OH·TECH

Ohio Technology Consortium
A Division of the **Ohio Board of Regents**

iam OHIO

InCommon Participant

Federated Identity & Authentication Workshop

October 22, 2014

OARnet
An OH·TECH Consortium Member

OhioLINK
An OH·TECH Consortium Member

Today's Agenda

1:00	Welcome and Introductions	5m	*Evans, Beadles*
1:05	Purpose and Goals	5m	*Beadles*
1:10	The Problem Today	15m	*Beadles*
1:25	Basics of Federation	20m	*Beadles*
1:45	Elements of the System	30m	*Beadles*
2:15	Implementation Options	30m	*Cantor*
2:45	Break	15m	
3:00	The Ohio Landscape	25m	*All*
3:25	Solution Requirements	25m	*All*
3:50	Call to Action	10m	*Beadles*
4:00	Dismissal		

Welcome & Introductions

Purpose & Goals

Purpose & Goals

1. Displace legacy access and authentication methods which have become dangerously obsolete

2. Enable OhioLINK members to adopt more secure, extensible authentication framework with OH-TECH's assistance

3. Lay stepping stones to broader adoption

4. Define program, answer questions, recruit participants

IAM Ohio Program Overview

- IAM Ohio: “A Network of Trust”
  - Identity & Access Management for Ohio Public-Serving Institutions
  - Education and Collaboration
- Program Goals
  - Integrating Research at State and Federal level
  - Enabling Shared Services: OhioLINK, BOR, EduRoam
  - Improving Provisioning for automation and efficiency
  - Enhancing the Classroom and Online Teaching

IAM Ohio Program

- Standard agreements/alignments with federation providers
  - InCommon
  - Eduroam
- Education & Training
- Vendor management
  - Vendor identification, testing, pilots
  - Development of favorable vendor business terms
- Federation operations
  - Definition of regional policies and standards
  - Establishment of IDM operations, appropriately scaled, supporting high levels of trust and assurance

The Problem Today

The Identity Crisis

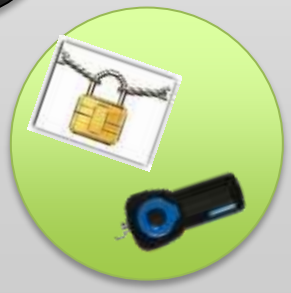
"On the Internet, nobody knows you're a dog."

OpenID

username/
password

Student
ID

Govern-
ment
issued
ID



Connect

The Identity Crisis

Multiple logins, multiple passwords

Lack of access to applications and services

Privacy breaches, fraud, theft and **noncompliance**

Lack of trust in identity and privacy claims

Disconnected silos of information

Duplicated **effort and expense**

Ohio Federation Adoption 10/14

OH-TECH Member *34*	InCommon Member *23*	InCommon Certs *17*	InCommon Auth *11*	OhioLINK via SAML *9*	Eduroam Member *8*	Active Eduroam *1*
Ashland					•	
Bowling Green						
Case Western	•	•	•	•	•	•
Cedarville	•		•	•	•	
Cleveland State					•	
Columbus State	•	•				
Denison	•	•				
Eastern Gateway						
Franklin	•	•				
Hebrew Union						
John Carroll						
Kent State						
Kenyon	•					
Lorain County	•	•				
Marietta						
Miami	•	•	•	•	•	
Oberlin	•	•				
Ohio Northern	•	•				
Ohio State	•	•	•	•	•	
Ohio University	•	•	•	•		
Owens	•	•				
Stark State	•	•	•	•		
U of Akron	•		•		•	
U of Cincinnati	•	•	•	•	•	
U of Dayton	•	•	•	•		
U of Findlay	•					
U of Mt Union						
U of NW Ohio	•		•			
U of Rio Grande	•	•				
U of Toledo						
Walsh	•					
Wittenberg						
Wooster	•	•	•	•		
Wright State	•	•				

KEY

InCommon

Member: Vetted member in good standing

Certs: Subscribes to InCommon cert service

Auth: Operates an InCommon IDP

OhioLINK via SAML: Authenticates users to Library services through SAML

Eduroam

Member: Listed by Eduroam: Initiated membership process or testing

Active: Authenticating users to wireless

Notes:

1. Most Ohio InCommon members are buying certs, not authenticating
2. Most members authenticate to library services using legacy protocols
3. “Open” wireless is more common than Eduroam

Barriers to Federation

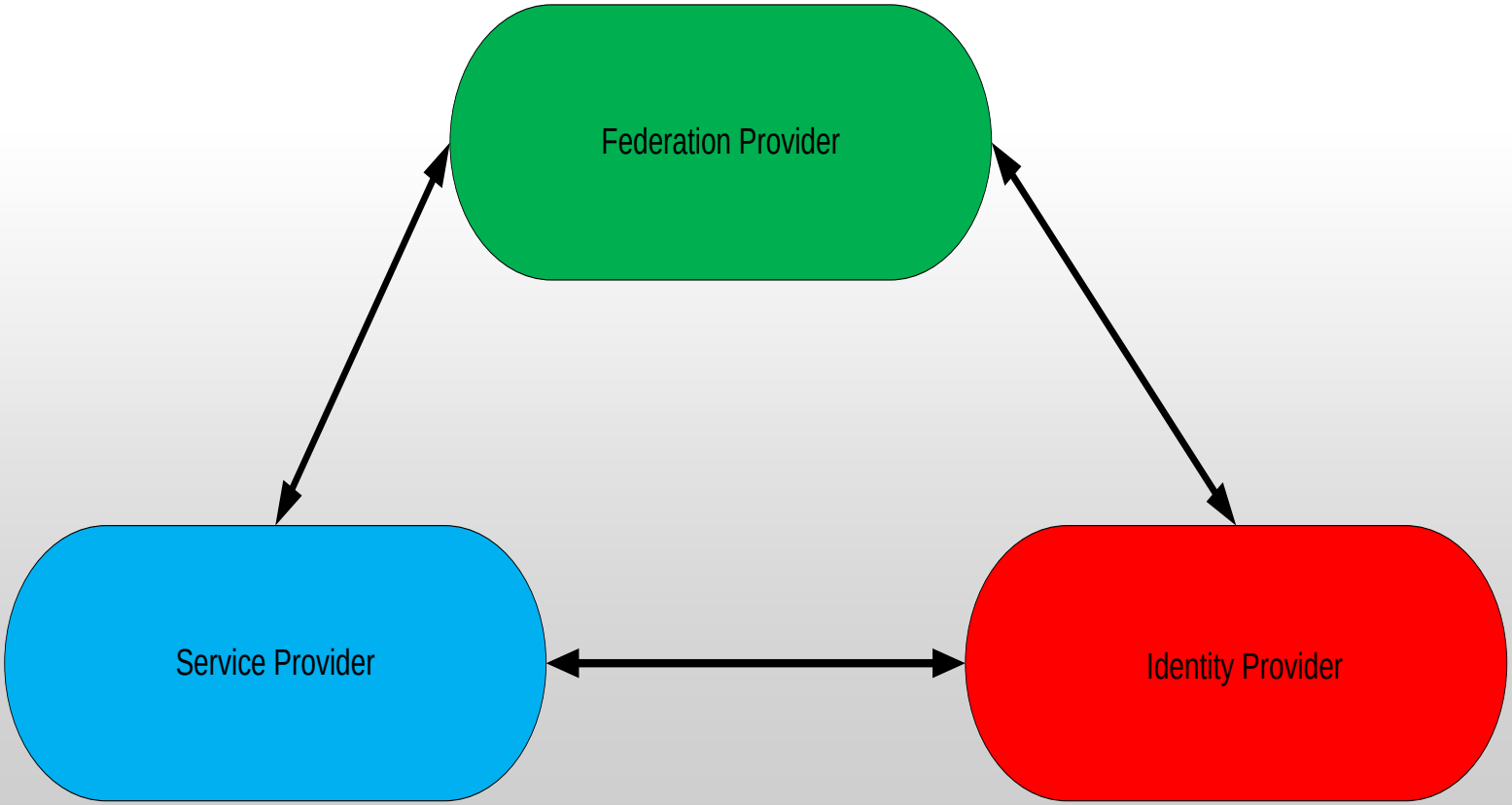
- We don’t have the time to set it up / operate it
- We don’t have staff with the right expertise
- It costs too much
- We don’t have the right software tools
- It’s too complex to integrate
- We don’t have servers or data centers to run it in
- We are challenged by Governance/Policy management
- It will disrupt our users
- It will disrupt our business
- There is no reason to care

Basics of Identity Federation

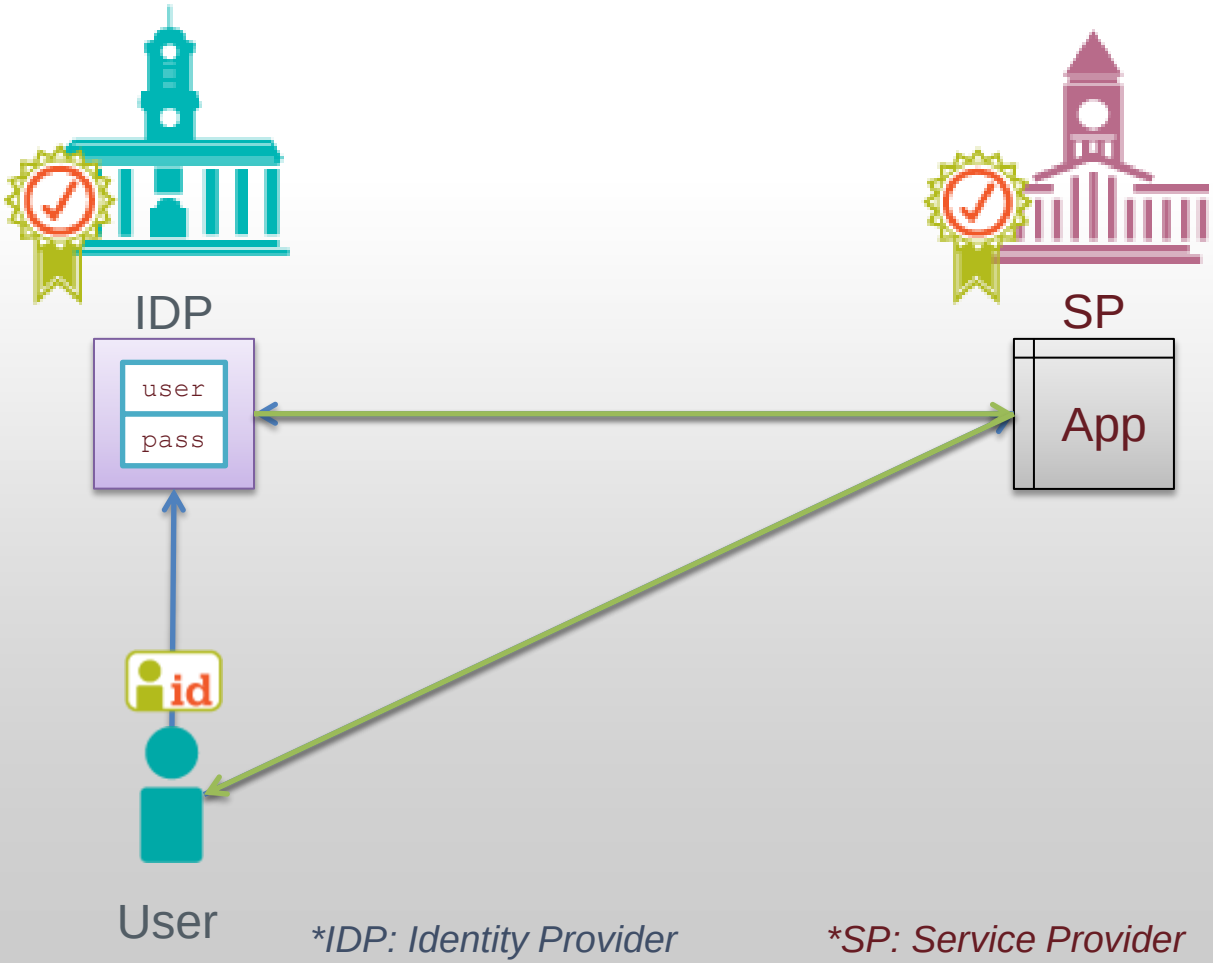
Building Blocks of Federation

- Identity Providers
  - identity management systems storing the user identity data
- Service Providers
  - collaboration, research, education tools, sites, services
- Federation Providers
  - In USA: InCommon for higher education and research

Components of a Federated System

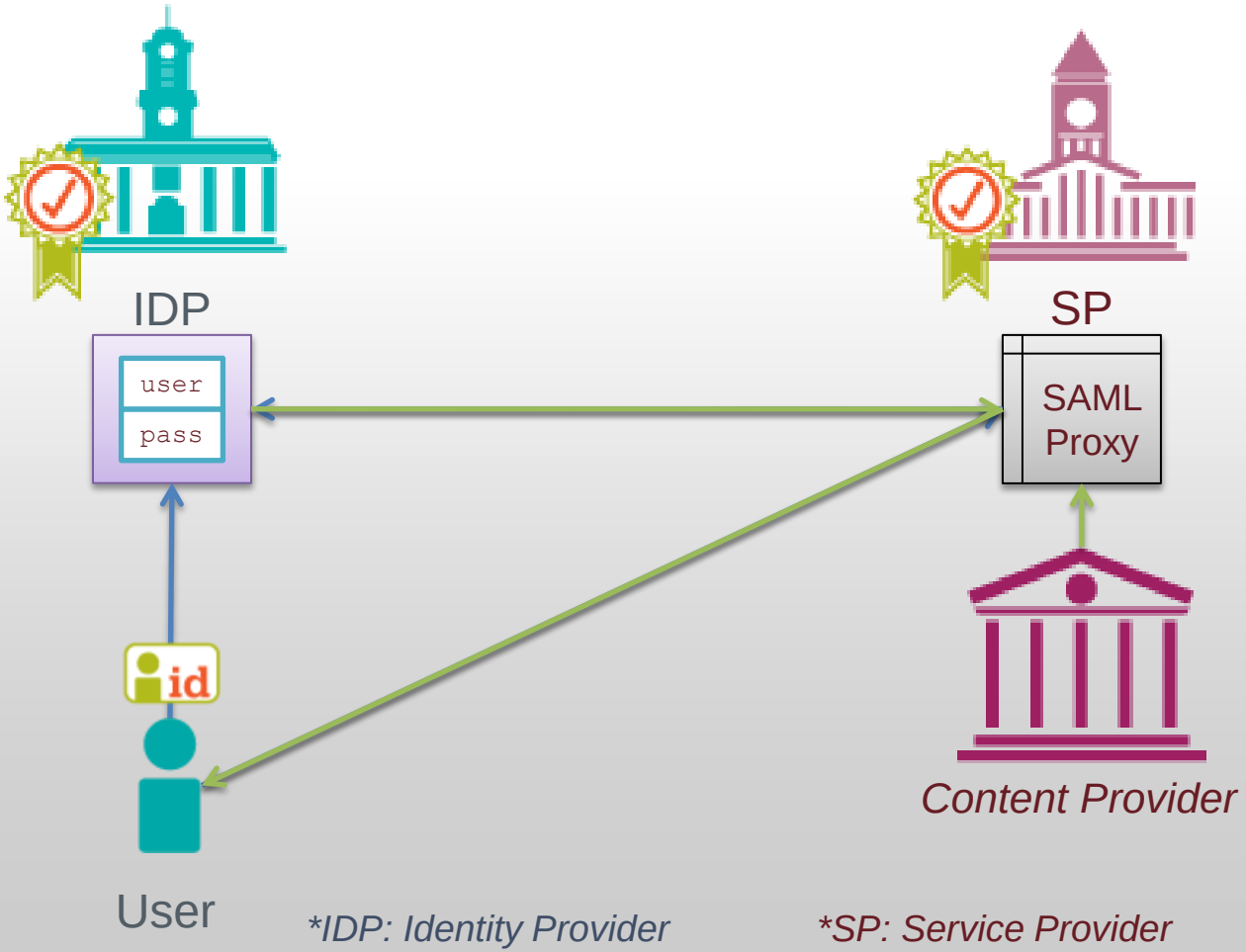


How Trusted Identity Federation Works



1. User requests access to App
2. SP contacts User's IDP
3. IDP authenticates User
4. IDP tells SP of result
5. SP provides access to app

How Trusted Identity Federation Works with Proxy



1. User requests access to Content
2. SP contacts User's IDP
3. IDP authenticates User
4. IDP tells SP of result
5. Proxy provides access to Content Provider

Trust is the foundation

Passwords are never disclosed

Institution that issues identity performs the authentication

Only authorized attributes are released

Multiple levels of trust depending on sensitivity of data

Collaborate only with trusted partners

Elements of the System

Shibboleth

is not

SAML

is not

InCommon

is not

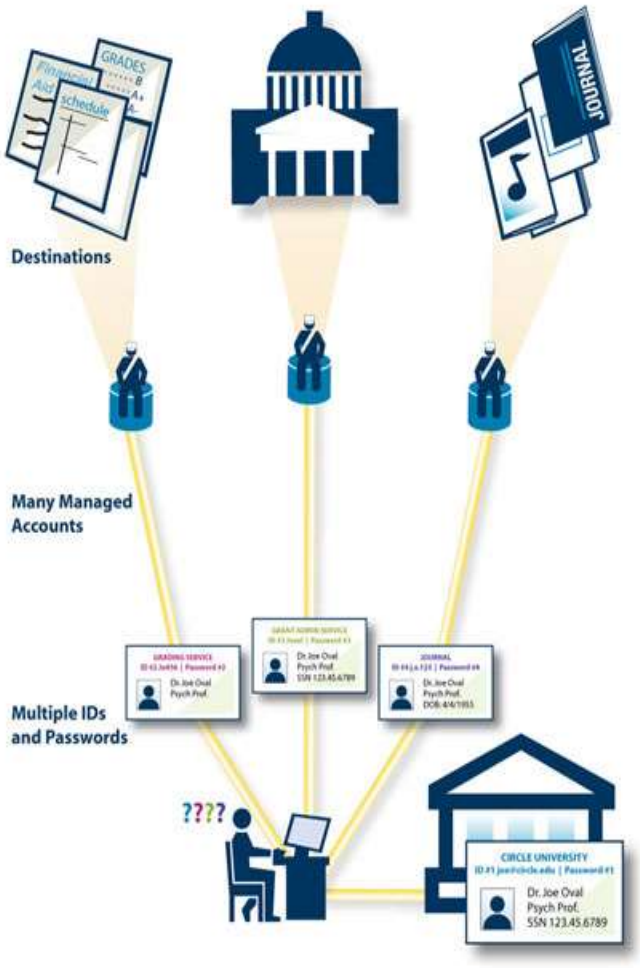
IAMOhio

Elements of the System

- SAML
  - Security Assertion Markup Language, a standard protocol for exchanging security claims and attributes with trust and security
- Shibboleth
  - Open-source software that implements SAML for web access
- InCommon Federation
  - A group of mutually trusting institutions, defined in SAML metadata, that use SAML to federate access
- Incommon
  - The entity that runs the InCommon Federation and also provides related services like certs, training, standardization, organizational vetting
- IAMOhio
  - A community of interest of OH-Tech members with a requirement to federate access regionally as well as with non-OH-Tech members; not limited to SAML

Without InCommon

- Users have many accounts to access different resources.
- Access is based on a user's identity or location.
- Time spent managing accounts instead of resources.
- Lack of uniform standards among partners.
- Collaborations don't happen because sharing is too difficult or insecure.
- Adding new resources and users may require significant work.



With InCommon

- Users have a single point of signing on to access different resources.
- Fewer user accounts to manage.
- Fine-grained control over the release of identities and other user information.
- Standards-based and open source.
- New resource providers and users can be integrated quickly.
- Access is based on information attributes, not identity or location.

Elements of the System

- Attribute
  - A single piece of user data (such as name, affiliation, study branch, etc.) needed to make authorization decisions. Some attributes are general; others are personal. Some combination of attributes defines a unique individual.
- Attribute Schema
  - eduPerson
- Attribute Release Policy
  - Defines which attributes are going to be released to a requesting resource. It is a mechanism to implement privacy and data protection
- Discovery Service (Where Are You From?)
  - A service that helps a user locate his or her "home" IdP

Current InCommon Sponsored Partners

Reference: http://www.incommon.org/participants/ Updated: 10/2014

12Twenty Inc.
9STAR
Aastra USA
Academic Works, Inc.
Acatar
Accessible Information Management, LLC
Active Network
Advantage Connect Pro Inc.
ALEKS Corporation
Alexander Street Press
AliveTek
American Psychological Association
AppointLink Portal Solutions, Inc.
ARTstor
Association for Computing Machinery
AT&T Services
AthenaOnline.com
Atlas Systems, Inc.
Atomic Learning
Axiom Education
Benelogic
BioOne, Inc.
BioRAFT
Blackboard, Inc.
Blatant Media Corporation
Blue Jeans Network
BoardEffect
Box, Inc.
Cambridge University Press
Campus Quad
CampusGuard
Cayuse, Inc.
Cengage Learning, Inc.
CENIC
Center for Research Libraries
CenturyLink
Cincinnati Children's Hospital Medical Center
Cirrus Identity, Inc.
Cloudpath Networks
CollegeNET
Colorado Alliance of Research Libraries
Comodo
CounterMarch Systems
CourseNetworking
Courseo
CourseSmart
CSO Research, Inc.
Data 180,LLC
Davie County Schools
Decision Lens
Desire2Learn
DigArc
Digital Measures
Do Sports Easy
DocuSign
DoubleMap Inc.
Dropbox
Durham Public Schools
e-academy, Inc.
e2Campus by Omnilert, LLC
Ebook Library - EBL
EBSCO Publishing
Echo360
Edublogs
EDUCAUSE
Elsevier
Ensemble Video
Entigence Corporation
eRezLife Software
ESM Solutions
Evanced Solutions, LLC
Evogh, Inc.
Ex Libris
First Advantage Screening Corporation
Fluidware Corporation
Fundriver, Inc.
FuzeBox Software Corp.
GivePulse
Governet
GradesFirst
Great Plains Network
Halogen Software Inc.
Hazelden Betty Ford Foundation
Higher One, Inc.
HighWire Press
Hitachi ID Systems
Houston Academy of Medicine - Texas Medical Center Library
IEEE
iLab Solutions
Imodules Software, Inc.
Innotas
Institute for Advanced Study
Instructure, Inc.
Interfolio, Inc.
JSTOR
Kaltura Inc.
Kuali Foundation
LabArchives
LCMS Plus Inc.
Leepfrog Technologies, Inc.
Library of Congress
Logistical Athletic Solutions
Longsight
Lucid Software
lynda.com
Mass. Green High Performance Computing Ctr
Maxient LLC
MCNC
MedHub
MediaCore Technologies Inc.
Merit Network, Inc.
Microsoft
Modo Labs Inc.
Moodlerooms, Inc.
Moofwd Inc
Moxie Software
Mozy, Inc.
MyEvaluations.com Inc.
Myunidays Limited
National Student Clearinghouse
NBC Learn
NC Live
Nolij Corporation
NuPark
OCLC
Ohio Technology Consortium (OH-TECH)
OhioLink - The Ohio Library & Information Network
OmniUpdate
OrgSync. Inc.
Outside The Classroom
Parchment Inc.
Pathbrite, Inc
PeopleAdmin, Inc.
Ping Identity Corporation
Portfolium, Inc.
ProQuest LLC
Publishing Technology
Qualtrics
Rave Mobile Safety
Reeher
RefWorks, LLC
Research Foundation for the SUNY
RightAnswers
Rockingham County Schools
Royal Society of Chemistry
Rsam
SAE International
Safari Books Online
Sallie Mae Campus Solutions
SANS Institute
SciQuest
SCLogic
Seelio
Serials Solutions
ServiceNow
SHI International Corp.
Skillsoft Corporation
Springshare
SSB Bart Group
Stoodify
Stryder Corp
Student Success
SumTotal Systems Inc.
Symplicity Corporation
TeamDynamix Solutions, LLC
TERENA
Terra Dotta
The Beans Group
The CBORD Group
The Centre Daily Times
The Solution Design Group, Inc.
Thomson Reuters
Tivli
Toopher
Top Hat Monocle
Travel Solutions, Inc.
Trondent Development Corp.
Trumba Corporation
Turnitin
Ubiquia Inc.
UHC
Unicon, Inc.
United Public Safety
University of Arkansas, Cooperative Extension Service
University of Texas Health Science Center At Tyler
UniversityTickets
UPIC Solutions
Upswing International, Inc.
VoiceThread
Washington Research Library Consortium
WebAssign
WEPA, Inc.
Woofound
Yammer
Zimride, Inc.

Implementation Options

Alternative Identity Provider Strategies

Source: InCommon Alternate IdP Working Group, https://spaces.internet2.edu/display/altidp

IdP Strategy	Description
Shibboleth	• Mainstream SAML implementation • Open source via Shibboleth Consortium
Microsoft ADFS (Active Directory Federation Services)	• Natural approach for Windows shops • Proprietary as part of Active Directory
SimpleSAMLphp	• Lightweight PHP-based IdP • Open source via Uninett (NO)
Outsourced Shibboleth	• 3rd party hosted Shibboleth IdP • e.g. Fischer Identity Ignite Federation
Outsourced other vendor	• 3rd party hosted non-Shib SAML IdP • e.g. Cirrus Bridge Social-to-SAML Gateway
Hub-and-spoke	• Group of organizations sharing a trusted IdP • e.g. WAYF (DK), SURFnet (NL), FEIDE (NO)
Identity-as-a-Service	• Outsource all or nearly all of IDMS • e.g. Stormpath, Okta, Google, Fischer Suite

Break

The Ohio Landscape
(handout)

Solution Requirements Discussion

Call to Action

"Federation Package"

- Federated Services
  1. OhioLINK library system access
  2. Eduroam roaming wireless
  3. State Board of Regents Services
     - Higher education student database
     - Supercomputing access
     - OARnet Customer Portal access
- OH-Tech Federation Package
  - SAML server in a box? (Shib/ADFS/Fischer…?)
  - Technical assistance/training (Shibfest II?)
  - Funding? Time? Personnel?
- Standards
  - Ohio "Category" a la R&S

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