

# 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

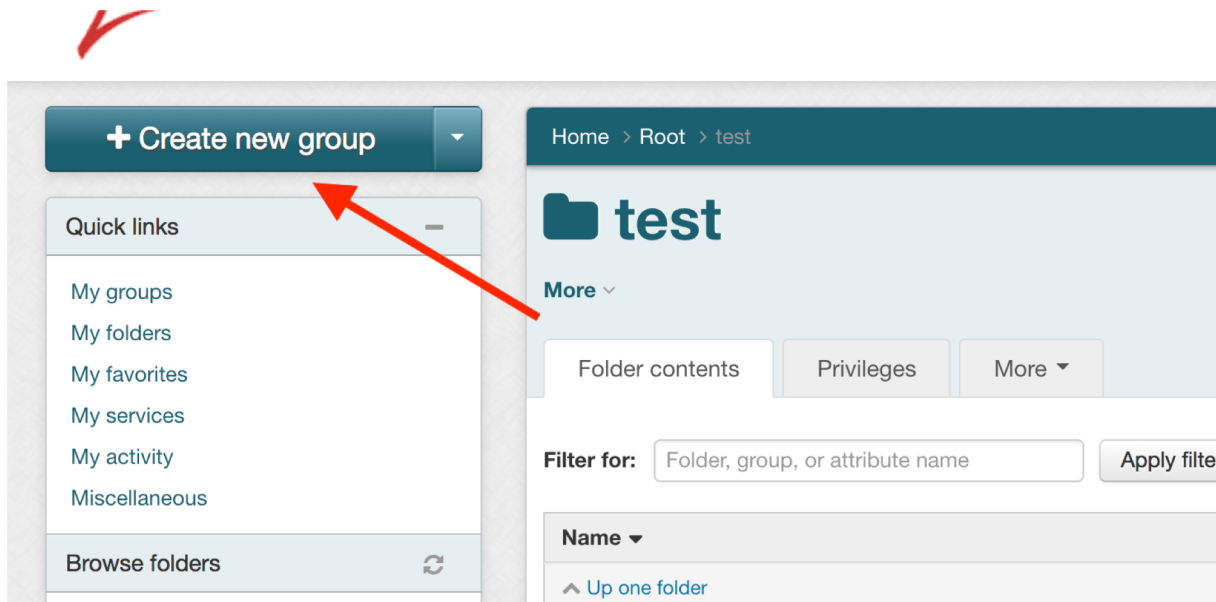
- Privileges in Grouper (e.g. a subject can READ the memberships of a group) are modeled as memberships
- They have a different “list”
- Members of a group use the “members” list
- You should not use any other lists

# 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”

Home > New group

## New group

Create in this folder:

Enter a folder name or [search for a folder where you are allowed to create new groups](#).

Group name:

Name is the label that identifies this group, and might change.

Group ID:


☐ Edit the ID

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.

# Hands on – add a member

- In "testGroup", add john smith

[Home](#) > [Root](#) > [test](#) > [testGroup](#)

 **testGroup**

[More ▾](#)

[+ Add members](#)

[More actions ▾](#)

[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
Showing 1-0 of 0 · <a href="#">First</a>   <a href="#">Prev</a>   <a href="#">Next</a>   <a href="#">Last</a>		

**Show:**

# Hands on – add a member (continued)


- Find “John Smith”

Home > Root > test > testGroup

 **testGroup**

**+ Add members**

More actions ▼


**Member name or ID:**   
 John Smith

**Assign these privileges:** ☒ Default privileges ☐ Custom privileges

**Add** or import a list of members .

More ▼

# Hands on – add a member (continued)

 **testGroup**

[+ 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:**

All members ▼

 [Apply filter](#) [Reset](#)

[Remove selected members](#)

<input type="checkbox"/> Entity name ▼	Membership	Choose action
<input type="checkbox"/>  John Smith	Direct	<a href="#">Actions ▼</a>

**Show:**

50 ▼

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

# Hands on – create a parent group

Home > New group

## New group

**Create in this folder:**

Enter a folder name or [search for a folder where you are allowed to create new groups](#).

**Group name:**

Name is the label that identifies this group, and might change.

**Group ID:**  ☐ Edit the ID

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](#) ▾

# Hands on – add banderson to parentGroup


Home > Root > test > parentGroup

 **parentGroup**

+ Add members

More actions ▼

Member name or ID:

 Bob Anderson

Assign these privileges: ☒ Default privileges ☐ Custom privileges

Add


 or import a list of members .

More ▼


# Hands on – add group to group

- Add member to parentGroup
- Find "test:testGroup"

Home > Root > test > parentGroup

 **parentGroup**

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


**Member name or ID:**   
 test:testGroup

**Assign these privileges:** ☒ Default privileges ☐ Custom privileges

[Add](#) or import a list of members .

[More ▼](#)

Member name or ID:

  
 test:testGroup

Assign these privileges:

☒ Default privileges ☐ Custom privileges


[Add](#) or import a list of members .

[More ▼](#)

# Hands on – see parentGroup memberships

- Identify direct and indirects

Home > Root > test > parentGroup

 **parentGroup**

+ Add members

More actions ▾

More ▾

Members

Privileges

More ▾




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

Filter for: All members ▾

Member name

Apply filter

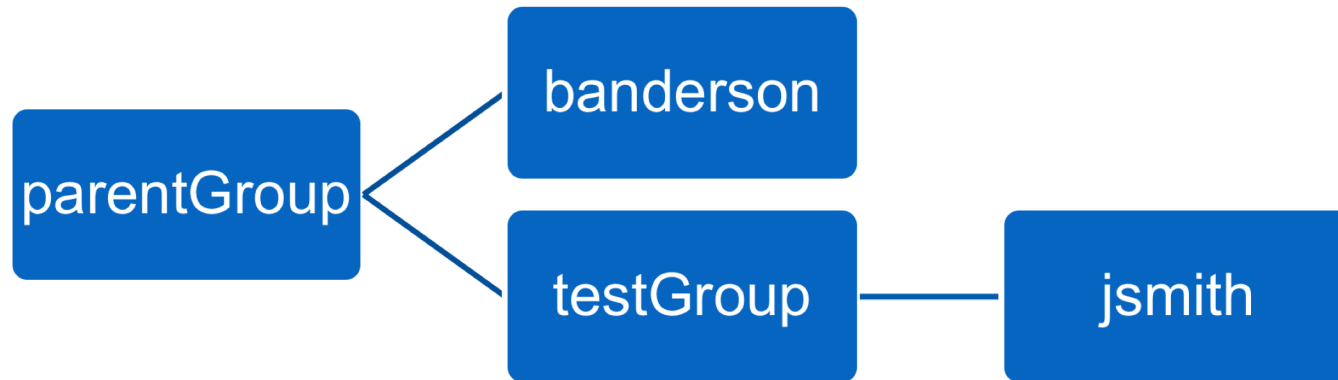
Reset

Remove selected members		
<input type="checkbox"/> Entity name ▾	Membership	Choose action
<input type="checkbox"/>  Bob Anderson	Direct	Actions ▾
<input type="checkbox"/>  John Smith	Indirect	Actions ▾
<input type="checkbox"/>  testGroup	Direct	Actions ▾

Show: 50 ▾

Showing 1-3 of 3 · First | Prev | Next | Last

# 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

[Home](#) > [New group](#)

## New group

**Create in this folder:**

Enter a folder name or [search for a folder where you are allowed to create new groups](#).

**Group name:**

Name is the label that identifies this group, and might change.

**Group ID:**  ☐ Edit the ID

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.

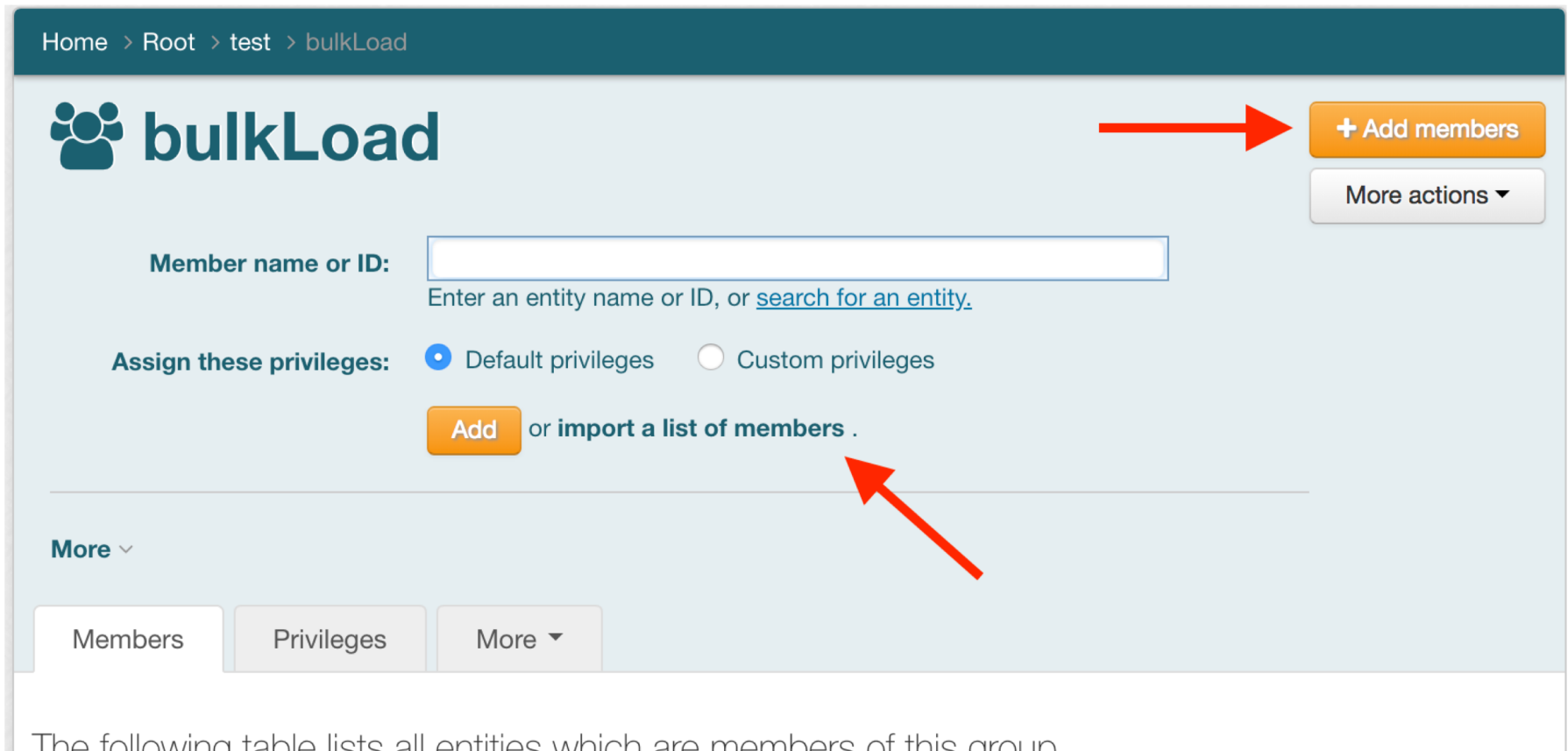
**Description:**

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


[Show advanced properties](#) ▾

# Hands on – bulk load a group (continued)

- Add members, import a list of members



Home > Root > test > bulkLoad

 **bulkLoad**

**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 in

Two red arrows are present: one points from the right to the '+ Add members' button, and the other points from the bottom right to the 'Add or import a list of members .' text.

# Hands on – bulk load a group (continued)

- Copy/paste: banderson, jsmith, abc
- Select EDU Ldap source

## Add members

Add members to group:   
Enter a group name or ID, or [search for a group](#).

---

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

Enter member IDs

Choose a data source

☐ Replace existing members?

# Hands on – bulk load a group (continued)

- See results

Home > Import members

## Add members

### Import results

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"

OK

# Hands on – export members

- More actions -> Export members

[Home](#) > [Root](#) > [test](#) > [bulkLoad](#)

 **bulkLoad**

[More ▾](#)

[+ Add members](#)



[More actions ▾](#)

[Members](#) [Privileges](#) [More ▾](#)

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

**Filter for:** [All members](#) [Member name](#)

[Remove selected members](#)

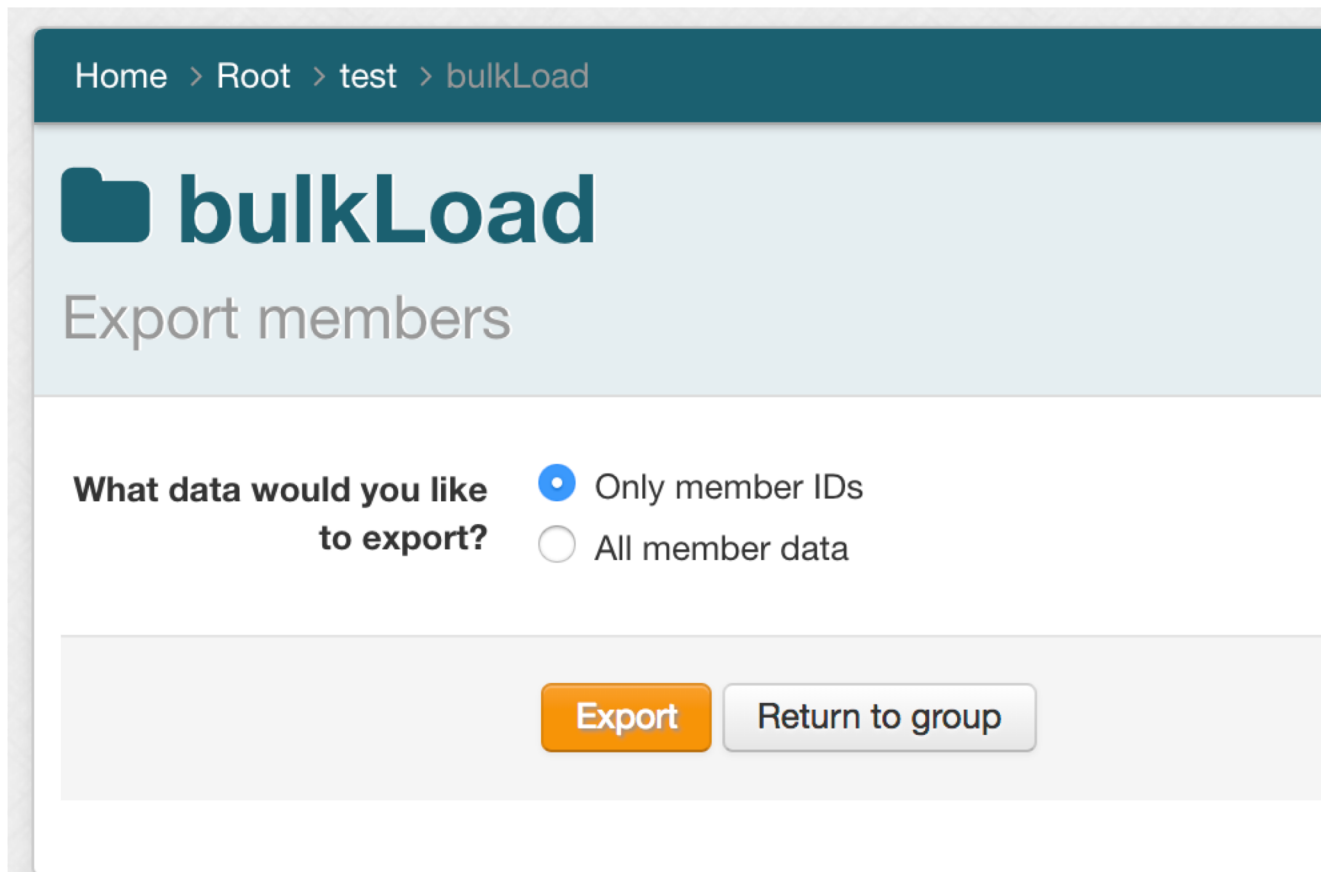
<input type="checkbox"/> Entity name ▾	Membership
<input type="checkbox"/>  <a href="#">Bob Anderson</a>	Direct
<input type="checkbox"/>  <a href="#">John Smith</a>	Direct

[Show: 50](#) [Showing](#)

[Add to my favorites](#)  
[Leave group](#)  
  
[Copy group](#)  
[Delete group](#)  
[Edit group](#)  
[Edit composite](#)  
[Move group](#)  
  
**[Export members](#)**  
[Import members](#)  
[Remove all members](#)  
  
[Attestation](#)  
[Deprovisioning](#)  
[View audit log](#)

# Hands on – export members (continued)

- Only member ID's (so we can reimport)



The screenshot shows a web interface for a group named 'bulkLoad'. At the top, a breadcrumb trail reads 'Home > Root > test > bulkLoad'. Below this, a folder icon is followed by the group name 'bulkLoad' and the subtitle 'Export members'. A section titled 'What data would you like to export?' contains two radio button options: 'Only member IDs' (which is selected) and 'All member data'. At the bottom of the form are two buttons: an orange 'Export' button and a grey 'Return to group' button.

Home > Root > test > bulkLoad

## bulkLoad

Export members

What data would you like to export?

☒ Only member IDs

☐ All member data

[Export](#) [Return to group](#)

# Hands on – export members (continued)

- See the CSV

A1				✕	✓	<i>fx</i>
	A	B				
1	sourceId	entityId				
2	ldap	banderson				
3	ldap	jsmith				
4						
5						

# Hands on – export members (continued)

- Remove all members

The screenshot shows the 'bulkLoad' interface. At the top, a breadcrumb trail reads 'Home > Root > test > bulkLoad'. The main header features the 'bulkLoad' logo and a '+ Add members' button. Below the header, there's a 'More' dropdown menu and a 'More actions' dropdown menu. The 'More actions' menu is open, displaying a list of options: 'Add to my favorites', 'Leave group', 'Copy group', 'Delete group', 'Edit group', 'Edit composite', 'Move group', 'Export members', 'Import members', 'Remove all members' (highlighted in blue), 'Attestation', 'Deprovisioning', 'View audit log', and 'View membership audit log'. The main content area shows a table of members. The table has columns for 'Entity name' and 'Membership'. Two members are listed: 'Bob Anderson' and 'John Smith', both with 'Direct' membership. A 'Remove selected members' button is located above the table. The table also includes a 'Show: 50' dropdown and a 'Showing' label.

Home > Root > test > bulkLoad

**bulkLoad**

+ Add members

More actions ▾

Members Privileges More ▾

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

Filter for: All members Member name

Remove selected members

<input type="checkbox"/> Entity name ▾	Membership
<input type="checkbox"/> Bob Anderson	Direct
<input type="checkbox"/> John Smith	Direct

Show: 50 Showing

# Hands on – import members

- Import members

Home > Root > test > bulkLoad



More ▾

Members

Privileges

More ▾

+ Add members

More actions ▾

Add to my favorites

Join group

Copy group

Delete group

Edit group

Edit composite

Move group

Export members

Import members

Remove all members

Attestation

Dependence

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

Filter for:

All members

Member name

Remove selected members



Entity name ▾

Membership

Show: 50

Showing

# Hands on – import members (continued)

- Find the export file

[Home](#) > [Import members](#)

## Add members

**Add members to group:**

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

Home > Import members

## Add members

### Import results

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.

OK

# Hands on – import members (continued)

- See the members back

[Home](#) > [Root](#) > [test](#) > [bulkLoad](#)



+ Add members

More actions ▾

Members

Privileges

More ▾

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

Filter for:



All members ▾

Member name

Apply filter

Reset

Remove selected members

<input type="checkbox"/>	Entity name ▾	Membership	Choose action
<input type="checkbox"/>	 Bob Anderson	Direct	Actions ▾
<input type="checkbox"/>	 John Smith	Direct	Actions ▾


Showing 1-2 of 2 · [First](#) | [Prev](#) | [Next](#) | [Last](#)

Show: 50 ▾

# Hands on – set end date

- Click Actions -> Edit membership on banderson

[Home](#) > [Root](#) > [test](#) > [bulkLoad](#)

 **bulkLoad**

[+ Add members](#)

[More actions ▾](#)



[More ▾](#)

[Members](#) [Privileges](#) [More ▾](#)

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

**Filter for:** [All members](#)  [Apply filter](#) [Reset](#)

[Remove selected members](#)

<input type="checkbox"/> Entity name ▾	Membership	Choose action
<input type="checkbox"/>  <a href="#">Bob Anderson</a>	Direct	<a href="#">Actions ▾</a>
<input type="checkbox"/>  <a href="#">John Smith</a>	Direct	

[Edit membership and privileges](#)  
[Revoke membership](#)

**Show:** [50](#) [Last](#)

# Hands on – set end date (continued)

- Set end date to future date

## Bob Anderson

Membership and privileges in bulkLoad group

Unique ID: banderson

Name: Bob Anderson

Description: Bob Anderson

☒ Bob Anderson is a direct member of the bulkLoad group

☐ Bob Anderson is not an indirect member of the bulkLoad group

Start date:

The date on which this entity's membership begins.

End date:

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


Save

Cancel

# Hands on – delete membership

- Select jsmith and remove

[Home](#) > [Root](#) > [test](#) > [bulkLoad](#)

 **bulkLoad**

[+ Add members](#)

[More actions ▾](#)



[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"/> <b>Entity name ▾</b>	<b>Membership</b>	<b>Choose action</b>
<input type="checkbox"/>  <a href="#">Bob Anderson</a>	Direct	<a href="#">Actions ▾</a>
<input checked="" type="checkbox"/>  <a href="#">John Smith</a>	Direct	<a href="#">Actions ▾</a>

[Show:](#)

Showing 1-2 of 2 · [First](#) | [Prev](#) | [Next](#) | [Last](#)

# Hands on – del membership (continued)

- See results

Home > Root > test > bulkLoad



More ▾

+ Add members

More actions ▾

Members

Privileges

More ▾

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

Filter for:

Remove selected members

<input type="checkbox"/> Entity name ▾	Membership	Choose action
<input type="checkbox"/> Bob Anderson	Direct	<input type="button" value="Actions ▾"/>


Show:

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

# Hands on – view mships from subject

- Click on Bob Anderson in upper right

[Home](#) > [Bob Anderson](#)

 **Bob Anderson**

[+ Add to a group](#)  
[More actions ▾](#)

**Unique ID:** banderson

**Name:** Bob Anderson

**Description:** Bob Anderson

**More ▾**

Memberships

Group privileges

Folder privileges













Attribute privileges

More ▾

The following table lists all groups in which Bob Anderson is a member.

**Filter for:** All groups ▾ Group name Apply filter Reset

Remove selected groups

<input type="checkbox"/>	Folder	Group name	Membership	
<input type="checkbox"/>	 banner	 banner_user	Indirect	<a href="#">Actions ▾</a>
<input type="checkbox"/>	 banner	 banner_user_allow	Direct	<a href="#">Actions ▾</a>
<input type="checkbox"/>	 grouperUi	 grouperUiUserData	Direct	<a href="#">Actions ▾</a>
<input type="checkbox"/>	 etc	 sysadmingroup	Direct	<a href="#">Actions ▾</a>
<input type="checkbox"/>	 test	 bulkLoad	Direct	<a href="#">Actions ▾</a>
<input type="checkbox"/>	 test	 parentGroup	Direct	<a href="#">Actions ▾</a>

**Show:** 50 ▾

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# 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

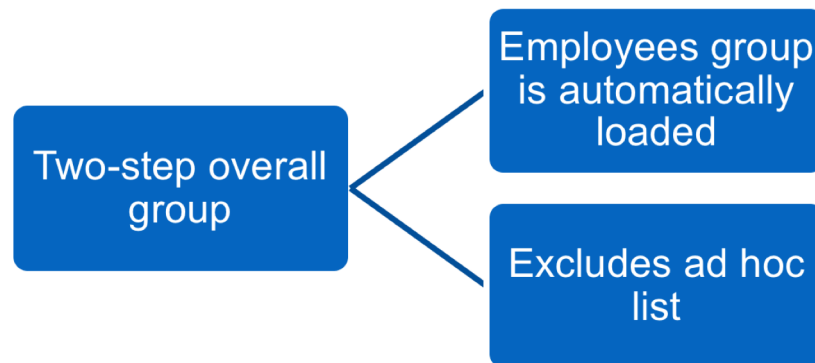
- “Require group” helps with deprovisioning
- E.g. an ad hoc group requires members be active employees
- Overall group is a composite of the ad hoc group and the active employees group
- Note, the “rule” that removes immediate members if not in another group might be better in most cases since they won't 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



# Composite group examples (continued)

- Includes/excludes takes five groups and allows manual changes on top of a system of record

