



Cloud Compute: Introduction

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TLP: WHITE Public

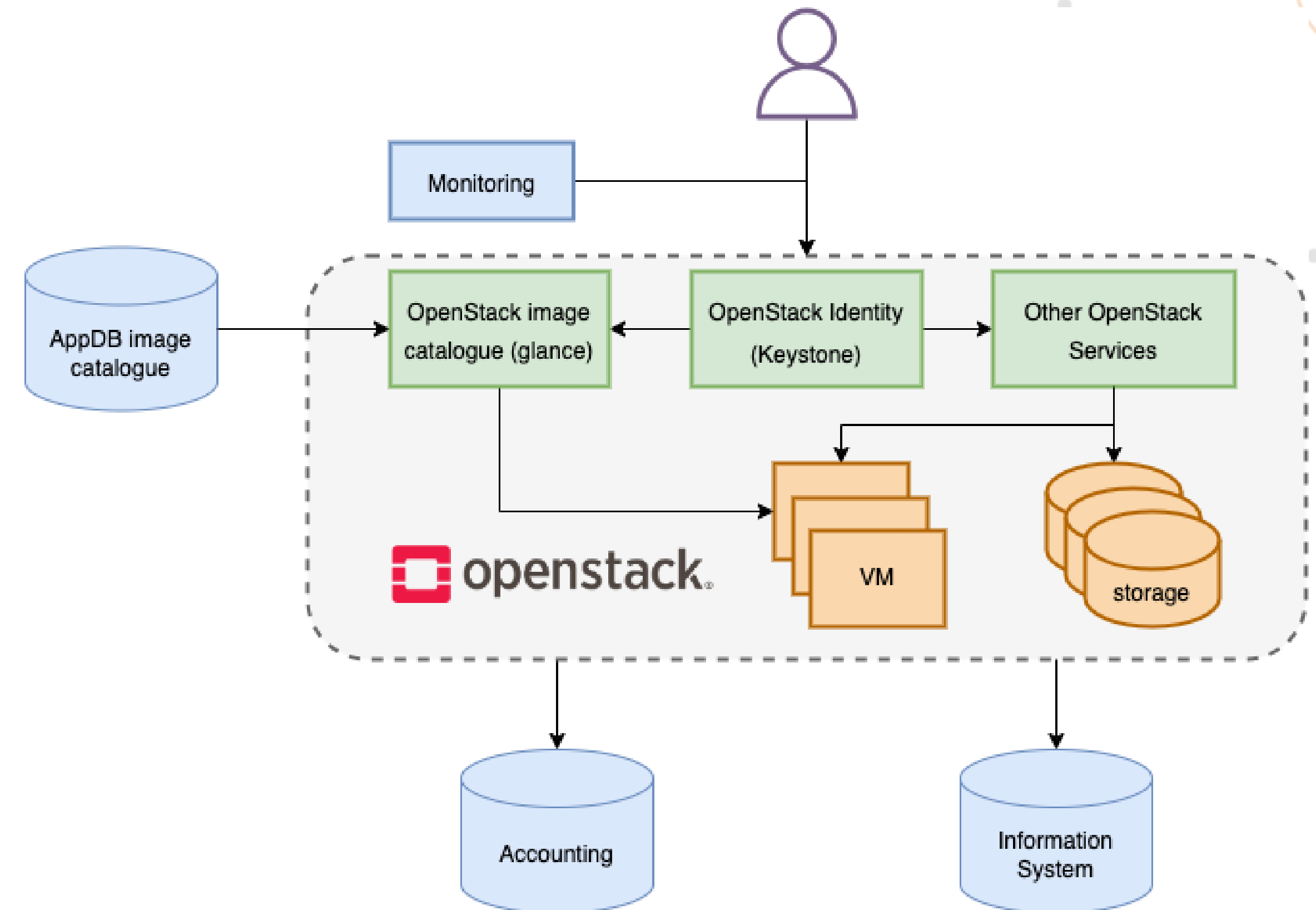
2024-10-01

EGI Conference 2024



A distributed Infrastructure as a Service (IaaS) powered by federated providers

- **Run workloads as VMs** – flexible and customisable configurations, including GPUs
- Common **VM image catalogue** – powered by AppDB
- **Dynamic DNS** for assignment of memorable hostnames
- **fecloudclient** for interaction via CLI and automation



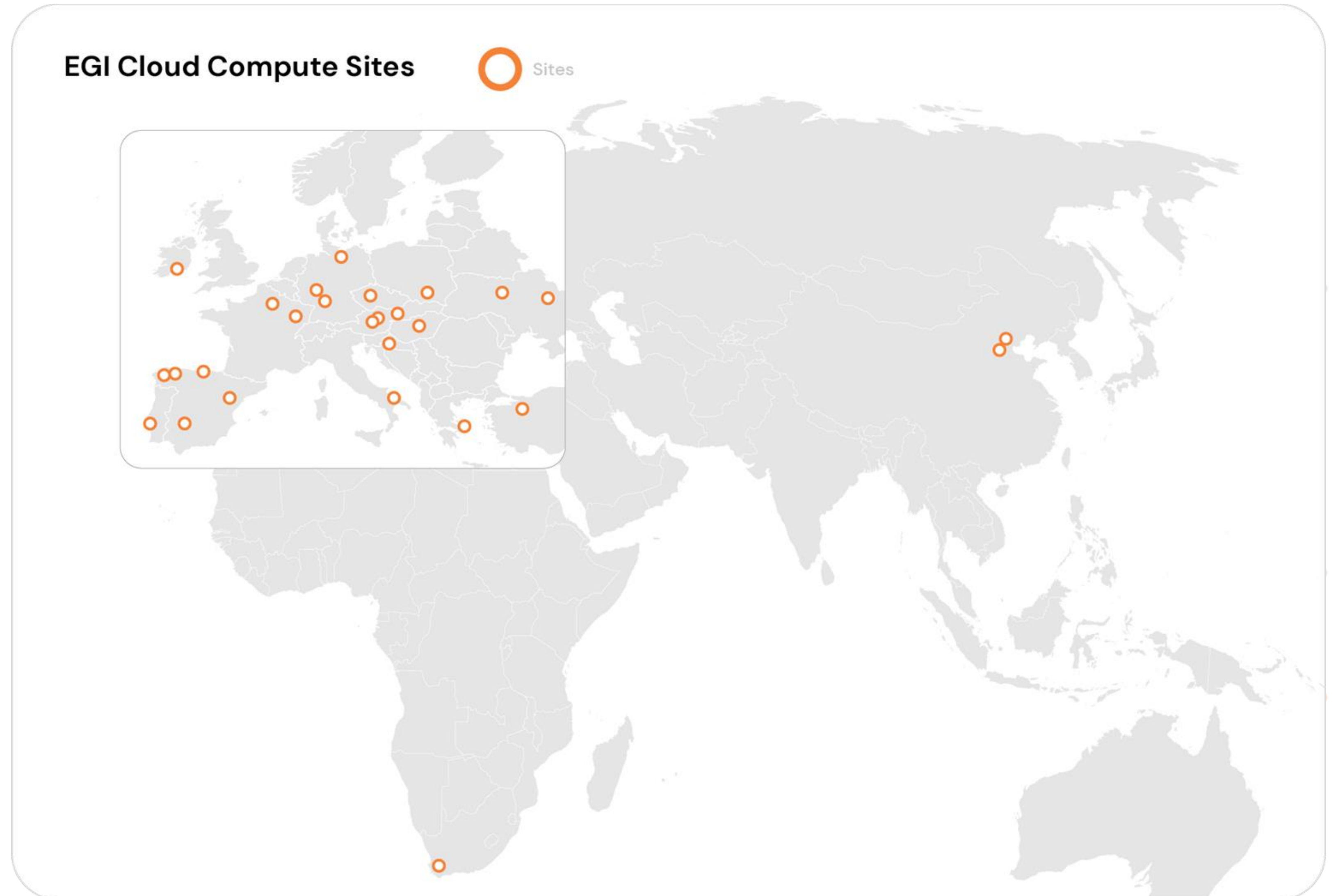
26 OpenStack based sites (EU + beyond)

42.7M CPU hours (Jan – Sep 2024) on +600K VMs supporting 86 VOs

Accounting portal:

<https://accounting.egi.eu/cloud/>

Learn about some of our providers next!



Join us Thursday 15:15 - 16:30 “Open Meeting: EGI Federated Cloud community”

- **Lightweight technical integration**

- AAI & Accounting configured at every site
- Rest of components (monitoring, information discovery, image synchronization) centrally operated by EGI

- **AppDB Cloud Marketplace evolution**

- Transition from custom development to Harbor-based
- Native support for containers (OCI), capable to support VM images
- Information system moving from LDAP GLUE2.1 to a JSON-based schema

- **Image building**

- Completely automated process for creating images

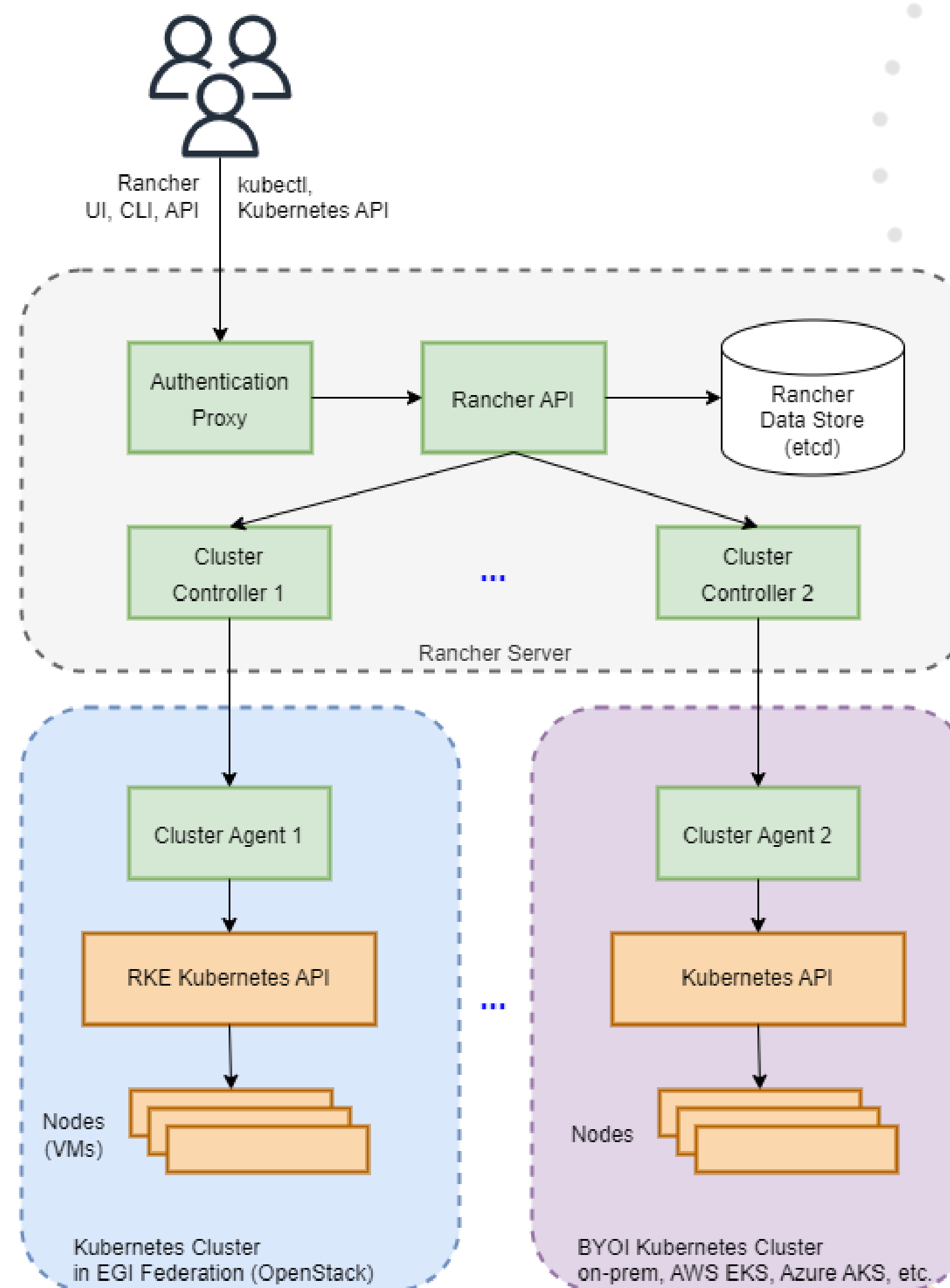
- **Monitoring**

- Major refactoring for EL9 using OpenStack SDKs with automated artifact build
- VO-level VM monitoring tool for VO managers

Managed service to run containerized research workloads

- **No need to provision, configure, or scale clusters of VMs**
- Container orchestration relies on **Rancher**
- Common **container image registry** based on Harbor
- **Automatic DNS** for assignment of memorable hostnames
- **Bring your own infrastructure (BYOI)** allows users to add their own Kubernetes clusters and manage them centrally

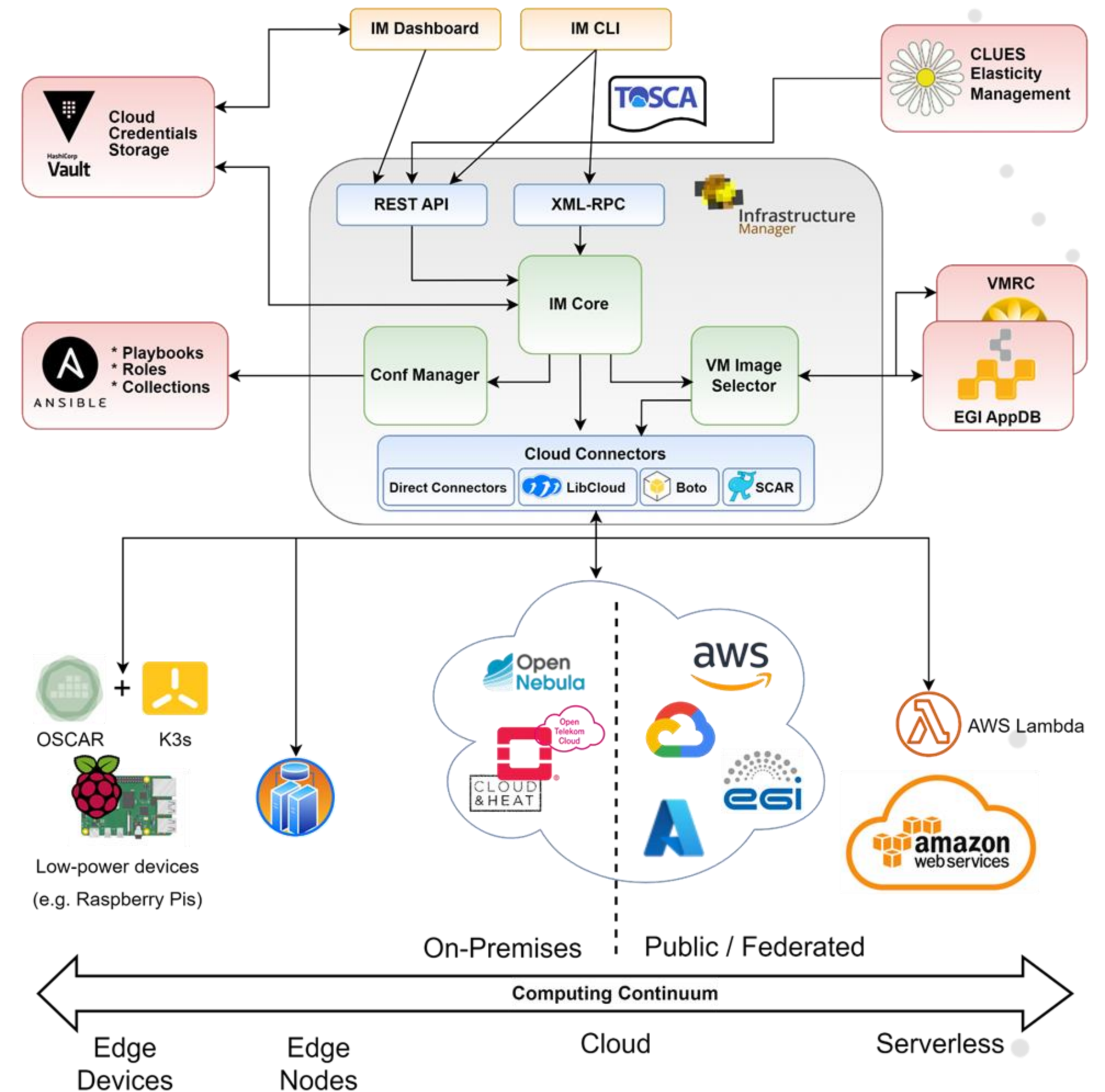
Learn more on Wed (14:30-15:00) demo
“Rancher: the EGI container execution platform”





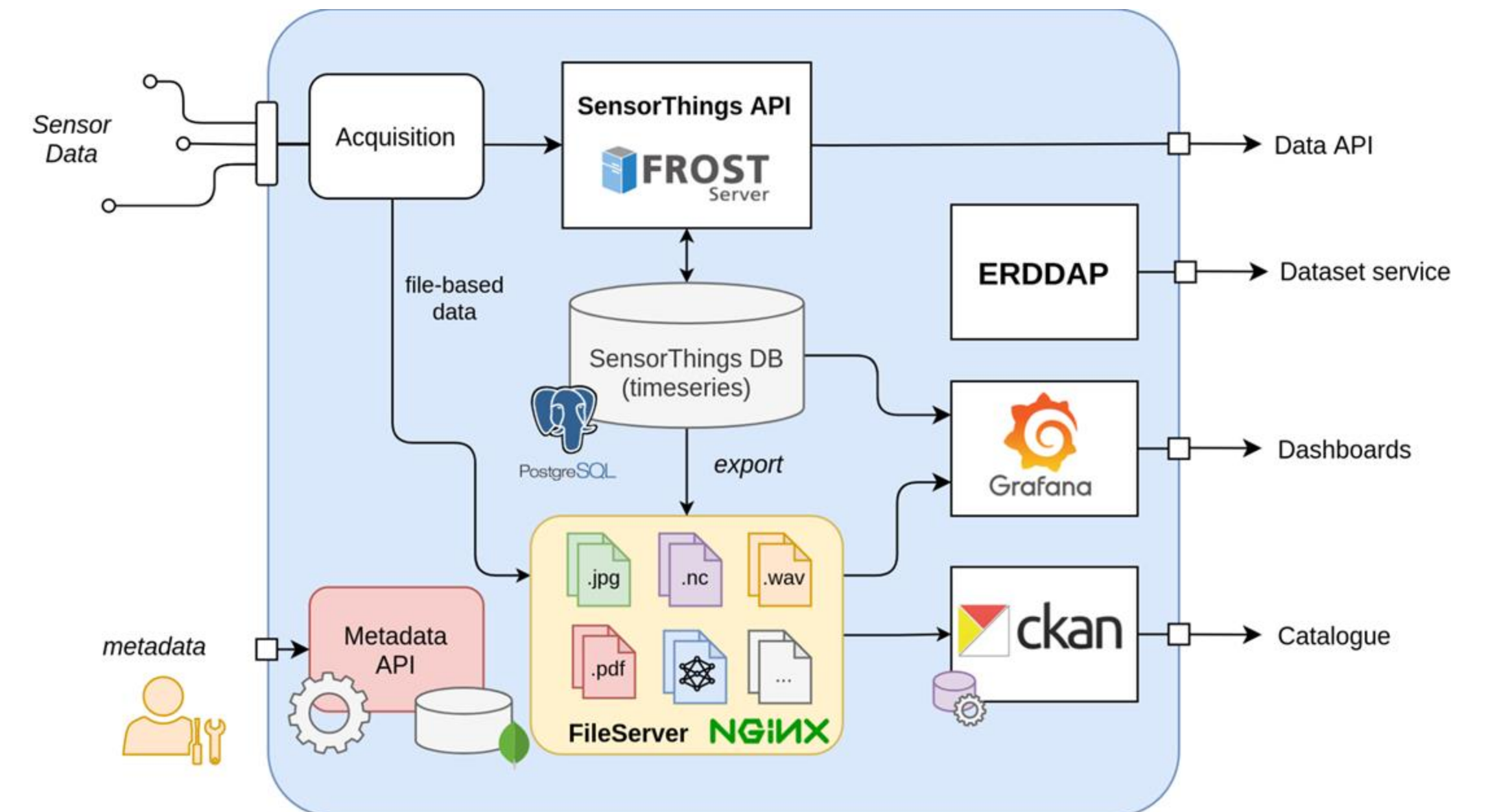
IM deploys virtual infrastructures on Cloud

- **Automates** the deployment, configuration, software installation, monitoring and update of virtual infrastructures
- **Infrastructure as Code (IaC):** RADL/TOSCA + Ansible
- **Cloud agnostic** with a wide variety of back-ends from edge to serverless
- **Powers EOSC EU Node AWM**
- **Coming: EOSC-Beyond extensions** with Jupyter integration and data staging features



OBSEA provides a testbed for the development of oceanographic instrumentation

Cloud Compute and Online allow OBSEA to deploy a **custom** data acquisition and data visualization services of the OBSEA infrastructure. These are in the EGI Infrastructure are directly accessed by EMODNet.



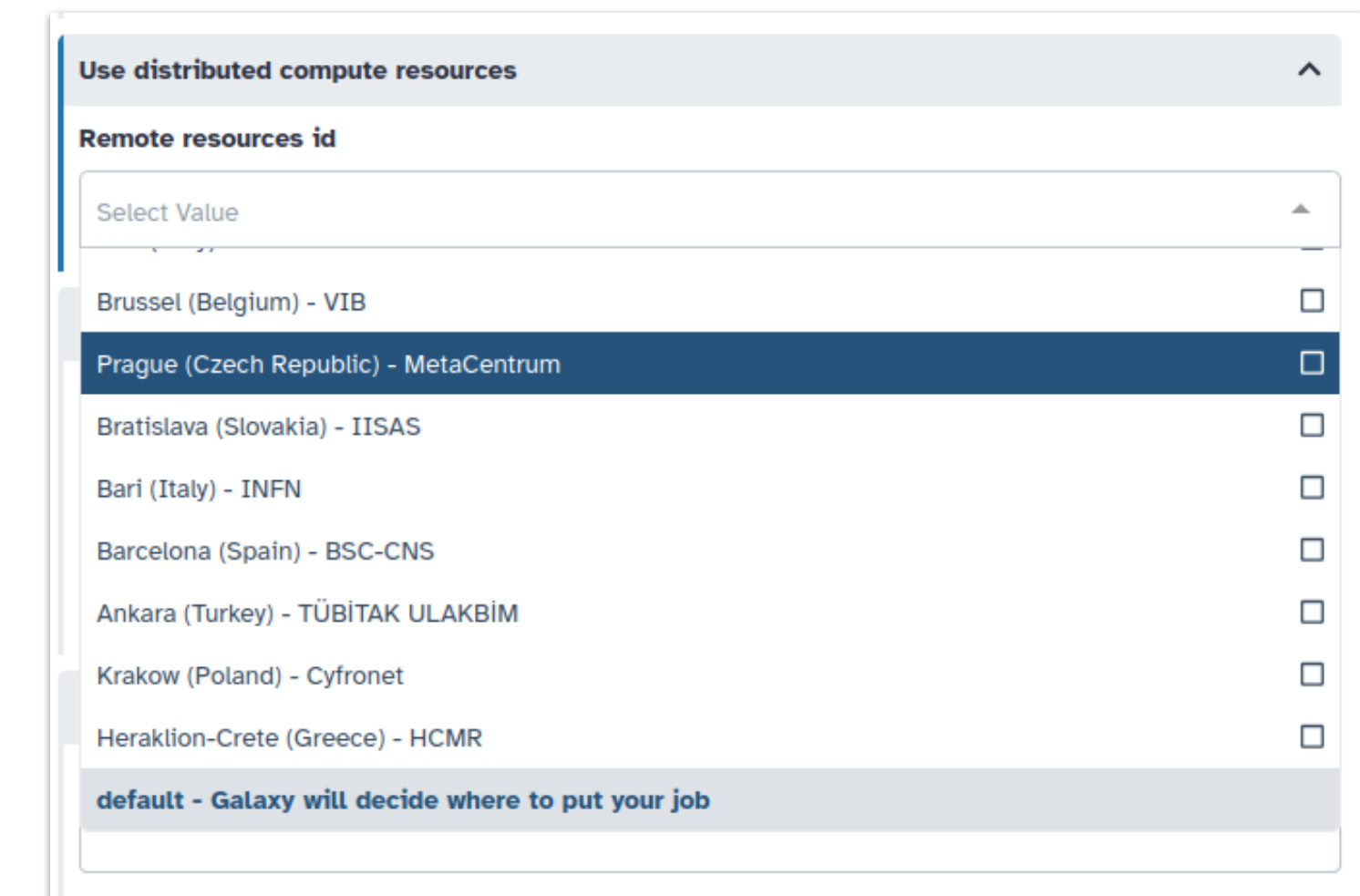
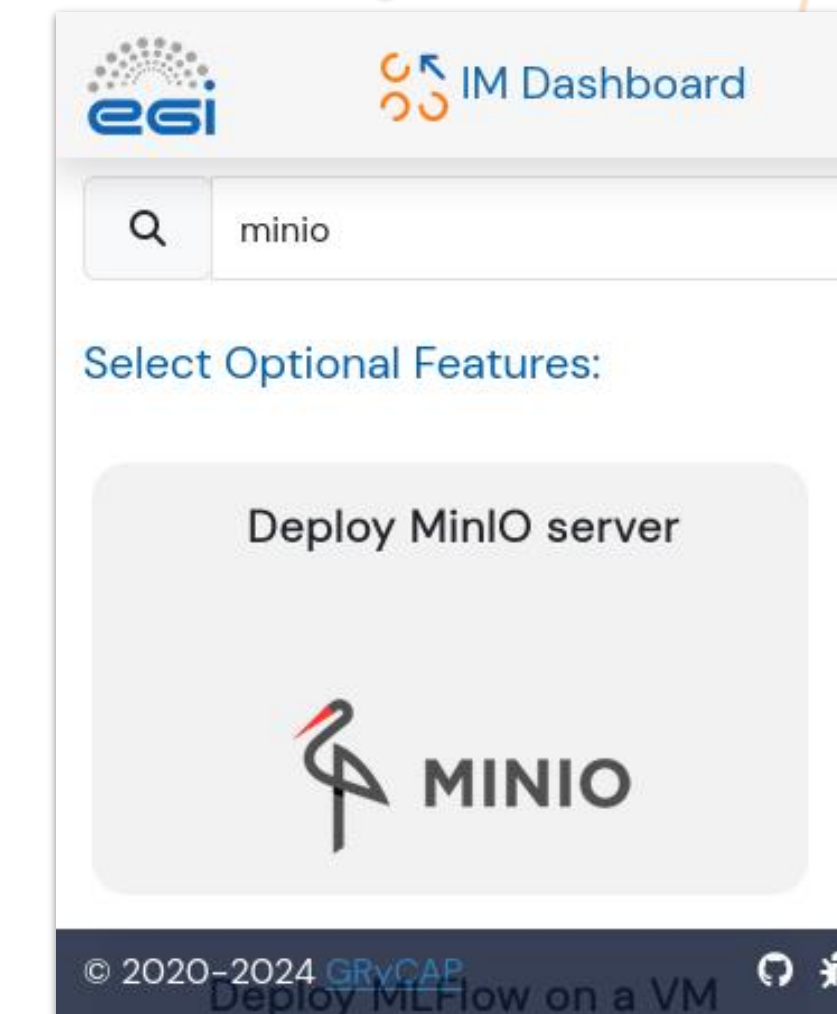
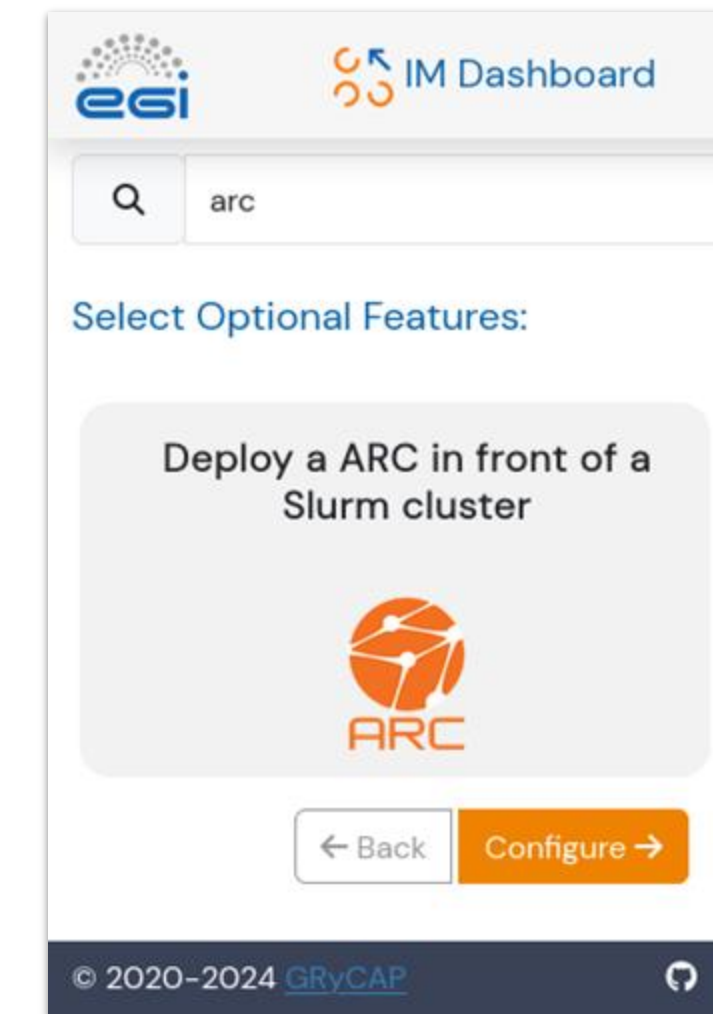
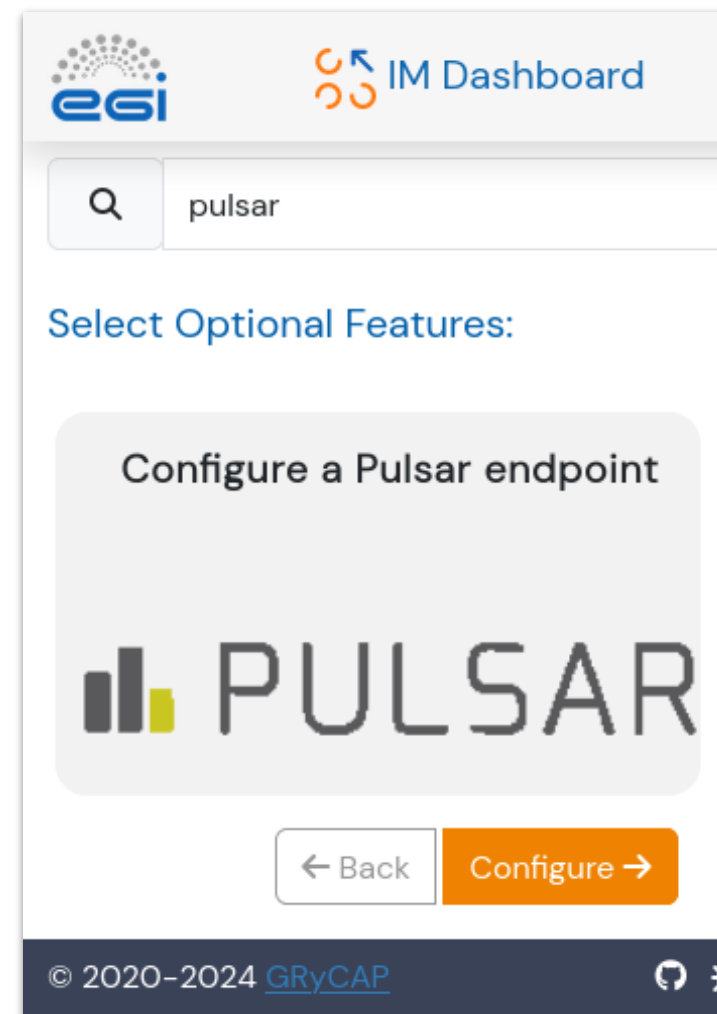
EuroScienceGateway facilitates the infrastructure usage of Galaxy with the help of Infrastructure Manager

- **Bring Your Own Compute**

- Automated creation of Pulsar & ARC endpoints on cloud resources via Infrastructure Manager

- **Bring Your Own Storage**

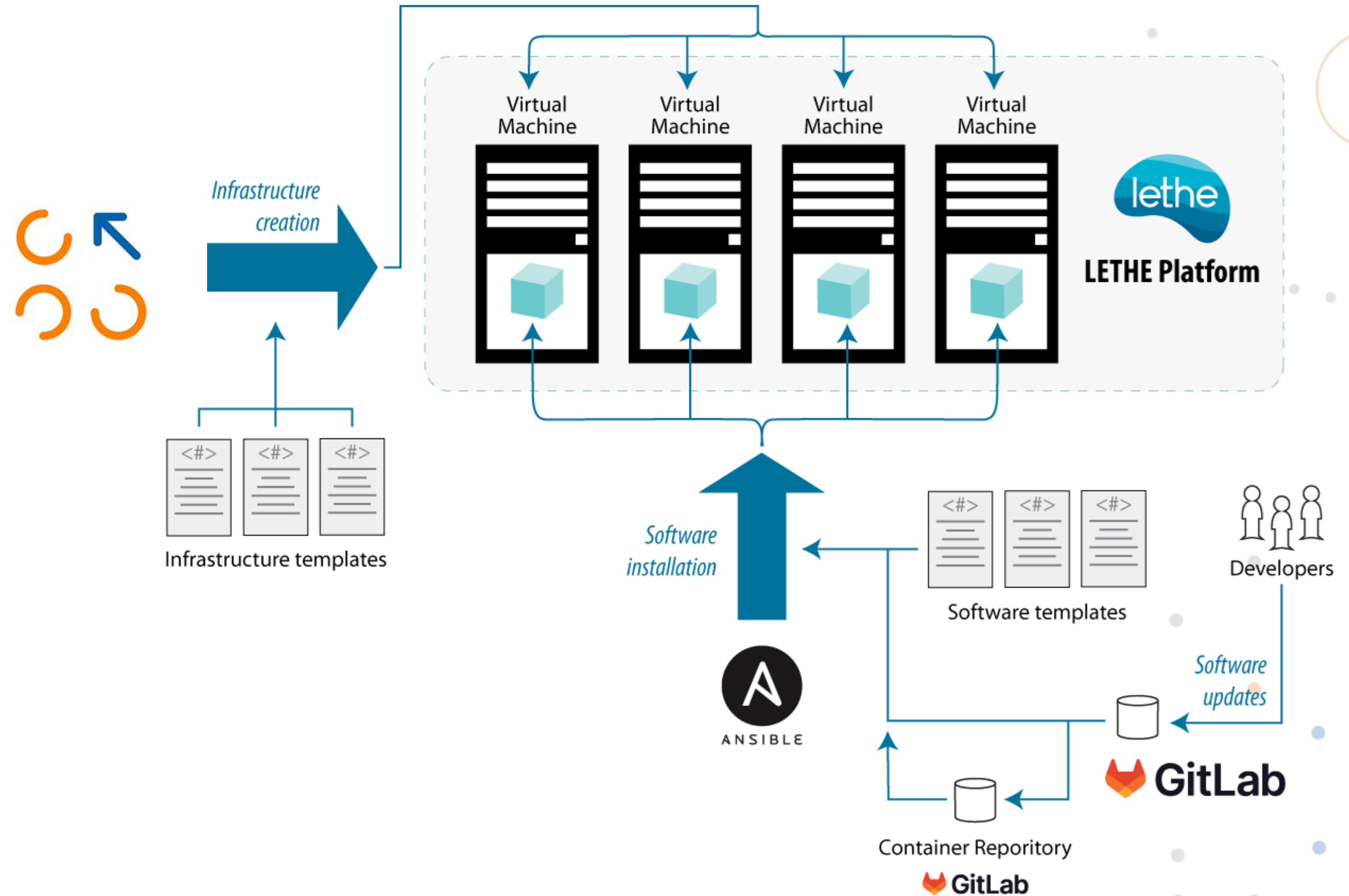
- Automated deployment of storage services on cloud via Infrastructure Manager



**Hear more about ESG in tomorrow's session
 "Simplifying Data-Driven Science with User-Friendly Platforms and Gateways"
 (16:45-18:00)**

LETHE project works on the prevention in the whole spectrum of cognitive decline in the elderly population at risk.

Relies on **IM, Cloud Compute** and **Check-in** to deploy the data collection and big data framework of the project





Contact us

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Let's talk. Or
meet in person

Get in touch with us

www.egi.eu



This work is partially funded by the EU research and innovation programme