Authentication and Authorisation for Research and Collaboration

AARC Pilots

Paul van Dijk - SURFnet

Pilots on the integrated R&E AAI

The pilot approach in AARC

Why we run pilots?

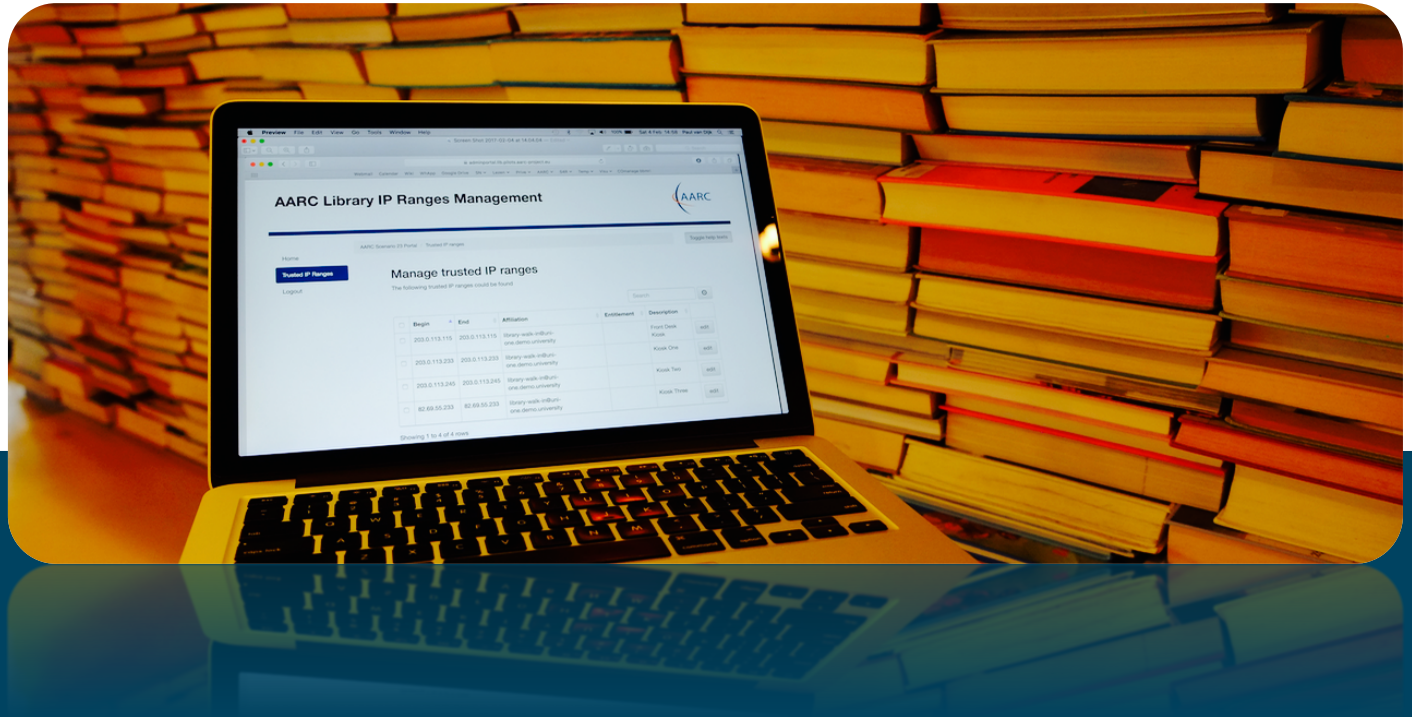
We tested **existing AAI components** to assess to what extend they meet:

- Functional requirements
- Technical (AAI integration) requirements
- Required “readiness” levels

- Running pilots is inevitable to get a good sense of these aspects
- While running pilots, new clues and ideas arise
- Where possible improve components and ease deployability
- **Improve visibility of useful AAI components for R&E**

Establish a common test-bed infrastructure

- A staging area for piloted services
- Technical platform delivered by okeanos
- >20 VMs instantiated
- Using Ansible scripts for deployment
- SimpleSAMLphp DIY IdP available
- Online support by SURFnet staff



Expand the reach of federated access (Libraries, external IdPs)

Library proxy pilot(s)

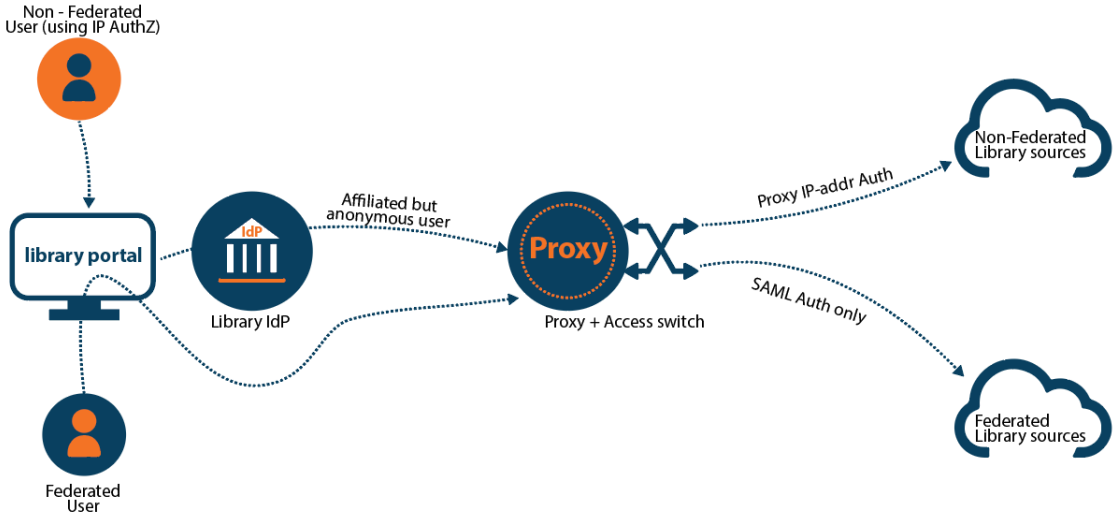
Purpose

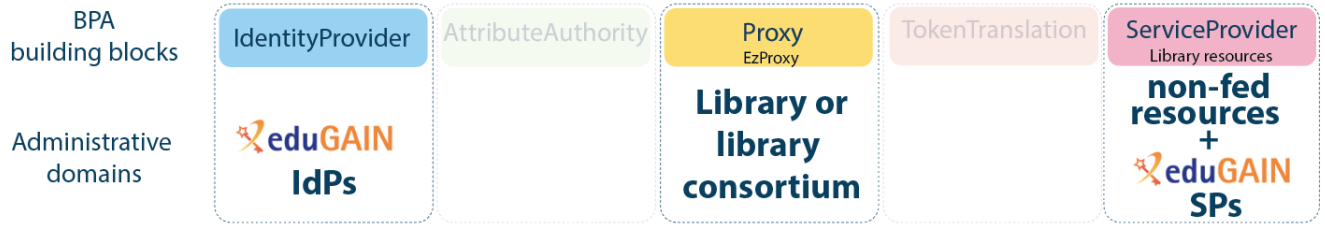
- Dealing with “walk by users” → Setting attributes based on IP-address
- Dealing with providers supporting IP-address access only → SP Proxy translating SAML to IP if needed

Services/Components used

- Shibb add-on to filter on IP-address
- EZproxy with access switch mode
- Several library resources

wiki.geant.org/x/a4qSAw





Social ID pilot

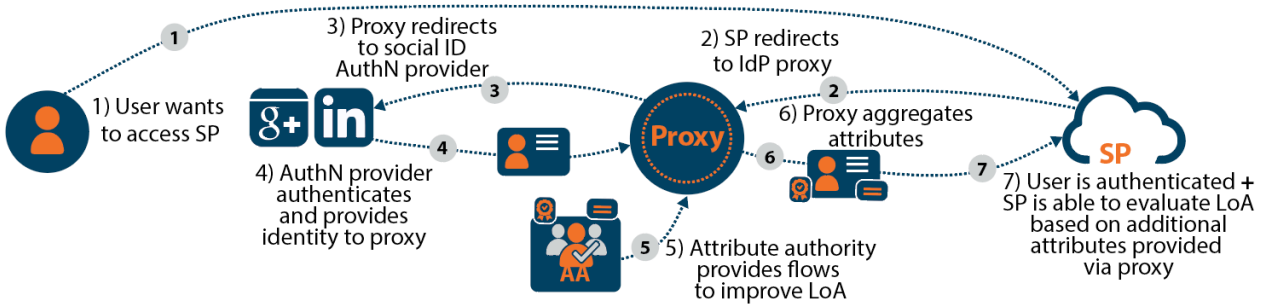
Purpose

- Demonstrate possible mechanisms to include users with Social Identities
- Explore clues to enhance LoA of users

Services/Components used

- Social ID providers (Google, ORCID, LI)
- COmanage AA
- SimpleSAMLphp proxy
- OpenStack Keystone SP
- Tested with EGI and AARC pilot community

wiki.geant.org/x/ZIqSAw



Testing technical and policy components

SAML – ORCID account linking pilot

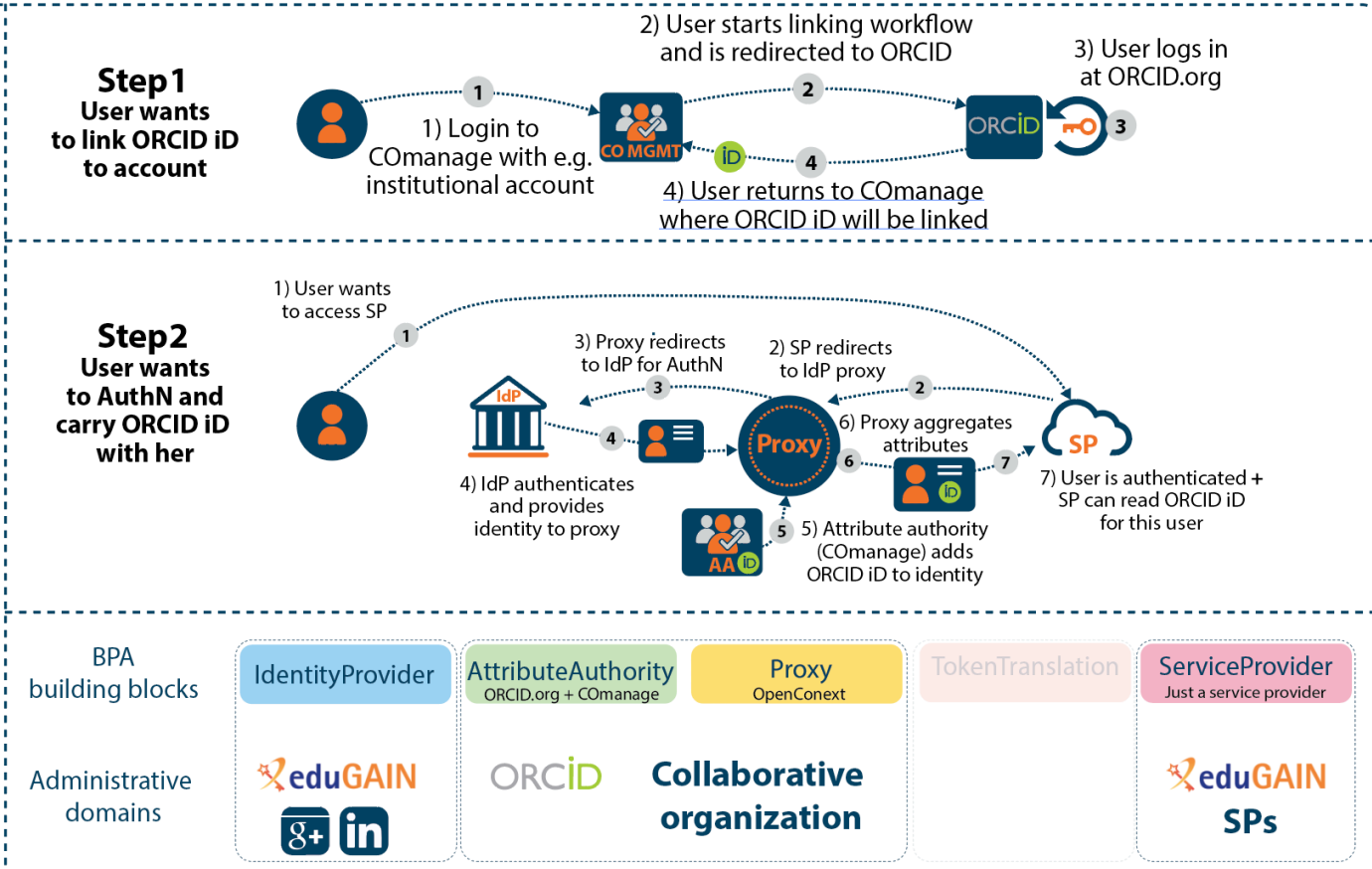
Purpose

- ORCID provides persistent researcher centric IDs which are useful for use in collaboration services → include this ID in the assertion

Services/Components used

- ORCID API - persistentID source
- COmanage – link ID to account
- Proxy – attribute aggregation
- Tested with the AARC community

wiki.geant.org/x/WAH5Aw



Attribute management & aggregation pilots

Demo
wiki.geant.org/x/RIOjAw

AARC

Purpose

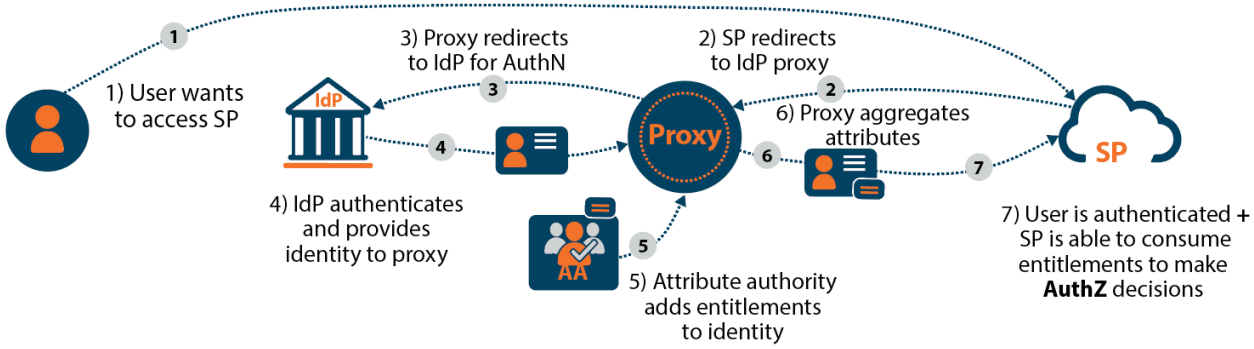
- Show how attributes from multiple AAs can be used for AuthZ in a fed. environment
- Delegate AuthZ decisions
- Minimize impact for SPs

Services/Components used

- COmanage/PERUN AAs
- SimpleSAMLphp proxy
- OpenStack Horizon SP/BBMRI SPs

[EGI: wiki.geant.org/x/LAH5Aw](wiki.geant.org/x/LAH5Aw)

[BBMRI: wiki.geant.org/x/HgD5Aw](wiki.geant.org/x/HgD5Aw)



TTS: RCauth

Demo
wiki.geant.org/x/RIOjAw

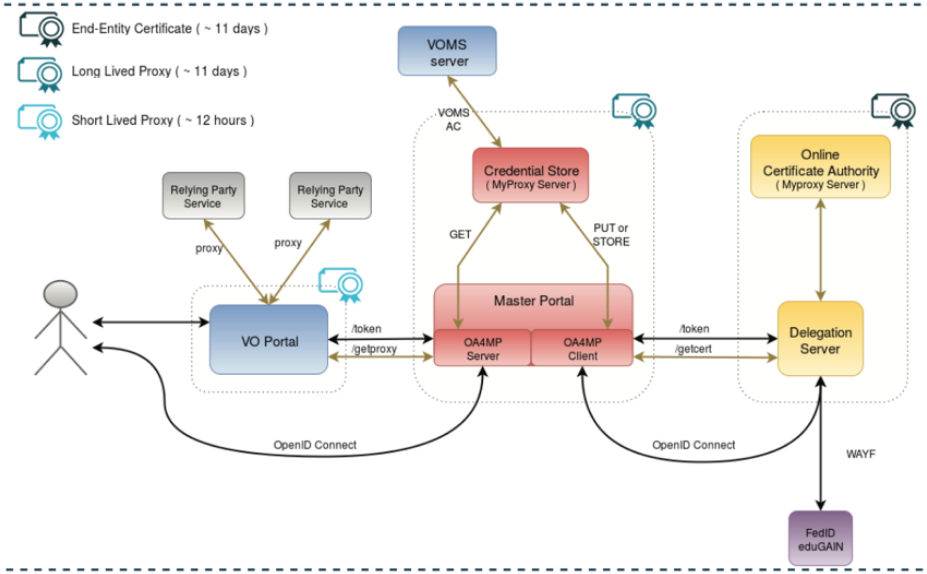
Purpose

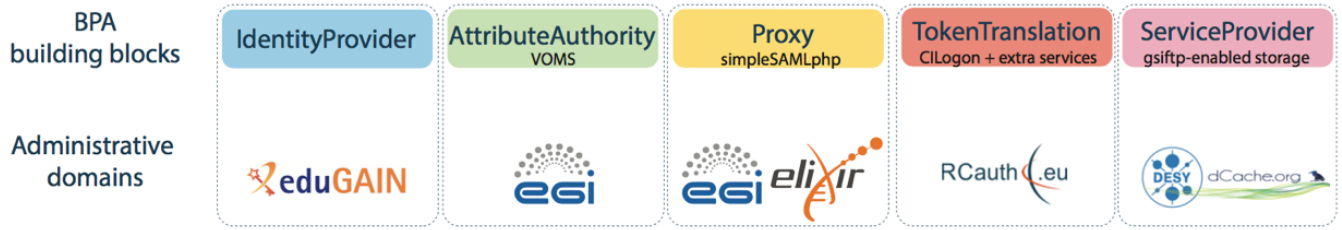
- Enable access to certificate based services for users with an institute account, generating certs on the fly
- Bridging eduGAIN & IGTF

Services/Components used

- CIlogon, adapted as RCAuth
- Several master portals
- Several science gateways
- SimpleSAMLphp
- VOMS Attribute Authority
- Tested with AARC community +...

wiki.geant.org/x/yADaAw





Bridging IGTF to eduGAIN

Demo
wiki.geant.org/x/RIOjAw

AARC

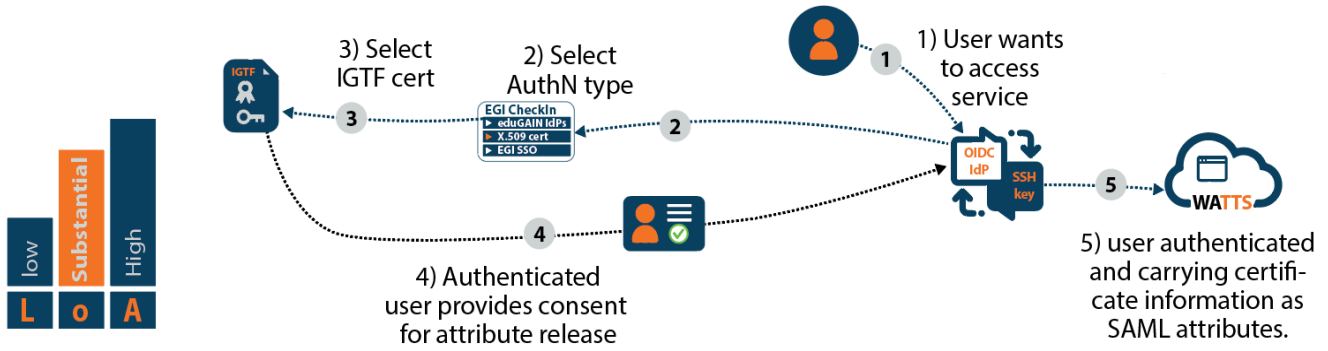
Purpose

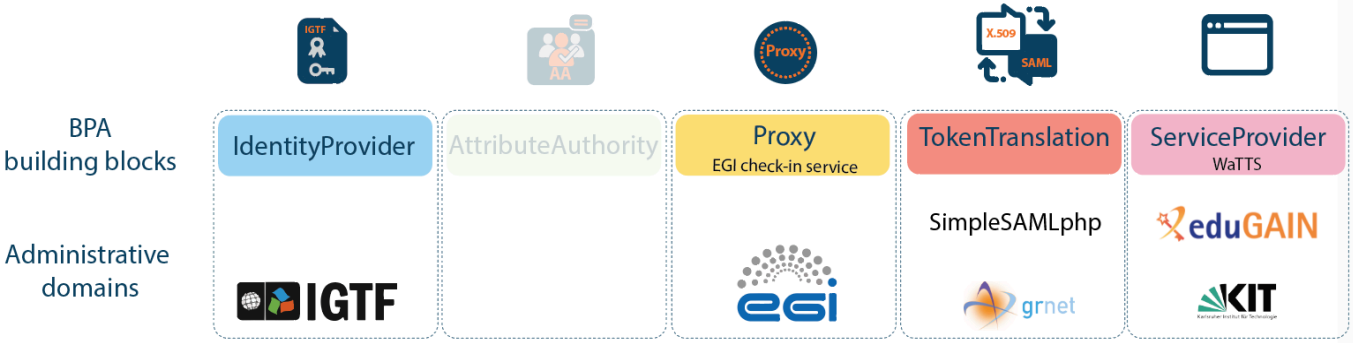
- Demonstrating how researchers can use X.509 certs to access eduGAIN services with substantial or higher LoA
- Not forcing them to use organization accounts

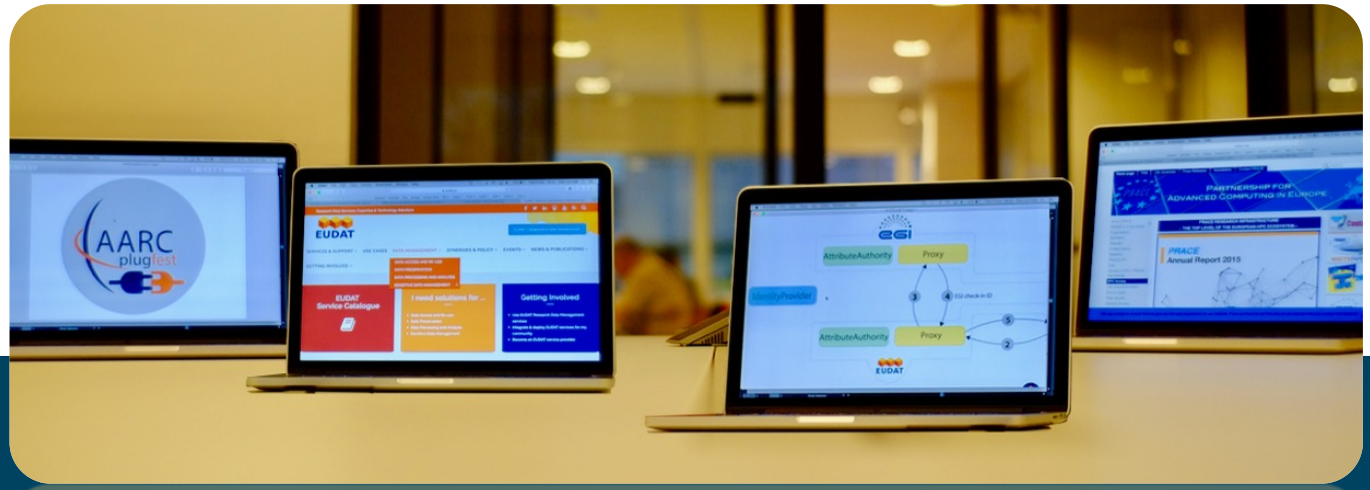
Services/Components used

- SimpleSAMLphp add-on
- WaTTS one-stop-TTS-shop
- ~Okeanos infrastructure

wiki.geant.org/x/JoEKB

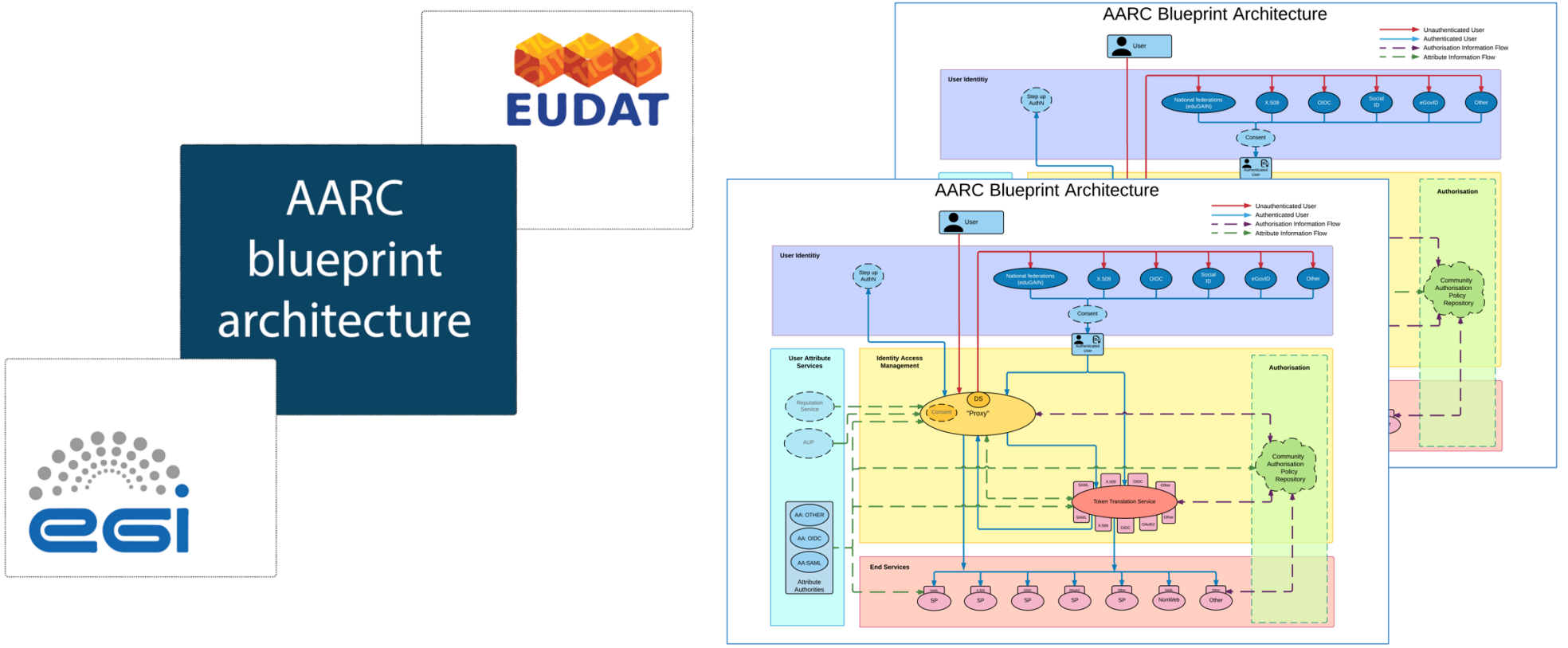






Cross infrastructure pilots

Cross-infrastructure pilots



Cross-infrastructure pilots, EUDAT - EGI

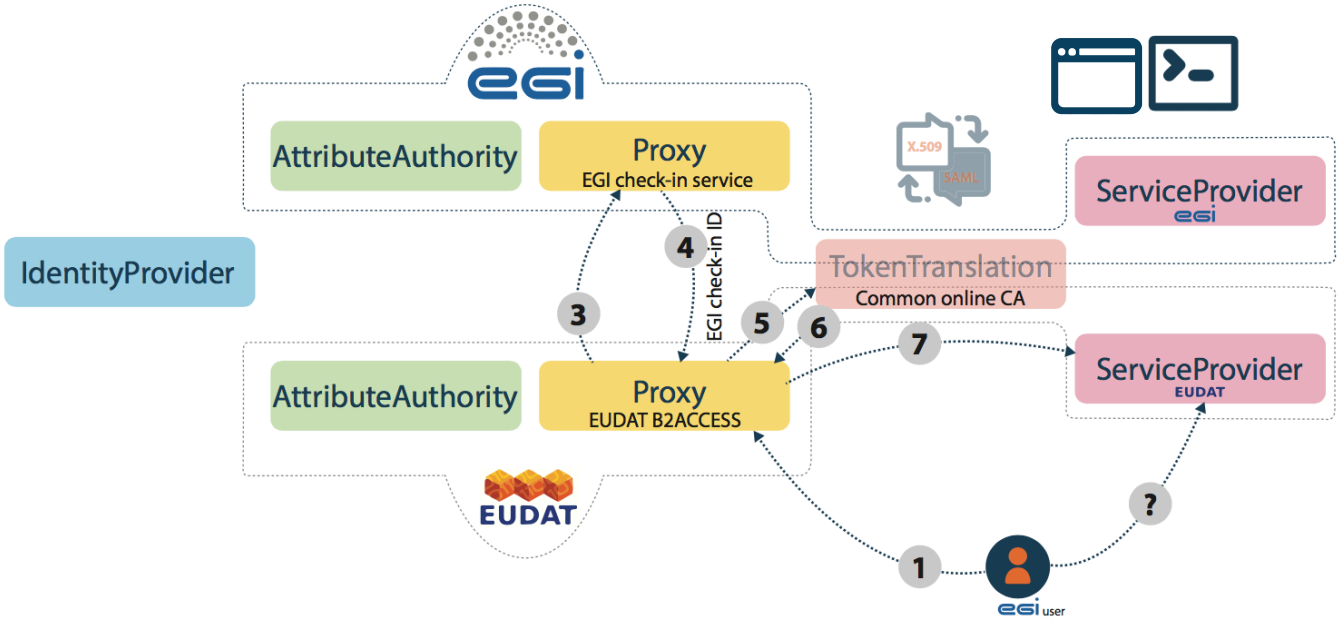
Purpose

- Enable access to EUDAT services for users registered @EGI
- Bridging EUDAT and EGI infra

Services

- EGI check-in service
- EUDAT B2ACCESS
- RCAuth (for non-web services)

wiki.geant.org/soon available



Authentication and Authorisation for Research and Collaboration

Conclusions, Lessons Learned and looking ahead

Conclusions[1]

Successfully...

- ✓ Deployed many different AAI solutions approx. 20
- ✓ Reused and glued together existing components
- ✓ Tested/discussed pilot results with communities
- ✓ Provided architecture and guidelines
- ✓ Provided software sources and deployment scripts

Many results are being rolled out in production already in R&E infrastructures

Conclusions[2]

We've shown that

Proxy = a key element (!)

in research collaboration use cases

E.g.:

- Library pilots → bridging SAML to IP-access
- E-infra pilots → collect, aggregate and forward AuthZ attributes, easy to digest by SPs
- TTS Pilots → bridging SAML to ssh/x.509 and v.v. while hiding complexity

Conclusions[3]

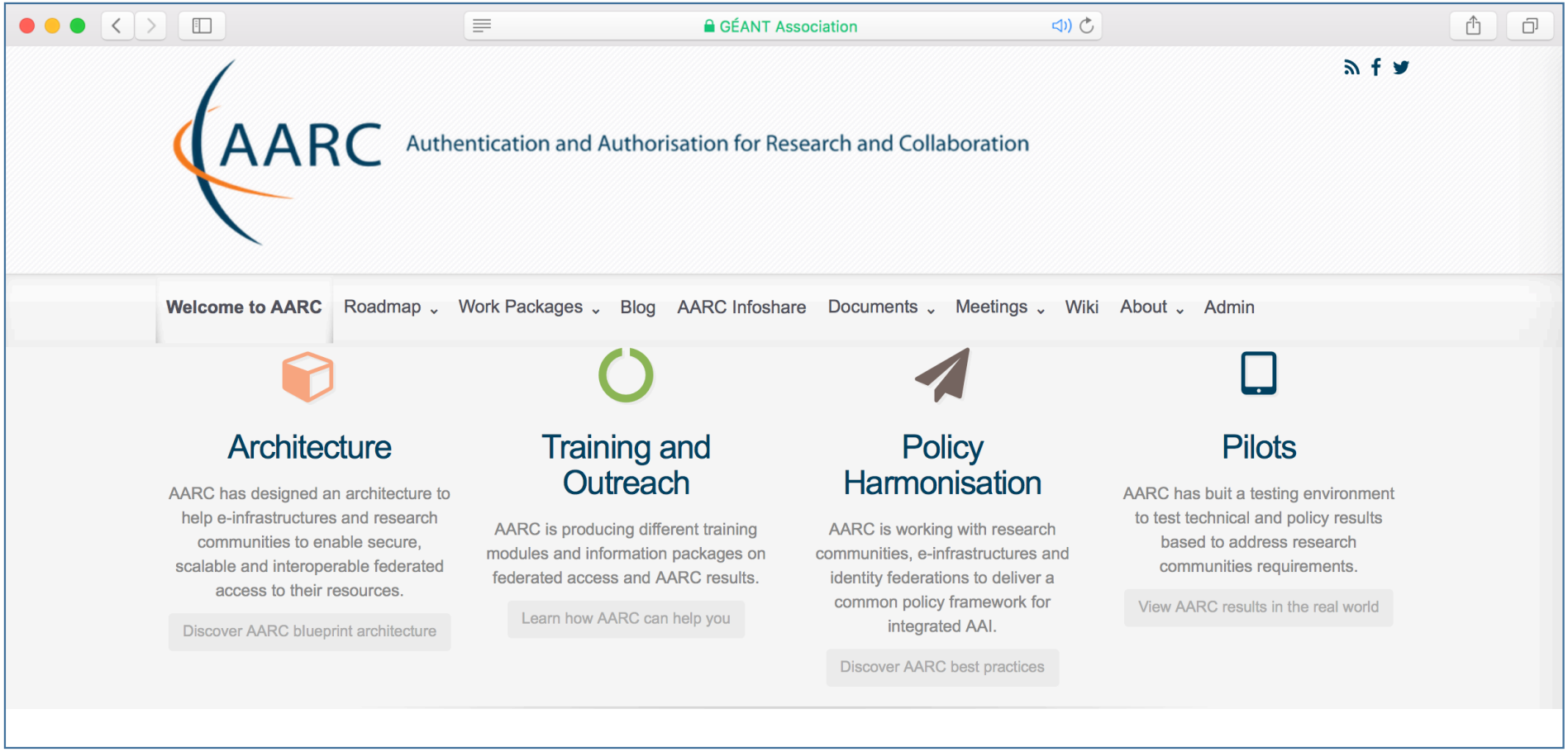
Successfully **bridged** eduGAIN NREN (SAML) world to e-infrastrure (ssh, X.509) world

Lessons Learned

- We needed this project to show the full **potential of AAI components** for **Research and Collaboration**
- Scoping and executing the **pilots** was a challenge
- Bring the communities together, speak the same language and increase mutual understanding. E.g. the **Blueprint Architecture** allowed to establish common understanding
- Engage with communities from the very beginning and have demos available to increase adoption
- Thanks to these results, AAI for research is on the radar, many e-infrastructures and research communities recognize the added value of AAI and are engaged now → **2nd edition of AARC**

AARC 2nd edition – A wide range of research communities committed

More information: aarc-project.eu,
Full list of pilots: wiki.geant.org/x/RIOjAw



Thank you

Any Questions?

http://aarc-project.eu/

The research leading to these results has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 653965 (AARC).