Managing memberships
Membership

- A membership is a tuple between a Group and a Subject
Immediate membership

- An immediate or direct membership is when a subject is directly assigned to a group
- Immediate memberships can be directly unassigned
Effective membership

- An effective or non-immediate membership is when a membership exists due to another reason
  - A group is a member of another group
  - Composite math generates the membership
- Effective memberships are unassigned when:
  - The ancestor group is removed
  - The subject’s immediate membership is removed
  - Composite math removes the membership
Privileges modeled as memberships

- Privileges in Grouper (e.g. a subject can READ the memberships of a group) are modeled as memberships
- They have a different “list”
- Members of a group use the ”members” list
- You should not use any other lists
Membership fields

- An immediate membership has these fields
- UUID (note, effective memberships have a composite ID)
- Creator subject
- Created on
- Enabled/disabled dates
- If enabled
Hands on – create a group

- In the “test” folder, make a group named “testGroup”
Hands on – create a group (continued)

- In the “test” folder, make a group named “testGroup”
Hands on – add a member

- In “testGroup”, add john smith
Hands on – add a member (continued)

- Find “John Smith”
Hands on – add a member (continued)

![Test Group](image)

**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.

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

<table>
<thead>
<tr>
<th>Filter for:</th>
<th>All members</th>
<th>Member name</th>
<th>Apply filter</th>
<th>Reset</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Remove selected members</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Entity name</th>
<th>Membership</th>
<th>Choose action</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Smith</td>
<td>Direct</td>
<td></td>
</tr>
</tbody>
</table>

**Show:** 50

Showing 1-1 of 1 · First | Prev | Next | Last
Hands on – create a parent group

New group

Create in this folder: test
Enter a folder name or search for a folder where you are allowed to create new groups.

Group name: parentGroup
Name is the label that identifies this group, and might change.

Group ID: parentGroup
ID is the unique identifier for this group. It should be short and simple, and might have character restrictions. The ID should rarely change, if ever.

Description:
Description contains notes about the group, which could include: what the group represents, why it was created, etc.

Show advanced properties

Save  Cancel
Hands on – add banderson to parentGroup
Hands on – add group to group

- Add member to parentGroup
- Find ”test:testGroup”
Hands on – see parentGroup memberships

- Identify direct and indirects
Visualize effective memberships
Bulk load a group

- Bulk load a group by file
- Bulk load on screen
- Import/export members from csv
- Add members or replace members
- You can add members to multiple groups
Hands on – bulk load a group

- Create a “bulkLoad” group in the test folder
Hands on – bulk load a group (continued)

- Add members, import a list of members
Hands on – bulk load a group (continued)

- Copy/paste: banderson, jsmith, abc
- Select EDU Ldap source
Hands on – bulk load a group (continued)

• See results

Add members

Here are the results of your import into the following group(s):

• test : bulkLoad

**test : bulkLoad**

• Before importing, the membership count was 0 and is now 2.
• You successfully added 2 members and deleted 0 members.
• 1 members were not processed due to errors, as shown below.

Errors

• Error on row 2. Problem finding entity: "abc"
Hands on – export members

- More actions -> Export members
Hands on – export members (continued)

- Only member ID’s (so we can reimport)
Hands on – export members (continued)

- See the CSV

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sourceld</td>
<td>entityld</td>
</tr>
<tr>
<td>2</td>
<td>ldap</td>
<td>banderson</td>
</tr>
<tr>
<td>3</td>
<td>ldap</td>
<td>jsmith</td>
</tr>
</tbody>
</table>
Hands on – export members (continued)

- Remove all members
Hands on – import members

- Import members
Hands on – import members (continued)

- Find the export file

Add members to group: test:bulkLoad
Enter a group name or ID, or search for a group.

Add another group

How to add members?
- Search for members to add
- Copy/paste a list of member IDs
- Import a file

Select a file to import: Choose File groupExportS...ulkLoad.csv

Your import file must be one of the following:
Hands on – import members (continued)

- See the members back

Add members

Import results

Here are the results of your import into the following group(s):

- 👤 test : bulkLoad

زهرة test : bulkLoad
- Before importing, the membership count was 0 and is now 2.
- You successfully added 2 members and deleted 0 members.
Hands on – import members (continued)

- See the members back
Hands on – set end date

- Click Actions -> Edit membership on banderson
Hands on – set end date (continued)

- Set end date to future date

**Bob Anderson**

Membership and privileges in bulkLoad group

<table>
<thead>
<tr>
<th>Unique ID:</th>
<th>banderson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Bob Anderson</td>
</tr>
<tr>
<td>Description:</td>
<td>Bob Anderson</td>
</tr>
</tbody>
</table>

Bob Anderson is a direct member of the bulkLoad group

Bob Anderson is not an indirect member of the bulkLoad group

**Start date:** yyyy/mm/dd

The date on which this entity’s membership begins.

**End date:** 2020/08/01

The date on which this entity’s membership expires.

**Direct group privileges:**
- ADMIN
- READ
- UPDATE
- OPTIN
- OPTOUT
- ATTRIBUTE READ
- ATTRIBUTE UPDATE
- VIEW

**Indirect group privileges:**
- ADMIN
- READ
- UPDATE
- OPTIN
- OPTOUT
- ATTRIBUTE READ
- ATTRIBUTE UPDATE
- VIEW
Hands on – delete membership

- Select jsmith and remove
Hands on – del membership (continued)

- See results

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

<table>
<thead>
<tr>
<th>Entity name</th>
<th>Membership</th>
<th>Choose action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob Anderson</td>
<td>Direct</td>
<td>Actions</td>
</tr>
</tbody>
</table>

Filter for: All members  
Member name  
Apply filter  
Reset  
Remove selected members  
Show: 50  
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Hands on – view mships from subject

- Click on Bob Anderson in upper right
Composite groups
Composite group definition

- Composite group takes two “factor” groups and does math operation for “overall” or “resulting” group
  - Intersection or “and” has overall group as members in both factor groups
  - Minus complement or “not” has overall group as members in first factor who are not in the second factor
  - Union or “or” is not a thing since you can just add many groups to be members of the parent group
Composite group notes

- Note, user setting up the composite needs to be able to READ both factors and be an UPDATE of the overall group
- Note, the overall group must be empty when a composite is configured
- A composite group can have no direct members
Composite group examples

- “Require group” helps with deprovisioning
- E.g. an ad hoc group requires members be active employees
- Overall group is a composite of the ad hoc group and the active employees group
- Note, the “rule” that removes immediate members if not in another group might be better is most cases since they wont be automatically re-added without going through the intake process
Composite group examples (continued)

- “Excludes list” helps remove members who otherwise would be included
- E.g. a two-step group has employees but some can be temporarily excluded if they are having issues or traveling
- Overall group has the first factor as employees minus an ad hoc excludes list
Composite group examples (continued)

- “Excludes list” helps remove members who otherwise would be included
- E.g. a two-step group has employees but some can be temporarily excluded if they are having issues or traveling
- Overall group has the first factor as employees minus an ad hoc excludes list
Includes/excludes takes five groups and allows manual changes on top of a system of record.