

# CIFER

(Community Identity Framework for Education and Research)

## Overview for CANS 2013

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# Identity and Access Management

- Jeff Lehman keynote: “perfectly controlled infinite sharing” is the goal
- IAM is the foundation that enables both
  - Sharing
  - Control of sharing
- IAM, like network itself is a foundational layer
- Both are there ultimately to support application delivery of resources and services

# 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?

- Shared effort across US higher education and research communities:
  - Idea emerged out of a Jasig conference
  - Participants from major consortia: Kuali, Internet2, Apereo (Jasig/Sakai)
  - Major contributors include PSU, Berkeley, U Washington, Rutgers, U Chicago, UW-Madison, Duke, U Penn...
- Would welcome international collaboration going forward

# Who/What is CIFER?

- 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 knowledge base 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
- COmanage to support research collaborations from small to large

## Authentication solutions *(available with broad adoption)*

- Apereo CAS
- Shibboleth, from the Shibboleth Consortium
- Additional support for multi-factor via contracted open source work

## Access Management solutions *(available with broad adoption)*

- Internet2 Grouper
- Quali Rice KIM

## 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

- Application integration work as share of our total IT outlay is large and growing
  - campuses don't build ERPs, or many large applications anymore
    - \*aaS is the trend and we are following it
    - O365, ELN, Lynda, Qualtrics,...
  - The world we need to integrate with is heterogeneous and not under our control
- We need a stable, modular IAM infrastructure
  - No luxury to work on IAM 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)

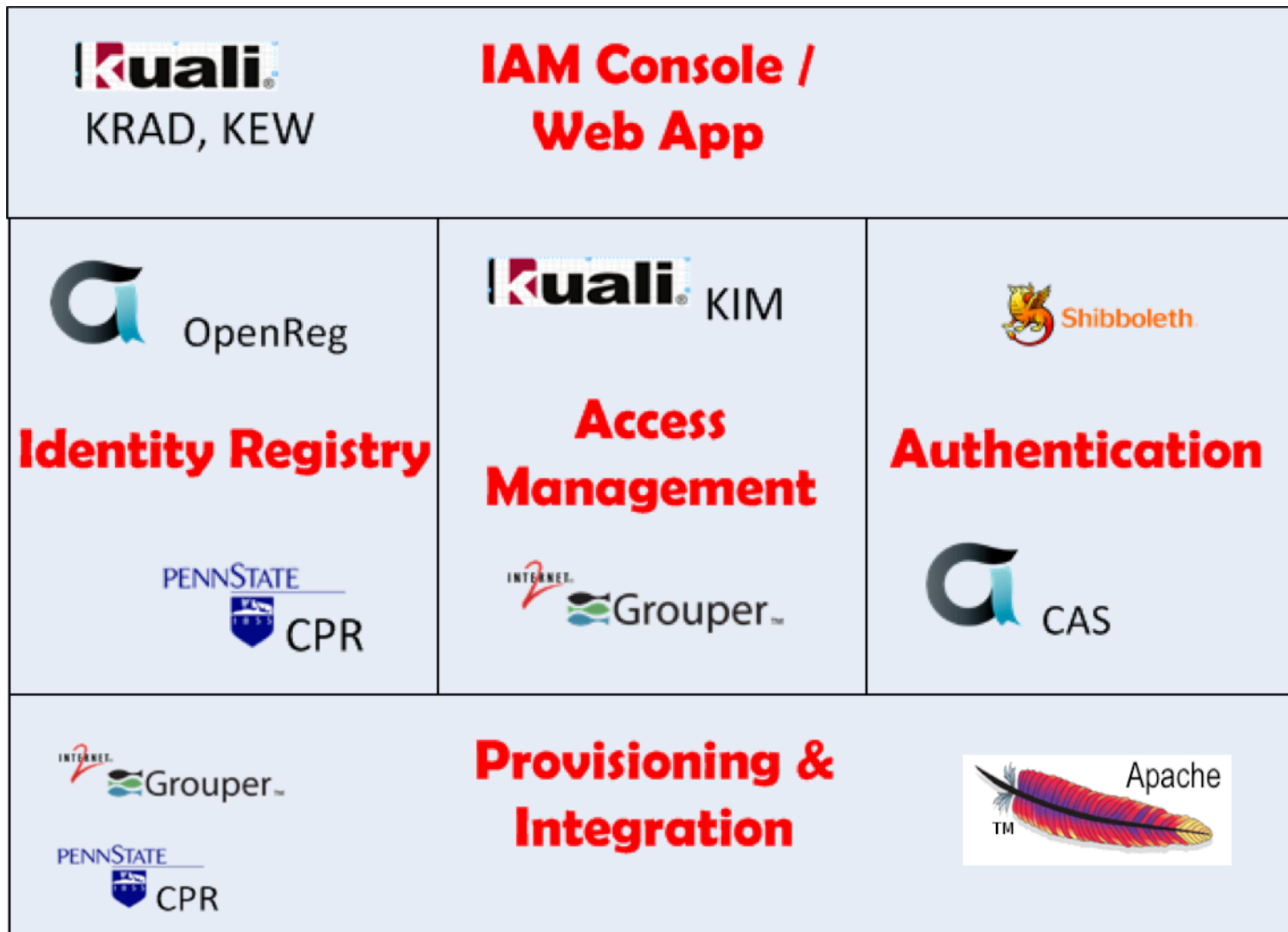
# Addressing perceived risks of Open Source Solutions

- 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



# Benefits of collaboration on IAM

- Leverage our investment in federated identity management (Shibboleth)
- 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