EGI Federation response to ENVRI-FAIR requirements and future collaborations

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TLP: WHITE Public
1. Cloud-based hosting and capacity scaling up of ENVRI-FAIR services

- Cloud compute and storage for hosting of data analytics and other services integrating access data from different RIs
- Scale up in-house capacity of RI data analytics with national facilities and serve researchers on a worldwide scale
- ENVRI-hub use case
Scaling up RI data and service infrastructures in EOSC

ENVRI COMMUNITY RESEARCH INFRASTRUCTURES

ENVRUI-HUB

ENVRUI KNOWLEDGE BASE

ENVRUI CATALOGUE

ENVRUI USE CASES

ENVRI Dedicated Data Exploitation Platform

Thematic VREs

Datasets cached on compute resources

User support

AAI modules

AI modules

JupyterHub modules

Compute resources brokered from national and international contributors

DATA STAGING

METADATA MAPPING

Web UI/API

Life

Air

Land

Water
2. Managed Jupyter Notebooks

Customized Jupyter Notebooks with integrated discovery and access to

- Federated research data
- Integrated workflow management to process on HTC, HPC and Cloud resources with the EGI Federation
- Integrated and customisable output data deposition services

https://www.egi.eu/service/notebooks/
Accessing data from Notebooks

(Small) data in your user space
- Fetch data from publicly accessible repositories using code in notebooks or well-known tools as Rclone
- User credentials for EGI Check-in protected repositories configured in the environment

(Big) data integrations:
- **EGI DataHub** spaces available transparently as a local folder (available for all users)
- **EUDAT B2DROP** also available as local folder. Can be activated by users
- **D4Science Workspaces** for notebooks integrated into D4Science VREs
- More integration options can be supported
Elements for sharing/reproducible research

1. Perform data analysis and visualisation

2. Publish notebook and Generate DOI

3. Cite DOI in publication

4. Discover DOI

5. Resolve DOI to Notebook

6. Insert DOI

Download notebook (single file)

GitHub

Your repository

Example

Journal paper

DOI: 10.5281/zenodo.3242074

Fellow researchers
3. Coordinated technical support involving different expert teams

- Integrated thematic and horizontal competencies for complex digital needs
- One contact point for exploitation of thematic research data, software including horizontal services from EOSC
EGI for Research Infrastructures
Solve your Digital Challenges with our Advanced Computing Solutions

https://www.egi.eu/publication/egi-for-research-infrastructures/