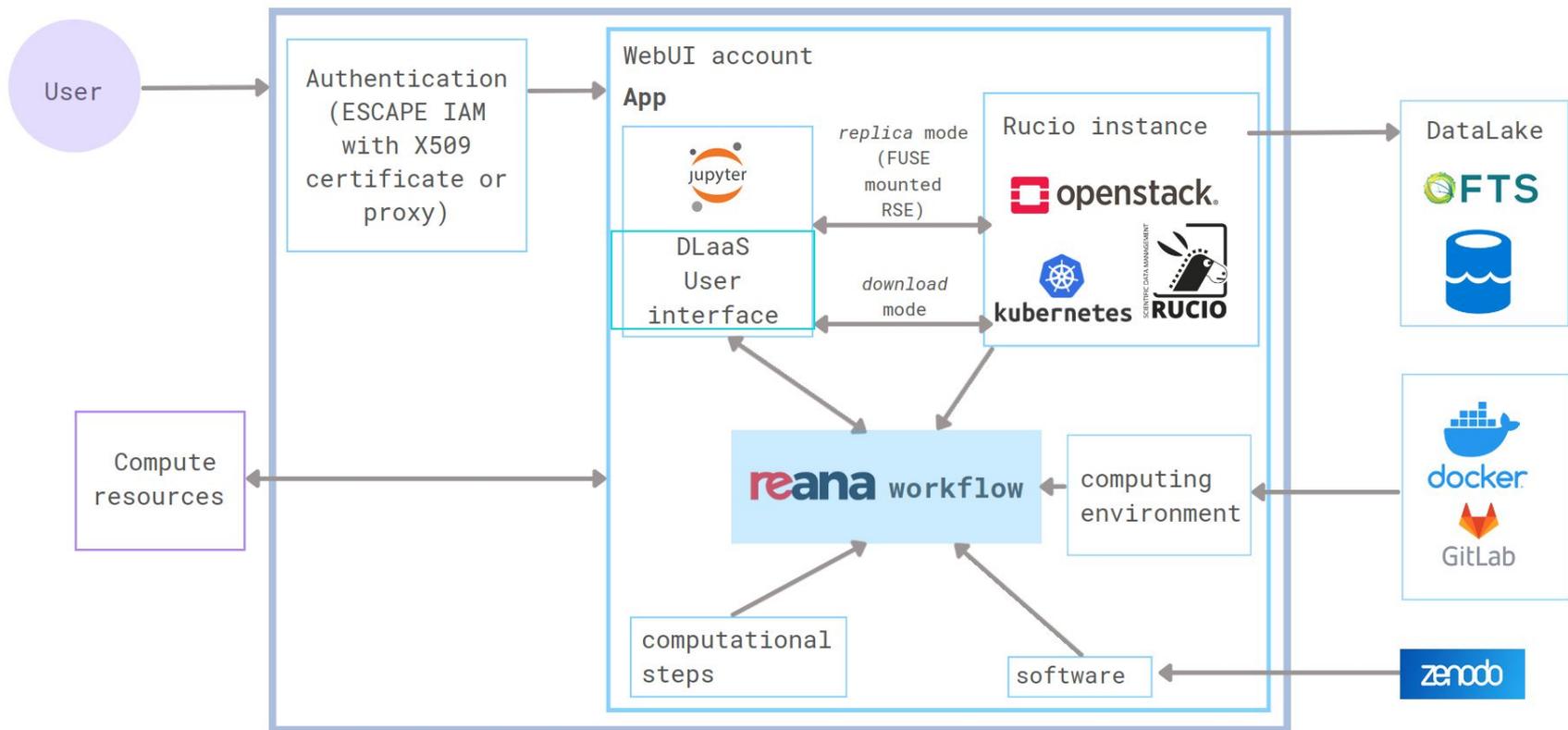
VRE **NOT OK** for:

- (re)Run large/heavy pipelines/workflows. ➔ Future connection with other computing facilities + **REANA**

VRE Current status (DLaaS)

VRE Goal

Virtual Research Environment (VRE)

A platform to collect all ESCAPE services and facilitate EOSC-Future project development