



cirrus identity

# FIM4R Talk

## Providing Solutions to Collaborations



Ask:

Given your experience in working with and supplying solutions to all kinds of collaborations, would you be willing to give a presentation on status and challenges you see that especially smaller collaborations face ?

- Cirrus Identity Experience in the field over the past decade +
- [InCommon Federation Proxies Working Group](#) (which leveraged the AARC blueprint as reference)

# Different kinds of proxies

- Infrastructure
- “Community”

There are many different types and sizes of communities with very different audiences and needs

- Level of assurance
- Attribute persistence and manipulation
- User experience
- And more

# Brief Background of Cirrus Identity's experience in the field

**Cirrus Identity is probably most  
known for the Cirrus Bridge**

**Connect commercial IdPs to multilateral trust  
frameworks**

# Cirrus Identity Enterprise Bridge

**Service  
Providers /  
Applications**

Multilateral  
federated  
SAML Applications

Multilateral SAML Authentication



SAML Bridge

**Identity  
Provider**



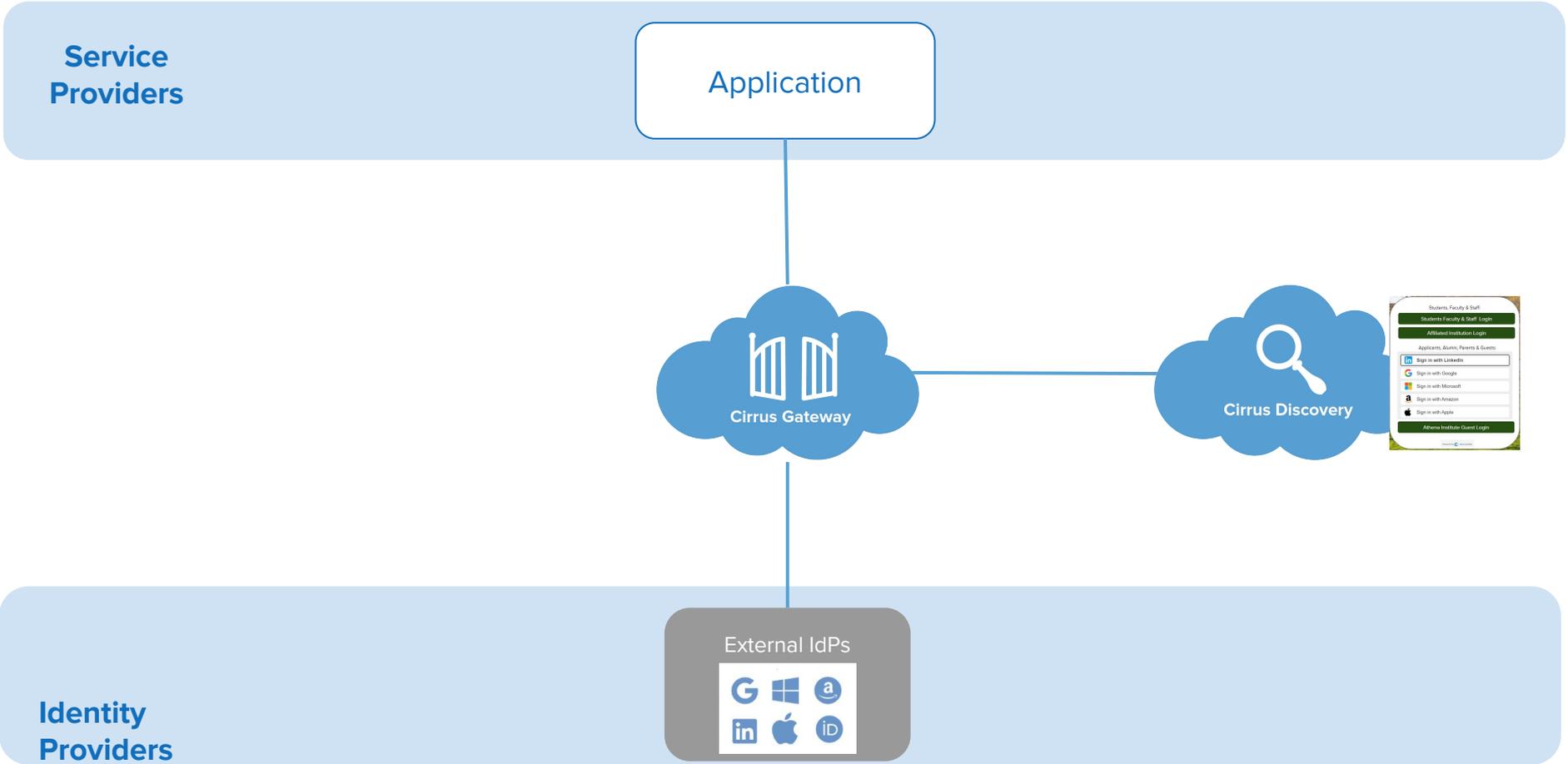
**Microsoft  
Entra ID**

**Cirrus Identity first launched with a very simple goal**

**Help application developers integrate social login  
with campus applications**

**Classic infrastructure proxy -  
Protocol translation, attribute mapping**

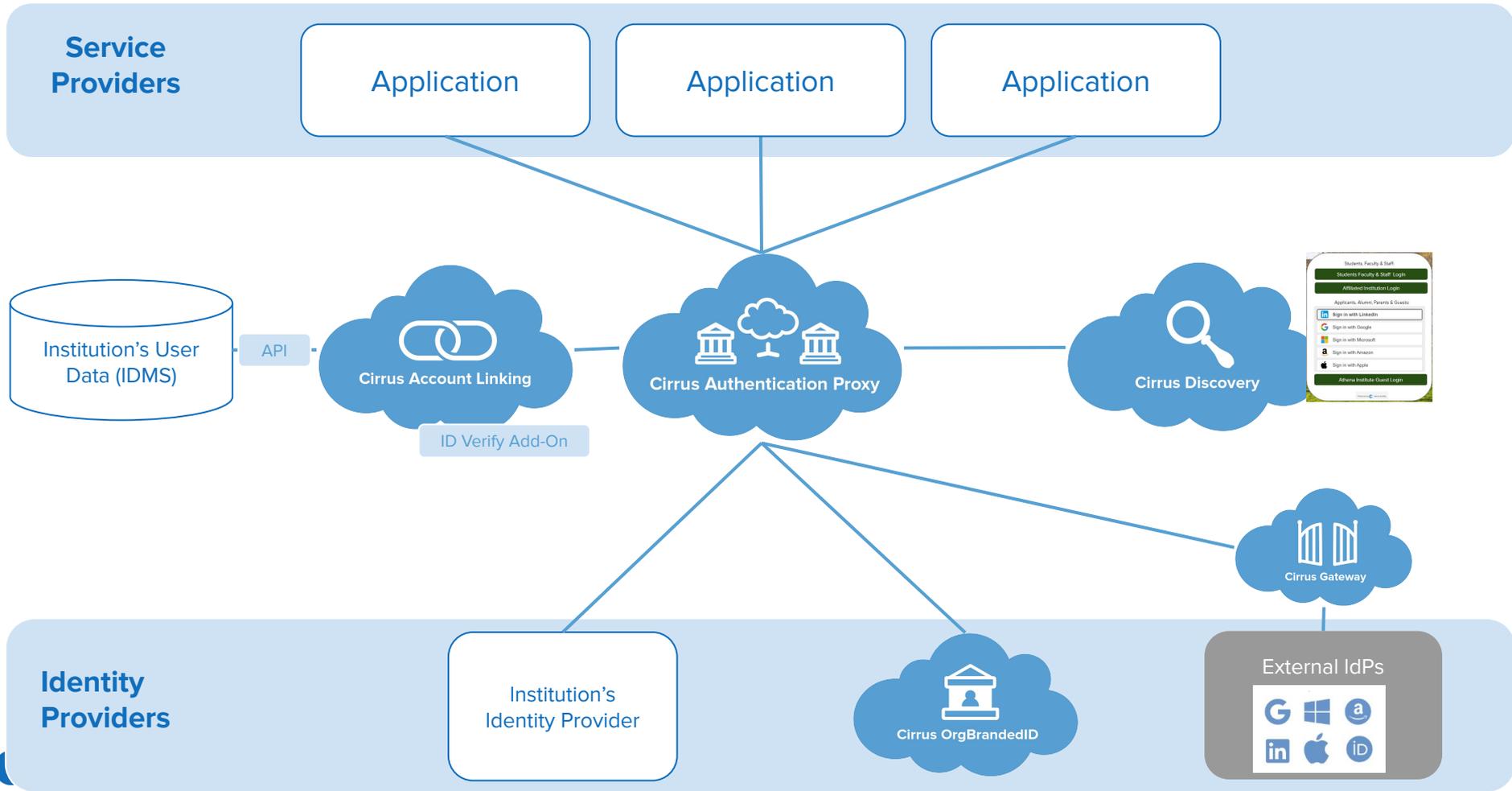
# Cirrus Identity - The beginning



# Campus Community Use Cases

**Alumni access**  
**Continuing and Professional Education**  
**Parent Access**

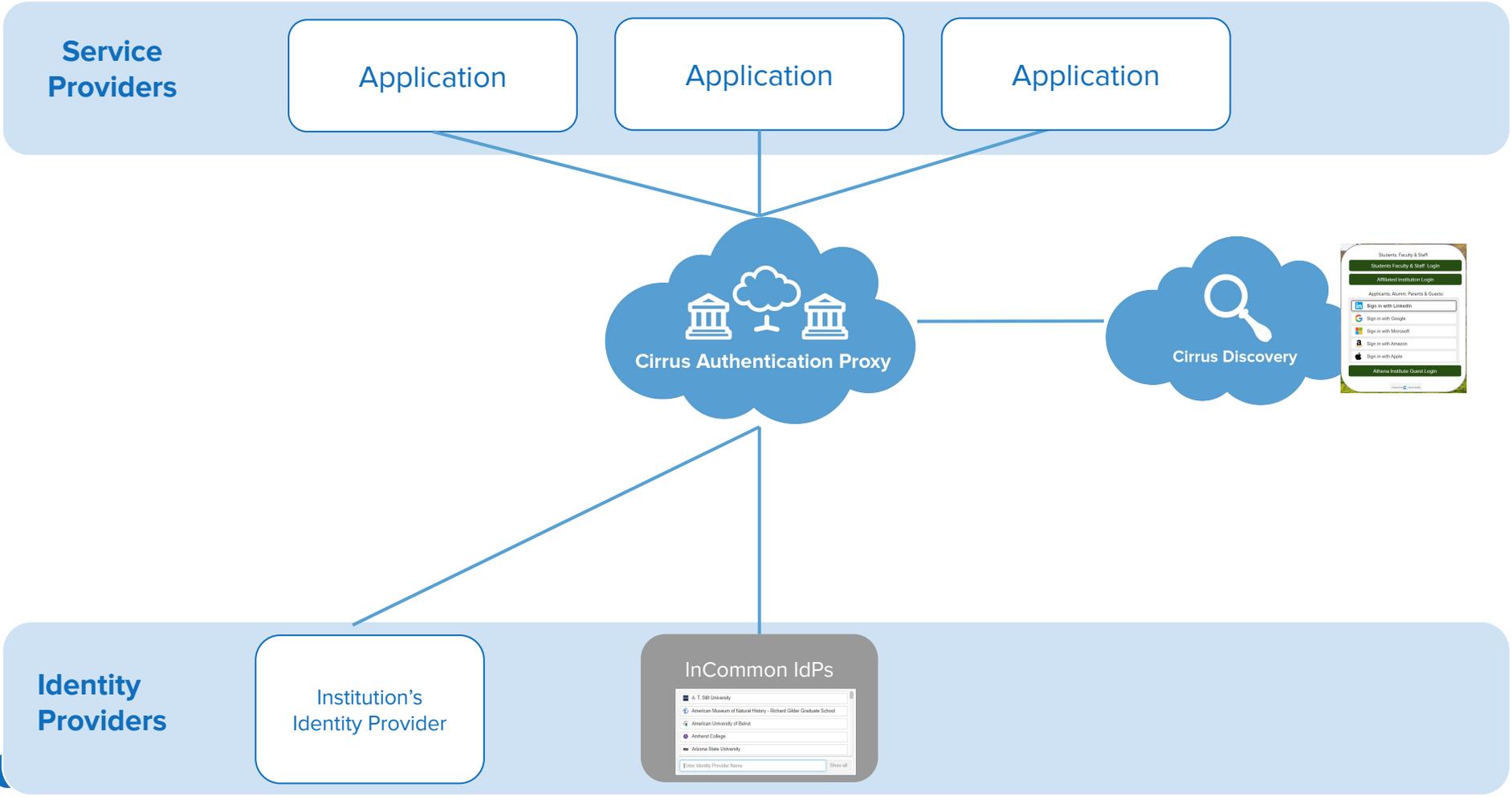
# Campus Community - Common Campus Use Case with Social Login



# Campus Community Research Use Cases

- **Campus App with External Partners - eAdmin for research**
- **Campus/medical center collaboration**
- **Grant-funded research at a campus - desire to leverage multilateral federation**

# Cirrus Research Community - Initial Research Architecture



## Sign In



Duke University

Click **Show all** for the full list of institutions or use the search box to find your institution. Once you have found your institution, click on the name to be taken to your login page.

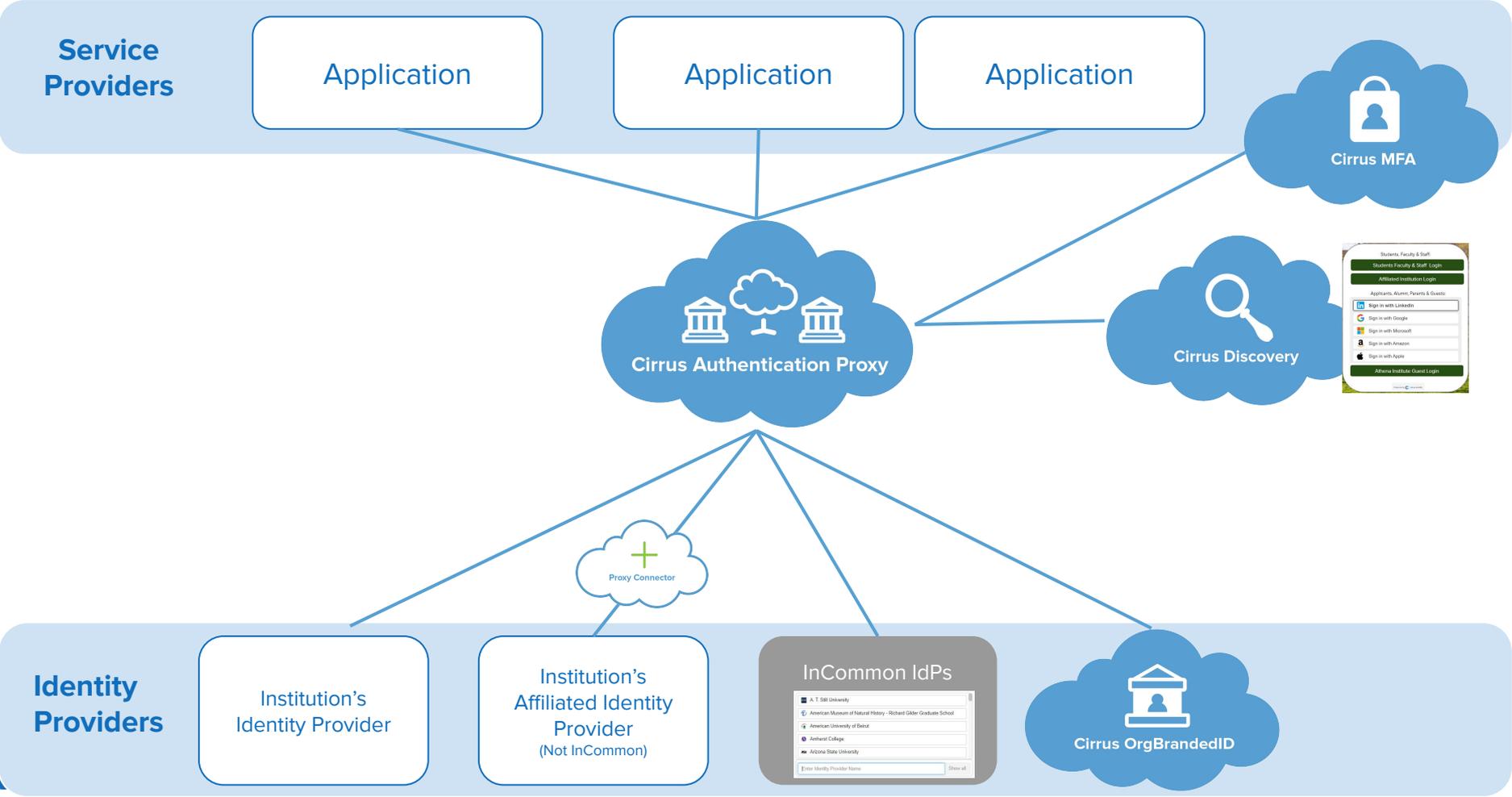
Arizona State University	
Athena Institute - Azure AD	
Augusta University	
Boston University	
Brown University	
<input type="text" value="Enter Identity Provider Name"/>	<input type="button" value="Show all"/>

# Campus Community Research Use Cases

## Evolving Needs

- Need access for users with no trusted IdP (IdPoLR)
- Need integration with trusted partners who do not wish to join the federation (“Proxy connector”)
- Need for MFA signaling and enforcement

# Cirrus Identity - Evolving Research Architecture



Service Providers

Application

Application

Application



Cirrus MFA



Cirrus Discovery



Cirrus Authentication Proxy



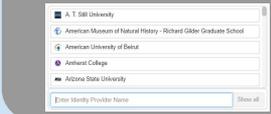
Proxy Connector

Identity Providers

Institution's Identity Provider

Institution's Affiliated Identity Provider (Not InCommon)

InCommon IdPs



Cirrus OrgBrandedID

## Select Identity Provider

-  Children's Hospital of Philadelphia
-  Children's Hospital of Philadelphia Guest
-  ACCESS CI
-  ARMS Software, LLC - Identity Provider

Show all



## Select Identity Provider

-  University of North Carolina at Chapel Hill
-  UNC Health Azure Bridge
-  University of North Carolina at Chapel Hill Research Guest
-  Allan Hancock College

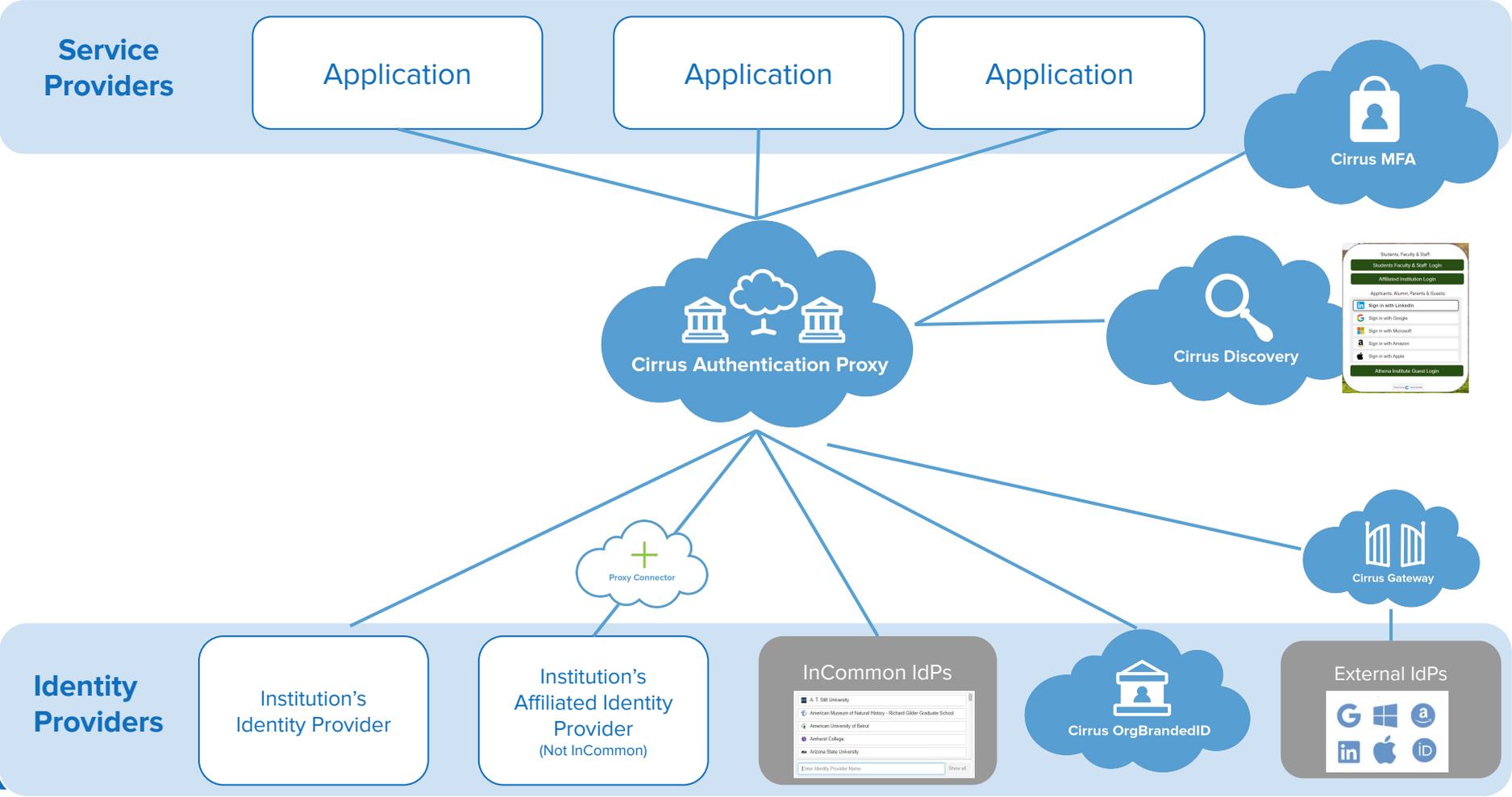
Show all

REDCap@UNC  
CTSA Grant Number: UL1TR002489

# Regional Collaboration Use Cases

- **State system-wide service access**
- **Learning Management Systems (Canvas, D2L)**
- **ERP solutions (WorkDay)**

# Cirrus Identity - Evolving Research Architecture



Service Providers

Application

Application

Application

Cirrus MFA

Cirrus Authentication Proxy

Cirrus Discovery

Proxy Connector

Cirrus Gateway

Identity Providers

Institution's Identity Provider

Institution's Affiliated Identity Provider (Not InCommon)

InCommon IdPs

Cirrus OrgBrandedID

External IdPs



# NSHE



## NSHE Identity Fabric



College of Southern Nevada



Desert Research Institute



Great Basin College



Nevada State University

Show all



University of Missouri System

COLUMBIA | KANSAS CITY | ROLLA | ST. LOUIS



CANVAS

UMSYSTEM  
**LOGIN →**

Use this log in with your UMSysystem credentials.

ALTERNATIVE  
**LOGIN →**

Use this log in if you do not have University credentials and have not received an invitation.

[Get help choosing a log in method.](#)



## Select Login Method



Sign in with Google



Sign in with Microsoft



Other Login

[How to choose your login method.](#)

For help logging in, please contact Academic Technology via email ([AT@umsystem.edu](mailto:AT@umsystem.edu), [chat](#) or phone (855-675-0755).

# Larger Community Collaboration

- Internet 2
- EDUCAUSE
- National Science Foundation

Various ways to onboard users and link identifiers used for authorization



## Sign In:



Access through your institution



Sign In with Google



Sign In as Internet2 Guest



## EDUCAUSE

### Sign In

**E** Log in or create a profile

Or use InCommon Federation login

AdventHealth University (new)

Allegheny College

American University of Beirut

Amherst College

Angelo State University

Enter Identity Provider Name

Show all

Looking to [manage your .edu domain](#)? You do not need an EDUCAUSE profile.

Not an EDUCAUSE Member? [Membership](#) is at an organizational level. When you join, everyone at your organization benefits.



## Sign In

Choose one of the three methods below to sign in. Login.gov and InCommon users must ensure the email address matches their NSF Primary Email. NSF Staff should provide their LAN ID or NSF email address to sign in.

NSF ID, NSF Primary Email or LAN ID (NSF Staff)

Next

or

Sign in with InCommon(Org) Credentials

Sign in with Login.gov Credentials



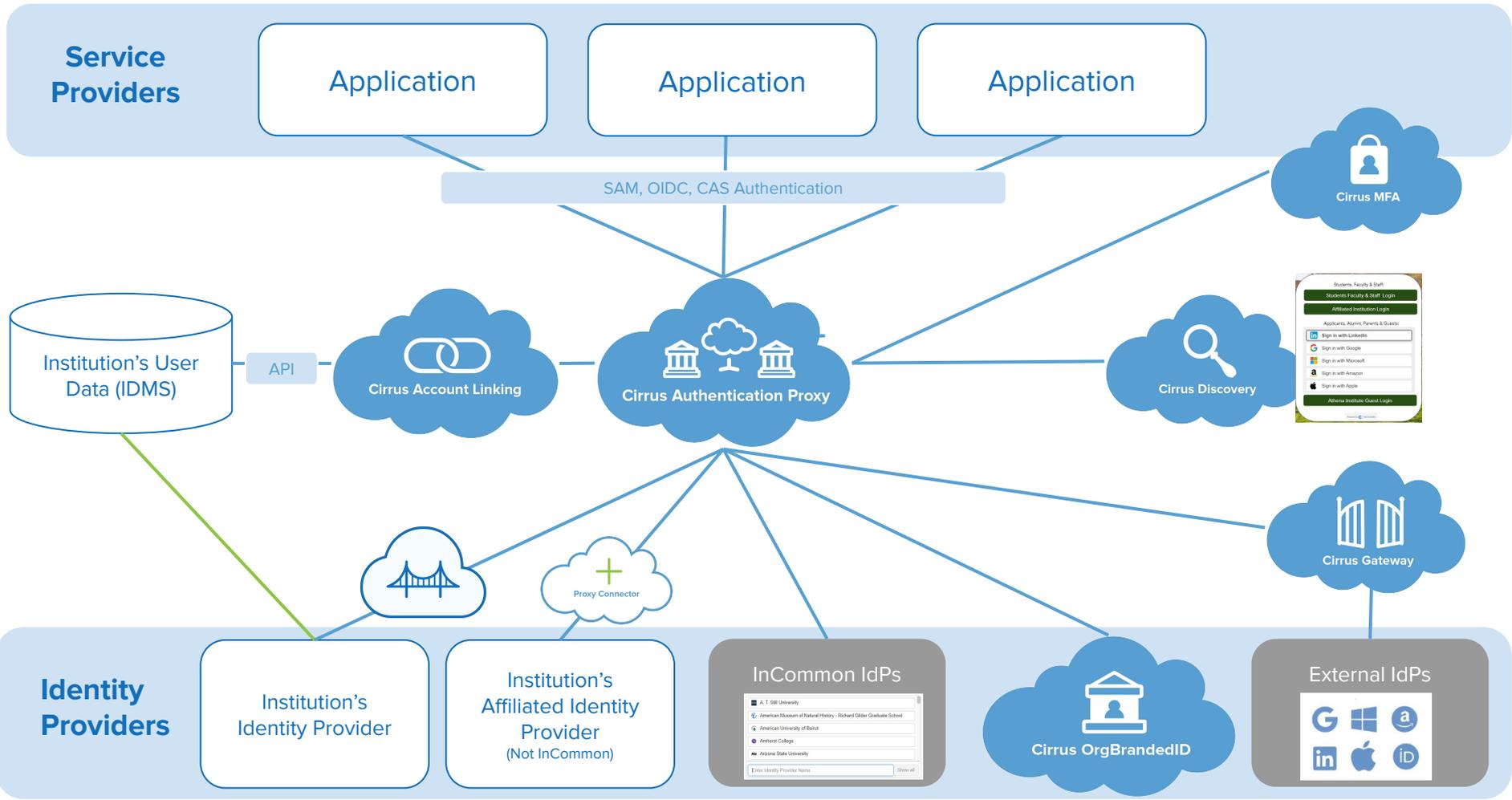
## Sign In With InCommon (Organization) Credentials

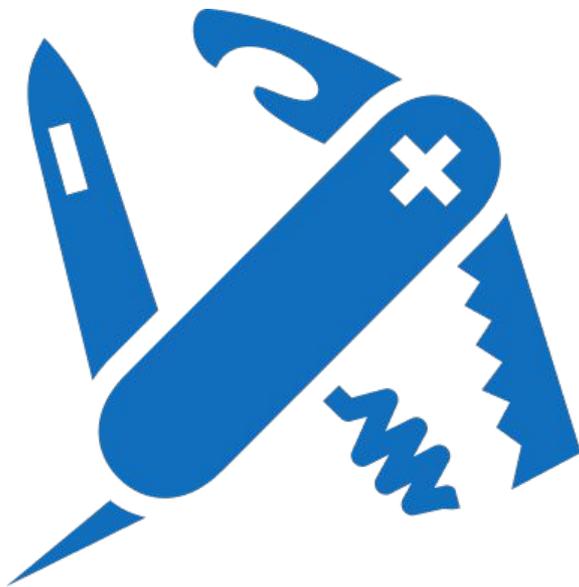
- Find and choose your organization
- Directs you to sign in to your organization
- Redirects you back to Research.gov

Don't see your organization?  
[Learn more/Register for InCommon](#)  
[Back to Sign In](#)  
[Help](#)

# Cirrus Identity - High Level Research Architecture

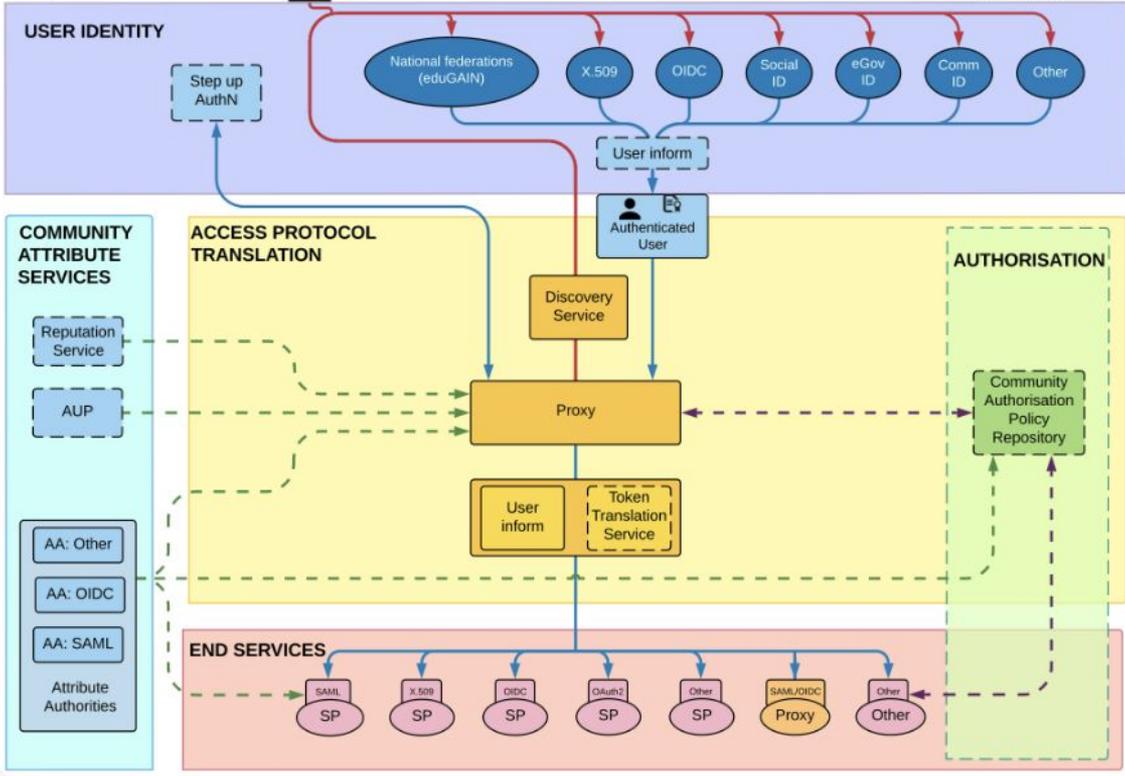




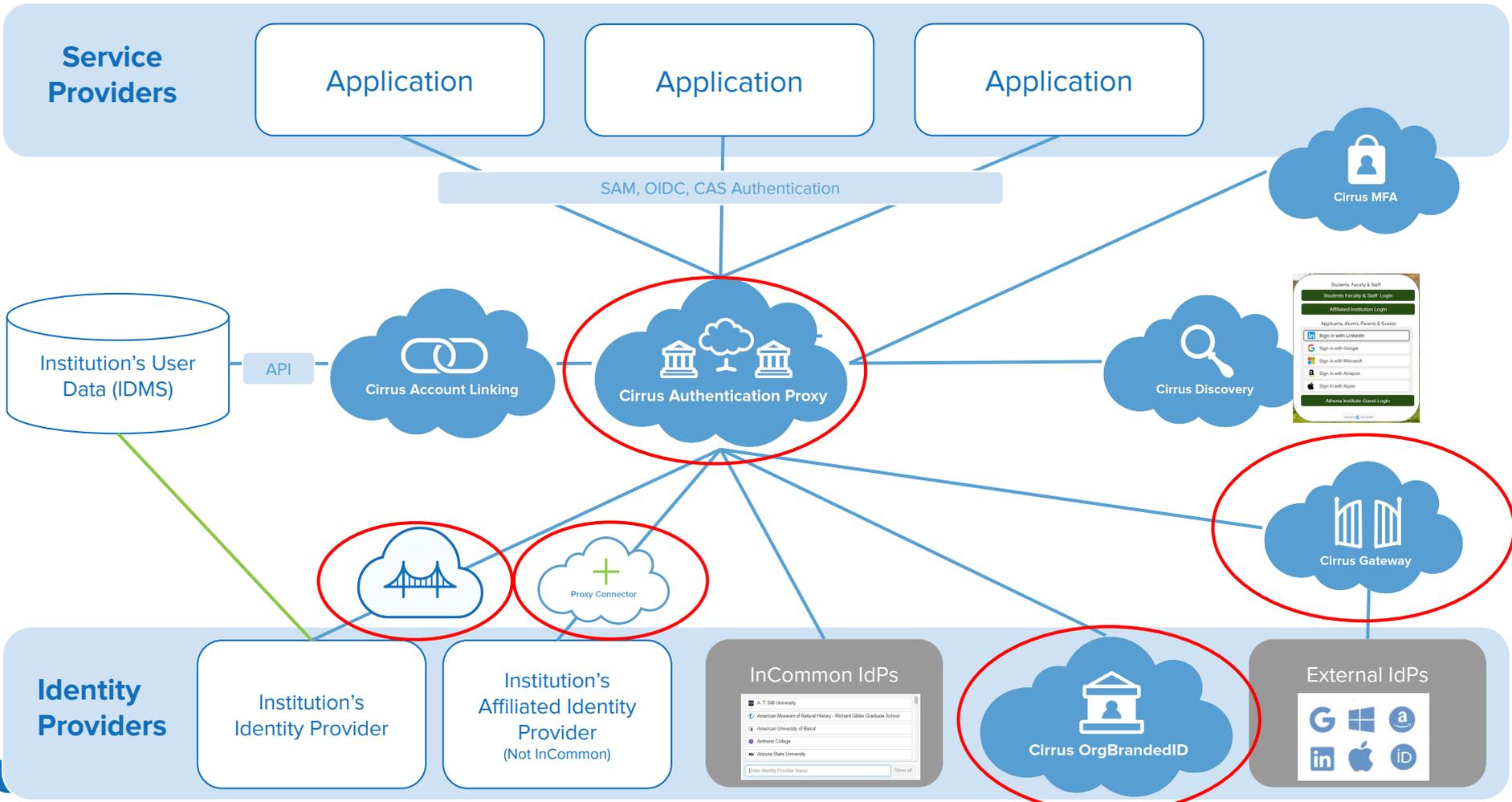


# AARC Blueprint Architecture

- Unauthenticated User
- Authenticated User
- Authorisation Information Flow
- Attribute Information Flow



# Cirrus Identity - High Level Research Architecture



# Primary Lesson Learned

Design the Solution to  
Fit the Needs of the Community

# Key Principles We Follow

## Respect, promote, and honor the core principles and values of multilateral trust federation as much as possible

- Educate functional and technical stakeholders about the value of multilateral federation
- Be a part of the community - work closely with federation operators and members

## Support key REFEDS specifications as they evolve

- MFA signaling
- R&S attributes (and other attribute specifications as developed)
- Level of Assurance frameworks as they evolve

Participate in workgroups that develop and update standards

## Incentivize participation in the federation

- Provide cost disincentives to non-federation participation
- But also provide options for hybrid collaborations - do offer options that enable collaboration for non-federation participants. This is better than long-term pressure to
  - leverage commercial solutions for trust
  - create duplicate/overlapping federations
- Create a pathway for federation onboarding

## Establish attribute requirements and expectations upfront

- What attributes will the SPs require?
- Do all the IdPs participating assert those attributes?
- Are there any specific authorization requirements for SPs that IdPs need to support?
- Is there an existing registry of users with unique IDs? Will there need to be one?

## Persist, manipulate, or otherwise transform data as little as possible

- Acting as a simple broker is best where possible
- The less data you persist, the fewer the compliance requirements and more intuitive the integration
- Where data is persisted and/or manipulated - maintain full transparency and have strong data management practices

## Leverage Multi-Proxy deployments for different audiences

- Even within the same organization, different stakeholders will have different needs and interests around
  - User on-boarding experience
  - IdPs they wish to allow
  - Login/discovery experience

Better to encourage use of common attribute collections, but support deployment of more than one proxy for different audiences

# Questions/thoughts



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**cirrus**  
identity