Building and Operating a service based on EOEPCA (EOEPCA Operator)

An example of utilising EOEPCA architecture and software,
integrating building blocks and web portal into an operational platform

ESA Phi-Week Session *"EOEPCA: Your Interoperable Exploitation Platform out-of-the-Box"*

15 October 2021

Olivier LAMBORELLE – Service Management
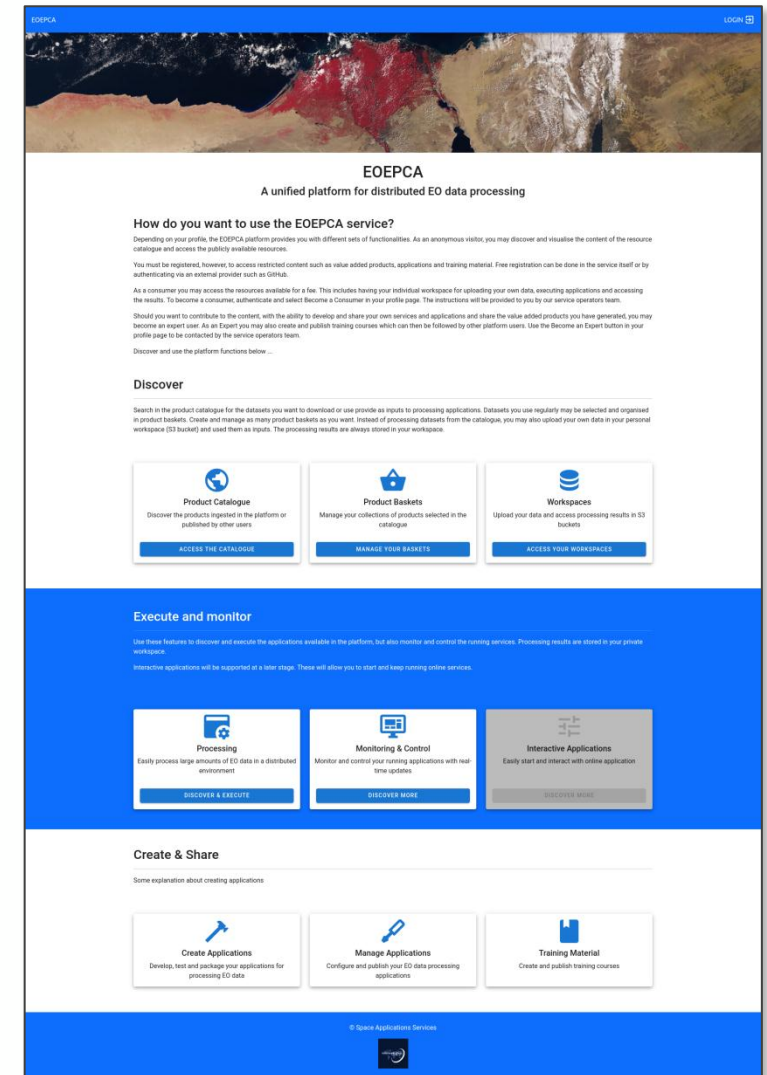Bernard VALENTIN – DevOps Lead
Leslie GALE – Community Management

- Main Objectives

- Service Infrastructure

- First Glance at the Service Web Portal

- Applications on-boarding

- Next Steps

We are going to

- build an EOEPCA-based service named **CROUD** to allow collaborative, **crowd** supported, **cloud** based development of EO applications

  - New service developed from scratch, gives access to features implemented in the building blocks, but not only

  - Particular focus on the creation of an advanced delivery mechanism, including via customisable dashboards

  - Evolve at the pace new releases of the EOEPCA building blocks are provided

  - Through this service we want to lower barriers to get going and support using other services in the federated ecosystem of platforms.

- evaluate how EOEPCA can be used to create the next generation federated platforms

- provide feedback to the EOEPCA building blocks developers on their (re)usability

- Three environments
    1. Development and test environment using resources in SpaceApps' infrastructure
    2. Staging environment
    3. Production environment
- Staging and Production located in CreoDIAS (obtained through the NoR), to increase the chances of a smooth deployment of the EOEPCA building blocks
- Building blocks hard-dependencies require effort for adapting them to other environments (local infra, other DIAS, other clouds, …):
    - Kubernetes
    - OpenStack
    - CreoDIAS S3

- Web-based centralised access to all platform features

- Users register for free

- Different user roles

  - *Visitors* discover the existing resources (data products, applications, training courses) and access the publicly available ones

  - *Consumers* discover, access and use available resources, possibly for a fee (pay-per-use model)

  - *Contributors* are experts who provide to the platform new applications, value added products and training material

- Data delivery via dedicated and customisable dashboards

spaceapplications
S E R V I C E S

Product Catalogue

Online Documentation

Workspace / S3 buckets Web client

Applications Monitoring

- Initial focus will be on on-boarding applications supporting the analysis of the *impact on health resulting from climate change and urbanisation in coastal regions*, the most populated regions of the world.

- We will populate the platform with relevant data sources, available applications and references.

- As part of the Community Management activities we will present the service platform and ask user communities to propose ideas, experts to develop and share their applications.

- An open library of tools and applications will be available to facilitate the development of new applications.

- Contributed applications and value added products can be proposed for free or according to a pay-per-use model.

- Contributors will be rewarded with platform credits when their contributions are used.

- Integrate EOEPCA building blocks v1.0 and release v1.0 of the service

- Continue the implementation of the portal and the features not present in the building blocks

- Contact domain experts and user communities

- Support the implementation, testing and publication of applications and value added products

Please contact us should you want to know more or like to be involved …

Thank you

Olivier LAMBORELLE – Service Management – olivier.lamborelle@spaceapplications.com
Bernard VALENTIN – DevOps Lead – bernard.valentin@spaceapplications.com
Leslie GALE – Community Management – leslie.gale@spaceapplications.com