



• 2016 •  
**TECHNOLOGY**  
exchange

MIAMI FL



SEPTEMBER 25-28

## Grouper Working Group

Chris Hyzer, University of Pennsylvania  
Shilen Patel, Duke  
Bert Bee-Lindgren, Georgia Tech  
Bill Thompson, Lafayette

# AGENDA

- Welcome
- Agenda Bash
- Core Team
- What is Grouper
- Grouper and TIER
- Roadmap and Scheduling
- Grouper Deployment Guide Work (Bill Thompson)
- Community Contributions
- Discussion

—



# Grouper Core Team

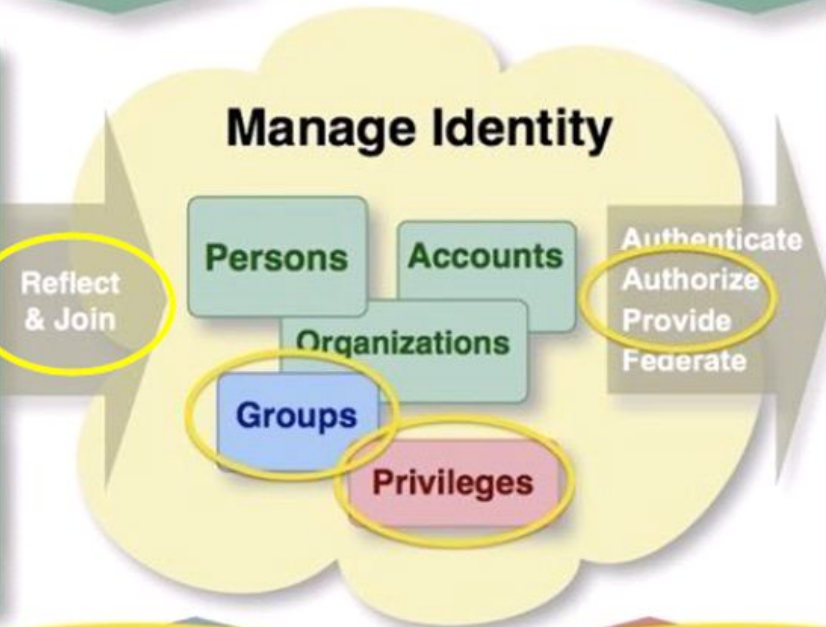
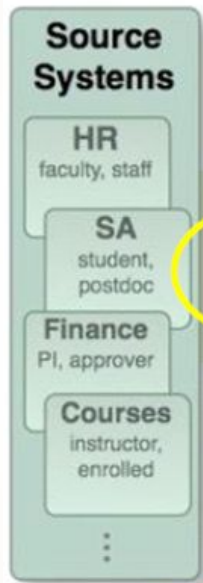
- Bert Bee-Lindgren (Georgia Tech) - provisioning
- Misagh Moayyed (Unicon) works on Grouper/TIER, initially focused on build/package management
- Vivek Sachdeva (independent) - WS
- Chris Hyzer (Penn) - Grouper lead, API, WS, and UI
- Shilen Patel (Duke) - API and everything else
- Emily Eisbruch (Internet2) - work group support



# What is Grouper?

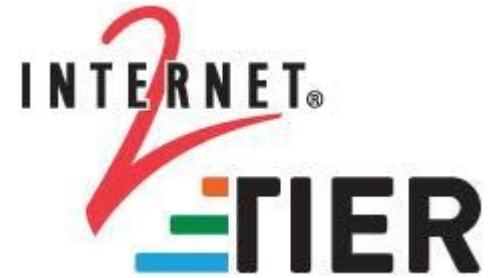
- Central authorization
- Groups
- Permissions
- Provisioning
- Auditing
- Delegation and distributed management





# TIER

- Trust and Identity in Education and Research
- Provides:
  - Governance
  - Funding
  - Requirements
  - Standard tools, infrastructure, collaboration utilities
  - Software



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# Grouper Roadmap

- Grouper 2.4 to be released Spring 2017 before TIER release



# Grouper Roadmap in v2.4

- Refine next generation provisioning
- Add new messaging strategies
  - e.g. ActiveMQ, RabbitMQ/AMQP, Azure, AWS, others?
- Grouper loader real time updates
- Grouper instrumentation
- TIER packaging
- TIER SCIM API implementation



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# Grouper Roadmap in v2.4 (continued)

- Provisioning by message
- Upgrade vt-ldap to ldaptive (PSPNG to use ldaptive)
- Revise build environment and dependency retrieval (gradle)
- Box integration
- Improve GSH
- Transition all configuration to be properties overlays
- UI accessibility



# Grouper Roadmap potentially for v2.4

- Administrative configuration UI User interface for administration and configuration of Grouper
- Finish the new UI, replace admin and lite UI



# Grouper Roadmap unscheduled

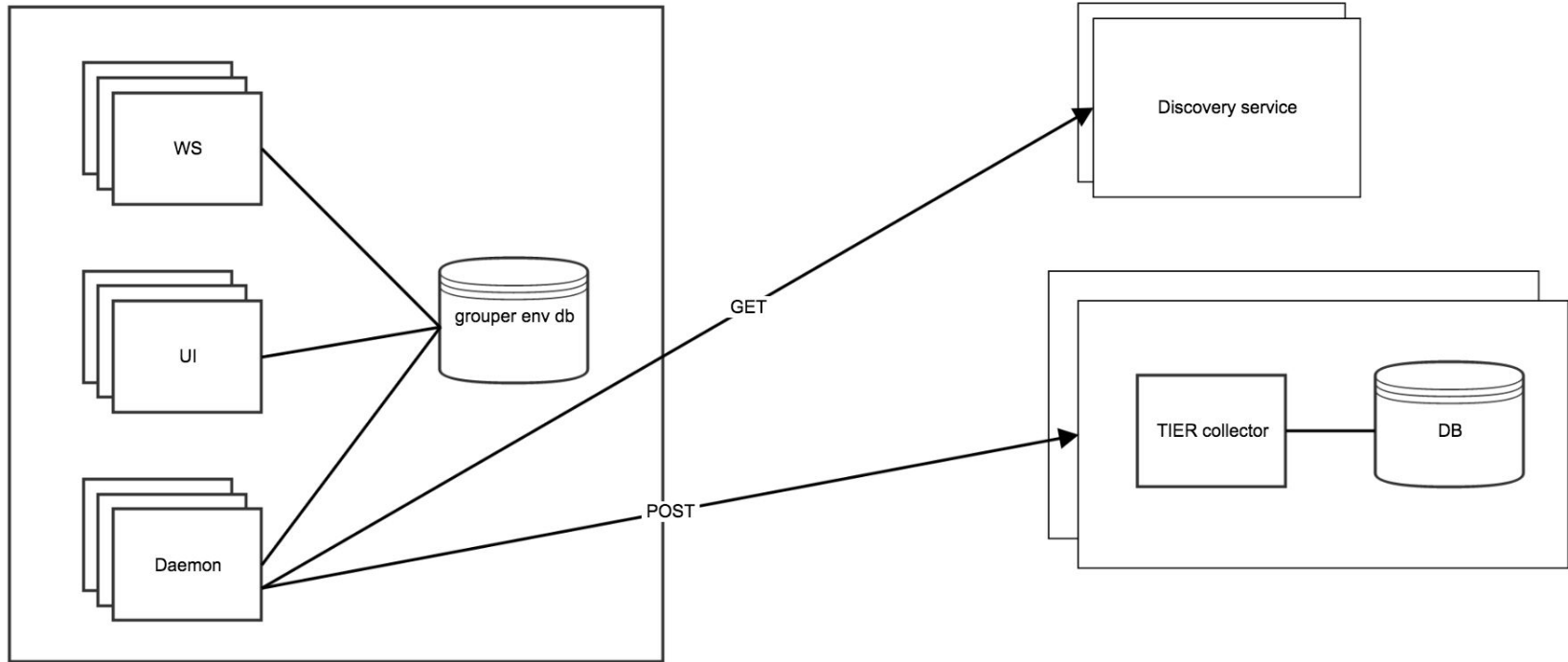
- Add remaining attribute/permission operations to WS
- Improve pagination in WS
- Add ability for users to register to be notified of changes to specified objects
- Expire dates on groups and attributes
- Rules on memberships



# Instrumentation

- TIER interested in collecting metrics for TIER components including Grouper.
- May help inform us of how Grouper is being used and where improvements can be made.
- Grouper 2.3 has a recent patch to send TIER basic information about your deployment. Currently disabled by default.
  - Version
  - Patches
  - OS
  - Number of recent changes
  - Total registry size
  - PSP/PSPNG running
- Still to do - add web service and UI information

# Instrumentation



# Other recent updates

- Bad membership finder daemon
  - Automatically detect and fix membership issues
- Rules and effective memberships
- Control which attributes are displayed for a subject and in which order

# Grouper loader real time updates (2.4)

- Loader jobs currently do full comparisons
- Can potentially be time consuming for large groups so the frequency of the job may be less than ideal.
- Provide a way for incremental updates
  - Change log
  - Messaging

# Provisioning: PSPNG Roadmap

## Now (2.3):

- Integration Tests, Bug Fixes/Patches, Videos, Support
- Performance Measurement & Improvements

## 2.4?:

- Feedback, refactoring, etc
- Deprovisioning Safety Nets
- Grouper Messaging: Message Skip/Retry
- New Endpoints? SCIM?



# Provisioning Architectures

Architecture	Examples	Notes
Changelog Reader, Grouper Java API	PSPNG 2.3, Duo, Many Others	OOTB, <Parts, Only Grouper
Messaging Using Grouper Java API	PSPNG, 2.4?	>Triggering, Retry, API Performance & Power
Messaging Using Grouper WS	Box, Lafayette, Others	>Triggering, >Languages, >Delegation, Use Other Data

# TIER API

- Worked on by Vivek
- TIER API is SCIM with extensions and resources types
- Based on Penn State's J2EE SCIM implementation
- GET/PUT/POST/DELETE on Groups (with TIER extension)
- GET on Users (with TIER extension)
- GET/PUT/POST/DELETE on Memberships (new resource type)
  
- What's next?



# Grouper Deployment Guide

## TIER Grouper Deployment Guide 1.0

- [TIER Grouper Deployment Guide Proposal](#)
- Expand the [Columbia Grouper Deployment Guide](#) to cover TIER recommendations
- Work with the TIER community on shared vocabulary, practice and strategies
- Distill community best practices from [Community Contributions](#) into specific guidance
- Expand IAM capabilities/use cases

## Timeline/Milestones

- TIER working group charter and community team formation - Aug 2016
- 0.5 draft outline TIER Grouper Deployment Guide - Sep 25, 2016
- 2016 Internet2 Technical Exchange presentation/discussion/feedback - Sep 25-28, 2016
- 0.7 draft release Dec 2016
- 0.9 draft release and final comments period Feb-Mar 2017
- 1.0 final release Internet2 Summit Apr 2017

## [Understanding Grouper](#)

[History](#)

[Architecture](#)

[Components](#)

[Capabilities](#)

[Requirements](#)

## [Installing Grouper](#)

[Grouper Installer](#)

[gsh Wrapper](#)

[Subject Source Configuration](#)

[Grouper.UI Authentication](#)

[Grouper.WS Security](#)

[Grouper Daemon](#)

## [Grouper Groups and Folder Design](#)

[Standard Folder Set and Pattern](#)

[Different type of groups...](#)



# Grouper Deployment Guide

## Discussion at TechEx

- Grouper BOF - Tue 2:30pm @ Bayfront B
- ACAMP Session
- Find me in the hall :)

## Discussions after TechEx

- [Grouper Deployment Guide Work - TIER Program](#)
- [NIST 800-162 ABAC](#)
- [Columbia Grouper Deployment Guide](#)
  - What do you wish you knew before you started your Grouper deployment?
  - What is missing from an initial deployment perspective?
  - What should we work on in the way of recommended / best practices?
- [Grouper wiki examples \(folders, community examples, etc\)](#)
  - Good examples of use cases? Good presentation/format?

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# Grouper Community Contributions

Share your Grouper experience on the Grouper wiki

- Update it from time to time
- <https://spaces.internet2.edu/display/Grouper/Community+Contributions>
- See or email Emily Eisbruch (emily@internet2.edu) for help setting up your Grouper contributions page

Thanks to all those who have recently updated their Grouper Contrib page!

# Grouper Community Contributions

**New York University - (Updated May 2016)** Grouper deployment at NYU, including selective group exclusion when provisioning.

**Newcastle University (Updated 2016)-** A video on how groups are structured, information on access control groups using Talend, managing

**Northern Arizona University** - See how Northern Arizona University integrated Grouper and uPortal

**Oregon State University (Updated June 2015)**– using Grouper for video access, Canvas, and Google Apps

**Penn State University - (Updated Feb. 2015)** Using Grouper with the Central Person Registry.

**Simon Fraser University** - Using the Grouper Loader, the Changelog and an ESB connector

**SURFnet OpenConext** - See how Grouper is used within the OpenConext collaboration platform

**University of Arizona Grouper Pages (Updated 2014)-** a self-service utility allows FERPA-trained faculty and staff members to manage ad-h

**University of Auckland, NZ (Added 2016)** - Migrating all group management functionality to Grouper

**University of California, Berkeley (Updated Oct. 2014)**– Grouper in production with CalMessages email broadcast

**University of California Los Angeles (Updated Aug. 2016)** - Overview of Grouper use cases and deployment at UCLA

**University of California, Santa Cruz (Added Oct. 2015)** - Grouper for VPN

**University of Chicago (Updated Jan. 2016)**– Learn about U. Chicago Grouper, including access management features and VPN delegation.

**University of Colorado Boulder (Updated Sept. 2016)** - Grouper with Exchange / Office 365

**University of Edinburgh (Added April 2015)**–Learn about the deployment of Grouper 2.2 with Tomcat 8/Java 8.



# Staying Informed/Get Involved with Grouper

- Join the Grouper-Users email list
  - To subscribe:  
Email [pubsympa@internet2.edu](mailto:pubsympa@internet2.edu) with the subject (case insensitive):  
subscribe grouper-users
- Join the effort to create Grouper Deployment Guide as part of the TIER work, led by Bill Thompson
  - To subscribe:
  - Email [pubsympa@internet2.edu](mailto:pubsympa@internet2.edu) with the subject (case insensitive):  
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# Questions/Comments/Feedback

