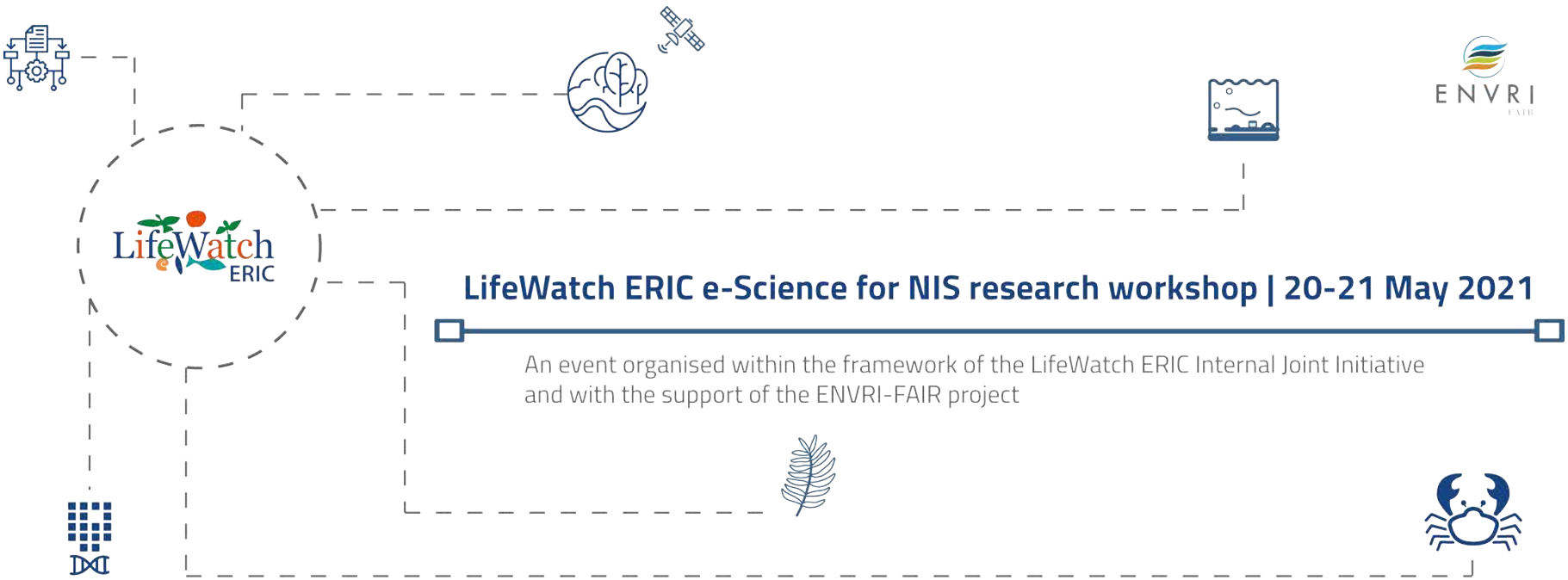


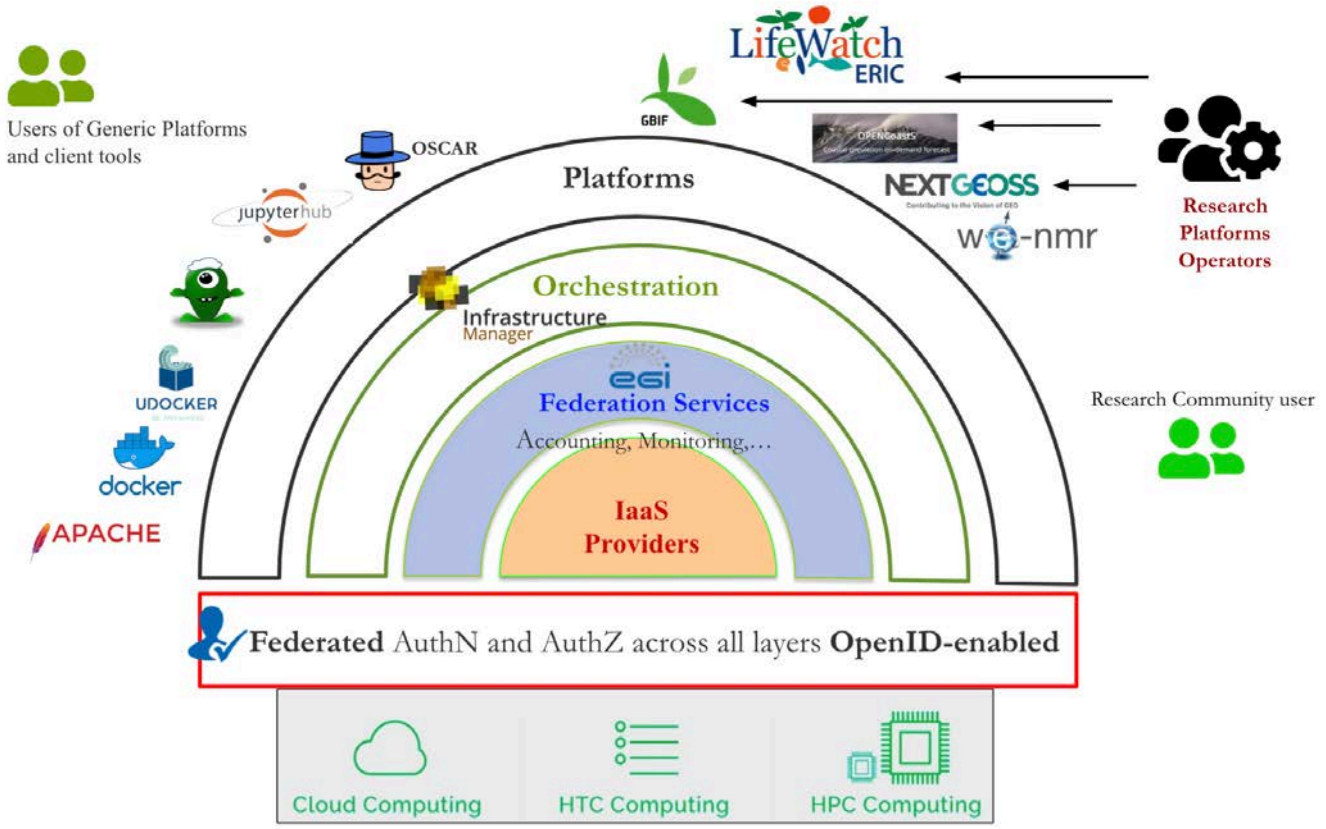
Integration of Thematic Services in EOSC

EOSC SYNERGY

Isabel Campos / CSIC

From the Platform to the Infrastructure layers

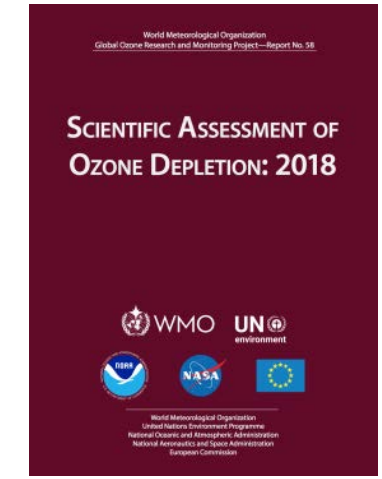
Software services to support the integration: PaaS → IaaS



Ozone assesment as a service in EOSC

For the compilation of the assessment reports large amounts of data coming from climate models simulations need to be analyzed: (climate model projections, time series, detection of trends in Ozone density,...)

→ Updated every 4 years since 1985



There is need for simplification & flexibilization

→ from data access, to data exploitation

→ better tools needed to generate & reproduce analysis

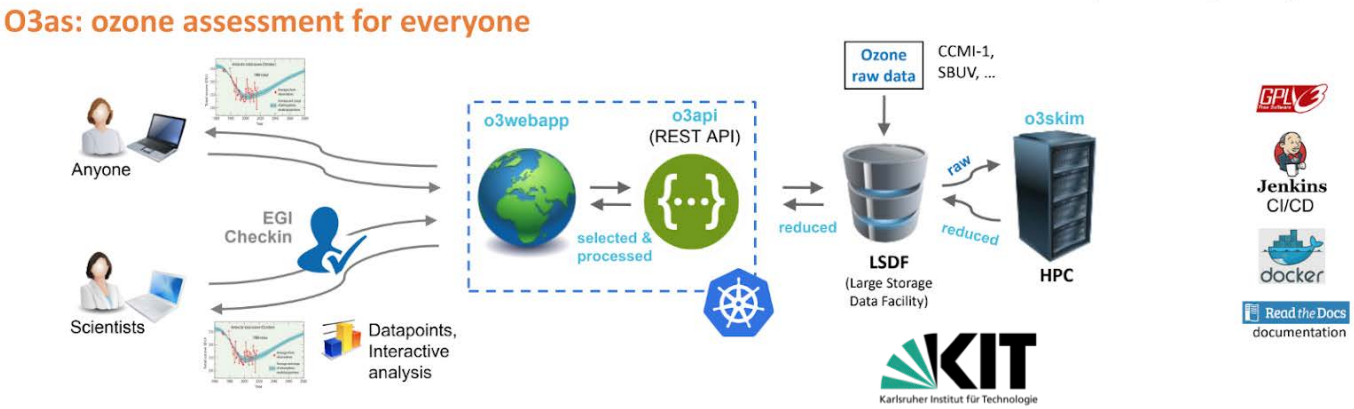
→ Publish high-level data to citizens

Re-engineering the architecture of the service using EOSC Core services

EOSC Services integration

- OpenID Connect provider to access certain functionalities: **EGI Check-In**
- **Infrastructure Manager**: To deploy service components on EOSC cloud resources.
- EOSC cloud resources: to offer O3AS service for users in a timely manner: **EGI Federated Cloud**

- **UDOCKER**: to run the containers for data skimming in HPC environments
- **OpenID Connect-Agent**: To mount data servers using WebDAV - HTTP authentication on the HPC side



Infrastructure Manager

UDOCKER

IBERGRID

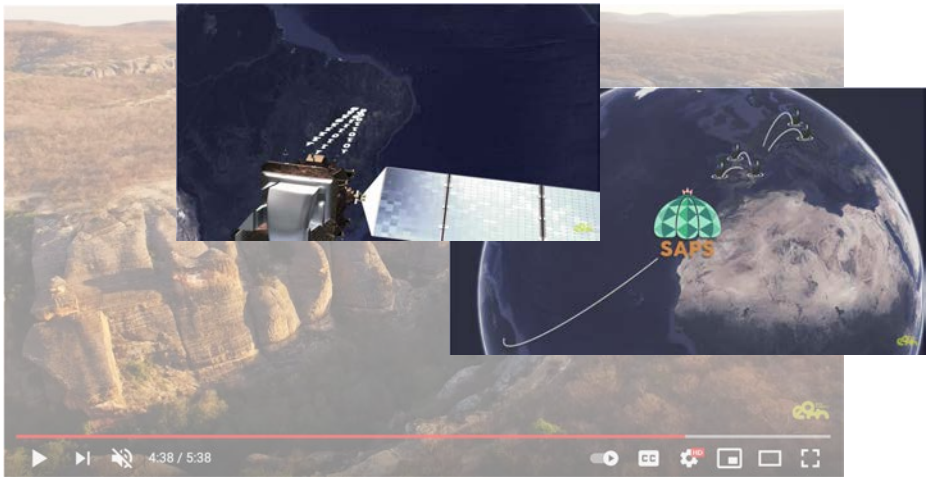
https://www.ibergrid.eu/ibergrid-eosc-activities

EGI

Invasive Species: SAPS

SAPS (SEB Automated Processing Service)

Estimates the Evotranspiration and other data that can applied to study the evolution of the forest, also the conditions under which Invasive Species may proliferate.



https://www.youtube.com/watch?v=RVCxjhpsIVs

https://www.youtube.com/watch?v=mM6xJJRS3Cs

Invasive Species: SAPS

- The user interacts with the system through the Dashboard:
  - web-based GUI that serves as a front-end to the Submission Dispatcher component.
- The user can specify the region, the period to be processed, as well as the particular Energy Balance algorithm.
  - **Three-stage workflow**: input download, input pre-processing, and algorithm execution.
- The Dashboard creates the processing requests and the Submission Dispatcher sends it to the **EGI Federated Cloud** for processing (OpenStack based in general)

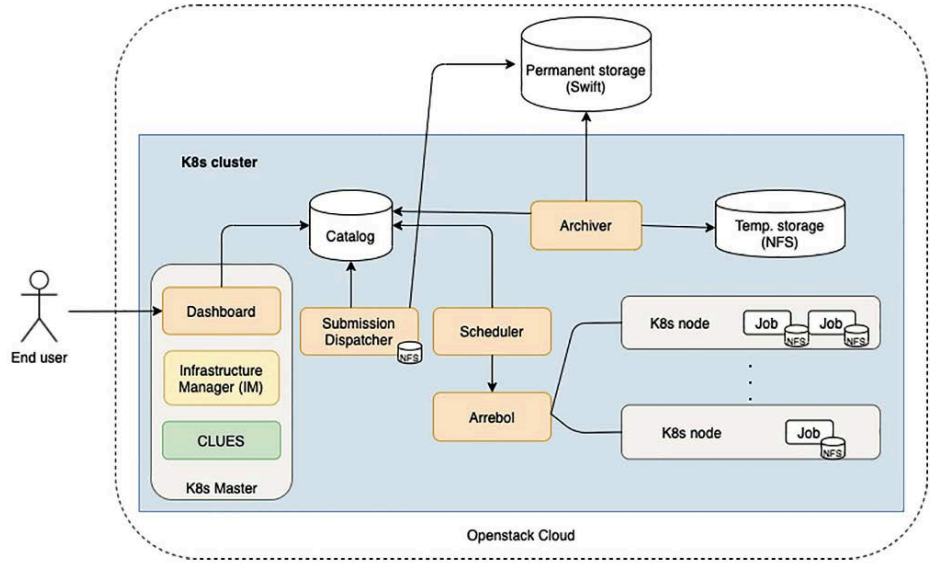


Figure 11 - Architecture of SAPS deployed on a Kubernetes (K8s) cluster by EC3

EGI CheckIn

Infrastructure Manager

IBERGRID

Thematic Services in EOSC

Are there NIS Services that could be integrated using similar strategies ?

Use case engineering: probably the most interesting integration activity ☺

O3AS, SAPS, and more, available at:

https://www.eosc-synergy.eu/thematic-services-brochure/

Get in touch if you see cooperation opportunities

follow us in twitter for updates ☺
@EOSC_synergy