ARC and the EuroScienceGateway project

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NorduGrid ARC for distributed computing

NorduGrid ARC is widely used today in the Worldwide LHC Computing Grid (**WLCG**) as one of the recommended middlewares connecting the Grid sites.

ARC, Galaxy and DIRAC in ESG

ARC is a part of the EU Horizon Europe EuroScienceGateway (**ESG**) project 2022-2025.

In ESG, the user-friendly scientific job deployment portal **Galaxy**, already used by many different scientific communities, will be interfaced with **ARC end-points**.
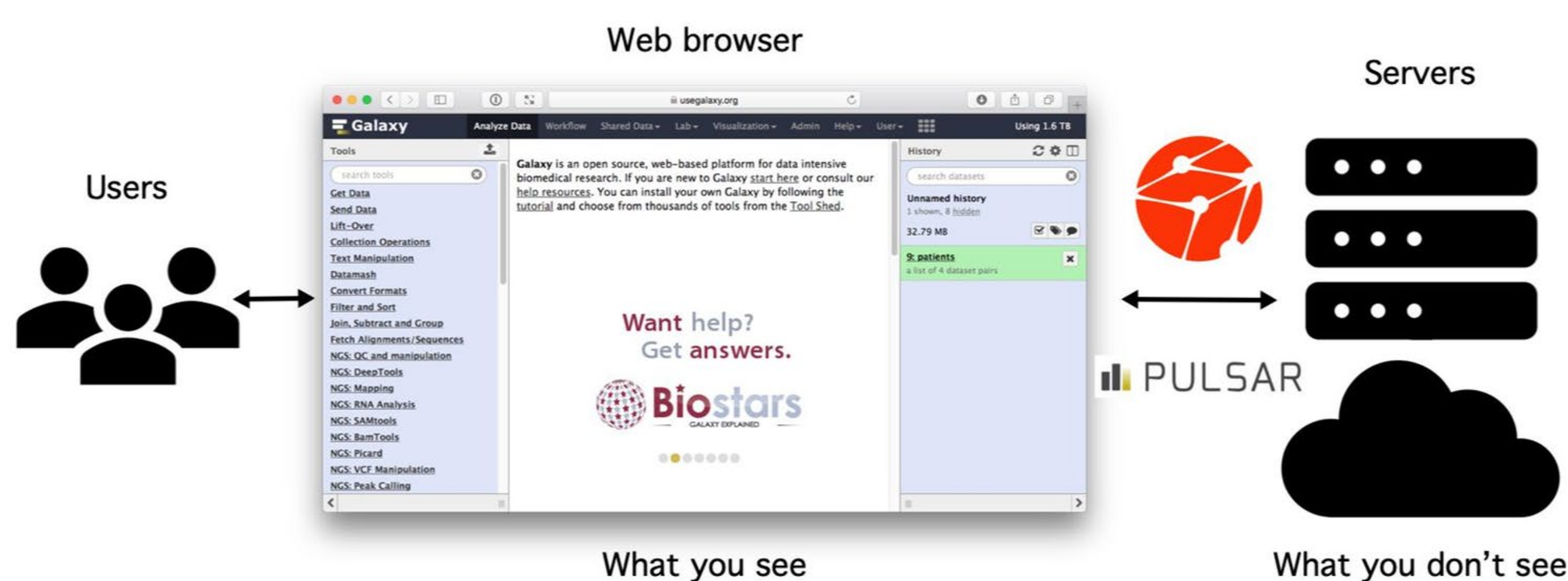
ARC will be coupled to **Galaxy** by **DIRAC**, creating a **multi-community distributed computing platform** for seamless submission of workloads to remote Cloud and **HPC centers** from **central Galaxy servers**.
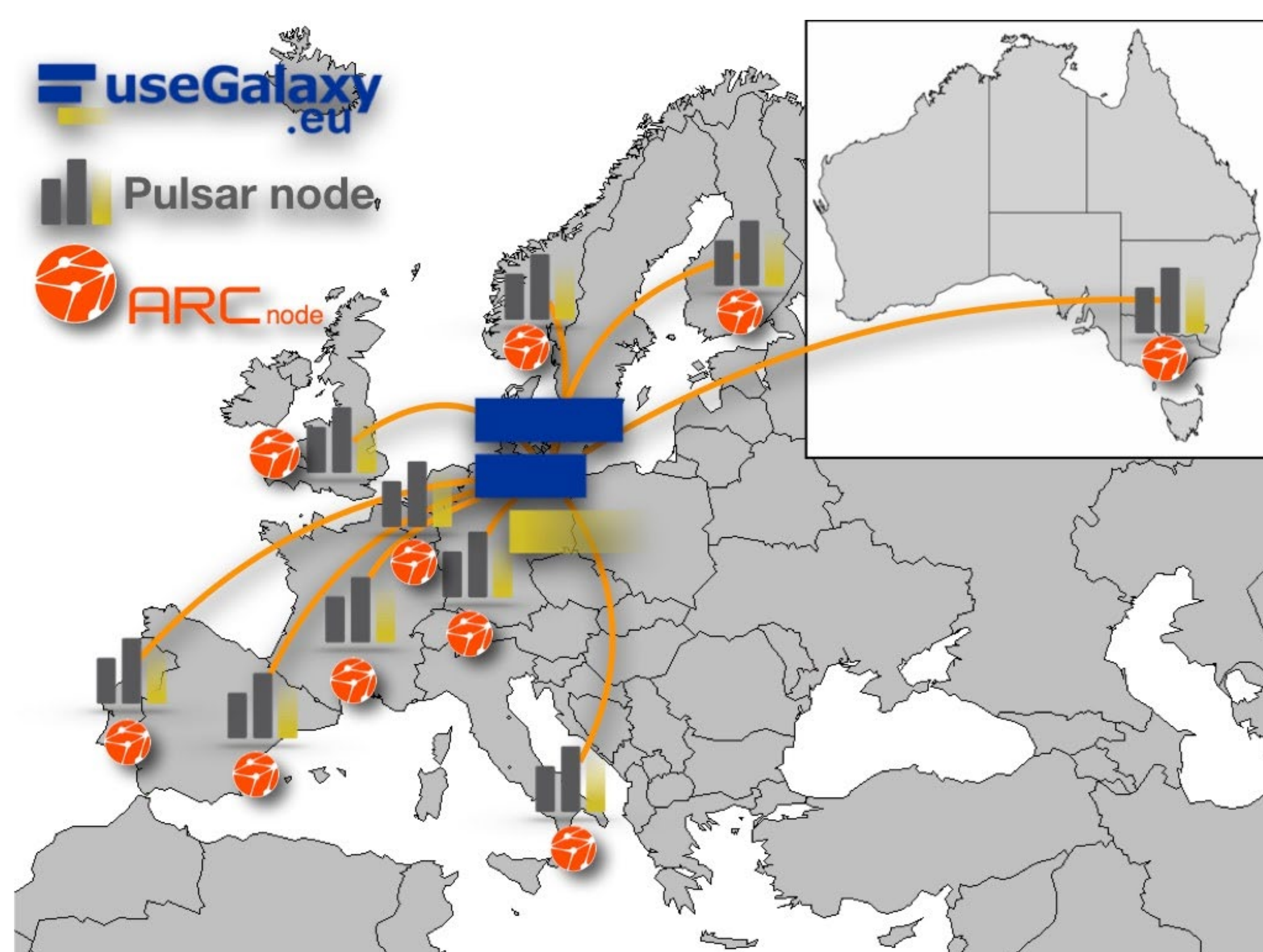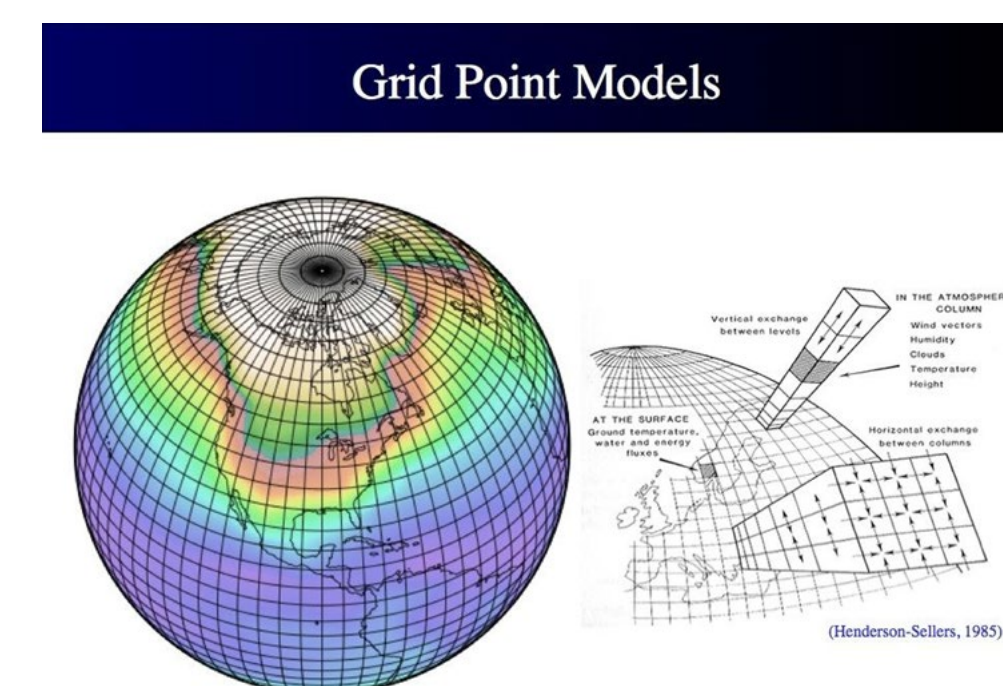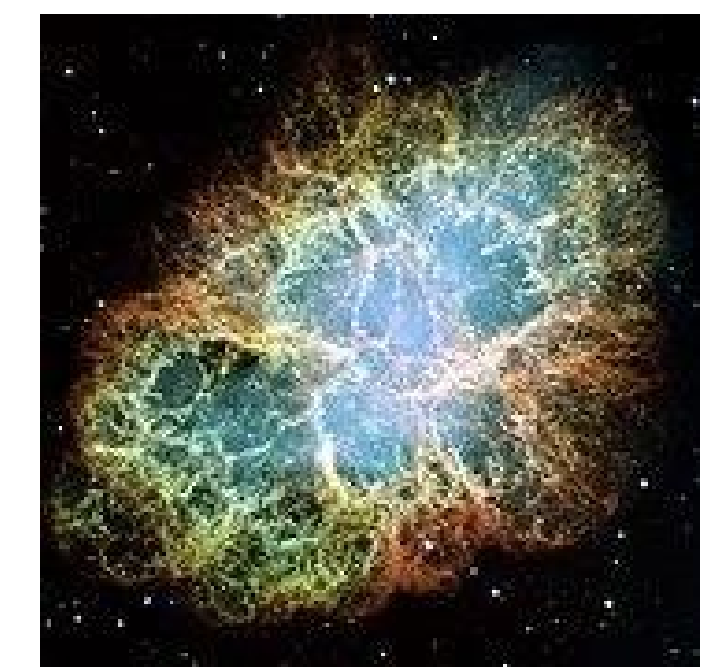

New opportunities with Galaxy and ESG

New communities: ARC aims to reach communities outside of HEP in the fields of **Bioinformatics, Astrophysics** and **Climate Research**.

For HEP: a **new user-friendly computing platform for HEP-related education and research.**

Ref: https://serc.carleton.edu/eet/envisioningclimatechange/part_2.html

Added benefit

The added benefit of including ARC into the already existing Galaxy – Pulsar network:

- ARC handles **data staging from remote sources**
- ARC is designed to **meet requirements of HPC systems**

ARC can be installed in **addition or instead of** a **Galaxy Pulsar node** for remote submission of Galaxy jobs.

A possible deployment scenario depicted here with **new remote ARC nodes** in addition to existing remote Pulsar nodes.