FERMILAB-SLIDES-18-105-CD

Centralized Authorization in Non-Uniform Federation

Communities of Interest

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Centralized Authorization

- Why do we care?

- What should we do?

(Semi) Open Science

Scientific process is based on free exchange of ideas.

Scientific collaborations require us to be more **open** than ever, while emphasis on cyber security puts pressure to become more **closed off**.

The role of IT is to enable exchange of ideas and data balanced with security concerns.

Non-Scientific resources

Exchange of information happens and is necessary in many other areas of Laboratory operations

Global collaboration era

- Centro Brasileiro de Pesquisa...
- Aligarh Muslim University Hor...
- Fermilab
- University of Florida
- University of Geneva
- Universidad De Guanajuato
- Hampton University
- Massachusetts College Of Li...
- Indian Institute of Science Ed...
- Northwestern University
- Oregon State University
- Otterbein University
- Pontifical Catholic University ...
- University of Pittsburgh
- University of Rochester
- Rutgers–New Brunswick
- Tufts University
- University of Minnesota Duluth
- National University of Engine...
- Universidad Técnica Federico...
- Ewell Hall
- University of Oxford
- University of Mississippi
- University of Pennsylvania
- University of Wrocław

MINERVA collaboration

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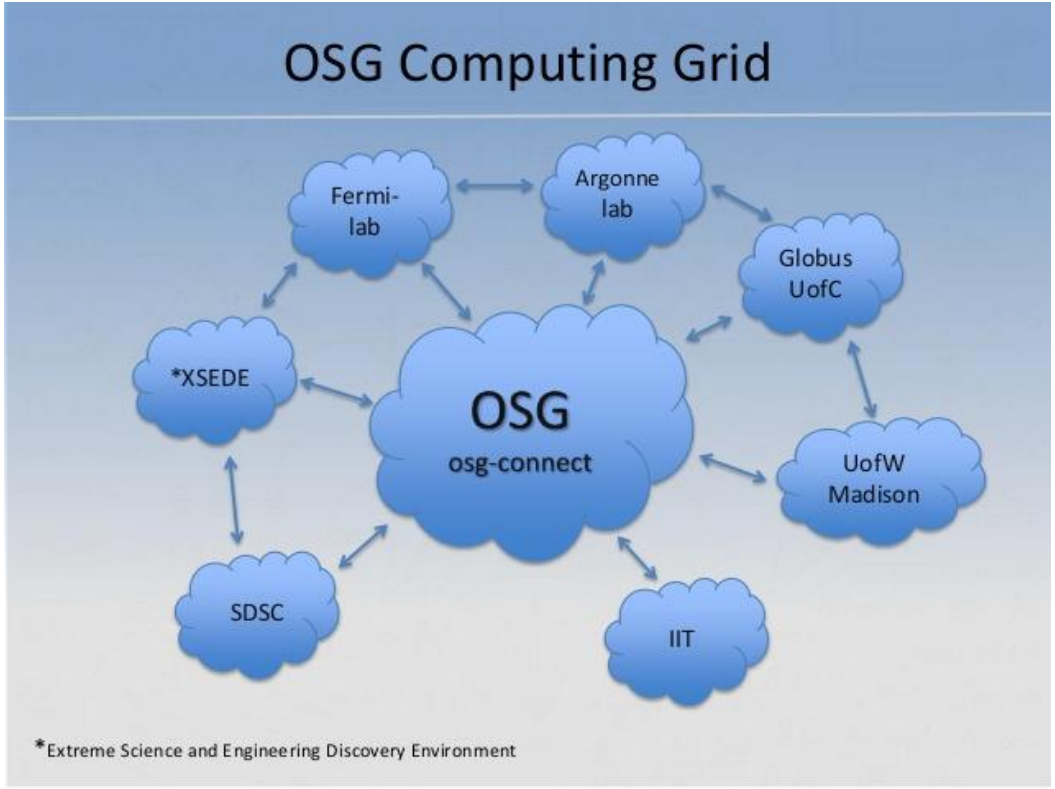
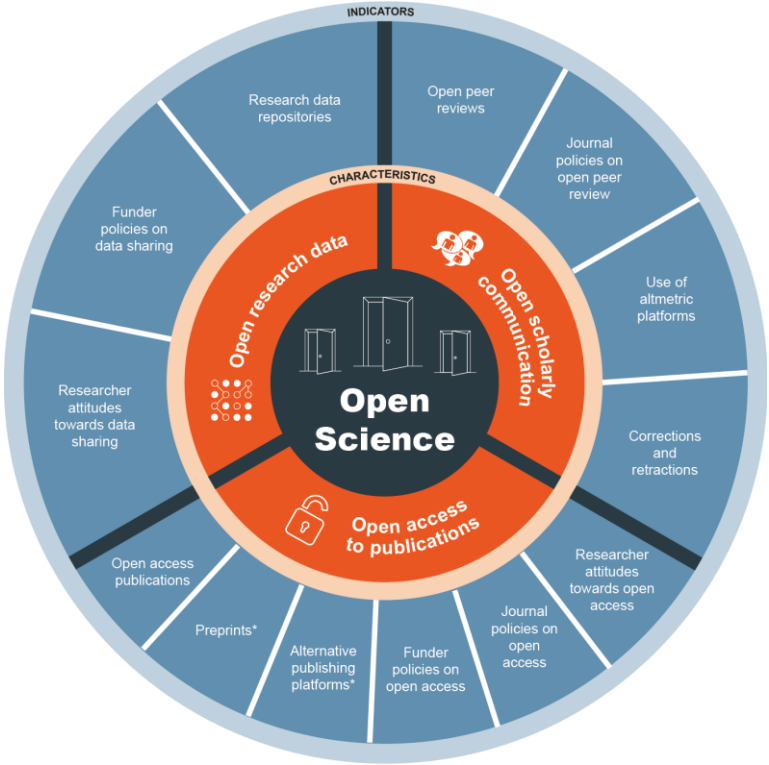
Global collaboration era





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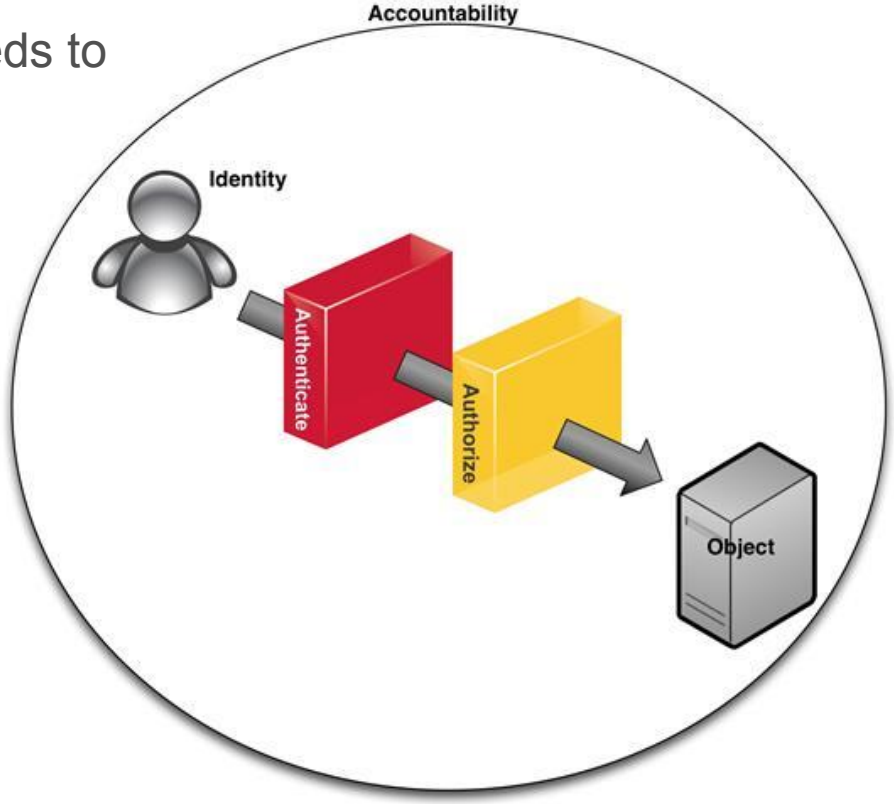
Access = Authentication + Authorization

Access **always** needs to be managed



Even open science is not 100% open

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On Premise => More Control

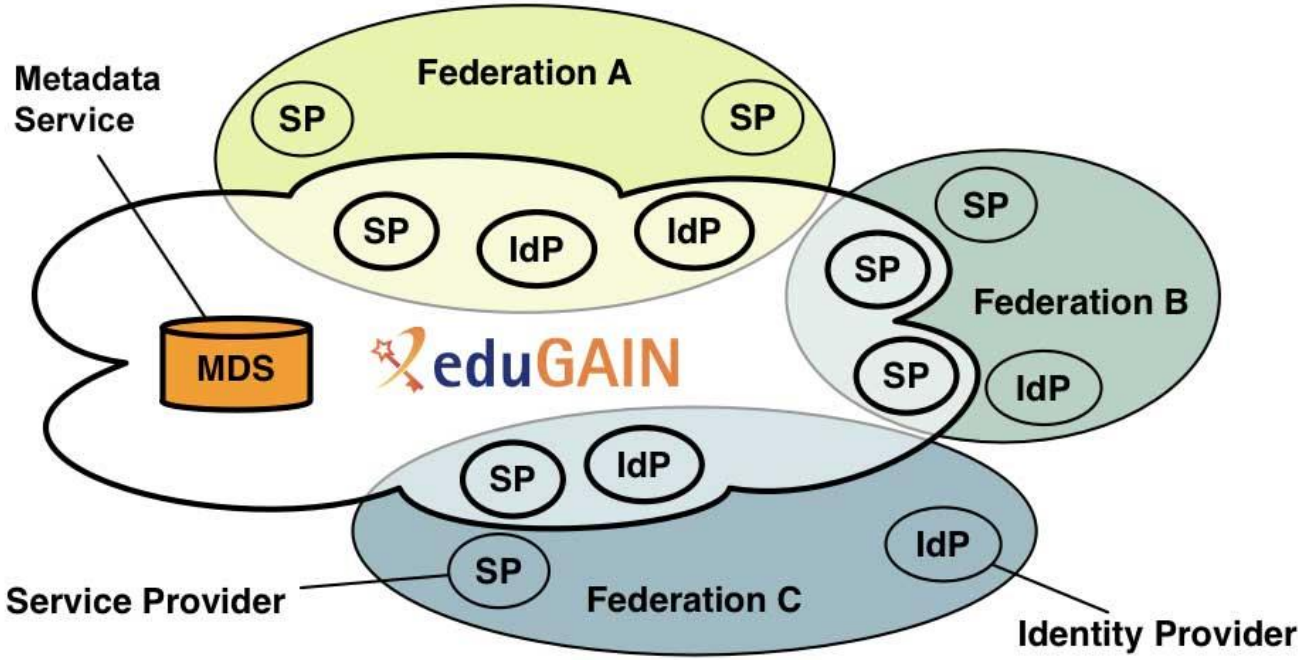
- On premise authentication
  - Typically Single Sign-On
  - Maybe LDAP
  - …
- On premise authorization
  - Active Directory Security groups
  - Individual Service Provider's Database
  - Identity Management
  - …

On Premise => Constraints

- Users don’t want to maintain another set of credentials
  - Passwords
  - Usernames
  - Registration process
- Admins don’t want to maintain another set of credentials
  - Expirations dates
  - Source of truth
  - HR involved in registration process
  - Short lived accounts
  - Price?

Federation

Each person is uniquely identified within organization and within Federation



Federations in eduGAIN	
Members	51
Voting-only Members	5
Candidates	13
Entities in eduGAIN	
All entities	4654
IdPs	2711
SPs	1947
Standalone AAs	6

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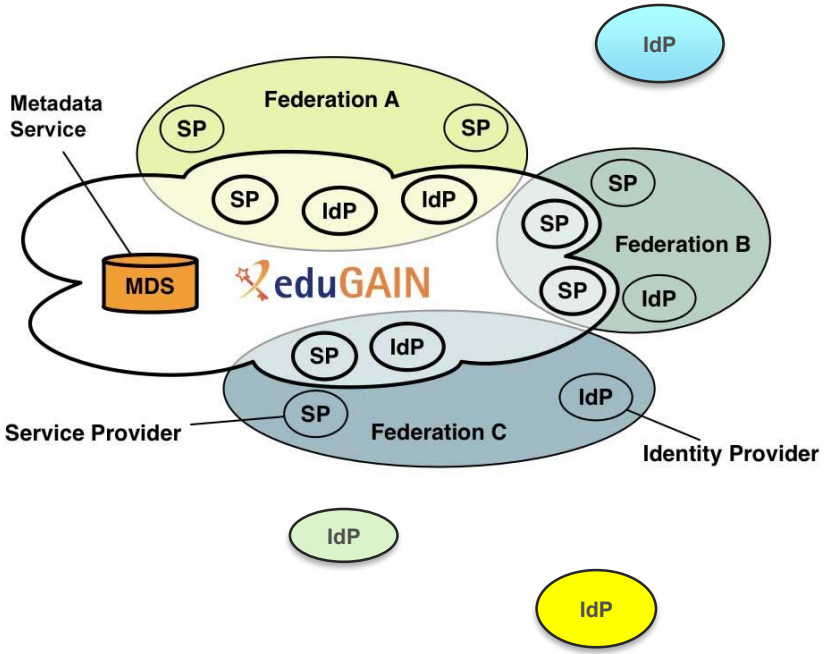
Federation

Invaluable collaboration tool!

- Placing every SP in federation is not practical
- Each SP maintains authorization data?
- Not every IdP is *in* Federation



Are there possibilities here for centralized authorization?

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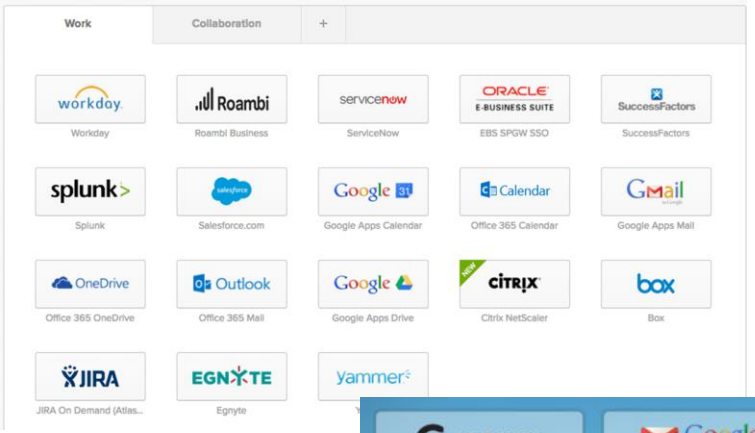
Identity and Access Management products



Typically

- Portal style
- Combine Authentication and Authorization
- More useful in self contained organizations

Some do integrate with federations

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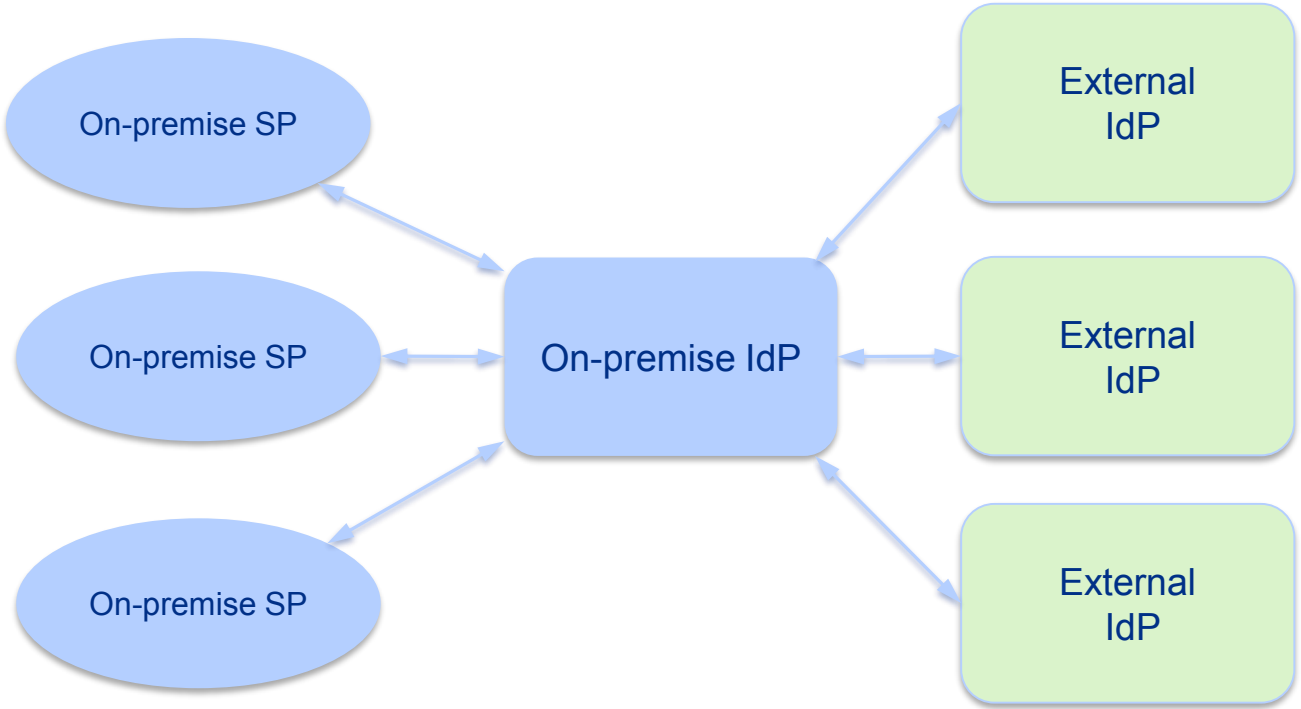
Federation Hub

This looks more centralized from Authentication point of view.



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What should we do?