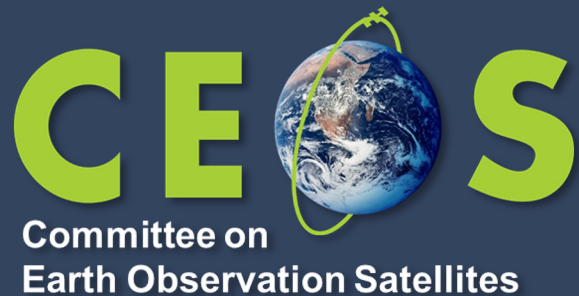


WGISS-55

EGI (openEO) – Federated Authorization



Valeria Ardizzone, EGI Foundation

Nicolas Liampotis, GRNET

Agenda ID: 2023.04.19_13.20

WGISS-55

Cordoba, Argentina (CONAE)

18-20 April 2023

- ❖ About EGI
- ❖ Introduction to the AARC Blueprint Architecture
- ❖ Community-first approach
- ❖ Authorisation models
- ❖ EGI Check-in service (IAM) and ESA_ITT openEO platform



Vision

All researchers have seamless access to services, resources and expertise to collaborate and conduct world-class research and innovation

Mission of the EGI Federation

Deliver open solutions for advanced computing and data analytics in research and innovation

Mission of the EGI Foundation

Enable the EGI Federation to serve international research and innovation together

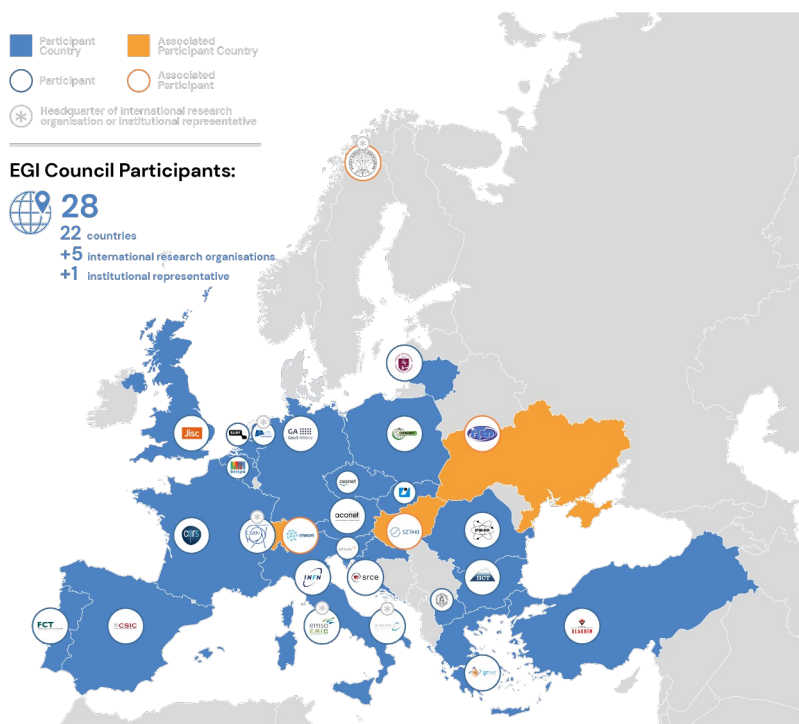


www.egi.eu

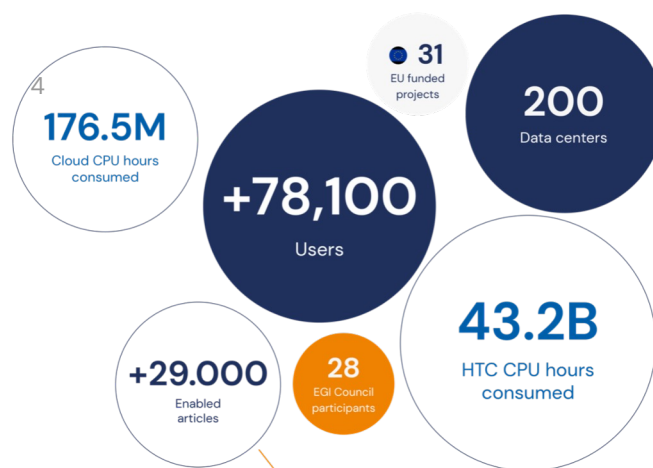


EGI Federation

A European flagship digital infrastructure for data-intensive scientific computing



EGI in numbers¹



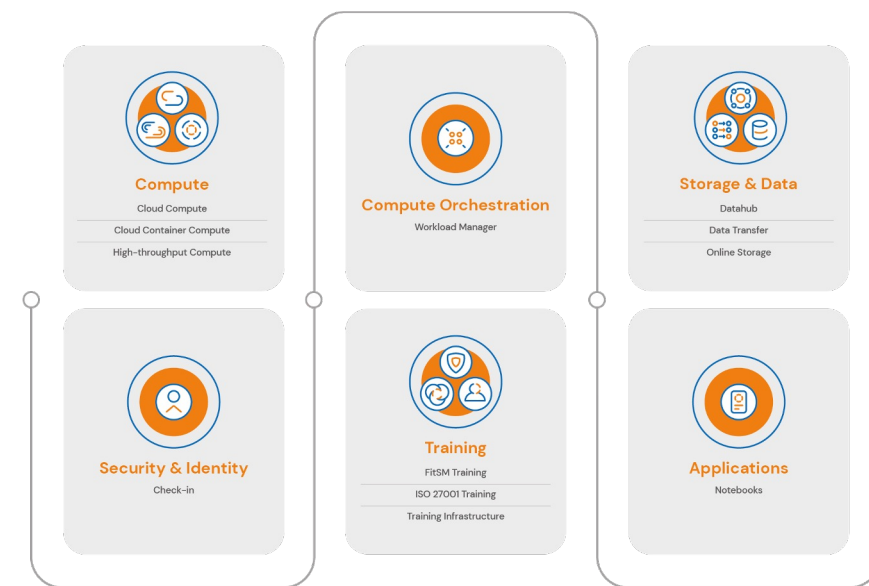
Why a federation?

- Support science at international scale
- Build an hyperscale facility for research
- Invest nationally, access globally
- Bring computing to the data

EGI Services

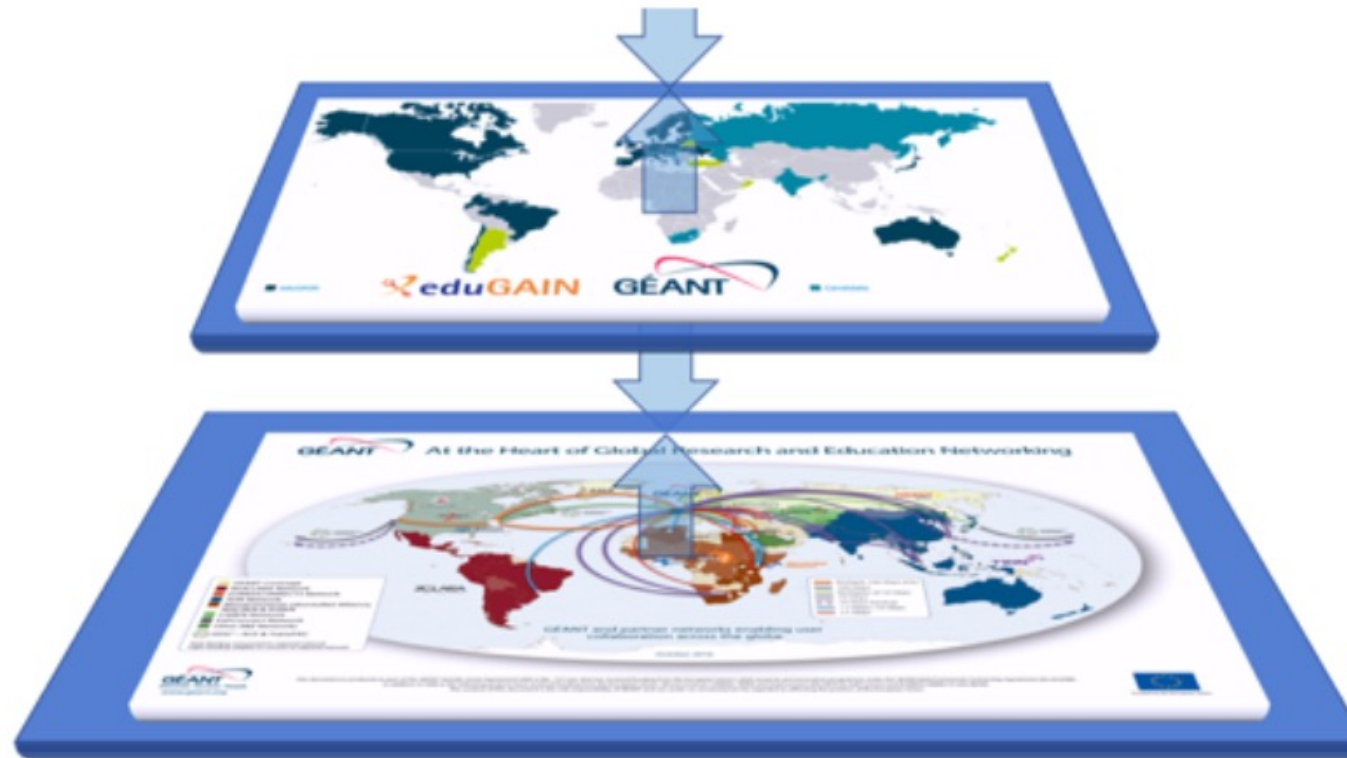
EGI delivers advanced computing services to support scientists, international projects, research infrastructures and businesses.

EGI services for research



¹the infographic shows the latest number of funded projects, members and data centers (updated in Sep 2022) and all-time data for the HTC and Cloud numbers according to the EGI accounting portal)

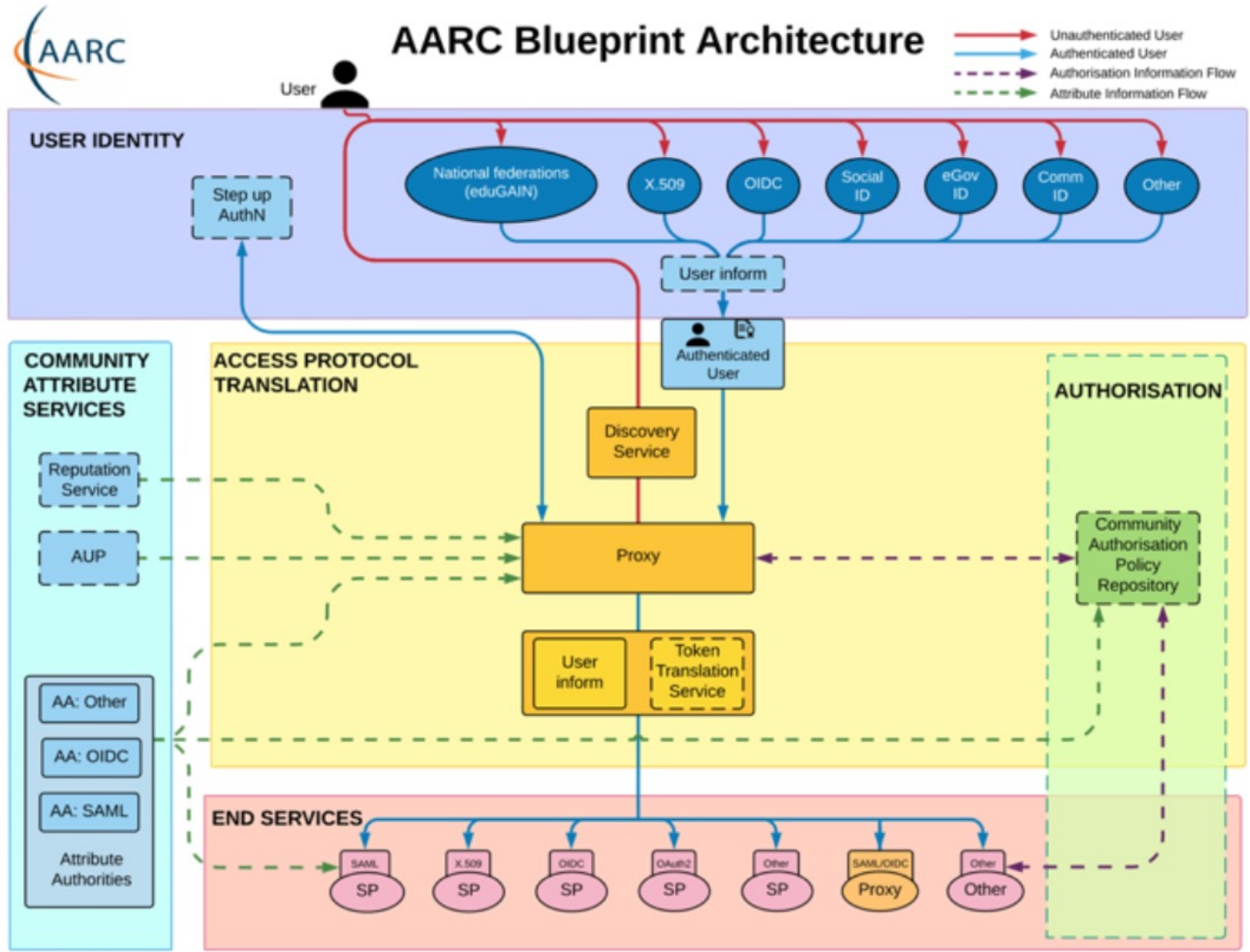
AARC BPA: Enabling an ecosystem of solution on top of eduGAIN



AARC BPA: Enabling an ecosystem of solution on top of eduGAIN



AARC Blueprint Architecture



How the Community-first approach can help communities to access resources

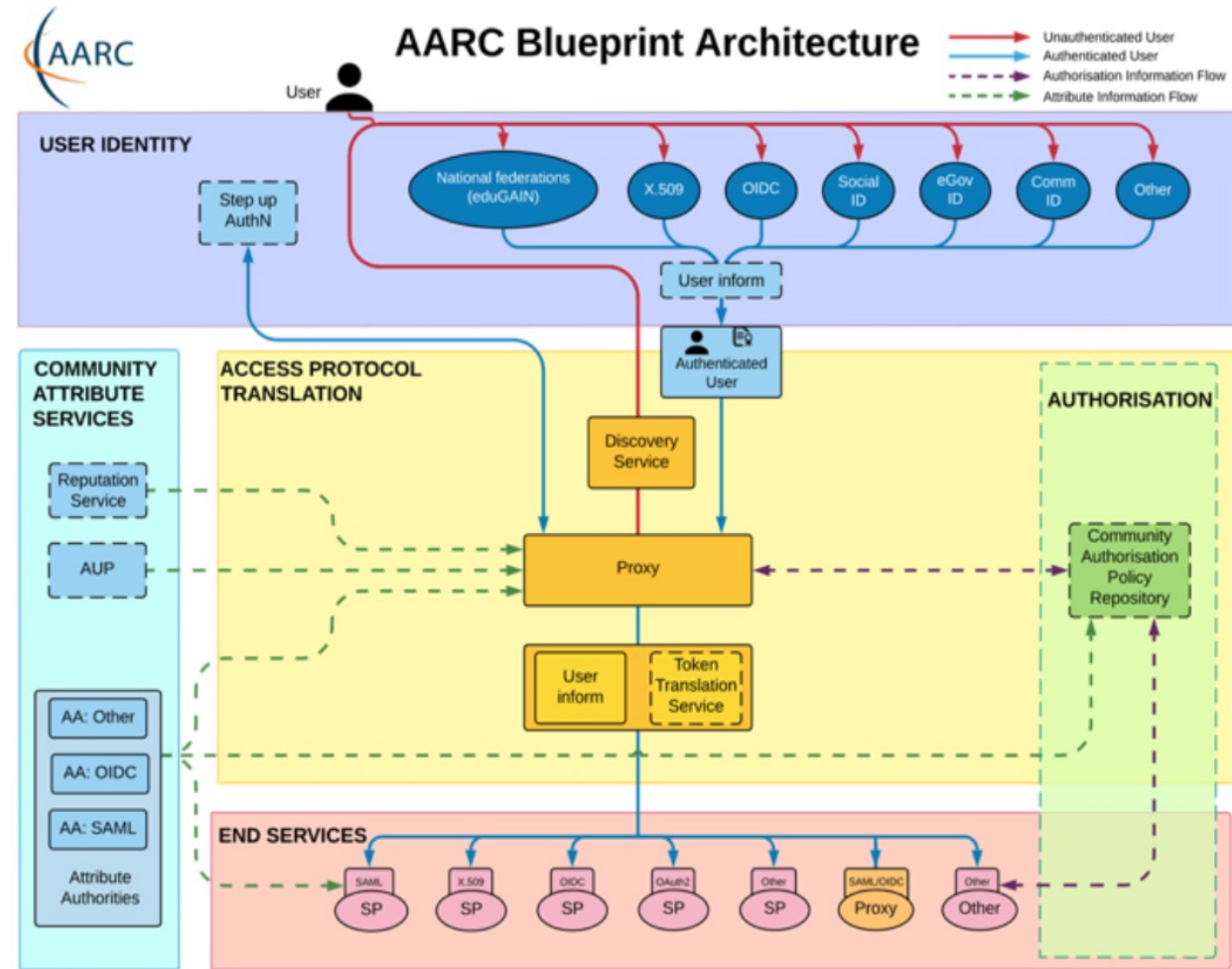
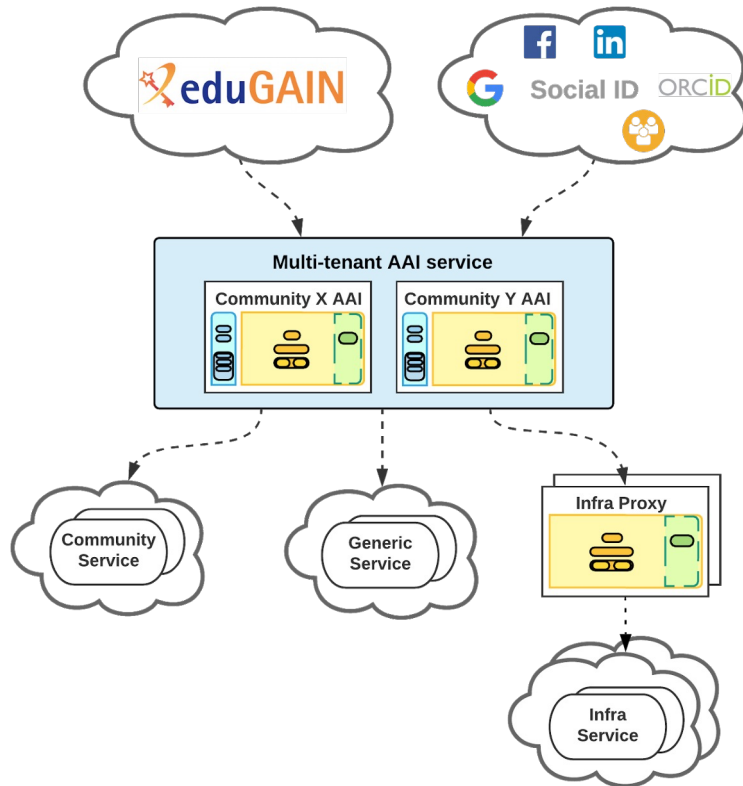


Community AAI

The purpose of the Community AAI is to streamline researchers' access to services, both those provided by their own infrastructure as well as the services provided by infrastructures that are shared with other communities.

Infrastructure Proxy

The Infrastructure Proxy, enables Infrastructures with a large number of resources, to provide them through a single integration point, where the Infrastructure can maintain centrally all the relevant policies and business logic for making available these resources to multiple communities



User Attributes-based authorisation

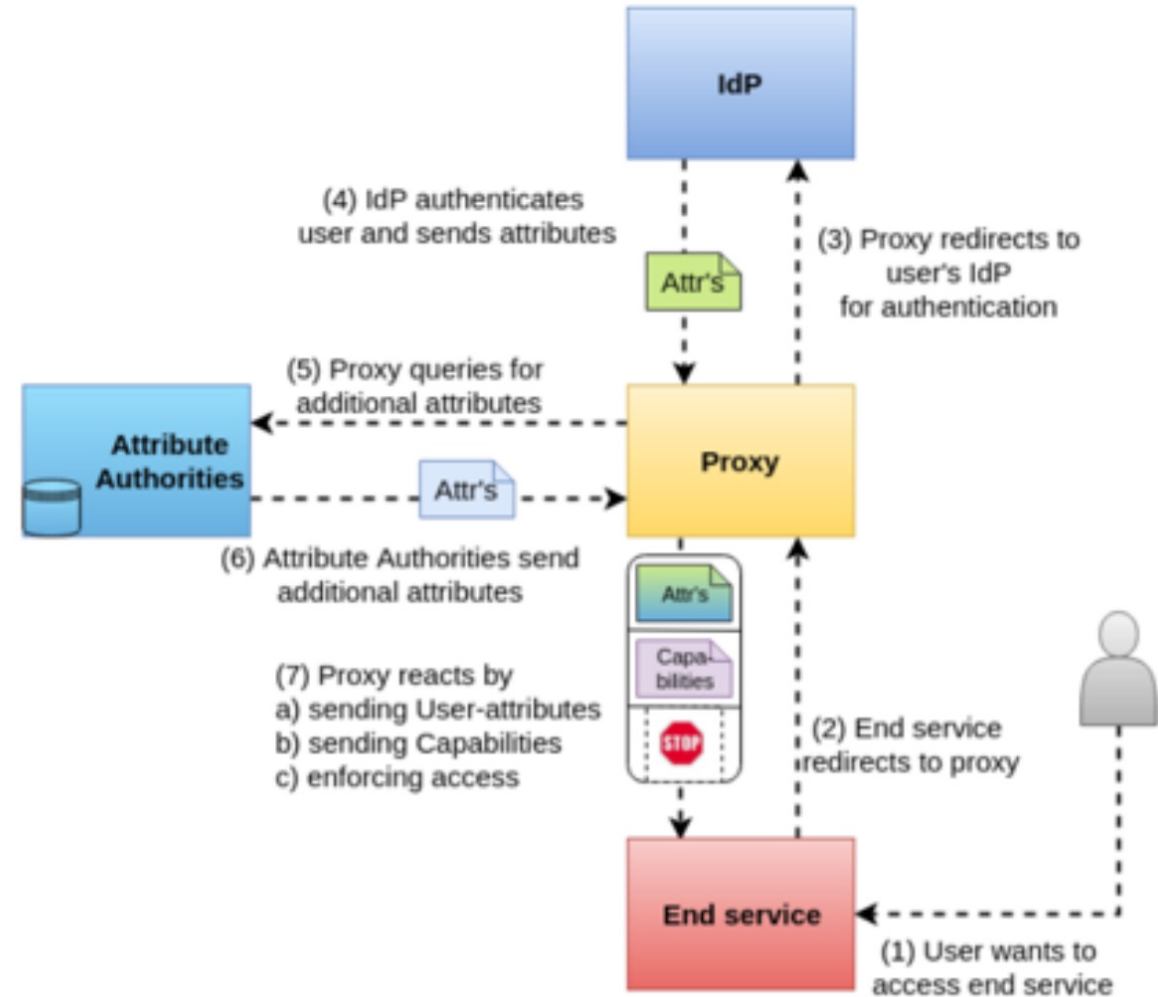
- VO/Group membership and role information
- GOCDB roles
- Assurance information
- Affiliation with home organisation

Capability-based authorisation

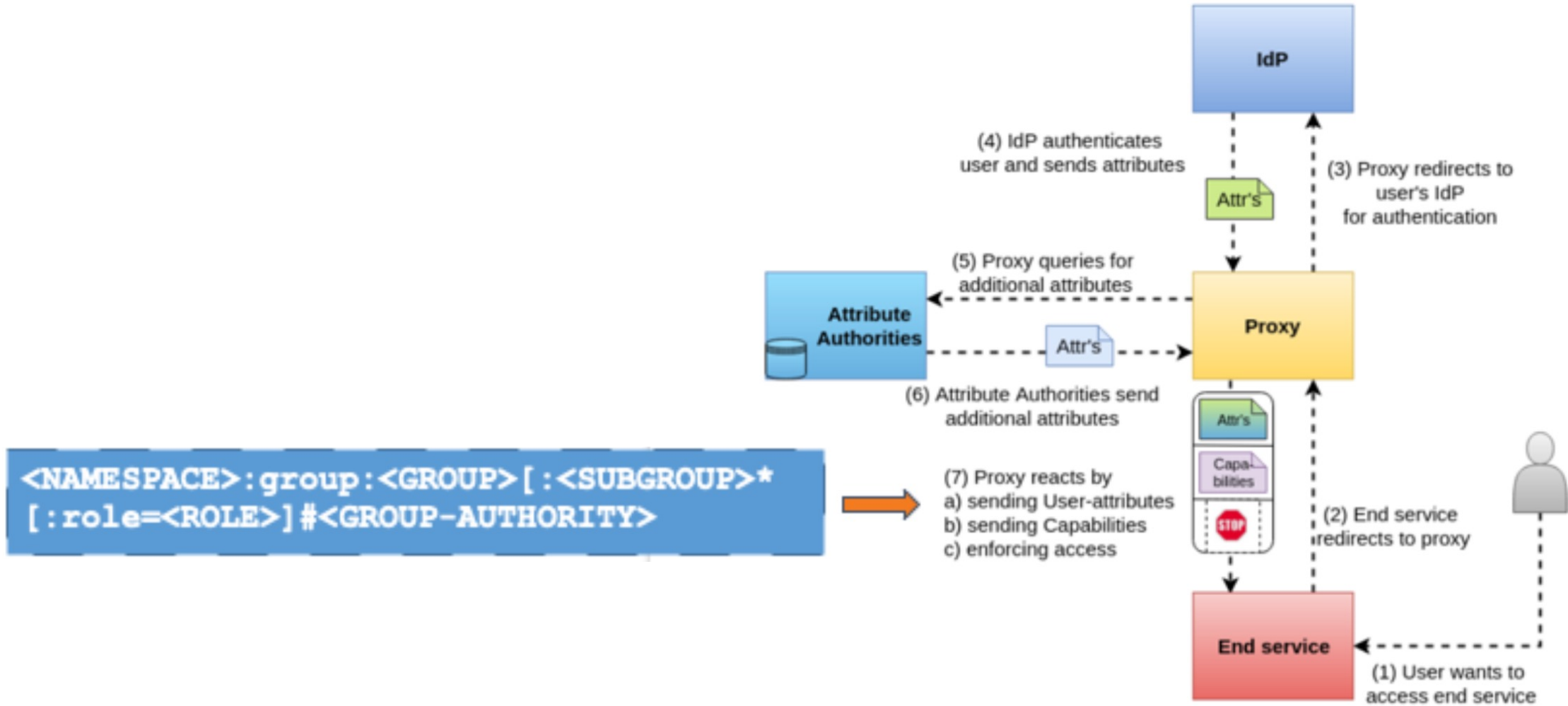
- Resources a user is allowed to access
- Optional list of specific actions the user is entitled to perform

Three Authorization models

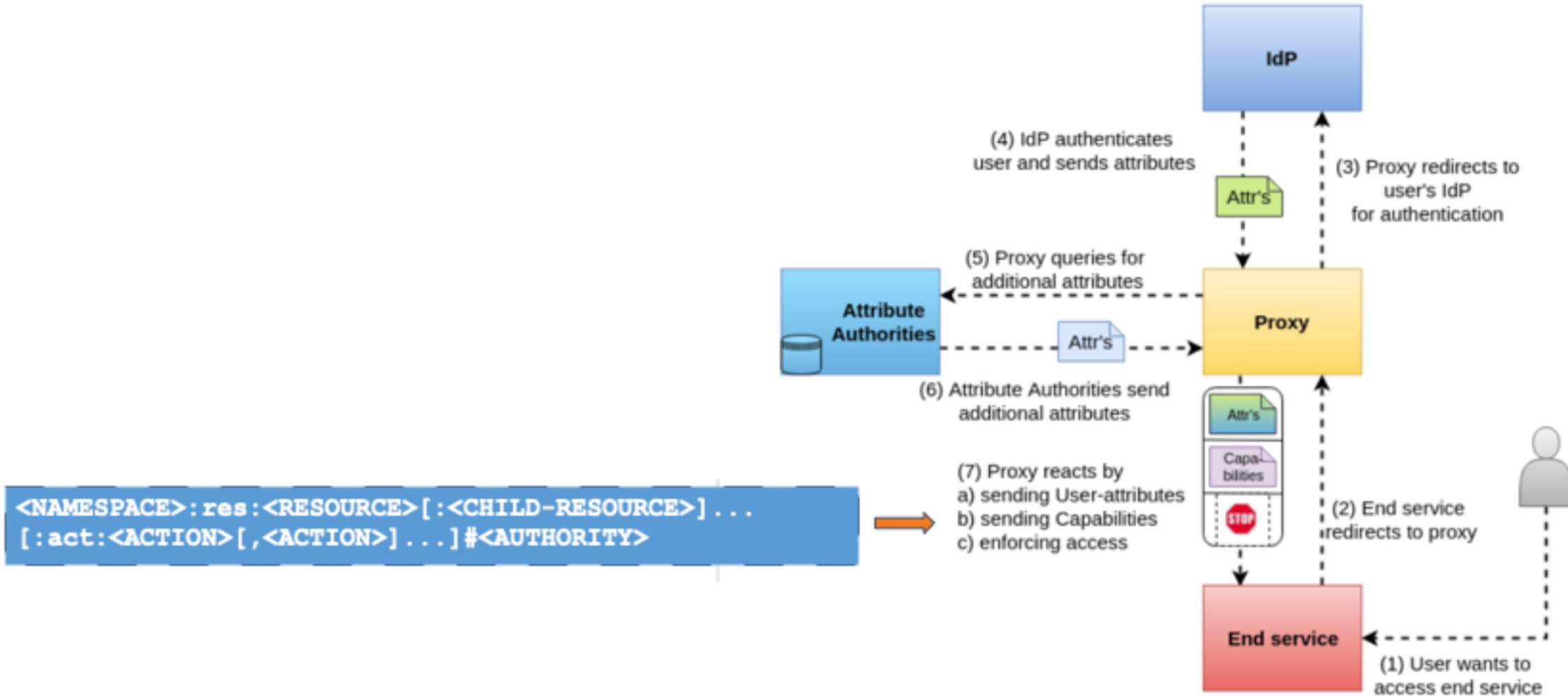
1. Centralized **Policy Information Point**
2. Centralized **Policy Management and Decision Making**
3. Centralized **Policy Management and Decision Making and Enforcement**



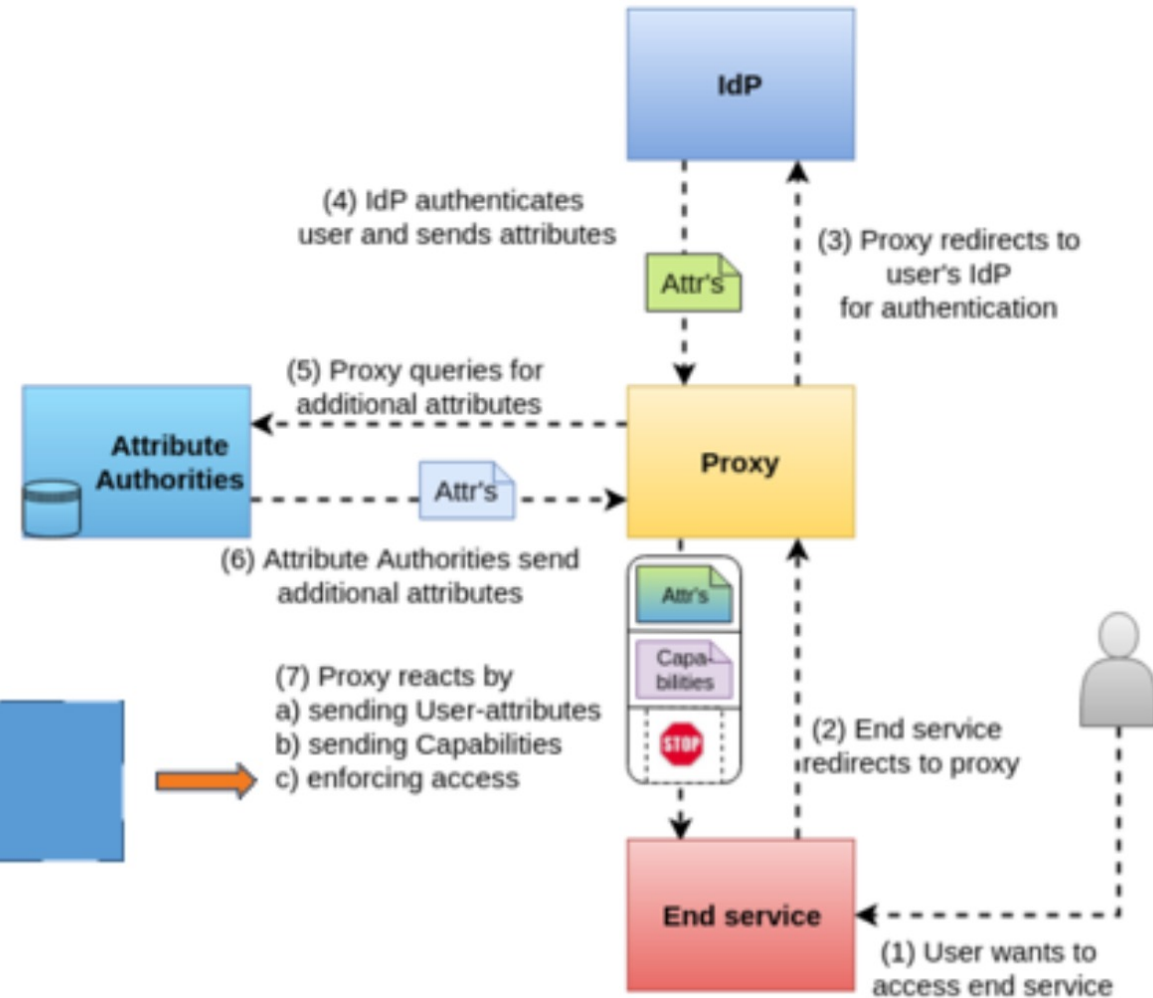
Centralized Policy Information Point



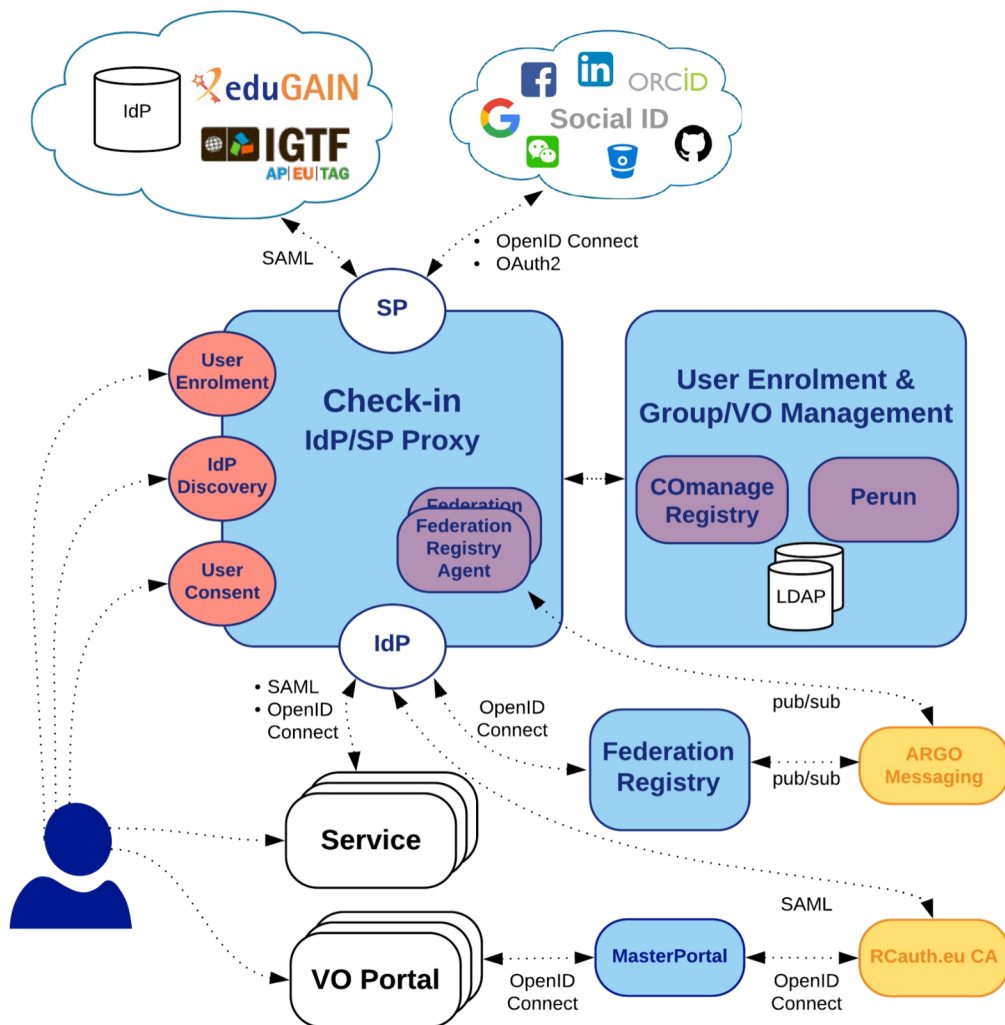
Centralized Policy Management and Decision Making



Centralized Policy Management and Decision Making and Enforcement



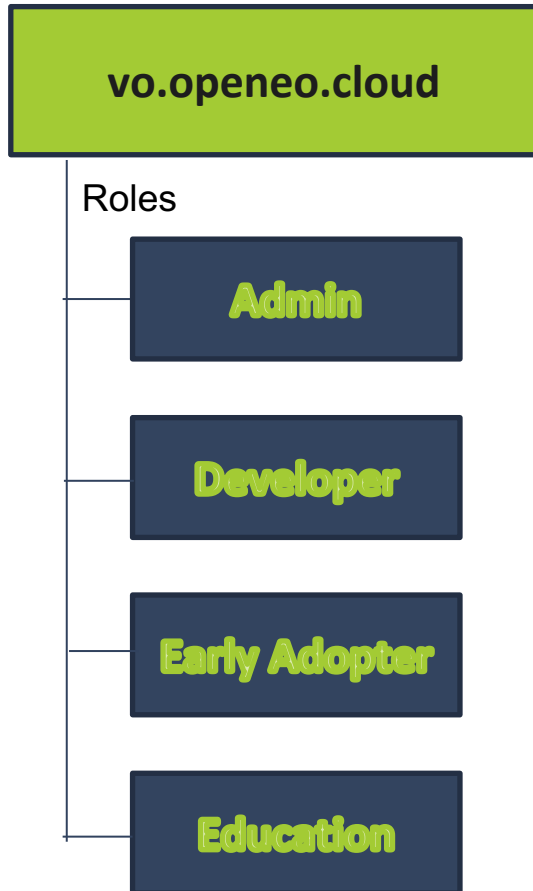
Block / Allow access at the proxy
(Possibly followed by either of the other)



Implementation of the AARC blueprint architecture

- Single point of integration for Identity Providers (IdPs) and Service Providers (SPs)
- Registered in eduGAIN as an SP complying with REFEDS Research & Scholarship and Sirtfi security framework
- All connected end-services can have one statically configured IdP
- No need to run an IdP Discovery Service on each end-service
- All connected SPs get harmonised user identifiers and accompanying authorization attribute sets from different IdPs that can be uniformly interpreted

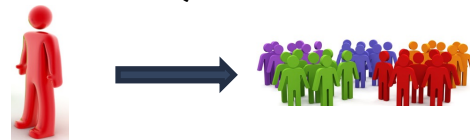
ORGANIZATIONAL STRUCTURE



USER'S IDENTITIES REGISTRATION



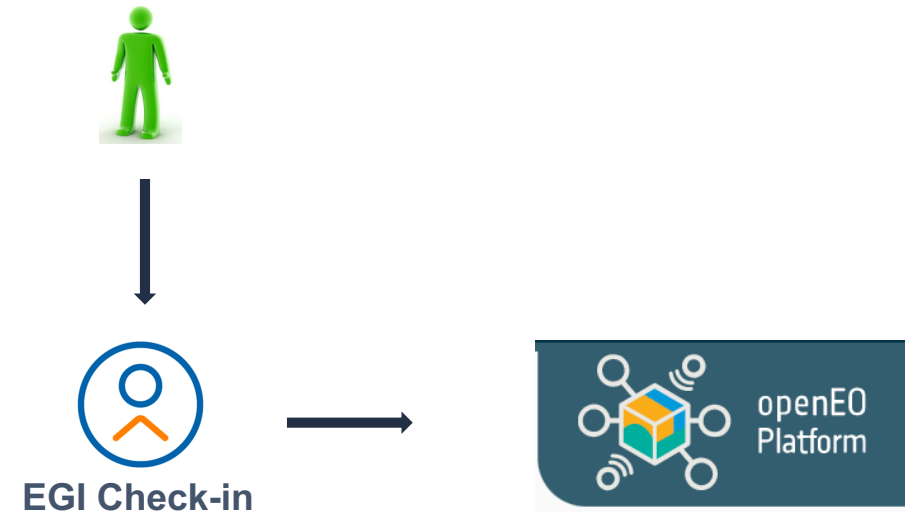
USER'S VO MEMBERSHIP REQUEST



ADMIN VO EVALUATION/ROLE ASSIGNMENT



USERS SIGN IN TO OPENEO PLATFORM SERVICE



Example of entitlements:

urn:mace:egi.eu:group:vo.openeo.cloud:role=early_adopter#aai.egi.eu

<https://openeo.cloud/>

Thank you!



Learn more about EGI

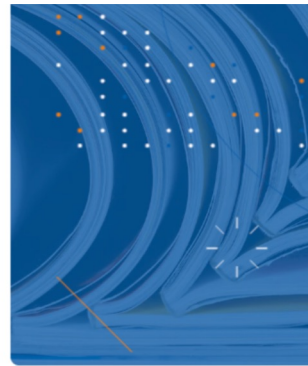
<https://www.egi.eu/publications/>

Home Services Solutions Projects Resources News & Events Participate

Publications

A collection of EGI's official documents

Check also publications available in our community space on [Zenodo](#)



Highlights

<p>EGI Annual Report 2021</p> <p>Annual Report 2021</p> <p>Summary of the activities and achievements of the EGI Federation in 2021.</p> <p>Read more</p>	<p>EGI Federation Strategy 2020-2024</p> <p>Strategy 2020-2024</p> <p>An overview of the EGI Federation strategy for 2020-2024.</p> <p>Read more</p>	<p>EGI Federation Service Strategy 2022-2024</p> <p>Service Strategy 2022-2024</p> <p>This report provides a selection of collaborations through which EGI support the setup and operation.</p> <p>Read more</p>
<p>EGI support for Research Infrastructures</p> <p>EGI support for Research Infrastructures</p> <p>This report provides a selection of collaborations through which EGI support the setup and operation.</p> <p>Read more</p>	<p>Joining the EGI Federation</p> <p>Introduction to the EGI Federation, related services, impact and benefits of joining.</p> <p>Read more</p>	

Access/order EGI services

<https://www.egi.eu/services/support@egi.eu>

About Services Solutions Projects Resources News & Events Participate

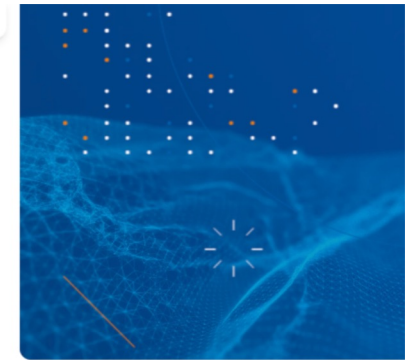
EGI Services

EGI delivers advanced computing services to support scientists, international projects, research infrastructures and businesses.

We continuously innovate our services and technology to meet the needs of researchers worldwide. The EGI services can be requested by everyone involved in research and innovation from both the public and private sectors.

[Discover our Case Studies](#)

[Solutions](#)



Advanced computing services to accelerate research & innovation

Learn why more than 78.000 users trust EGI

Besides the services tailored for researchers and businesses, EGI also offers dedicated services for its federated members. Furthermore, we advocate services from the community and act as consultancy partner for policymakers.

From advanced computing to data spaces and service hosting, EGI changes the way how researchers and businesses innovate science and operate in a digital world

EGI provides technical and human services, from integrated and secure distributed high-throughput computing and cloud computing, storage and data resources to consultancy, support and co-development. The scientists relying on EGI services work in large international organisations, research infrastructures, projects, university labs, or as individual researchers.

Discover our services

<p>Services for Research</p> <p>Our large-scale computing and data analytics services are helping scientists to accelerate the process leading...</p> <p>Read more</p>	<p>Services for Federation</p> <p>Our internal services provide tools for coordination of the EGI Federation, improving how we work...</p> <p>Read more</p>	<p>Services for Business</p> <p>We help companies to exploit services and resources for compute- and data-intensive research and innovation.</p> <p>Read more</p>
---	--	--