



Introduction to Grouper

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Unicon



Agenda

- Part I
 - Intro, basic concepts
 - Grouper Quickstart
- Part II
 - Grouper in Action @ Penn
 - Qualtrics, Confluence, Quali,...
- Part III
 - Hands on Grouper
 - Folder, Groupers, Roles
 - Grouper Loader, Subject API,...

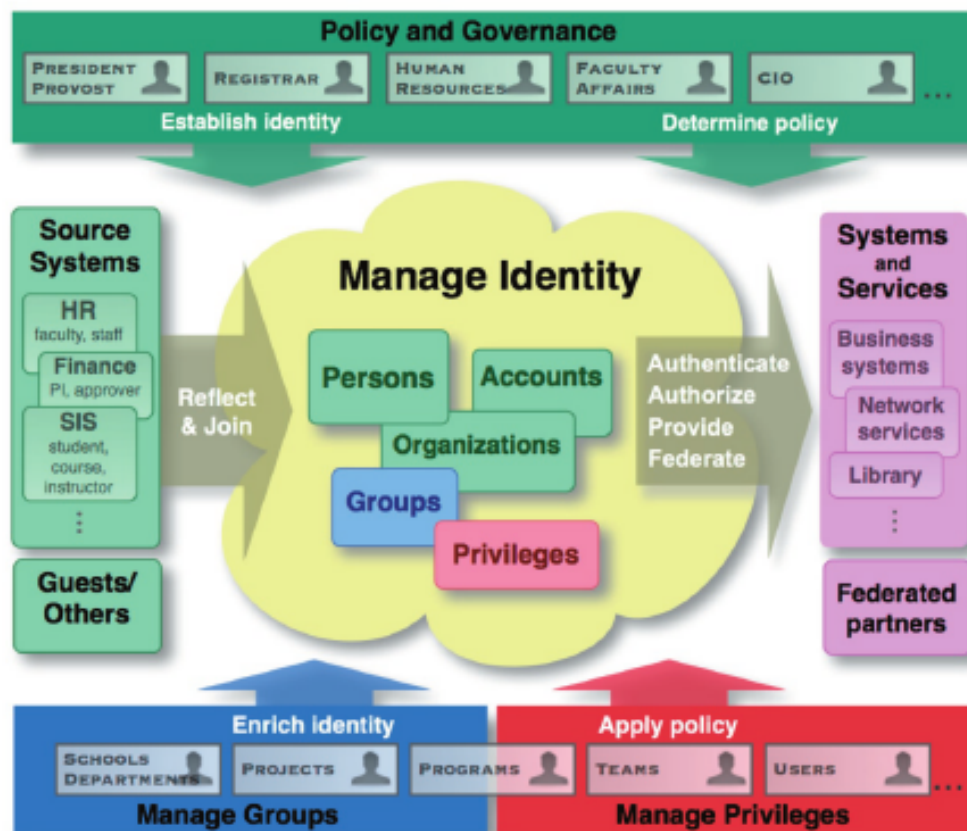
CIFER, Shib, CAS, OR, CPR, Grouper?

- Name, Role, Institution
- CAS? Shib? CAS/Shib?
- Person Registry? OR? CPR?
- Enterprise Directory? OpenLDAP? AD?
- Group/permission management today?

Identity & Access Management (IAM)

- Identity
 - You
- Authentication
 - Log in
- Authorization
 - What you can do
- Access management
 - Map policy & authority to authorization

Access management strategy



- Tools & processes to translate IAM concepts into typical campus environment
 - Which people?
 - What systems & business processes?
 - What policies?
 - What purposes?
 - Whose authority?

Policy and Governance

PRESIDENT
PROVOST



REGISTRAR



HUMAN
RESOURCES



FACULTY
AFFAIRS



CIO



...

Establish identity

Determine policy

Source Systems

HR

faculty, staff

SA

student,
postdoc

Finance

PI, approver

Courses

instructor,
enrolled

⋮

Manage Identity

Persons

Accounts

Organizations

Groups

Privileges

Reflect
& Join

Authenticate
Authorize
Provide
Federate

Systems and Services

Business systems

Network services

Library

⋮

Federated partners

Enrich identity

SCHOOLS
DEPARTMENTS

PROJECTS

PROGRAMS

TEAMS

USERS

...

Manage Groups

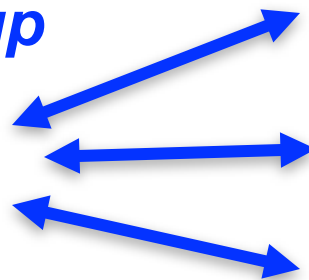
Apply policy

Manage Privileges

Why have an access management strategy?

- Lower cost and time to deliver a new service
- Simplify and make consistent by using the same group or role in many places

***Physics 101
Course Group***



Email Group

Wiki Access

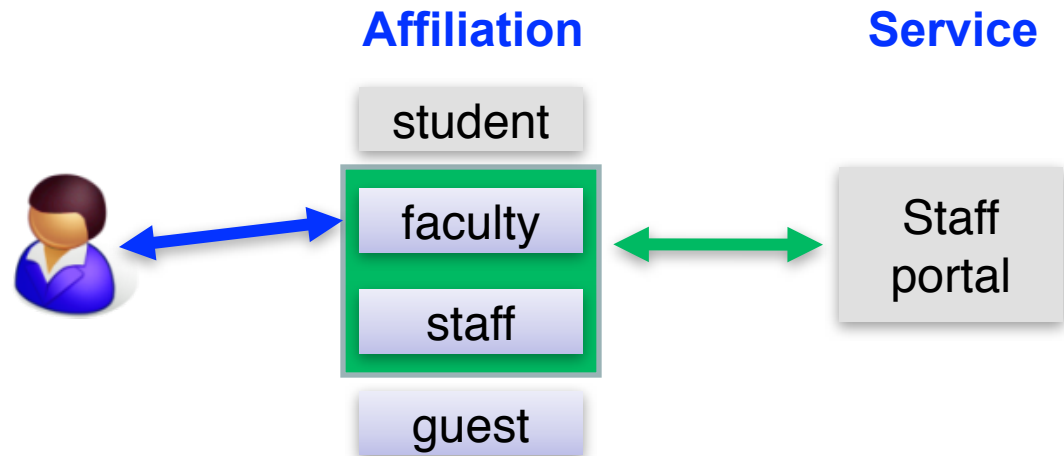
Lab Reservations

Additional benefits of access management

- Empower the right people to manage access. Take central IT out of the loop.
- See who can access what, with a report rather than a fire drill

Access management stages: authorization > authentication

1. Start out using a single user attribute, *affiliation*, in LDAP or Active Directory. This lets services implement simple access policies.



Access management stages: authorization > authentication

2. Enrich & centralize access management with groups determined from systems of record
 - Courses, financial accounts, departments
 - Define service-specific access policies in the centralized access management system

Math Faculty Group



can access

Math
Faculty
Resources

Access management stages: authorization > authentication

3. Get central IT out of the loop

- Distributed management
- Exceptions
- Departmental applications

*Math Faculty
Group*



+

*Math Support
Group*



can access

Math
Faculty
Resources

Access management stages: authorization > authentication

4. Increase integration of access management

- Direct integration with applications using web services
 - SOAP/REST/ESB
- Roles & privileges to support applications more deeply



For Math Department,
while John works there

HR
Admin
Role

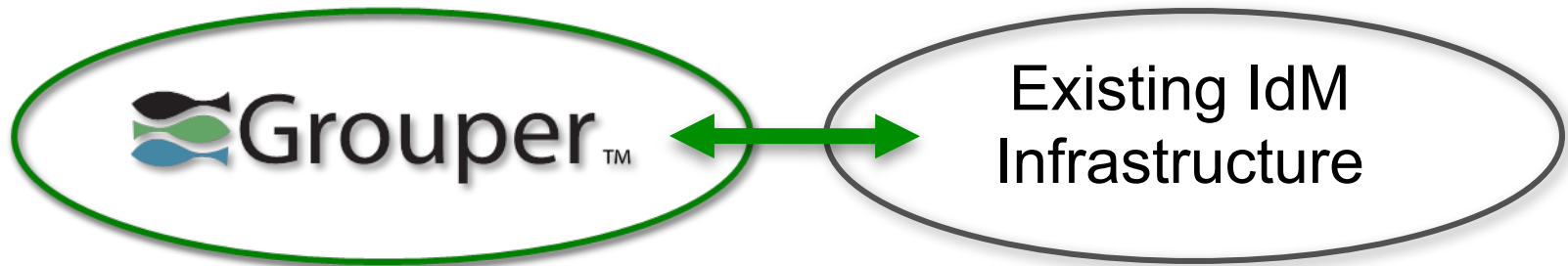
The Grouper Story

- Open source, community-driven project of the Internet2 Middleware Initiative
 - Initial release v0.5 in December 2004



The Grouper Story

- Key aims
 - Delegation and distributed management
 - Integration with most any existing Identity Management infrastructure



The Grouper Story

- Grouper v2.X expanded beyond groups
 - Roles & permissions



- Rules

```
- If
    removed from group A
- then
    remove from group B
```

Contributing organizations, so far

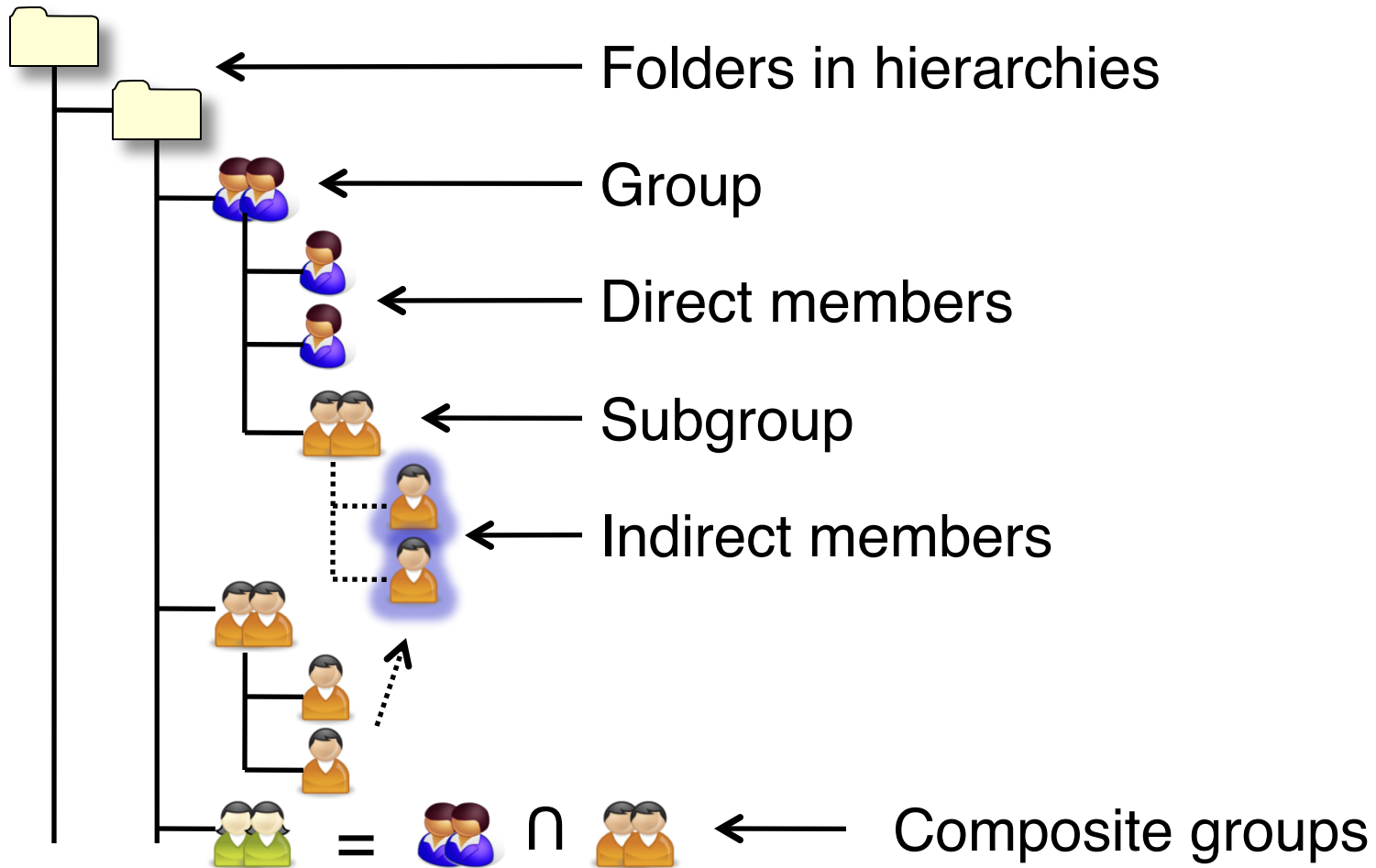
- Brown University
- California Polytech
- Cardiff University
- Campus Crusade for Christ International
- Cornell University
- Duke University
- Freie Universität Berlin
- GIP RECIA
- LIGO
- Newcastle University
- Northern Arizona University
- Ohio State University
- SURFnet
- University of Bristol
- University of Chicago
- University of Kansas
- University of Memphis
- University of Pennsylvania
- University of Washington
- University of West Bohemia

Latest addition to the community



- Unicon offers IT Services for Education, Specializing in Open Source
 - Cooperative Support Program for Grouper, Shibboleth, CAS, uPortal, uMobile, Sakai
 - Annual subscription, 4 levels, provides access to and funds dedicated support team who work directly with the open source projects

Grouper: core concepts



Security & delegation

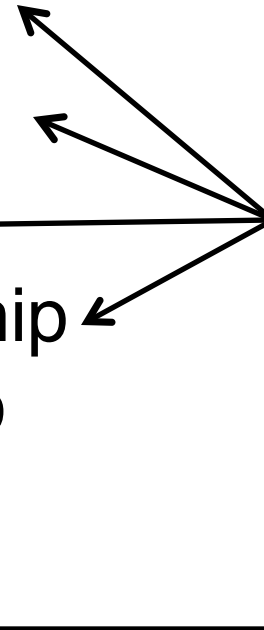


- Create groups
- Create subfolders

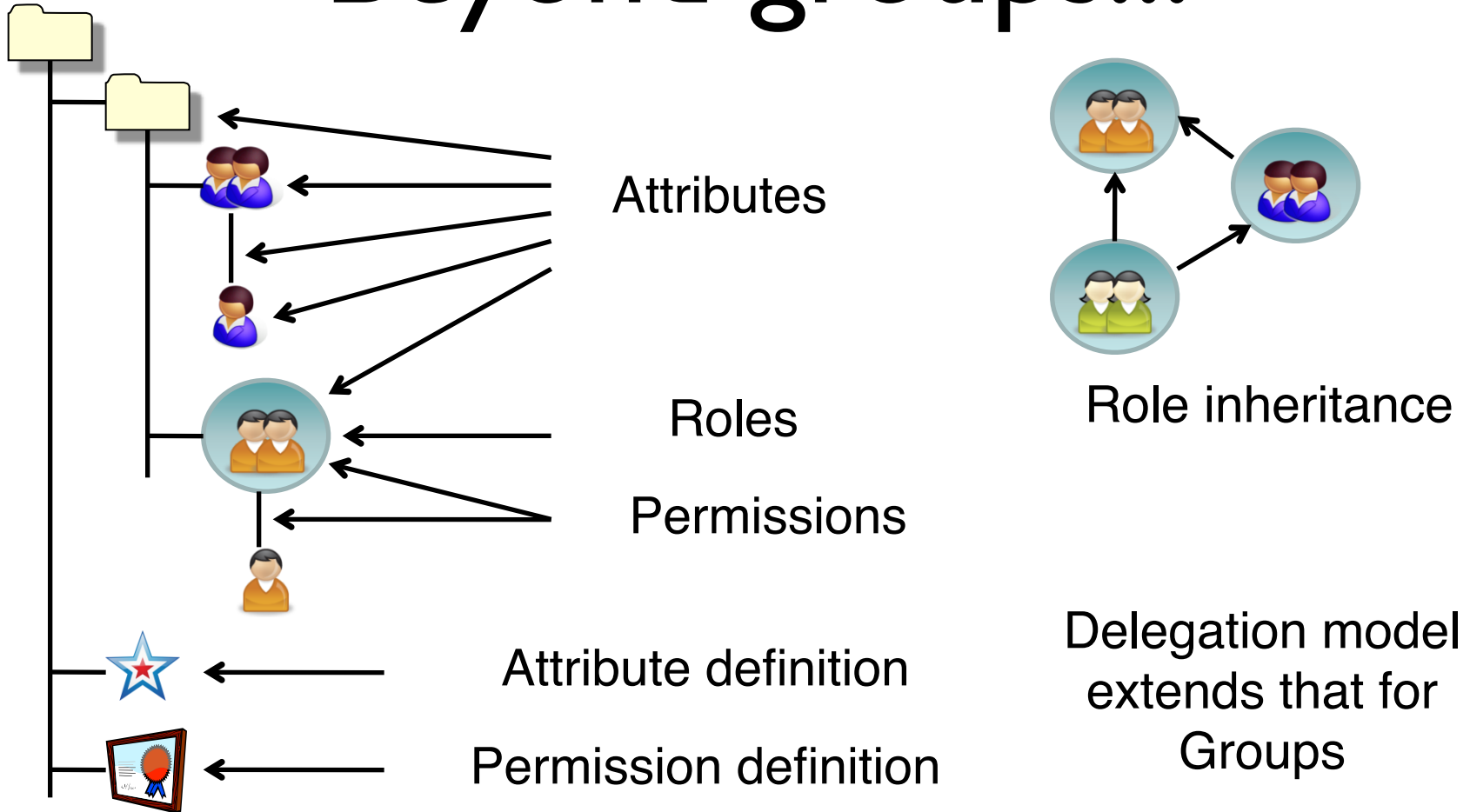


- Admin
- Update membership
- Read membership
- View group
- Opt-in
- Opt-out

Delegation



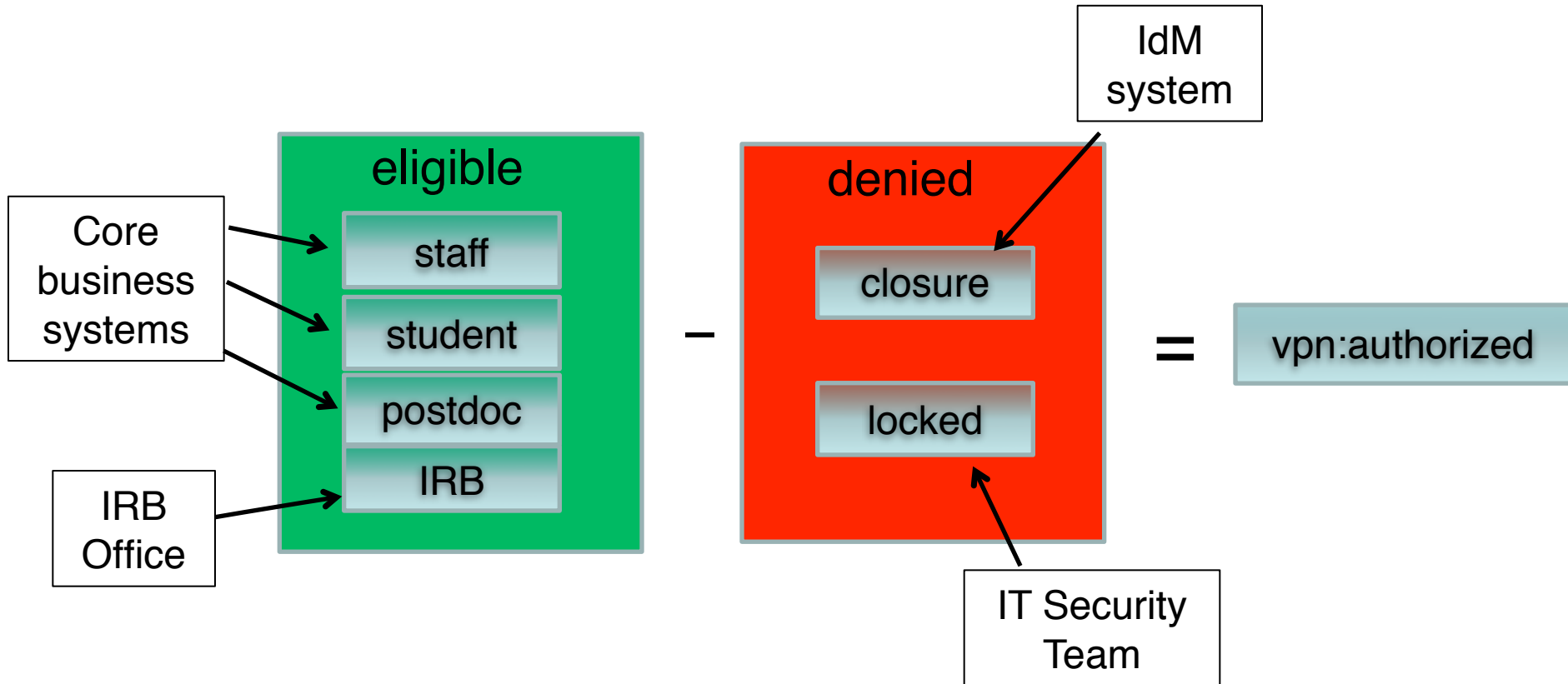
Beyond groups...



Access management lifecycle support

- Membership start & end times (optional)
- Move or copy folders, groups, etc
- User audit
- Point in time audit
- Rules

Distributed Authorization Management

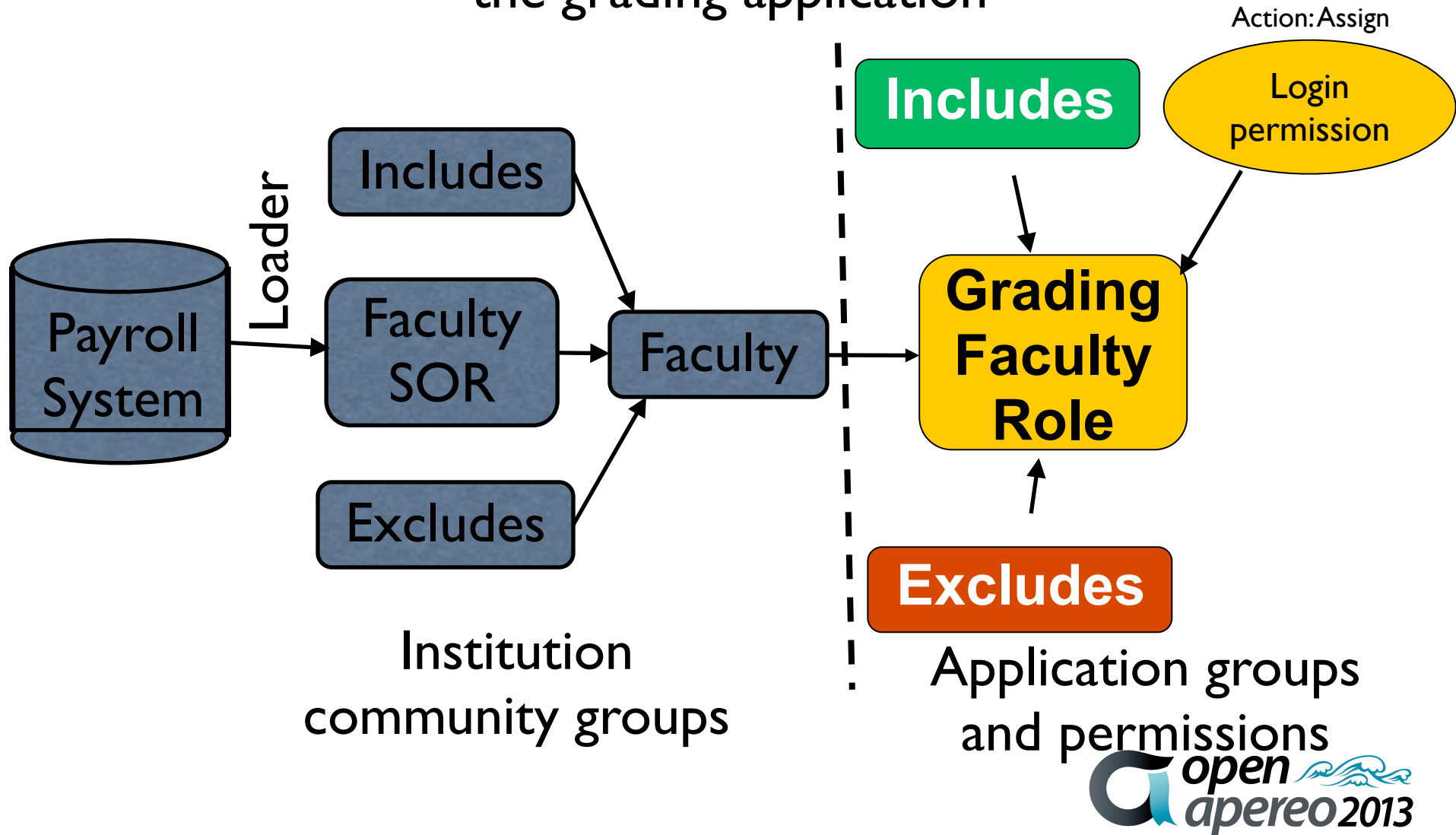


Different groups, different authorities

VPN only uses “vpn:authorized”

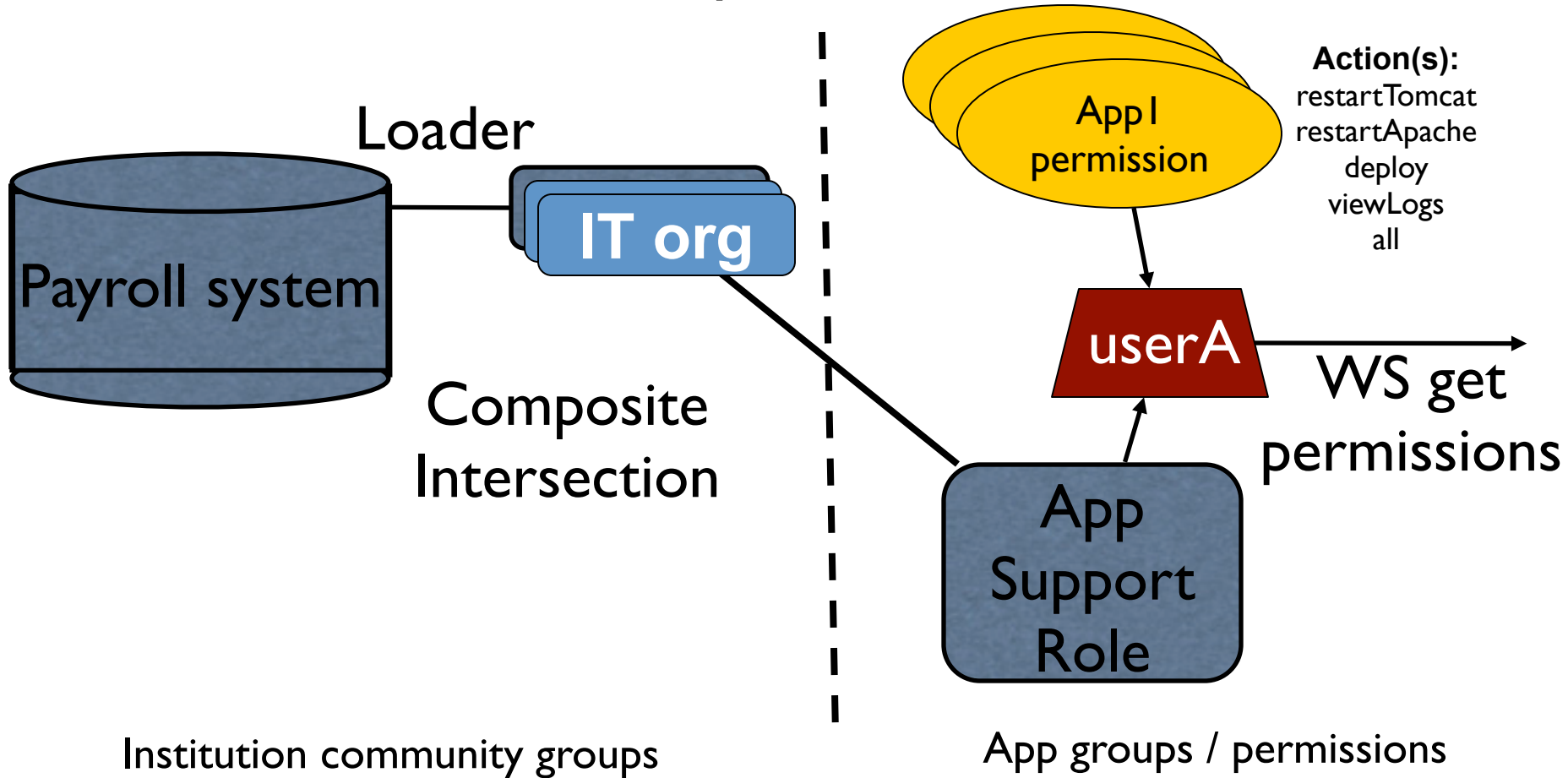
Deprovisioning

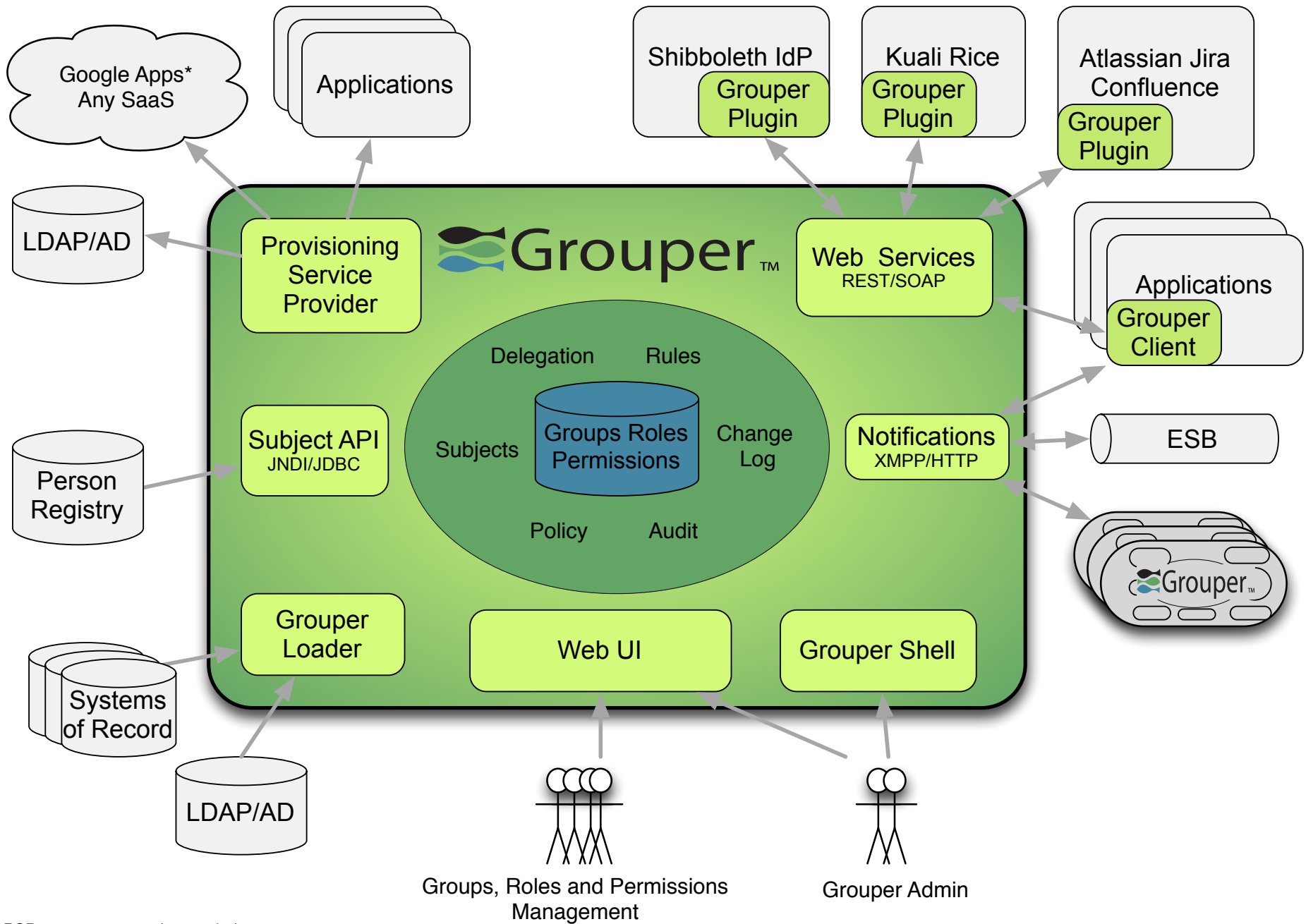
Only Active faculty members can login to the grading application



Fine-grained Permissions Management

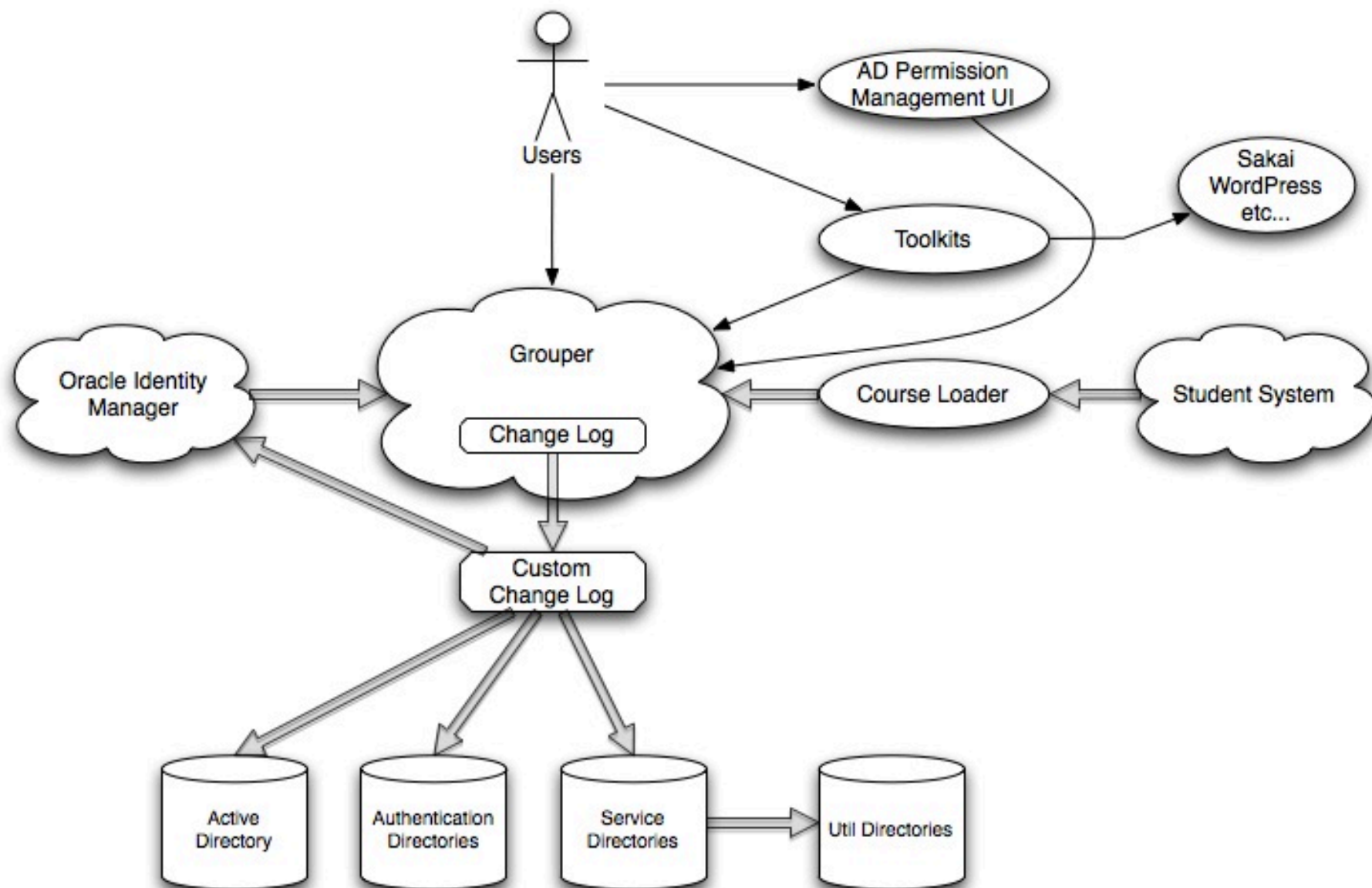
Active IT support staff can manage applications that they work on





* PSP connectors may be needed


Provisioning Authorization Data




Ad-hoc Collaboration Communities

Creates various groups in Grouper

Create/View tool sets

 For course use

 For non-course use

Name:

Example WordPress url:

https://sites.duke.edu/adhoc_test_community

Example Duke Mailing list address:

adhoc-test-community@duke.edu

Create

Tool Set for Test Community

Chat Room <i>A private Jabber chat room</i>	Add
Email Messaging <i>Email list using Sympa</i>	Add
Other <i>Placeholder to allow non-Toolkit resources to share activities</i>	Add
Quad <i>Quad is currently a Pilot project</i>	Add
Sakai <i>A learning management system</i>	Add
Virtual Computer Lab Access <i>VCL makes it possible to run lab software without visiting the lab in person</i>	Add

Groups and Roles for: Test Community

Use the links on this page to add or remove anyone with a Duke NetID from your course tool set. You can also add and remove guests with a Yahoo, Gmail or AOL email address. Once you add members to a group in Toolkits and set their roles, those members and their permissions are duplicated across all applications you open up to the community. Note that officially registered students, TAs, and instructors are automatically included in the appropriate groups and do not need to be added by hand.

[Add Person with a Duke NetID](#) [Add a Guest](#) [Batch add users](#)

All (1) [Admin](#) (1)

[What do these roles mean?](#)

Name	NetID	Role	Action
Shilen Patel	shilen	Admin	Edit



Group	Chat Room	Wiki	WebFiles Space	Email Messaging	WordPress Site	Sakai Site
Instructor	Owner	View, Modify, Comment, Admin	owner	List Owner	Admin: Can edit site appearance, manage users and privacy settings, and write posts and pages	Instructor
Manager/TA	Admin	View, Modify, Comment, Admin	Read/Write /Delete	subscriber	Admin	Instructor
Developer	Participant	View, Modify, Comment	Read/Write /Delete	subscriber	Editor: Can create, edit and publish pages and blog posts	Course Builder
Mentor	Participant	View, Modify, Comment	Read/Write	subscriber	Editor	Teaching Assistant
Student	Participant	View, Modify, Comment	Read/Write	subscriber	Author: Can create and publish posts, but not access or edit pages	Student
Visitor/Auditor	Participant	View	Read	subscriber	Subscriber: Can access a private blog and write comments	Visitor

Tom Barton's UChicago group memberships

Welcome Thomas Barton Act as self Change

My enrollment

My memberships

Join groups


My responsibilities

Manage groups
Create groups

My tools

Explore
Search
Folder workspace
Group workspace
Entity workspace
Help

Grouper is sponsored by



My memberships ⓘ

To find groups in which you are a member, you can:

- Browse the groups hierarchy
- List your groups
- Search for groups by name

Browse or list groups ⓘ [Show folders and groups](#)

Showing 1-50 of 145 items

- 👤👤 Grouper Administration:Wheel Group
- 👤👤 The University of Chicago:Applications:aams:Create ChicagoID
- 👤👤 The University of Chicago:Applications:aams:roles:trusted
- 👤👤 The University of Chicago:Applications:Bulkmail:Recipients:All Recipient Groups
- 👤👤 The University of Chicago:Applications:Bulkmail:Recipients:Students:All Students
- 👤👤 The University of Chicago:Applications:Bulkmail:Recipients:Students:Graduate Students
- 👤👤 The University of Chicago:Applications:Bulkmail:Recipients:Students:Undergraduate Students
- 👤👤 The University of Chicago:Applications:Bulkmail:users
- 👤👤 The University of Chicago:Applications:Bulkmail:Users:3
- 👤👤 The University of Chicago:Applications:Bulkmail:Users:4
- 👤👤 The University of Chicago:Applications:Bulkmail:Users:Bulkmail Users
- 👤👤 The University of Chicago:Applications:Business Objects Enterprise:irf:users
- 👤👤 The University of Chicago:Applications:Chalk:Authorized
- 👤👤 The University of Chicago:Applications:Chalk:Eligible Factor
- 👤👤 The University of Chicago:Applications:CityRyde:authorized
- 👤👤 The University of Chicago:Applications:CityRyde:Eligible Factor
- 👤👤 The University of Chicago:Applications:Cmail:users:authorized
- 👤👤 The University of Chicago:Applications:Cmail:users:eligible_factor

Memberships become LDAP attributes

dn: uid=tbarton,ou=people,dc=uchicago,dc=edu

ucismemberof: uc:org:nsit:integration:techag

ucismemberof: uc:org:nsit:srdirs

ucismemberof: uc:org:nsit:integration:iteco:wr

ucismemberof: uc:applications:confluence:NSIT:esx

ucismemberof: uc:org:nsit:integration:iteco:wr

ucIsMemberOf :
uc:applications:vpn:authorized

ucismemberof: uc:applications:bulkmail:users

ucismemberof: uc:org:library:gnet:admins

ucismemberof: uc:applications:gnetid:admins

ucismemberof: uc:applications:wireless:authorized

ucismemberof: uc:applications:cmail:users:authorized

ucismemberof: uc:reference:affiliations:effective:staff

UChicago applications managed by Grouper, so far

aams

Ad Astra

Bulkmail

Business Objects Enterprise

Chalk

CityRyde

Cmail

cnet

Confluence

Directory Administration

dmca

Facilities SIMS

gnetid

grouper

im

isx

IT Ecosystem

Lab School

LDAP

lists

Mail Forwarding

Mail Quarantine

Microsoft Exchange

modem pool

monitoring

myUChicago

Non-po

Onecard

online directory

password expiration

Service Now

sharepoint

shibboleth

statements portlet

SVN

tank

unifiedcomm

versions

virtualization

voip

vpn

web hosting

webproxy

webshare

webpace

wireless

Roadmap – v2.2

Release	Item	Description
2.2	New Grouper UI	Provide new UI capabilities that better meet community needs.
2.2	Services in Grouper	Tag objects in Grouper so that folders, groups, permissions can be associated with a "service" to make it easier for users to perform tasks in Grouper.
2.2	Improved Grouper configuration	Make Grouper more easily deployable and upgradeable across environments with cascaded config files and expression language in config file entries.
On-going	Grouper Core	Continue adding capabilities to meet requirements from the field.
On-going	Community contributions	Solicit and publicize <u>community contributions</u> of extensions and complements to Grouper.

Roadmap – v2.2

Release	Item	Description
2.2	Legacy attribute migration	Migrate legacy attributes into the new attribute framework.
2.2	Unix GID management	Built-in support for managing unix GIDs

Penn and Grouper

- Used Grouper centrally at Penn for 5 years
- 120k groups
- 2.7 million immediate memberships
- 10k permission assignments
- We use: UI, WS, GSH, loader, LDAP, client, external users, workflow with Kualu Rice edoclite, heavily delegated

Penn Grouper project team

- ~20% technical person
- ~20% data analyst
- Small requirements from various other people: manager, sysadmins, ldap admins, etc
- Note: during upgrades time requirements increase, these are average times

Example application: Qualtrics

- Cloud survey tool which is not licensed to everyone at Penn
- People in various schools or centers see a different branded site
- Loader manages affiliate groups
- Responsible parties can add ad hoc members
- Shib entitlements communicate rights to

Example application: Qualtrics (continued)

Search results for: qualtrics

- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsBsd
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsBsd_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsDental
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsDental_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsDesign
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsDesign_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsGse
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsGse_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsInstResearch
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsInstResearch_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsIsc
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsLaw
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsLaw_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsNotMember
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsNotMember_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsNursing
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsNursing_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsSas
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsSas_systemOfRecord
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsSeas
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsWharton
- 👤👤 penn:evp:businessServices:apps:qualtrics:qualtricsWharton_systemOfRecord
- 👤👤 penn:gse:apps:qualtrics:qualtricsUsers
- 👤👤 penn:gse:apps:qualtrics:qualtricsUsers_systemOfRecord
- 👤👤 penn:seas:security:qualtrics:qualtricsUsers
- 👤👤 test:seas:wsk:qualtricsUsers

Example application: custom app admin console

- Custom app framework does groups (pre-dated Grouper)
- Integrated so groups could be linked externally to Grouper
- For admins (all powerful), it is required that users be in the

Example application: custom app admin console (continued)

Membership list

- Show DIRECT members of this group
- Show INDIRECT members of this group
- Show ALL members of this group (direct and indirect)

Change display

First name **Change sort attribute**

This group has no direct members

- This is a composite group

 [penn:isc:ait:apps:fast:fastAdmins system of record intersection](#)

 [penn:community:employee:org:91XX - Information Systems and Computing Parent:91XX - Information Systems and Computing Parent](#)

[Remove composite group](#) [Replace composite factors](#) [Back to group summary](#)

Example application: Confluence wiki
















- Confluence (our version at least) can have external groups (hopefully ldap)
- We externalized users and groups so we have single signon, and ability to use Grouper features:
 - Loader - Auto-deprovisioning
 - Reuse groups in other apps
 - Central report to see who has what

Example application: Confluence wiki

- Note: we have a rule for auto-assigning privileges

Error: Too many results returned by one or more data sources - displaying truncated result set. Please narrow your search

Search results for: confluence

 penn:isc:ait:apps:atlassian:groupsConfluence:direct_lending_admin
 penn:isc:ait:apps:atlassian:groupsConfluence:direct_lending_contributors
 penn:isc:ait:apps:atlassian:groupsConfluence:direct_lending_viewers
 penn:isc:ait:apps:atlassian:groupsConfluence:dw_refresh_admin
 penn:isc:ait:apps:atlassian:groupsConfluence:dw_refresh_contributors
 penn:isc:ait:apps:atlassian:groupsConfluence:era_admin
 penn:isc:ait:apps:atlassian:groupsConfluence:era_contributors
 penn:isc:ait:apps:atlassian:groupsConfluence:era_viewers
 penn:isc:ait:apps:atlassian:groupsConfluence:harts
 penn:isc:ait:apps:atlassian:groupsConfluence:international_activities_contributors
 penn:isc:ait:apps:atlassian:groupsConfluence:isc_admin
 penn:isc:ait:apps:atlassian:groupsConfluence:isc_ait
 penn:isc:ait:apps:atlassian:groupsConfluence:isc_contributors
 penn:isc:ait:apps:atlassian:groupsConfluence:isc_finance_hr
 penn:isc:ait:apps:atlassian:groupsConfluence:isc_nt

Grouper loader

- Daemon that periodically sync'ed external sources with Grouper
- Can work for groups or permissions (e.g. org chart)
- SQL or LDAP sources (note: PSP does LDAP too)
- Grouper admins can configure jobs based on attributes

Grouper loader (continued)

- Can sync multiple groups from one query/filter (e.g. courses or orgs)
- Penn has 92 SQL Grouper Loader jobs
- Generally we run these daily, though some run a handful of times throughout the day

Provisioning

- Grouper PSP can provision grouper data to LDAP or AD (other targets can be created)
- Grouper change log can send notifications to XMPP, ESB, etc (other targets can be created)
- Generally we aim for periodic full refresh, with near real time updates

Auditing

- “User audit” will audit who does what
- Point-In-Time auditing will keep track of the history of the repository
 - Who was in this group at a point in time (or time range) in the past
 - Who are all the people who have been in this group
 - What groups was this person in at a point in the past (or time range)

Grouper Quali Rice edoclite workflow

Paper form screenshot

- In 2009 Penn wanted to convert paper access management forms to eForms

Part I Identification Information (please print) Check one: New ID Change privs. Remove privs.

Full Name (include middle initial): _____

Phone Number: _____ - _____ Organization Name: _____

Address: _____

Email Address: _____ @ _____ PennCard ID Number: _____

PennNet ID (network ID): _____ Oracle ID (for changes, deletions): _____

As an individual whose position requires interaction with any or all of the University's administrative information systems, I may be provided with direct access to confidential and valuable data and/or use of data systems. In the interest of maintaining the integrity of these systems and of ensuring the security and proper use of University resources, I will maintain the confidentiality of my password for all systems to which I have access. I will maintain in strictest confidence the data to which I have access. Any confidential information will not be shared in any manner with others who are unauthorized to view such data. I will use my access to the University's systems for the sole purpose of conducting official business of the University. I understand that the use of these systems and their data for personal purposes is prohibited. I understand that any abuse of access to the University's systems and their data, any illegal use of copying of software, any misuse of the University's equipment may result in disciplinary action, loss of access to the University's systems, and possible sanctions consistent with the University Policy on Adherence to University Policy.

Requestor signature: _____ Date: ____/____/____

Expiration Date: ____/____/____

Paper form screenshot

(continued)

<p>Part 2A Requested Access for:</p> <p><input type="checkbox"/> Financial Balances</p>	<p>Part 2B Access Level:</p> <p>BEN Financials ID*: _____ (Access to Financial Balances will be granted with the same organization access as BEN Financials)</p> <p>*If you do not have a BEN Financials ID, specify level of access desired. Chart of Accounts training is the prerequisite for users without access to BEN Financials.</p> <p><input type="checkbox"/> University Wide <input type="checkbox"/> School -- School Number: _____ <input type="checkbox"/> Org Number: _____</p>
<p>Part 3A Requested Access for:</p> <p><input type="checkbox"/> Salary Management</p>	<p>Part 3B Access Level: Specify <i>one</i> level of access required.</p> <p><input type="checkbox"/> University Wide <input type="checkbox"/> School -- School Number: _____ <input type="checkbox"/> Org Number: _____ <input type="checkbox"/> Employee General only* (no salary information)</p>
<p>Part 4A Requested Access for:</p> <p><input type="checkbox"/> Position Inventory</p>	<p>Part 4B Access Level: Specify <i>one</i> level of access required.</p> <p><input type="checkbox"/> University Wide <input type="checkbox"/> School -- School Number: _____</p>

Paper form screenshot

(continued)

(continued on second page)

<p>Part 5A Requested Access for:</p> <p><input type="checkbox"/> Sponsored Projects (use this form ONLY if you really need the old Sponsored Projects data... otherwise, please use the regular Data Warehouse Access form for Financial Data, and request access to PennERA Proposals)</p>	<p>Part 5B Access Level: Access to Sponsored Projects will be granted with the same organization access as BEN Financials. If you do not have a BEN Financials ID, please specify <i>one</i> level of access:</p> <p><input type="checkbox"/> University Wide <input type="checkbox"/> School -- School Number: _____ <input type="checkbox"/> Org Number: _____</p>
--	--

Part 6 Type of Access

Business Objects Full Client? Windows 98 Win2000/XP

OR

InfoView-only?

(If neither of the above, please specify method of access: _____)

Paper form screenshot (continued)

Part 7 Authorizing signatures

The person named above has my approval for the requested warehouse access.

Authorizing (ie., supervisor) Signature: _____ Date: ____/____/____
(Required for all the data collections listed above)

School/Center Sr. BA Signature: _____ Date: ____/____/____
(Required for all the data collections listed above)

Trainer Signature: _____ Date: ____/____/____
(Required *only* for General Ledger access for non-BEN Financials users, to certify Chart of Accounts training)

Human Resources Signature: _____ Date: ____/____/____
(Required for Salary Management* and Position Inventory only)

Payroll Signature: _____ Date: ____/____/____
(Required for Salary Management* and Position Inventory only)

*Human Resources and Payroll signatures are *not* required for requests for Salary Management – Employee General access.

Paper form screenshot (continued)

Part 8 To be completed by Security Administrator

ID assigned: _____

Initial password assigned: _____

Data Administration initials: _____

Authorizations in order. Date received: ___/___/___

Authorization incomplete. Return to sender.

Date returned to Security Administrator: ___/___/___ Date completed: ___/___/___

Remarks:

Send completed forms to:

Data Administration - W.H. Access

██████████ Street/6228

To request additional forms:

URL <http://██████████forms.html>

Paper form existing list

To request authorization and access, you must submit a Data Warehouse Access Request Form for each data collection you need. Be sure to check the appropriate check box on each form if you plan to use Business Objects or InfoView only. Select the form from these data collections:

- [Advancement Data Collection](#) (information from ATLAS)
- [Assets Data Collection](#) (property management asset information from the BEN Assets module of BEN Financials)
- [BRIM Data Collection](#) (Office of Research Services' Billing and Receivables Management)
- [Express Mail Collection](#) (access to Express Mail detail data)
- [Faculty Data Collection](#) (information from the Faculty Information System)
- [FRES Work Requests Data Collection](#) (information from Facilities and Real Estate Services Facility Focus System)
- [General Ledger , Salary, Position Inventory and PennERA Proposals Data Collections](#)

(Note: You may also this form to request access only to EMPLOYEE_GENERAL and related tables, for the purposes of viewing basic employee and primary appointment information with no salary or job details.)

- [Sponsored Projects version](#) of the financial collection form (used only for access to old Sponsored Projects data, *not* Proposals)
- [Graduate Admissions](#) (for graduate and professional school reporting)
- [ISC Billing Data Collection](#) (access to Network billing, Telecommunications, and

Requirements

- Autofill personal information
- Common includes (privacy statement)
- Fill out form on behalf of someone else
- Org chart picker for data access
- Person picker from group (employee)
- Notification to requester when complete
- Report on form data
- Should require no Java to create forms

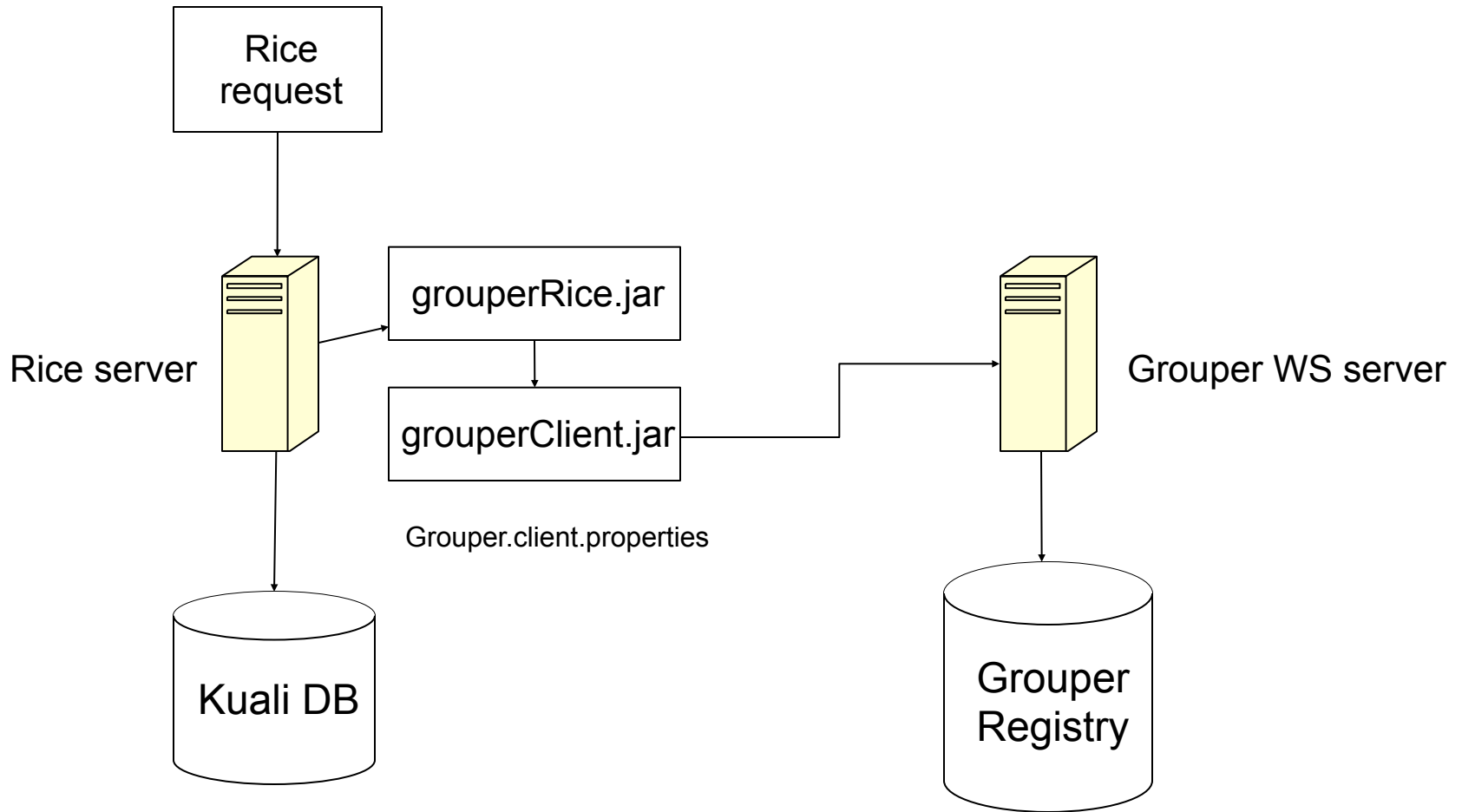
Routing requirements

- Route to members of Groupers group
- Route to selected group (pick school)
- Ability to return to previous route node
- Route to multiple groups at once
- Conditional routing
- Dynamic routing to someone entered on form

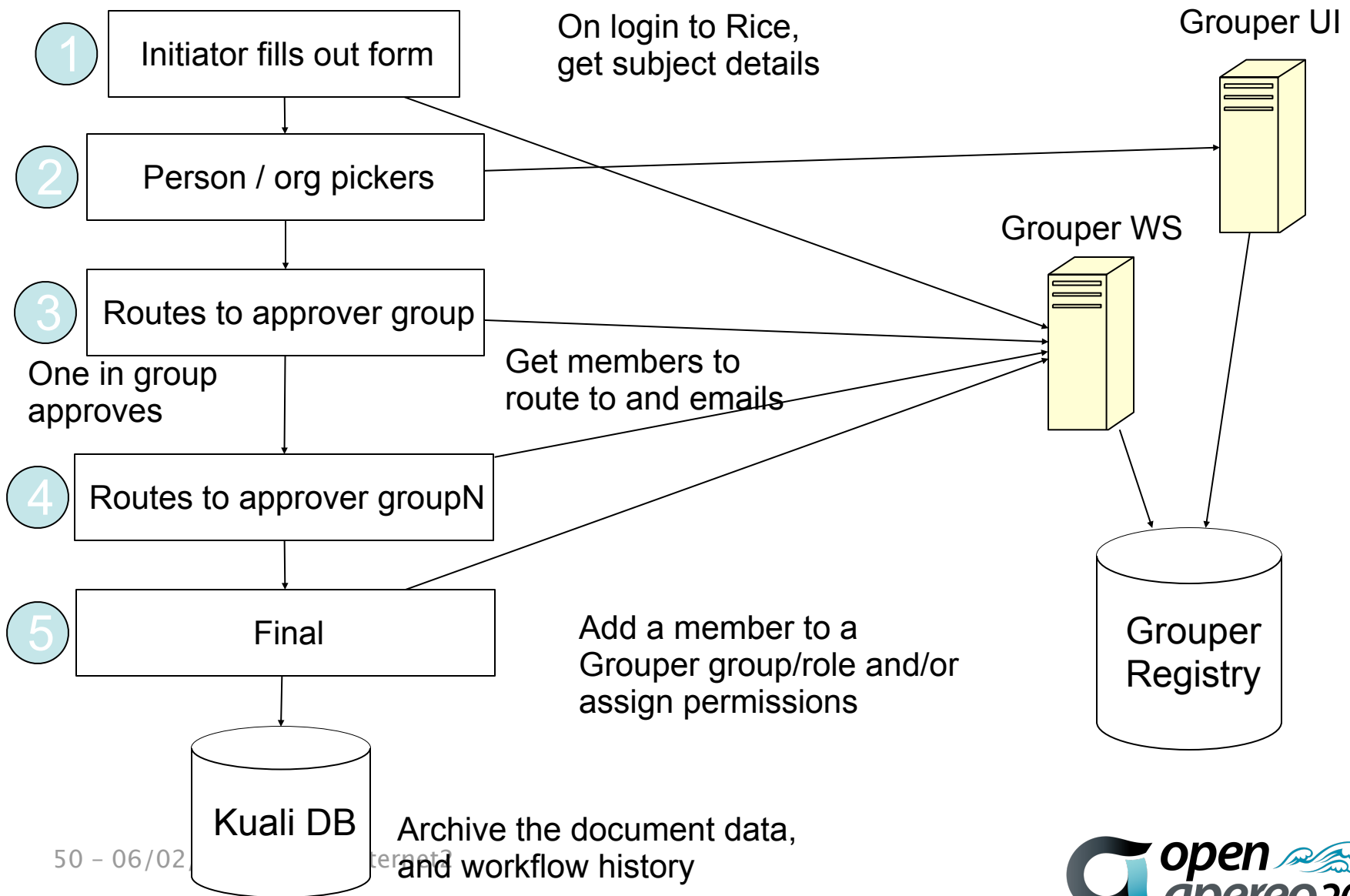
Security requirements

- Submitters can see current and past forms
- Approvers can see current and past forms
- Certain people can edit certain forms

Kuali Rice overridable services



eForms workflow with Grouper



Salary management eForm

Form name:	Salary Management access
Form status:	INITIATED
Create date:	07:50 PM 11/07/2010
Document ID:	3196

Access Request Form: Data Warehouse Salary Management Collection

Requester Information:

Please complete the fields below, and then click the **route** button to initiate your request. Fields with an asterisk (*) are required.

On behalf of Penn ID*

On behalf of (auto filled from above) Michael Christopher Hyzer (m [REDACTED], [REDACTED]) (active) Staff - Isc Administrative Systems Tools And Technologies - Programmer Analyst Sr (also: Alumni)

Privilege change* New ID Change privs Remove privs **Oracle ID (for changes or deletions)**

Name Michael Christopher Hyzer (m [REDACTED]) (active) Staff - Isc Administrative Systems Tools And Technologies - Programmer Analyst Sr (also: Alumni)

Expiration date (yyyy-Mon-dd)

Type of access* Business Objects InfoView only Other (please specify)

Supervisor Penn ID*

Supervisor (auto filled from above)

Salary management eForm (continued)

Please specify level of access desired by selecting ORGs in the fields provided below.

Org*	<input type="text" value="0107"/>	<input type="button" value="Find org"/>	<input type="text" value="UNIV:USCH:02XX:FBBA:ENGL:0107"/>
Org	<input type="text"/>	<input type="button" value="Find org"/>	<input type="text"/>
Org	<input type="text"/>	<input type="button" value="Find org"/>	<input type="text"/>
Org	<input type="text"/>	<input type="button" value="Find org"/>	<input type="text"/>
Org	<input type="text"/>	<input type="button" value="Find org"/>	<input type="text"/>

[More orgs](#)

As an individual whose position requires interaction with any or all of the University's administrative information systems, I may be provided with direct access to confidential and valuable data and/or use of data systems. In the interest of maintaining the integrity of these systems and of ensuring the security and proper use of University resources, I will maintain the confidentiality of my password for all systems to which I have access. I will maintain in strictest confidence the data to which I have access. Any confidential information will not be shared in any manner with others who are unauthorized to view such data. I will use my access to the University's systems for the sole purpose of conducting official business of the University. I understand that the use of these systems and their data for personal purposes is prohibited. I understand that any abuse of access to the University's systems and their data, any illegal use of copying of software, any misuse of the University's equipment may result in disciplinary action, loss of access to the University's systems, and possible sanctions consistent with the University Policy on Adherence to University Policy.

I will abide by this policy*

Salary management eForm

(continued)

Supervisor Action:

Please select the appropriate School/Center Access Administrator from the list.

School/Center Access Administrator*

Form Routing:

To add a comment to your request or approval action, enter it in the Note field provided and click the **save** button.
Click the appropriate button (**route**, **approve**, **disapprove**, etc.) to submit the form for continued processing in the workflow.

Create Note			
Author	Date	Note	Action
Michael Christopher Hyzer (n [REDACTED]) [REDACTED] (active) Staff - Isc Administrative Systems Tools And Technologies - Programmer Analyst Sr (also: Alumni)	11/07/2010	<input type="text"/>	<input type="button" value="save"/>

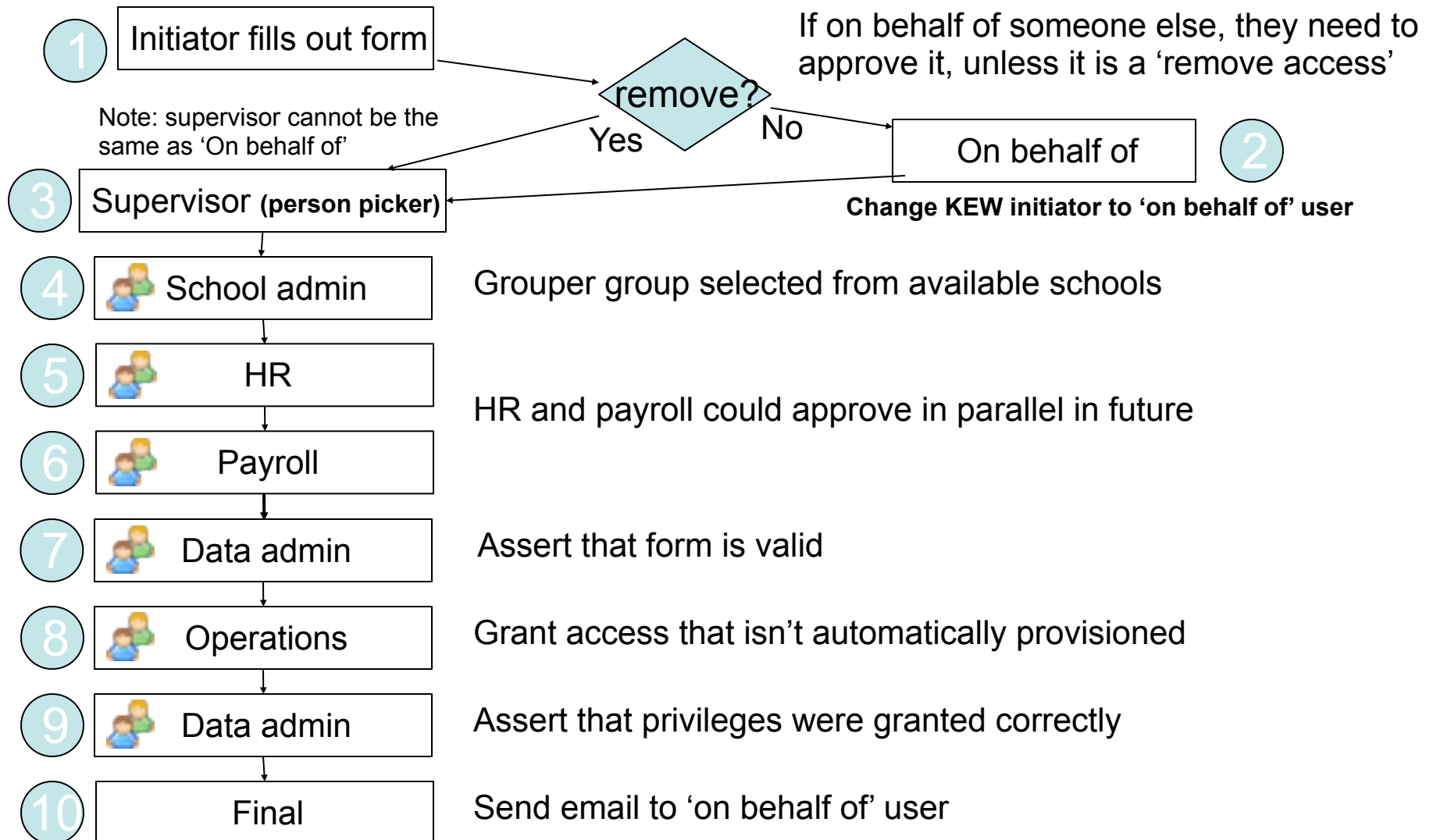
Implementation Notes:

For internal ISC use only. The following implementation actions are complete:

- Oracle ID assigned
- Data Warehouse access
- Listserv membership(s)
- Business Objects access

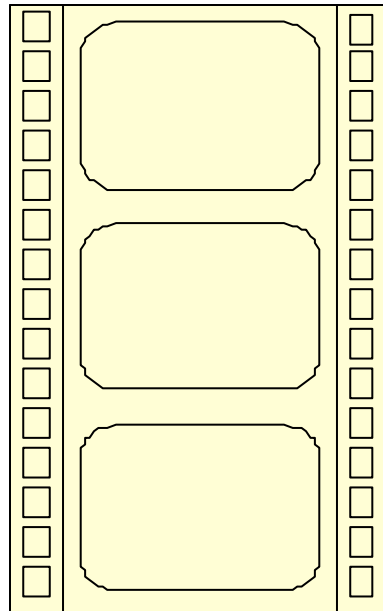
Form template last revised 08/04/2010

eForms demo workflow



Grouper Rice demo

- Demo movie



Groupware Rice group provisioning

- Groupware can provision groups and permissions when forms are complete, so generally Penn does not use it that way

Grouper and external users

Penn's Secure Space

- Penn launched Secure Space in Fall 2010
- Initially it was for PennKey holders only
- 2011 we enabled external users
- 2013 we will retire this service in favor of Box.net

Penn's Secure Space (continued)

- Secure Space is built on Grouper with three groups per space: admins, users, readonly
- When logging in, the grouper client / WS is used to cache the list of groups for user
- On create/delete space, GC/WS is used to create/delete groups
- Group memberships are managed via the membership lite UI screen

Penn's Secure Space (continued)

- Penn's Grouper has rules to only allow external users in certain SS folders
- Penn's Grouper external users must be invited to be able to register
- SecureSpace uses InCommon
- EPPN is required for external users
- External users self-register their name, email, institution

Penn's Secure Space (continued)

- Penn installed Shibboleth Discovery Service (DS/WAYF), customized:
 - Pennify
 - Support channel
 - Make it easy for Penn users
 - Recommend ProtectNetwork for users who don't have an InCommon account which releases EPPN

Penn's Secure Space (continued)

- Grouper shows external users with different icon, and description:
- [unverifiedInfo] First Last - institution
[externalUserId] userId@institution.suf
- External users do not show in results for groups which do not allow external users
- Demo

Thanks!

Further information:

Infosheets, mail lists, wiki, downloads, etc:
www.internet2.edu/grouper

Grouper demo server:
<https://grouperdemo.internet2.edu/>