

The journey to knowing your users

Experiences of implementing RAF for access to LUMI EuroHPC

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About Puhuri and LUMI



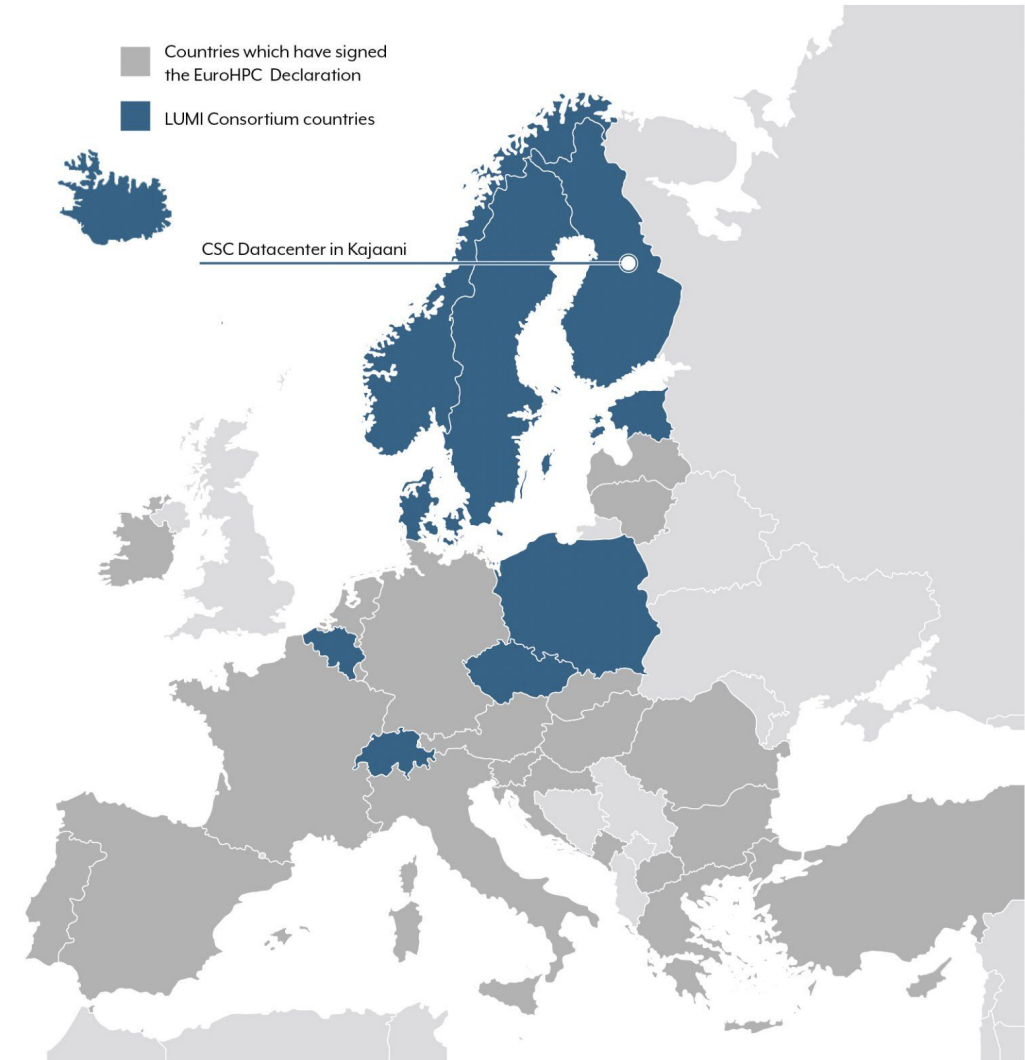


What is LUMI and Puhuri

- [LUMI](#), one of the **EuroHPC pre-exascale** supercomputers, located at CSC's data centre in Kajaani, Finland
- The supercomputer is hosted by the **ten European countries** of the LUMI consortium:

Finland, Belgium, the Czech Republic, Denmark, Estonia, Iceland, Norway, Poland, Sweden, and Switzerland

- Bringing together their unique expertise and experience, these countries together provide added value for the whole of Europe
- Puhuri is a system to facilitate easy and efficient access to high-performance computing (HPC) and related services throughout Europe





Initial requirements

Users: Researchers, industry, public sector

- Rely on the R&E federated identities in eduGAIN
- Enable existing community IdPs to connect
- Enable use of eIDAS
- Solution for industry and public sector
- Solution for users without federated identity

Authentication characteristics

- Enable Multi-factor authentication
- Enable SSH access to compute resources

Identity characteristics

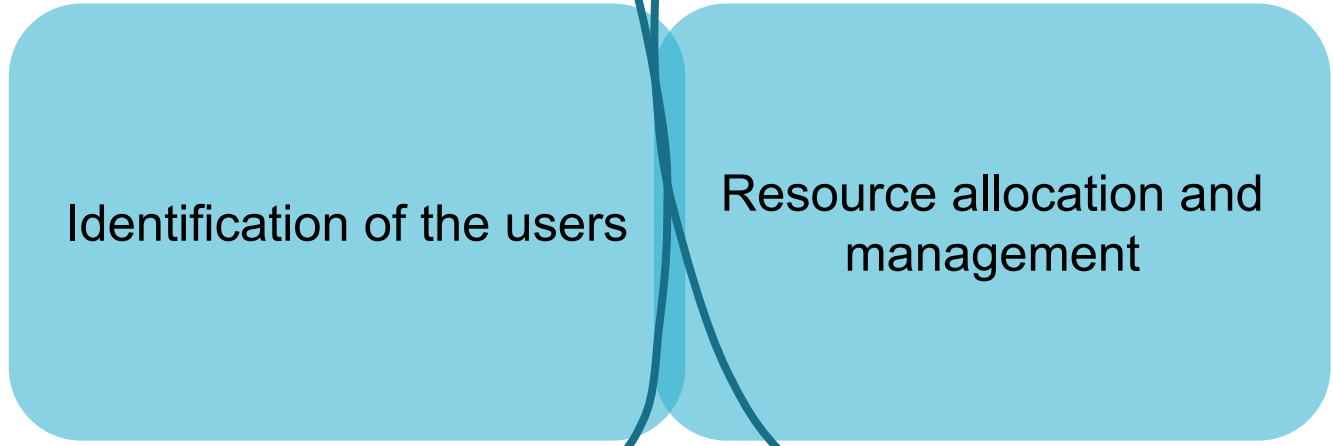
Minimum set of attributes (name, email, identifier, affiliation, organisation, assurance)

Minimum identity proofing

https://puhuri.neic.no/idp_integration/attributes/



Access control to supercomputer resources

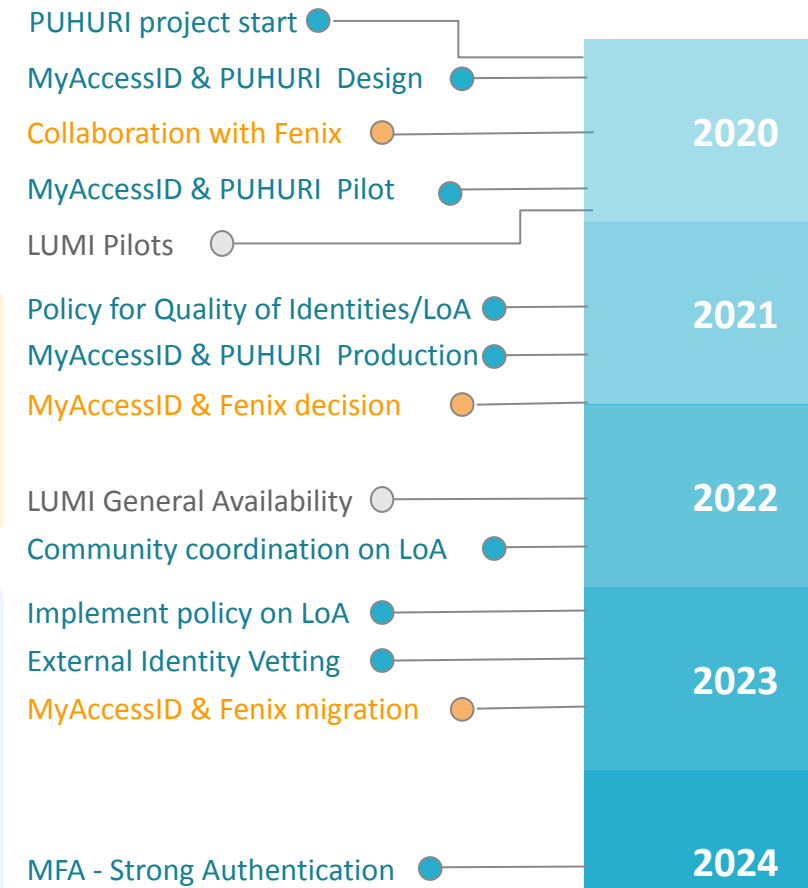
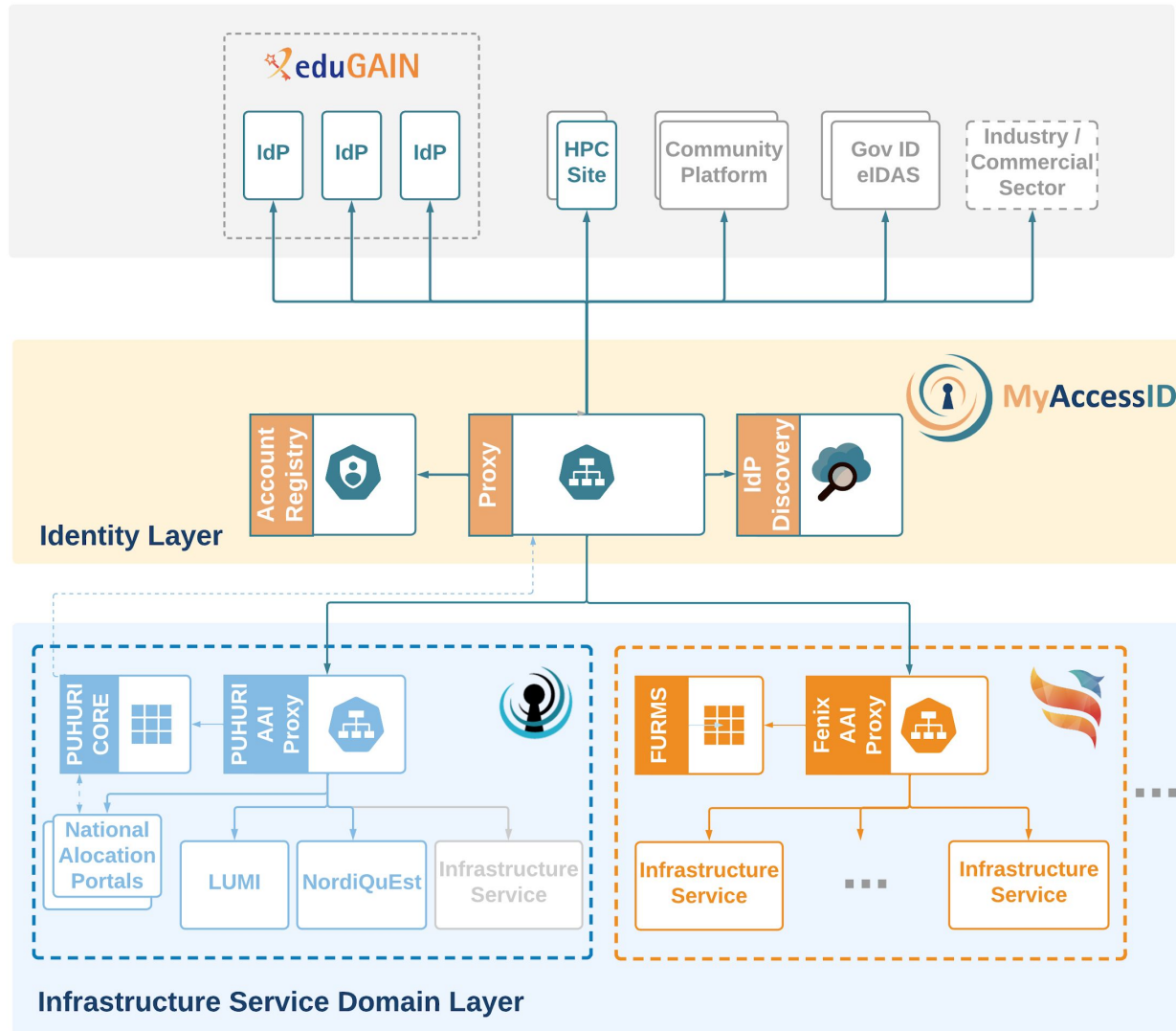


Out of scope
for PUHURI

In scope for
PUHURI



PUHURI access management and MyAccessID



Journey of the LoA Implementation





Level of Assurance and Attribute Requirements

Attribute requirements

https://puhuri.neic.no/idp_integration/attributes/

Identifier

Name

email

Affiliation

Assurance

Organisation

Level of assurance requirements

REFEDS Assurance Framework <https://wiki.refeds.org/display/ASS>

To insure sufficient **identity proofing and credential issuance, renewal, and replacement**

<https://refeds.org/assurance/IAP/medium;> or

<https://refeds.org/assurance/IAP/high>

To insure **identifier uniqueness**

<https://refeds.org/assurance/ID/UNIQUE;> or

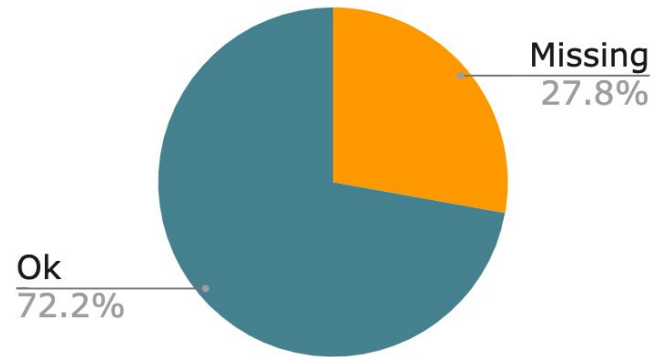
<https://refeds.org/assurance/ID/eppn-unique-no-reassign>



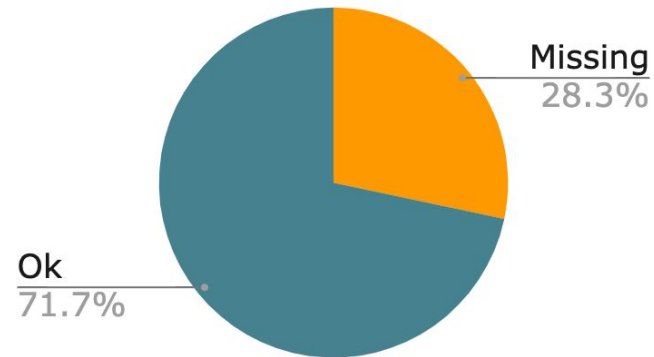
Identity Provider Attribute Release Statistics

<https://wiki.geant.org/display/MyAccessID/IdP+Status+Report>

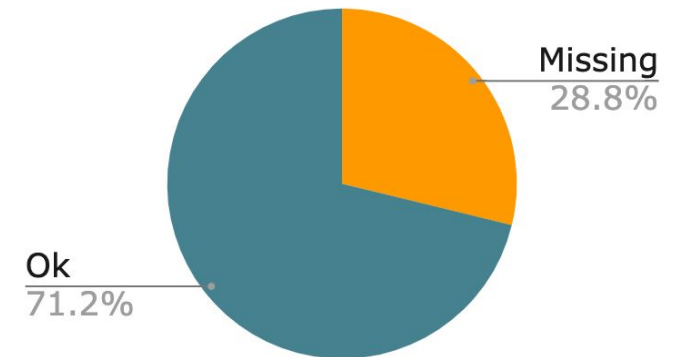
Name



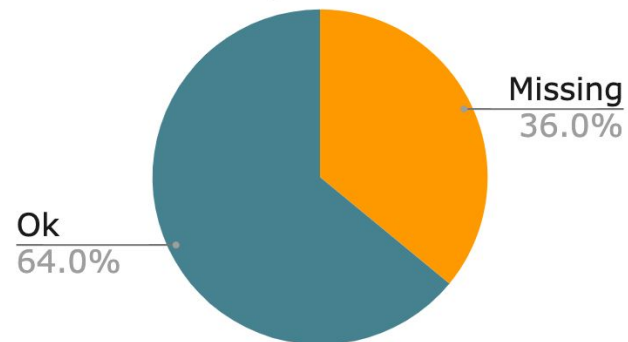
Mail



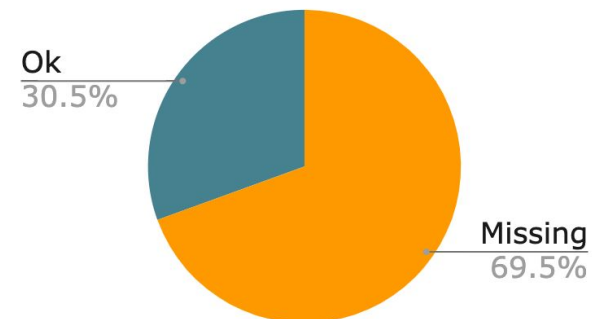
eduPersonScopedAffiliation



SchacHomeOrganisation



eduPersonAssurance

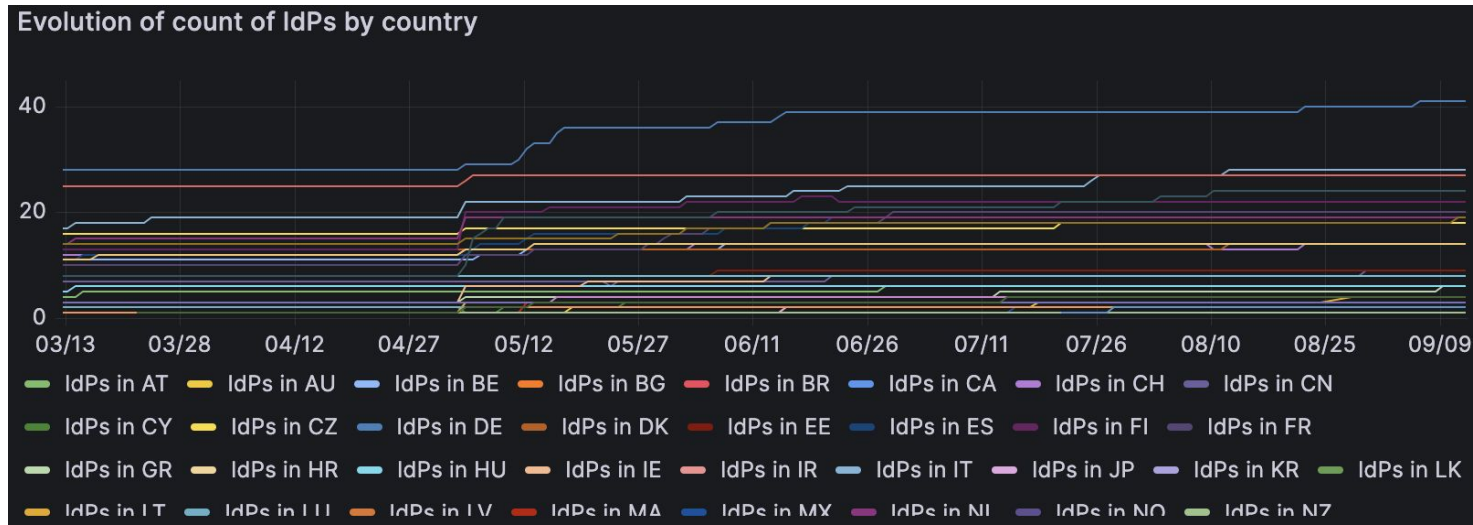




European Identity Provider Attribute Release Statistics

187
IdPs

27
LoA
Med./High

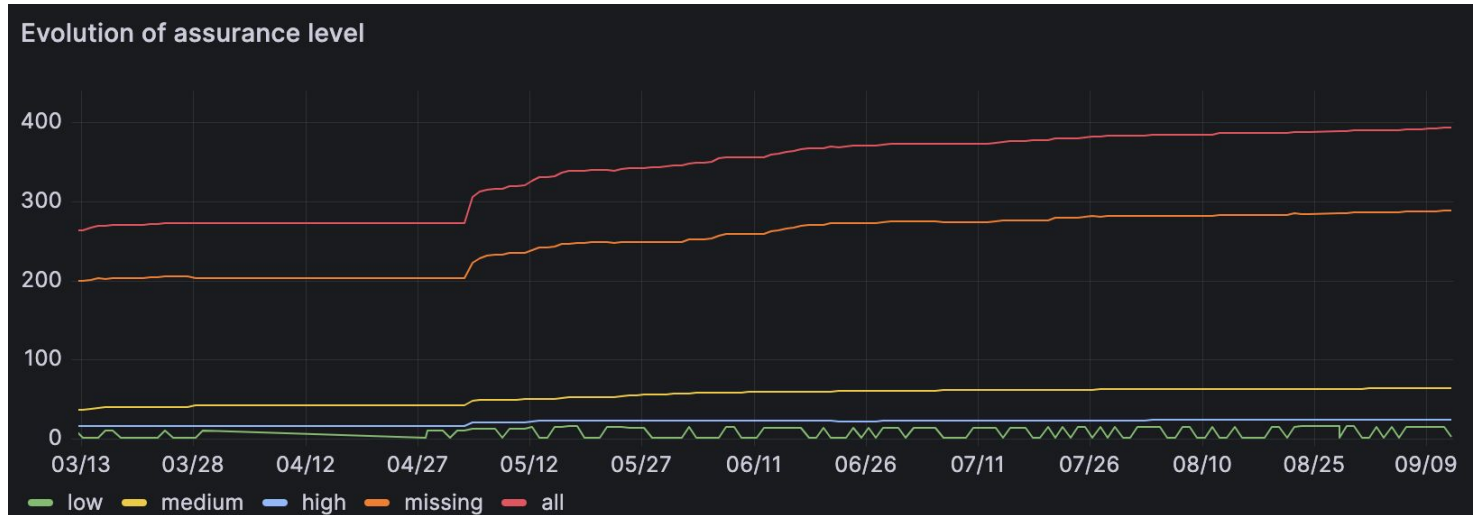


33
Countries

393
IdPs

>2k
Users

88
LoA
Med./High





Level of Assurance implementation plan and... reality

Plan

LoA requirements socialised within LUMI consortium and wider

MyAccessID warning message 1. March deadline

Start to work on alternative solution: Identity vetting

LUMI requirements translated into LoA

Regular coordination with federation operators

Deadline changed for later in 2023

Identity vetting through eduid.se implemented

LoA policy enforced

2021

2022

2023

Reality

Well accepted, half of the partners declared support by their federation already

Well received, triggered internal discussion to adopt LoA in several federations

LoA tracking shows about 15% adoption

Users react

LUMI reacts

LoA tracking shows improvement 23% adoption



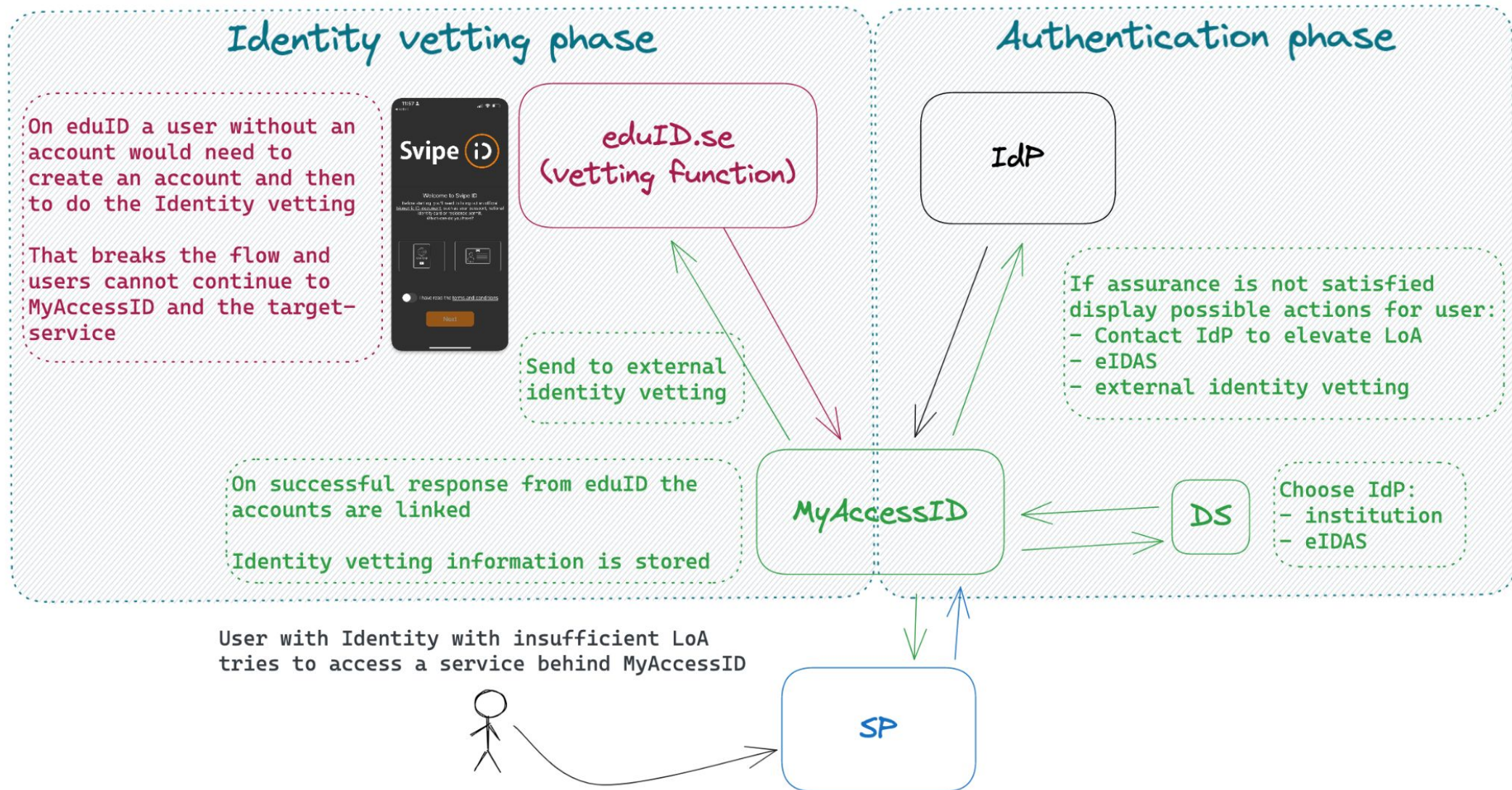


Challenges with implementing RAF 1.0

- There is no signaling of IdP capabilities
 - Difficult to make decision about enforcement of LoA early on
 - Difficult to re-inforce LoA later on
- It is very difficult for IdP admins to interpret RAF 1.0 LoA medium and high requirements into operational decisions, and even for federation operators to support them
- Access to EuroHPC is high profile but low volume use case, not enough traction



Flow with external Identity Vetting



Thank you for attention!

Questions?

