CIFER

(Community Identity Framework for Education and Research)

Overview for UW-Madison

www.ciferproject.org

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CIFER Initiative Goals

- To make radical improvements in higher education Identity and Access Management (IAM) capability, ease of integration, and affordability.

- To be an agile, modular, federation- and cloud-ready IAM solution suite

- Delivered by and for the higher education community.

Who/What is CIFER?

- It's us:
  - Idea emerged out of a Jasig conference
  - Participants from Kuali, Internet2, Apereo (Jasig/Sakai)
  - Major contributors include PSU, Berkeley, U Washington, Rutgers, U Chicago, UW-Madison, Duke, U Penn...
- Organized as a set of teams:
  - Strategy & Organization
  - Architecture Coordination
  - Functional Area Work Streams with links to established projects
    - Identity Registries
    - Provisioning and Integration
    - Authentication
    - Access Management
    - IAM Console (admin & self-service UI)

The CIFER Alignment Solution

- Facilitate coordination across existing IAM projects
  - To build out a comprehensive, yet modular, set of IAM components aligned to an overall roadmap
- Raise new funds
  - To augment and accelerate development within key existing IAM projects
  - If necessary, to launch carefully scoped new projects that address remaining gaps in IAM capabilities
- Develop extensive knowledgebase and support systems
  - To facilitate implementation and ongoing support for CIFER-aligned IAM components by participating campuses

HE Community Developed IAM solutions that are already available

Identity Registry solutions *(available but relatively new)*
- Apereo OpenRegistry – In production at Rutgers, in incubation in Apereo
- Penn State's Central Person Registry – recently released as open source

Access Management solutions *(available with broad adoption)*
- Internet2 Grouper
- Kuali Rice KIM

Authentication solutions *(available with broad adoption)*
- Apereo CAS
- Shibboleth, from the Shibboleth Consortium; Additional support for multi-factor from contracted work underway by Unicon;

Provisioning & Integration solutions *(some features within projects)*
- Internet2 Grouper PSP, Open source, e.g., Apache Service Mix with Camel, JMS/ STOMP, SCIM

IAM Management Console solutions *(no comprehensive solution exists, some UI within existing projects)*

These Open Source IAM solutions still have some gaps…

Identity Registries

- Identity Matching and Reconciliation improvements needed
- UI improvements for both CPR and Open Registry needed
- Converged, standardized APIs needed

Authentication

- Account and credential issuance and management capabilities needed
- Social authentication support needed
- Multi-factor authentication support needed
- Levels of Assurance use cases and improvements needed

Provisioning & Integration

- System-of-Record to Registry patterns, toolkits and connectors needed
- Registry to Target-Consuming-System patterns, toolkits and connectors needed
- Enhanced support and guidance for integration with cloud services

These Open Source IAM solutions still have some gaps…

Access Management
- Standard API's for improved integration in all projects needed
- Additional business-friendly role creation and management capabilities needed

IAM Console
- Standard UI for all projects needed (end user self-serve and administrator functions)
- Better audit, monitor and reporting capabilities needed

Core CIFER Value Propositions

Cross-project visibility and interconnection with the aim of significantly ***easing campus adoption and ongoing support.***

All CIFER Aligned solutions, in the form of code bases, community contributions, documentation and training materials are available to all, ***free of charge under standard open source licenses***.

All CIFER Aligned solutions are ***built by and for the higher education and research community*** meeting our diverse and complex needs.

HE IT: Integration work is job #1

- Integration work as share of our total IT outlay is large and growing
  - DoIT's journey from AD to ADI
  - We don't build ERPs, or many large applications anymore
    - *aaS is the trend and we are following it
    - O365, ELN, non-credit initiative, Google Apps, Lynda, Qualtrics,...
  - The world we need to integrate with is heterogeneous to a fault

- We need a stable, modular IAM infrastructure
  - No luxury of infrastructure for infrastructure's sake

Integration in a heterogeneous world

- To succeed our IAM architecture needs to place high architectural value on
  - Standards (SAML, SCIM,…)
  - Interoperability (has to be a design goal)
- This focus helps us realize principles of
  - Modularity (Swappability; Opposite of lock-in)
  - Agility (Getting through the integration project to-do list)

Addressing perceived risks of Open Source Solutions

- Support:
  - We need to have a place to turn when we encounter problems or need enhancements in our IAM infrastructure
- CIFER responding to this community need
  - Commercial affiliates: Unicon already offers contracted support for uPortal, Shib, Grouper; Other companies stepping up
  - Safety in numbers: Building a consortium of user institutions who all need the open source products to thrive and continue to develop

Addressing perceived risks of Open Source Solutions

- Product stability
  - Open source avoids risk of the merger/divestiture problem
  - Can't have the rug pulled out from under us by changing licensing terms

CIFER Aligned Projects
Solution Architecture Vision
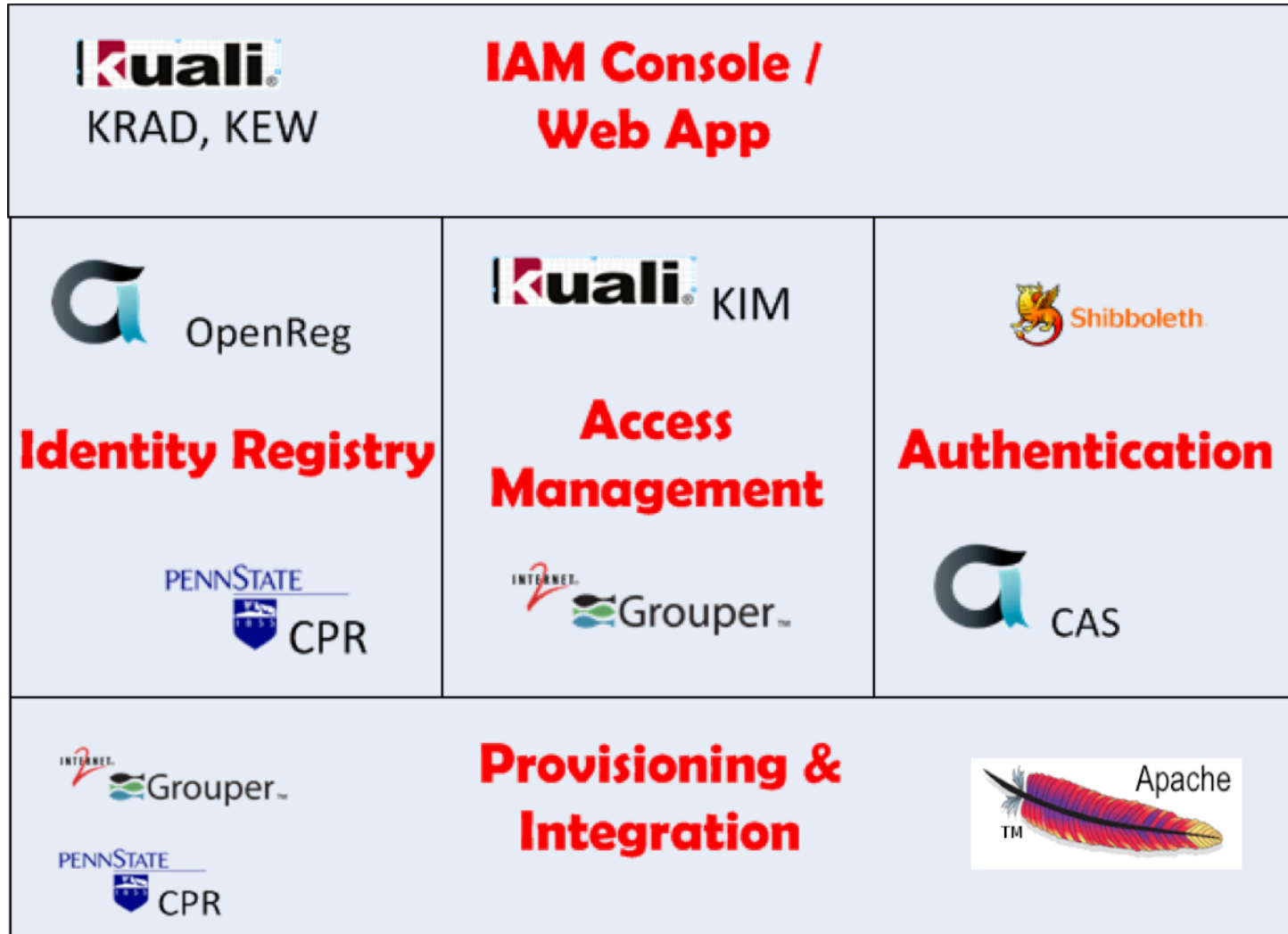
We're already on the CIFER path

- Let's leverage our investment in Shib, Grouper
- Let's focus on the long list of integration projects
- Let's continue working with our peers
  - Adding functionality (Multi-factor, Social2SAML, Federated Groups)
  - Building shared components (Provisioning connectors, etc.)
- Let's retain control of the future of our IAM Infrastructure