



SEE Identity Federation Training

GÉANT Trust and Identity Services

March 30, 2021

Slides v1.4

www.geant.org



Agenda

- GÉANT
- GÉANT Network
- GÉANT Trust and Identity Services





Provides an open, innovative and trusted information infrastructure for the European knowledge economy and to the benefit of society worldwide



A membership Association for Europe's National Research & Education Networks (NRENs) GÉANT Association



Coordinates and participates in EC-funded projects

Under Horizon 2020 the financial instrument for implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness



Operates a pan-European e-infrastructure with connections to all regions of the world
GÉANT network



Manages a portfolio of services for research & education
EduX



Organises and runs community events & working groups
TNC, task forces & special interest groups





GÉANT membership

NATIONAL MEMBERS

1 per country

REPRESENTATIVE MEMBER

NORDUnet

RHnet (Iceland)

SUNET (Sweden)

UNINETT (Norway)

CSC (Finland)

DeIC (Denmark)

ASSOCIATES

ADVA Optical Networking

Alcatel-Lucent

Ciena Corporation

CERN

Cisco Systems

Coriant GmbH

ECI Telecom GmbH

EMBL

European Space Agency

Google UK Ltd

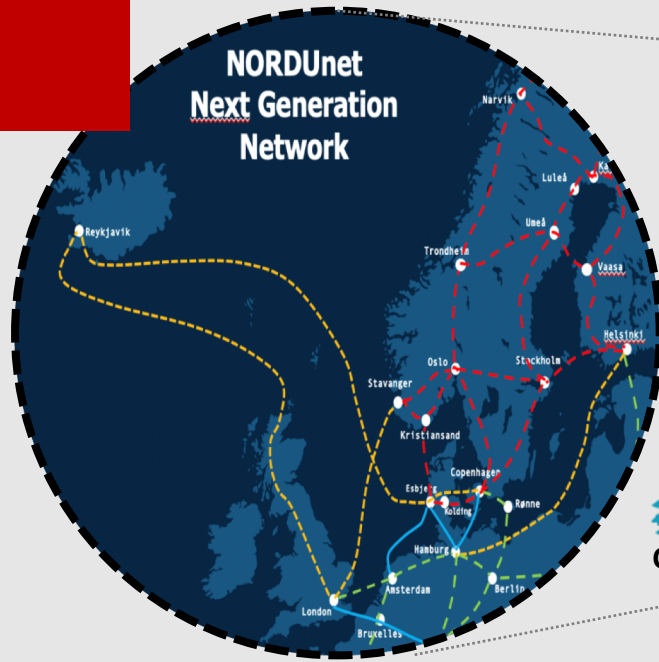
Level 3 Communications

ownCloud

Tata Communications



**Planned network
(not definite!)**





GÉANT Trust & Identity services

Protecting privacy and enabling secure access to services



Secure global roaming WiFi access service, available in 100+ territories



Inter-connects identity federations around the world, simplifying access to content, services and resources ~ 3500 identity providers accessing services



Lightweight student validation service, protecting student privacy



Making managing virtual teams easy



<https://www.eduroam.org/>



eduroam

Linking global R&E community



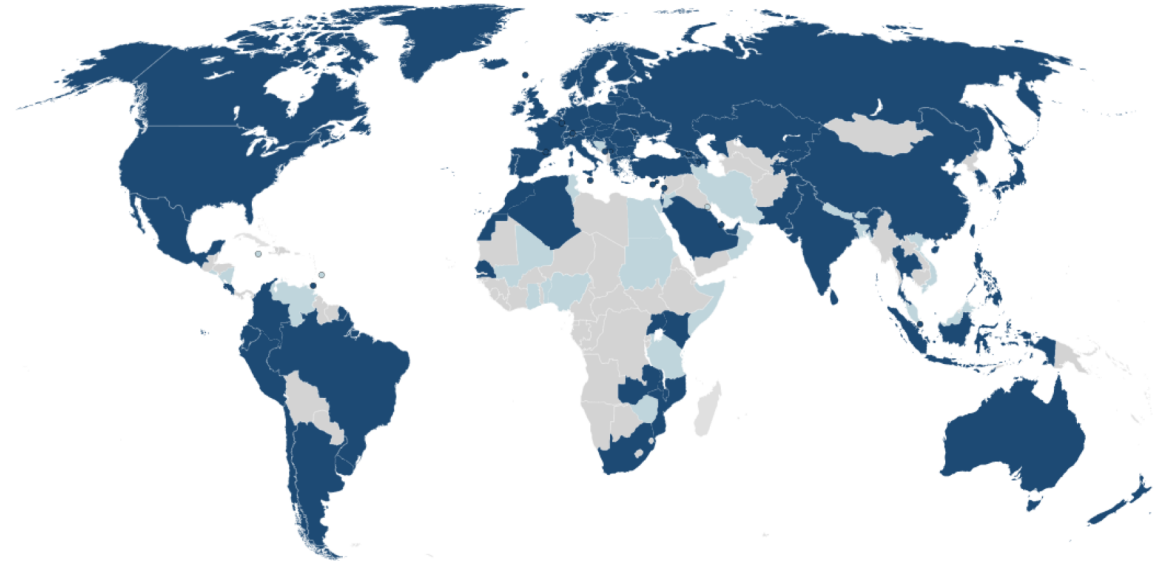
Secure global roaming infrastructure for research and education: users **authenticate locally and get online in eduroam-enabled locations**

Global service **across 100+ territories**

More than **3 billion international authentications and counting**

A worldwide success story

eduroam has been an amazing success story and an example of research and education collaboration



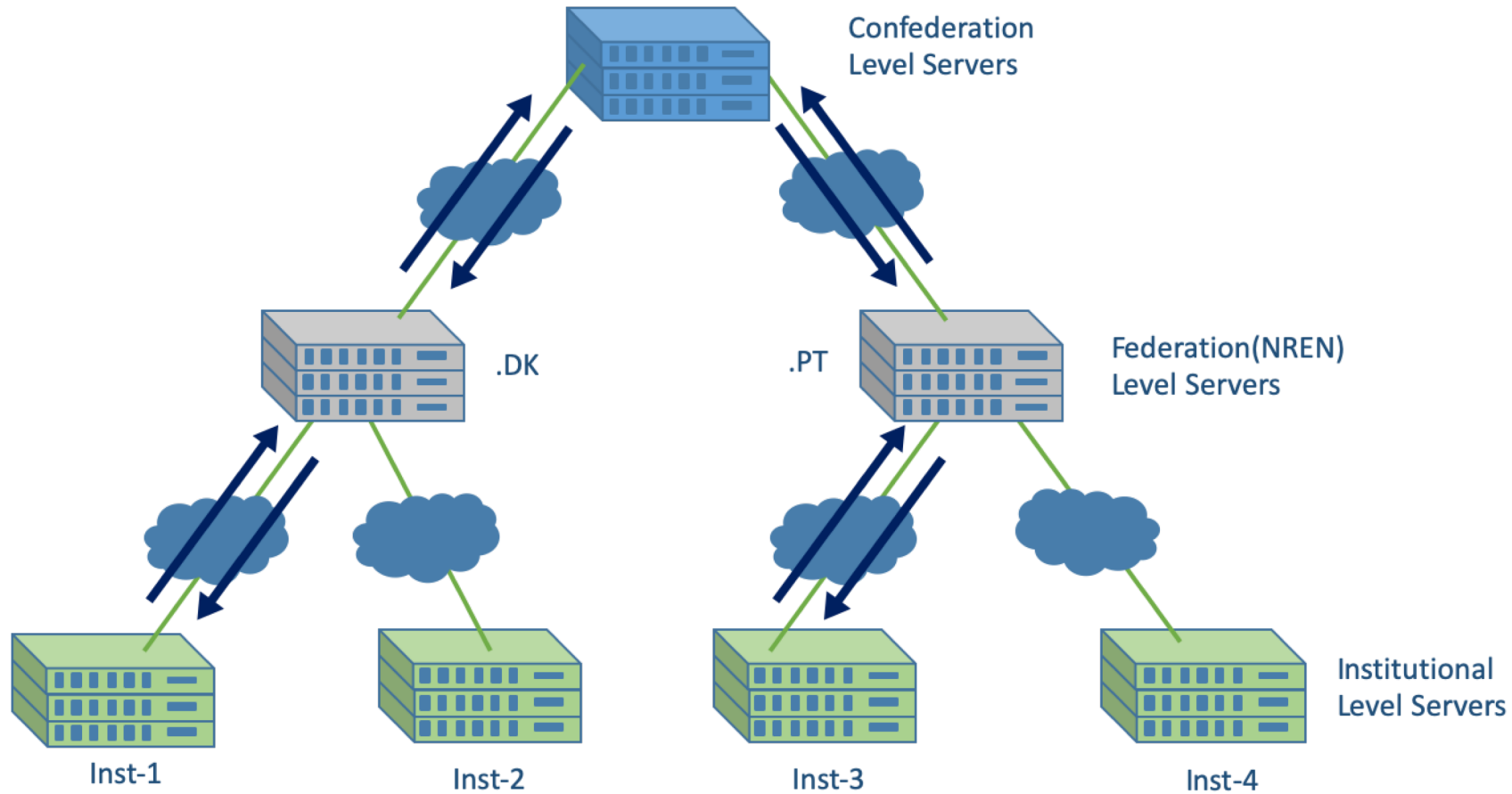
NEW

eduroam Managed IdP service to simplify onboarding of smaller institutions
Open for Institutes worldwide

eduroam.org

[@eduroam](https://twitter.com/eduroam)

Hierarchical RADIUS-based authentication infrastructure



tom@inst-1.dk



supporting services

eduroam monitor and database

Monitor the status of the RADIUS servers and related infrastructure

<https://monitor.eduroam.org/>

Configuration Assistant Tool - CAT

Configure users mobile device to use eduroam

<https://cat.eduroam.org/>

eduroam managed IdP

Service to simplify onboarding of smaller institutions
Open for Institutes worldwide

<https://hosted.eduroam.org>



eduGAIN

<https://edugain.org/>

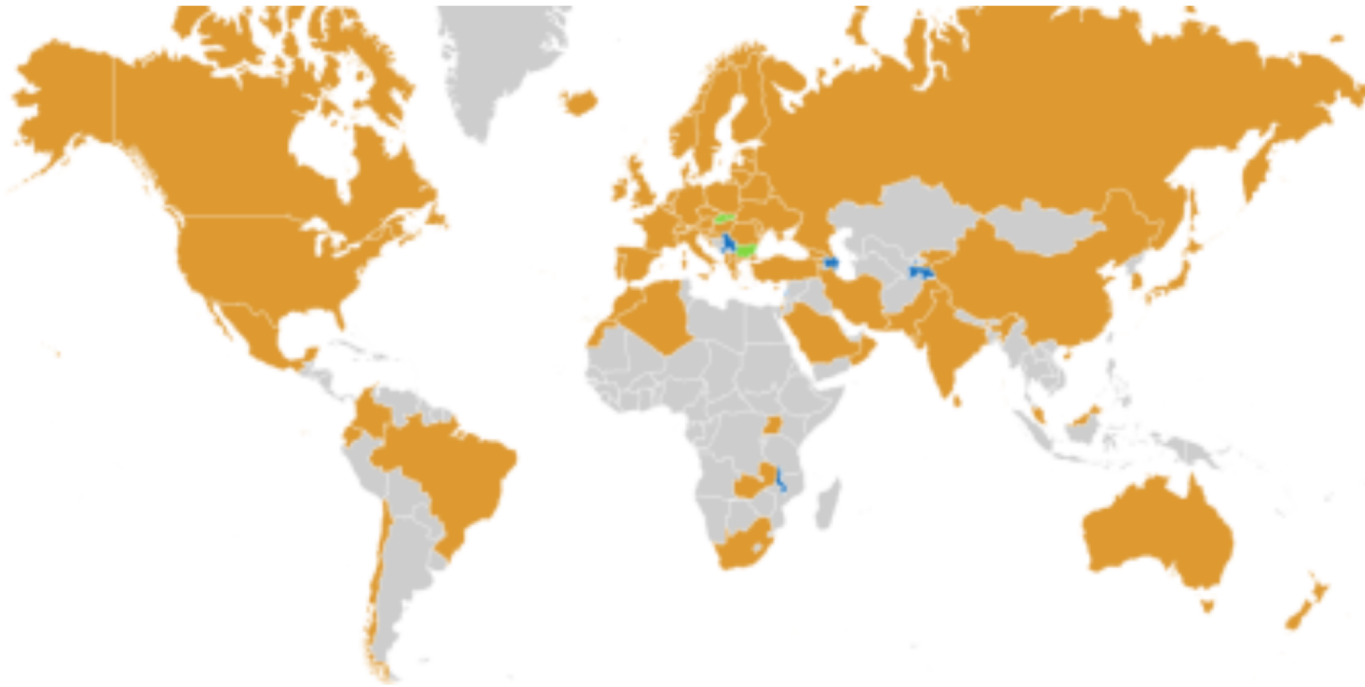


The inter-federation service



eduGAIN inter-connects Identity Federations enabling Identity Providers and Service Providers of different federations to authenticate users worldwide:

- Expands the user base to tens of millions
- Enables national service providers to offer their service worldwide without per-country agreements
- Enables secure Single Sign On services to global research and educational



■ Participants ■ Voting-only ■ Candidate

March 2021:
* 71 Active Federations
* 7 Candidate Federations
* 7417 entities

REFEDS Production Federation Map



<https://refeds.org/>

<https://technical.edugain.org>

Security

eduGAIN Support
eduGAIN Security Incident Response

Metadata

eduGAIN Metadata Distribution Service (MDS)
eduGAIN Validator
eduGAIN Entities Database
eduGAIN Technical site (and APIs)

Attribute Release

eduGAIN Connectivity Check (ECC)
eduGAIN isFederated Check (EIFC)
eduGAIN Access Check (EAC)
eduGAIN Attribute Release Check (EARC)
eduGAIN Code of Conduct Monitor (ECOCCM) monitor
Sirtfi contact check service
F-Ticks based eduGAIN statistics collection and presentation service

Deploy

Campus IdP Toolkit (ansible playbook to install an IdP)
Federation-as-a-Service (FaaS)



<https://eduteams.org/>

A service to enable use of federated identity management in research & academic collaborations

Partner for any e-Infra or Research Infra including “long tail”, informal groups

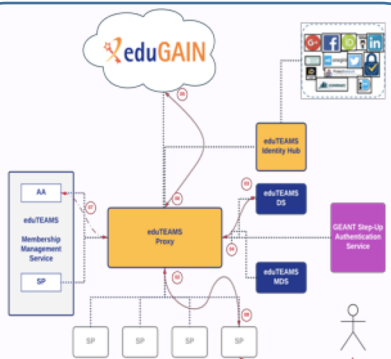
Components

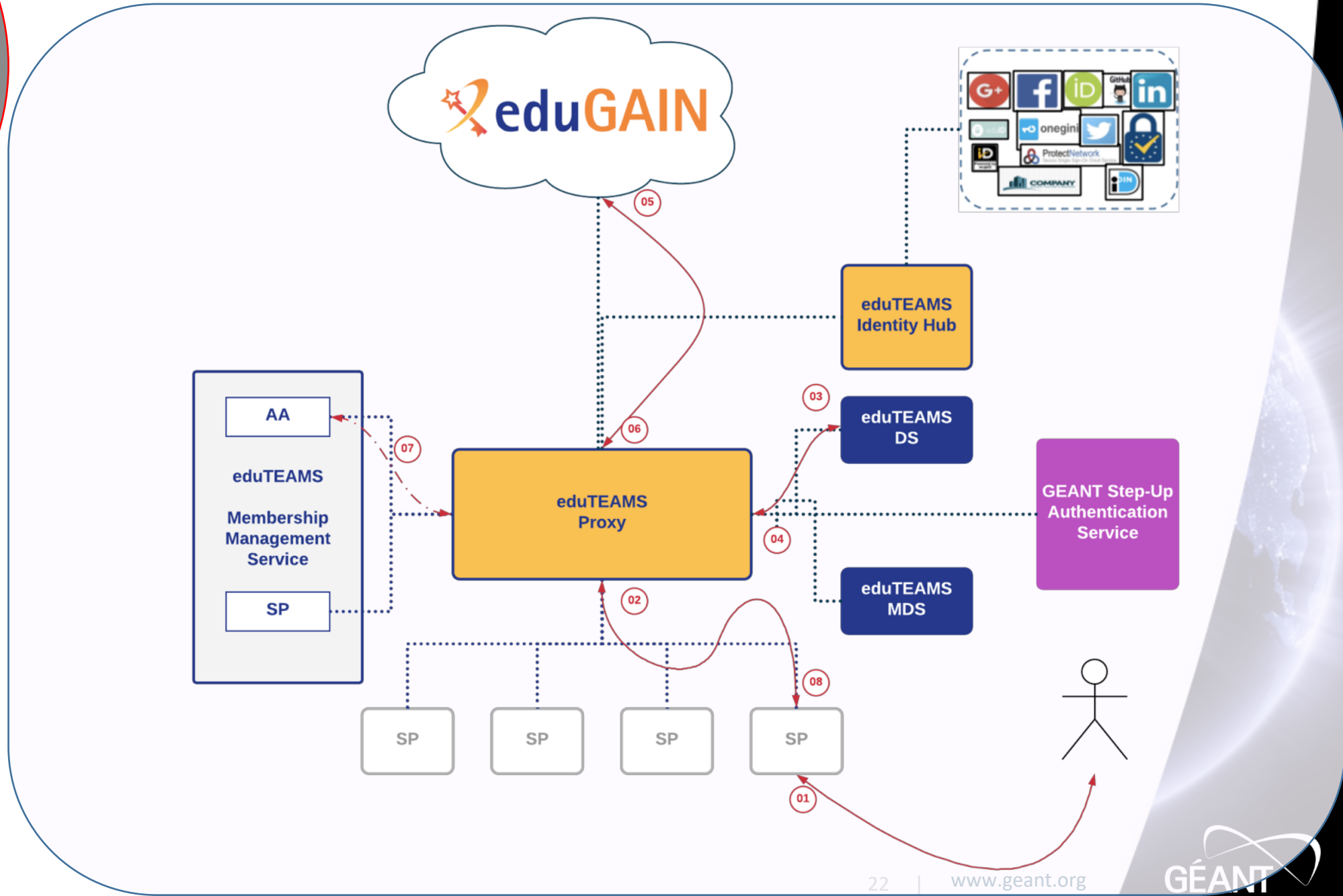
- Proxy & Identity Hub
- Membership Management service
- Discovery Service
- Metadata Service
- **Second Factor Authentication (Pilot!)**

Characteristics

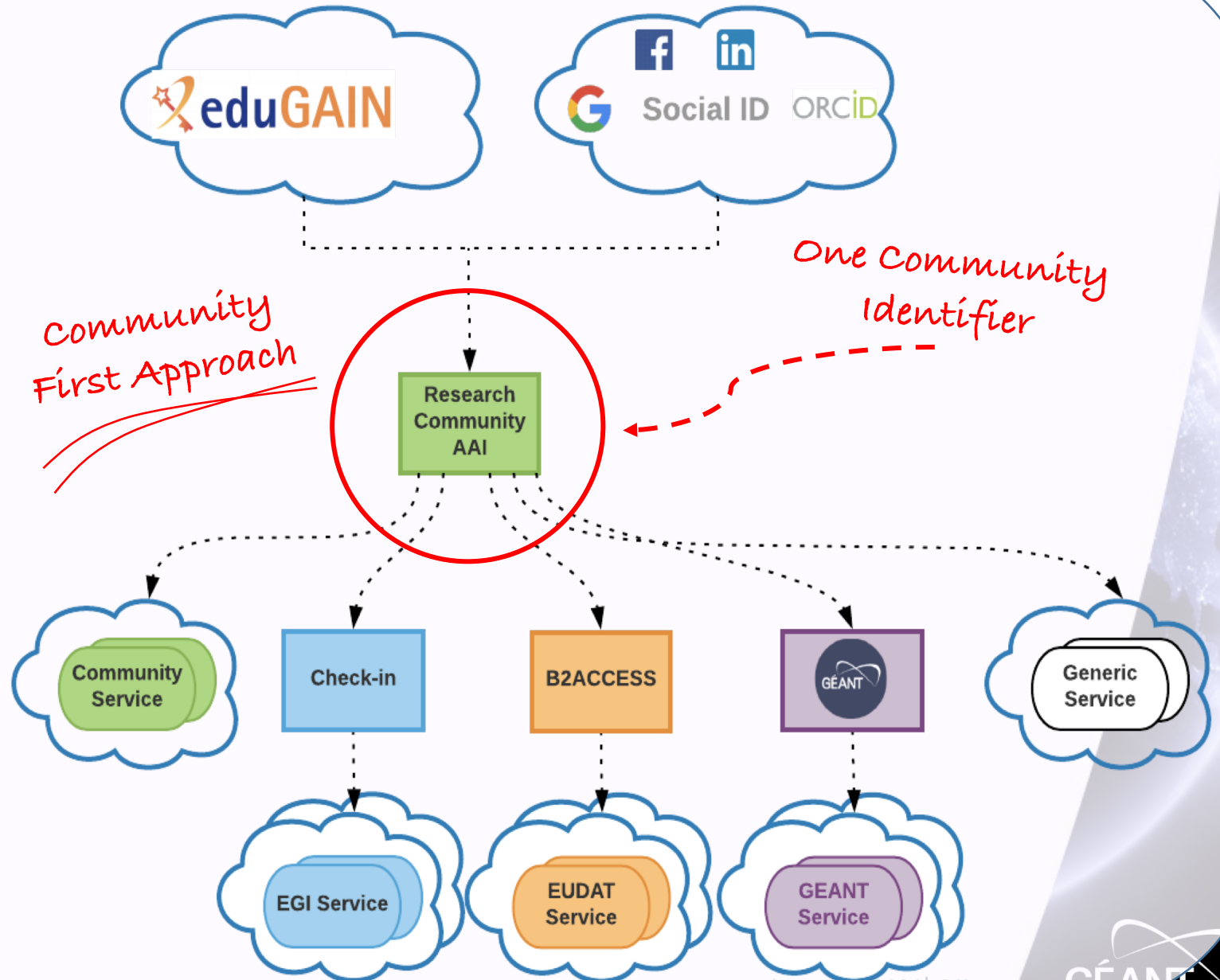
- Full implementation AARC Blueprint Architecture
- Single- and multi-tenant options
- Sustainability and strategic partnerships

- Users sign into services with their **community identity** via eduTEAMS
- Users **register once and access any service** (available to their community)
- Reduces complexity for Service Providers by providing **one integration point for all services**
- Integration with **GÉANT, EOSC and other communities and/or eduGAIN services**





European Open Science Cloud





*In*Academia

<https://inacademia.org>



What is InAcademia?

- Service to validate whether an end user is affiliated with academia

The real-time, digital equivalent of asking a student to show their student card to access or buy discounted or specialist services and products

- Builds upon eduGAIN to consume federated academic identities
- End users authenticate in the same way as to other federated services
- Provides merchants with a quick, easy, reliable and secure way to verify academic identities
- Reduces burden for Identity Providers and Federation Operators in onboarding service providers, especially the long tail
- It is privacy preserving and helps with GDPR compliance





What problems are we trying to solve?

- For many organisations offering simple services, joining R&E identity federations presents a barrier. Such organisations have difficulties to deal with complex and diverse environment in eduGAIN
- Identity federations need to invest effort to support them in order to make use of federated identity
- Enhance privacy by minimising the release of personal data to third parties

InAcademia deals with the complexity of the eduGAIN ecosystem and presents a unified interface to specific services



What opportunity does this bring?

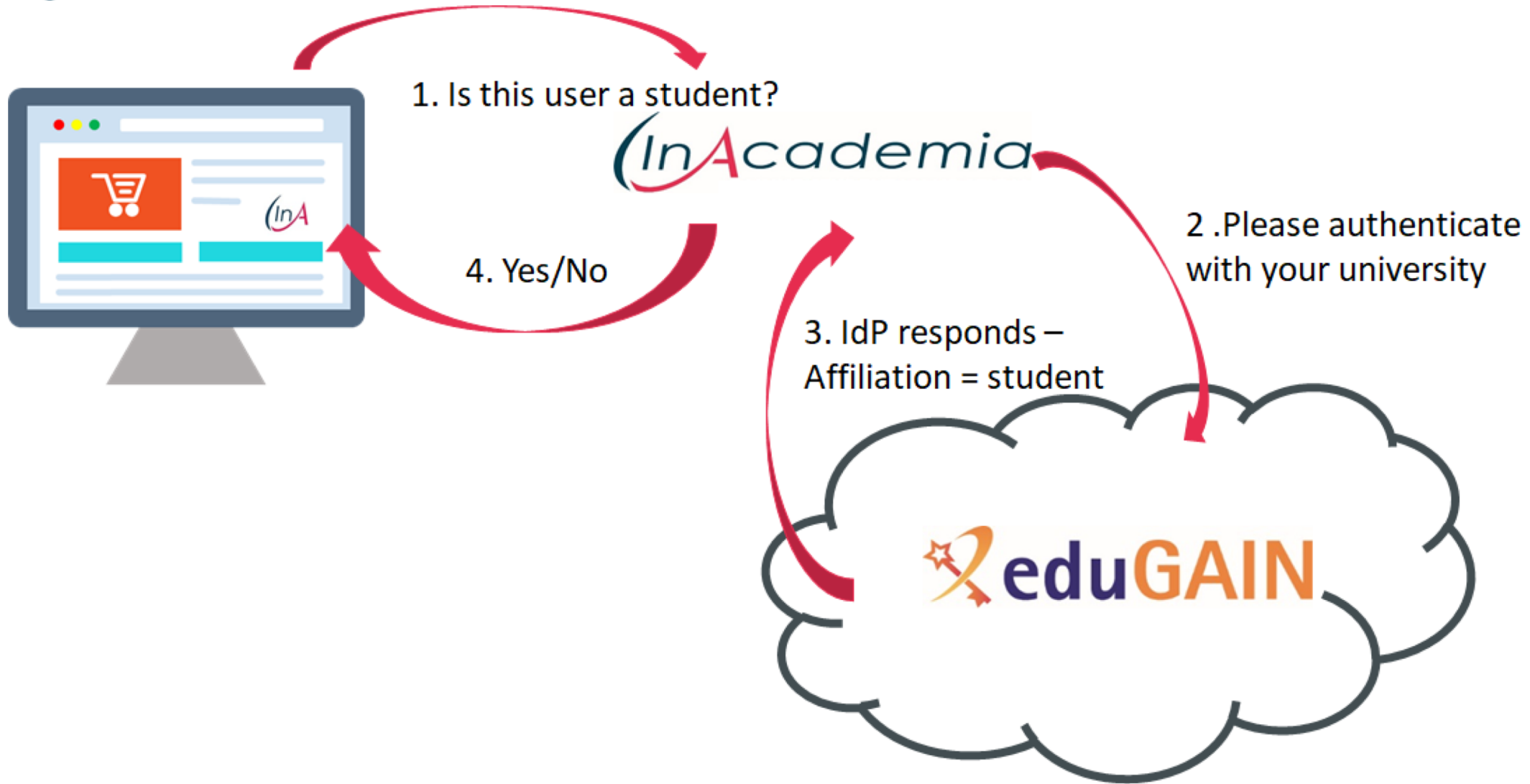
- R&E Identity federations and eduGAIN established to support the R&E community
- Academic identity is now global and has a value to the non-R&E world
- This enabled commercial organisations (merchants) to build successful businesses from the value of the academic identity
- These companies make significant profit without contributing back to the community from which the capability comes



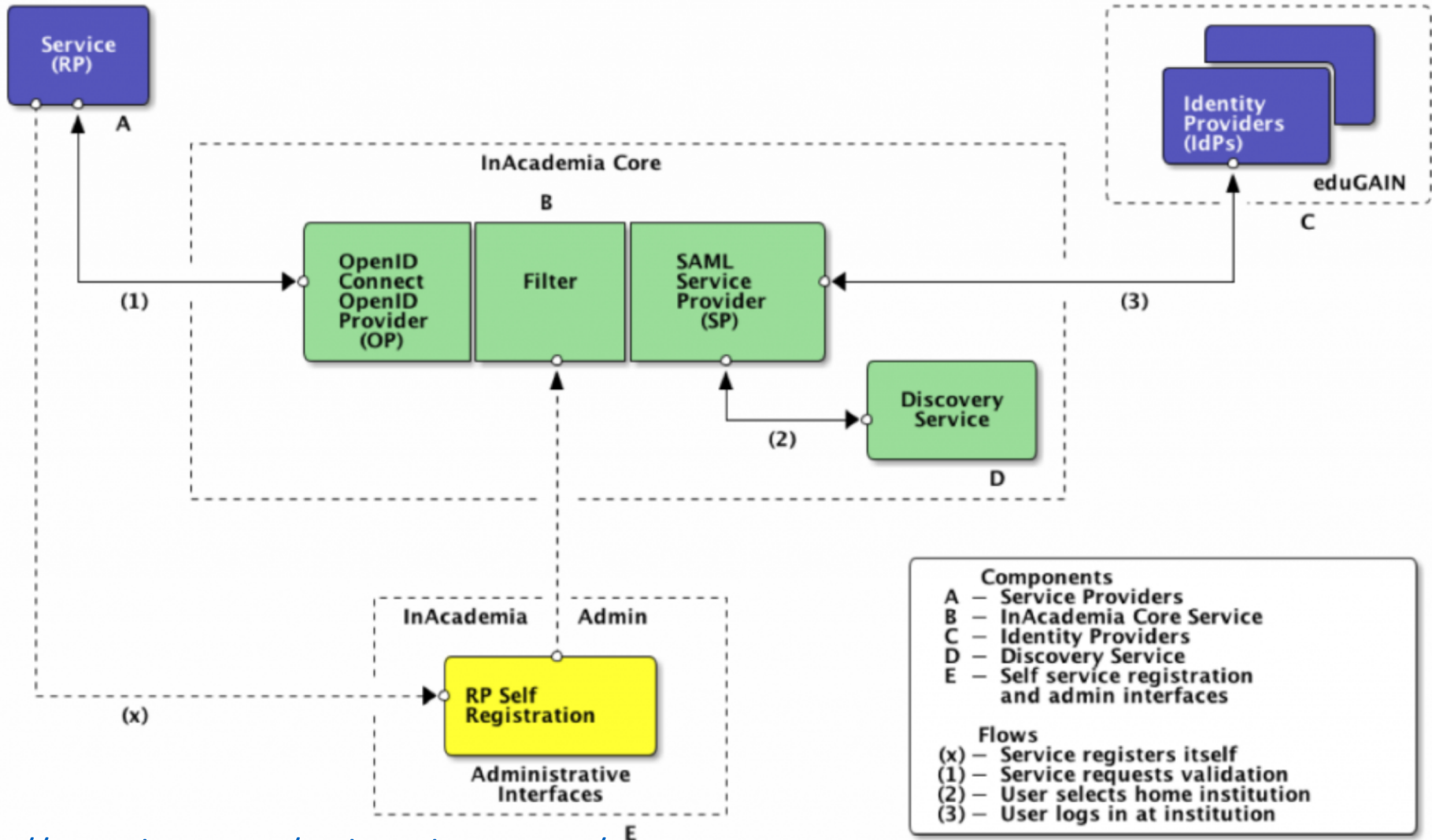
Target Audience

- Potential customers:
 - **third-party merchants (service providers) outside the GÉANT community's existing customer base** who require only a simple 'yes/no' validation response
 - **not marketed towards students**, support services are only offered to the merchants themselves
- Such third parties could be **either**:
 - **non-commercial** (therefore, eligible to use the service free of charge), **or**
 - **commercial/retail organisations** (who would be charged to use the service)

To serve these markets we introduce two editions: 'commercial' and 'community'



InAcademia service architecture



Source: <https://inacademia.org/technical-overview/>





Value Proposition for R&E Identity Federations

For Federation Operators InAcademia provides:

- a **lighter weight option for Service Providers (SPs)**: entry-level, low-maintenance alternative using federated identity
- **extends eduGAIN**, adding value to the existing ecosystem
- **incentive for identity providers to join eduGAIN**
- **reduction in support load**: we take care of the administrative, technical and support burden of onboarding services

Leads to greater number & variety of services available to users



Value Proposition for Institutions

For Institutions InAcademia helps to:

- provide a **privacy preserving** way to prove affiliation
- **hassle free** for students
- **reduce GDPR risks** due to limited attribute release ('Yes/No' attribute)
- **add** value to the existing ecosystem
- **reduce support load**: we take care of the administrative, technical and support burden of onboarding services

Leads to greater number & variety of services available to users



Summary

- InAcademia is a service to validate whether an end user is affiliated with academia
- Has value for NRENs, Federation Operators, IdPs, SPs, and end users
- Two editions: Commercial and Community
- First the business pilot has been conducted on production grade infrastructure and did due diligence on business and legal requirements
- Proposed pricing and roll out strategy
- The service is currently operational in production
- Latest updates: French Federation (FER) joined (last week)
- Current member federations:
 - SURconext NL, DFN-AAI DE, WAYF DK, SIR ES, FER FR



To provide an open, innovative and trusted information infrastructure for the European knowledge economy and to the benefit of society worldwide

Thank you

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GEANT **Research Engagement and Support Team**

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