



Grouper Overview

Stephen Sazama - UMD (Included these slides only)

Todd Haddaway - UMBC

Cross Campus Technology Group
Fall 2018

Grouper at UMD

- TIER Initiative
- Grouper initial rollout: October 2016
- Grouper 2.2.2 with some customizations
- Upgraded to 2.3.0 in July 2017

Primary Goal: Centralized group management for distributing access

Delivering Groups to Other Systems

- **Custom Change Log Consumers**

- Atlassian JIRA
- Atlassian Fisheye/Crucible
- Database Updater for Tableau (decommissioned)

- **Web Services**

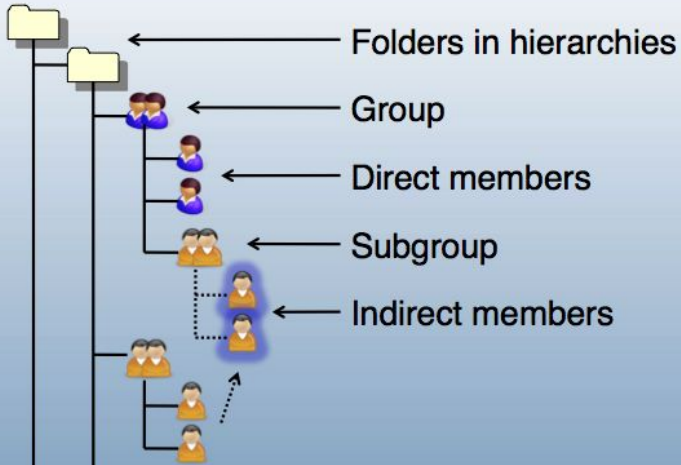
- Tuition Remission
- Environmental Safety
- Other DIT Web Applications

- **LDAP Provisioning (PSPNG)**

- Atlassian Confluence
- Atlassian Bamboo
- Splunk
- Business Office Ticketing System
- Informatica Cloud
- Libraries

Group Structure in Grouper

Group and folder structure



Home > Root > Application Roles > Division of Information Technology > JIRA > AHUTIL > AHUTIL-Viewer

AHUTIL-Viewer

[+ Add members](#)
[More actions](#)

Member name or ID:
Enter an entity name or ID, or [search for an entity](#).

Assign these privileges: Default privileges Custom privileges
[Add](#) or import a list of members .

More ▾

Members Privileges More ▾

The following table lists all entities which are members of this group.

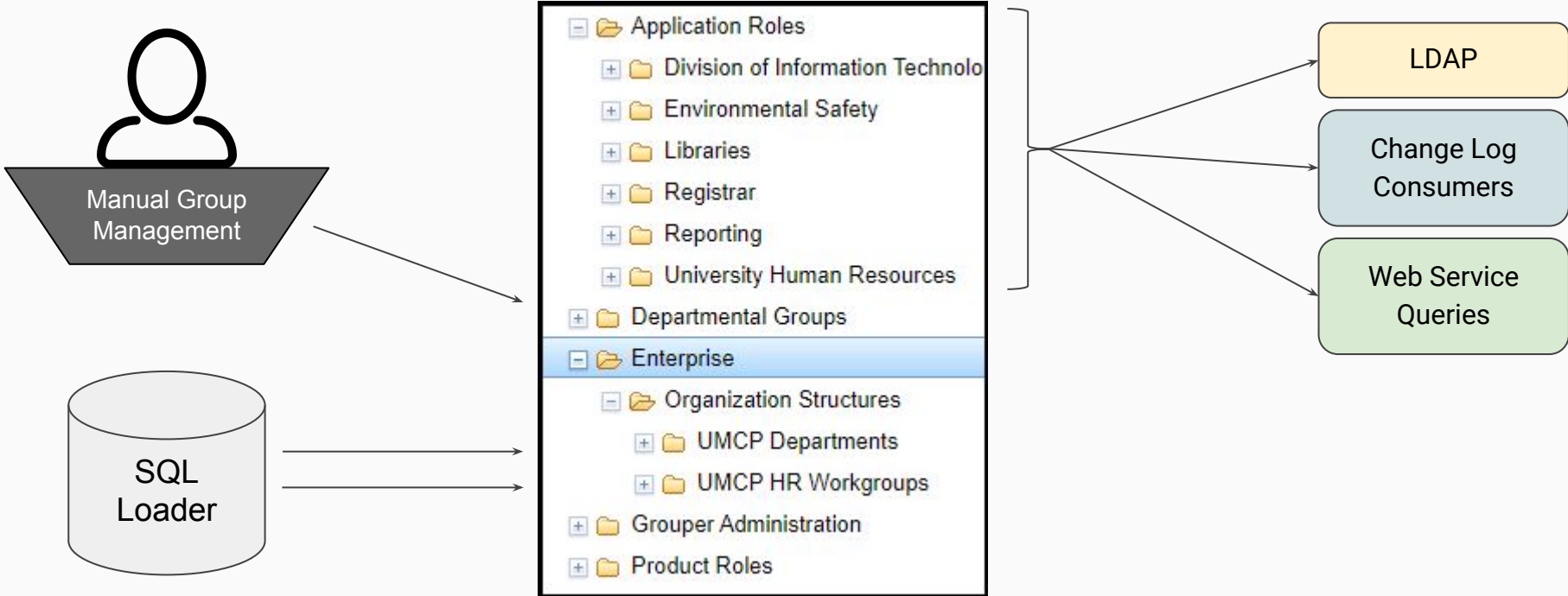
Filter for: [Apply filter](#) [Reset](#)

[Remove selected members](#)

<input type="checkbox"/> Entity name ▾	Membership	Choose action
<input type="checkbox"/> AHUTIL-Users	Direct	Actions ▾
<input type="checkbox"/> Ankit Parmar	Direct	Actions ▾
<input type="checkbox"/> Stephen A Sazama	Indirect	Actions ▾

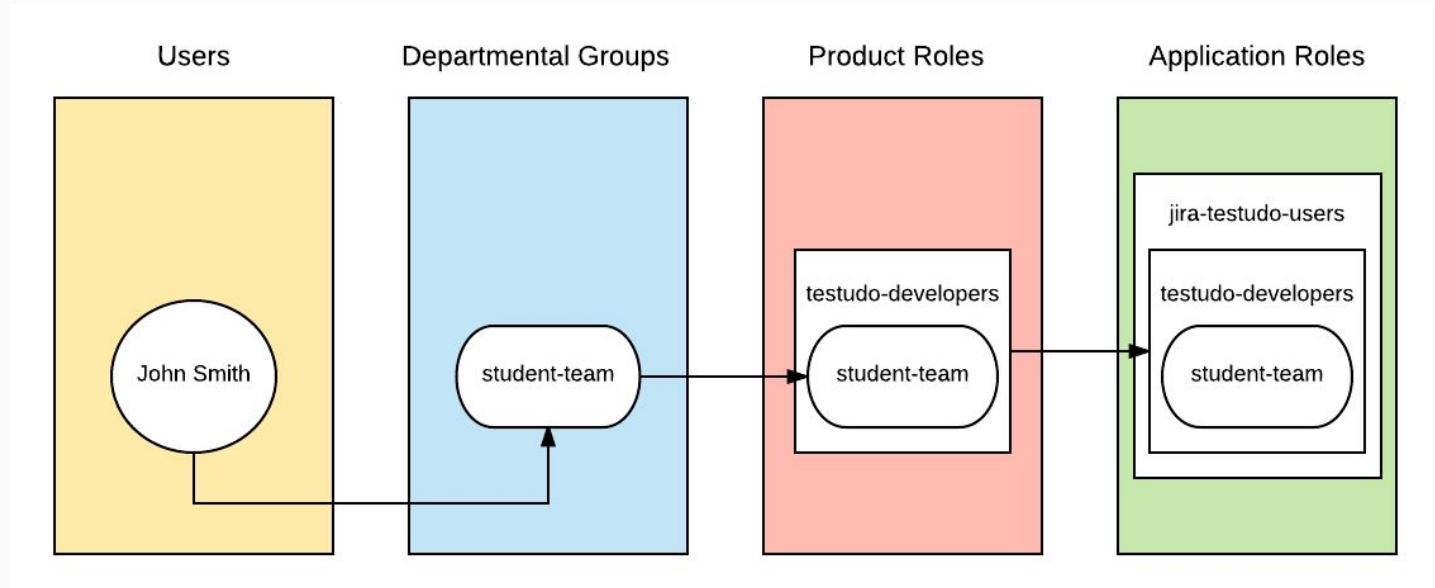
Show: Showing 1-3 of 3 · [First](#) | [Prev](#) | [Next](#) | [Last](#)

Group Structure at UMD: Incoming and Outgoing



Group Structure at UMD: Shared Roles

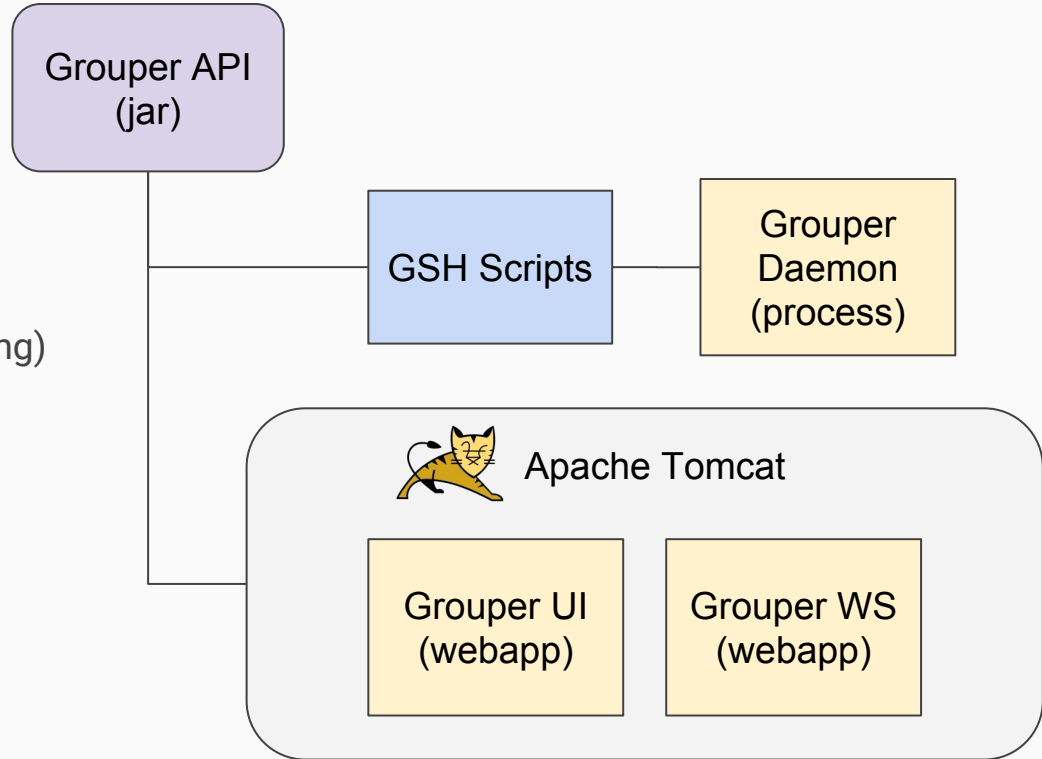
- Users (or HR groups) are assigned to Departmental Groups.
- Departmental Groups are created by users as needed, and may be assigned to multiple Product Roles.
- Product Roles are assigned to multiple Applications Roles.
- When a user is added/removed from source HR groups or Departmental Groups, they are automatically added/removed from all downstream applications.



Grouper Installation

`grouperInstaller.jar`

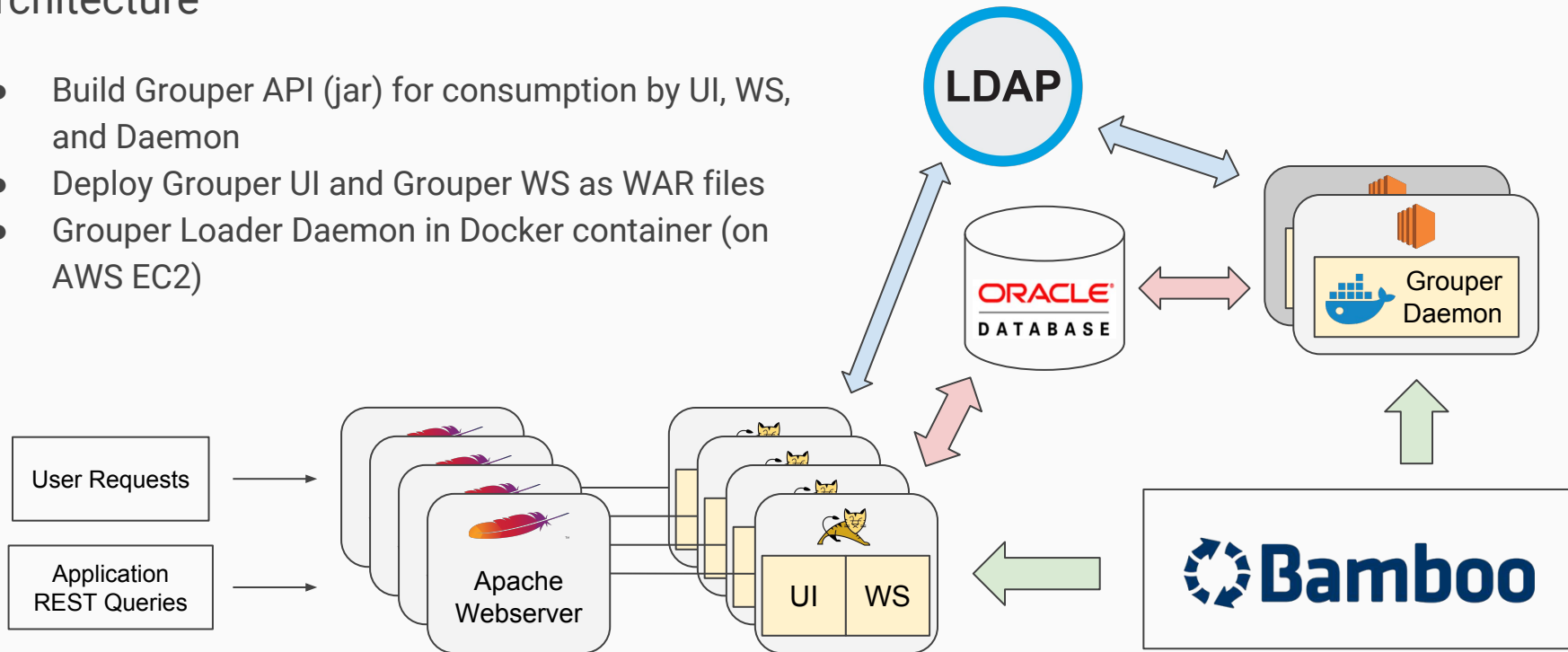
- Builds Grouper API
- Sets up Database (or use existing)
- Creates Grouper Shell files with configuration defaults
- Installs Tomcat
- Installs User Interface webapp
- Installs Web Services webapp
- Other optional components
- Applies patches



Grouper Deployment at UMD

Architecture

- Build Grouper API (jar) for consumption by UI, WS, and Daemon
- Deploy Grouper UI and Grouper WS as WAR files
- Grouper Loader Daemon in Docker container (on AWS EC2)



Grouper Deployment at UMD

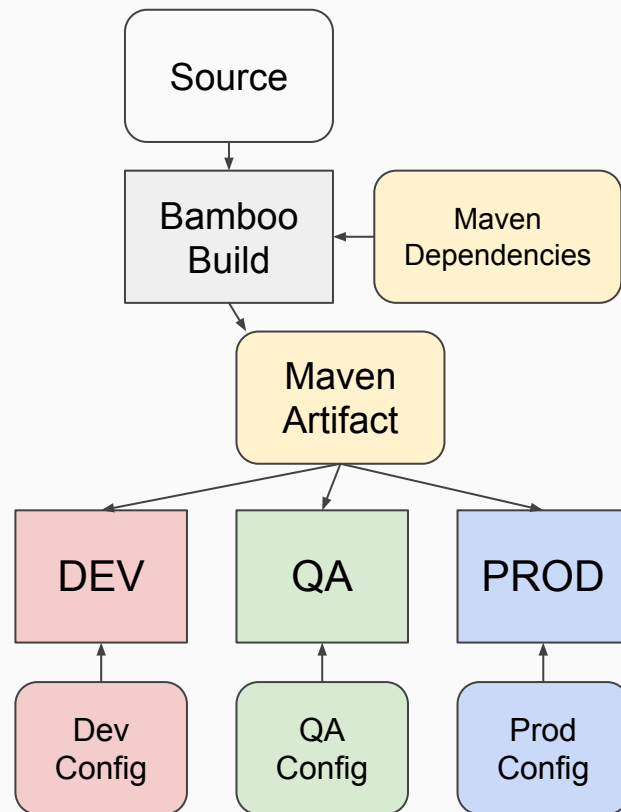
Conflicts with using Grouper Installer

- **Maven**

- Source includes pom.xml file which lists dependencies
- Dependency JARs must be available for download (not committed to source)

- **Apphosting Infrastructure**

- Bamboo executes the Maven build and deployment
- Tomcat deployable must be a WAR file (not exploded)
- Same build artifact deployed to all environments
- Configuration separate from deployed application



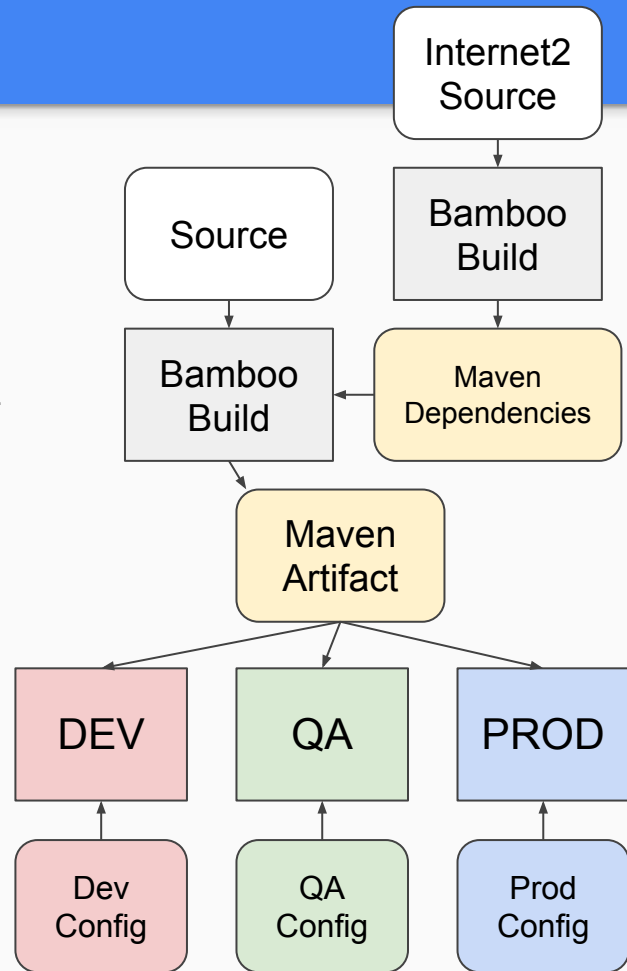
Grouper Deployment at UMD

Solution: Customizations with Maven Overlay

- Locate required dependencies for Maven
- Build source code which already includes patches from Internet2 Grouper GitHub
- Maven WAR Overlay UMD customizations onto Grouper code

UMD Customizations

- Read from external config directory
- Invoke proprietary credential store to get passwords
- Allow login filters to work with UI war deployed as ROOT
- Cherry-picking bug fixes from newer patches



Future of Grouper at UMD

- Replace in-house SIMS group management
 - Group lifecycle, ownership, attestation
- Connector for Oracle database roles
- Automated group creation
 - User requests for new groups
 - Roles for JIRA, etc.