Guide to Creating and Administering Managed Groups in Grouper

This guide describes the steps to create and administer managed groups in Grouper by a school/department delegated group administrator. A managed group is one which is pertinent to a specific school/department and contains people with fine-grained or cross-functional affiliations, e.g. members of a scrum team within a department, or members of a steering committee. A managed group may also contain other groups, such as IAM reference groups which auto-update based on an individual’s Harvard affiliation and role type.

After completion of these steps, the delegated group administrator will be able to do the following in Grouper:

- Create additional folders to organize the school/departments managed groups
- Create managed groups within the folders which are pertinent to their school/department
- Add and remove members of the school/department’s managed groups
- Utilize reference groups to automatically remove inactive members of a group
- Make a managed group visible within the OpenScholar and Wiki group pickers

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Before You Begin

IAM will have set up a school/department-specific folder in the organizational (org) hierarchy within Grouper, and a “managed” folder beneath that. Also, you have been added as a delegated group administrator of your school/department folder. You should be able to log into the Grouper application at https://grouper.iam.harvard.edu/grouper. Grouper requires that you are logged into VPN.

If you are just training and want to work in the IAM Grouper Test (Stage) environment then the above setup should have been completed for you in the Stage environment and you can log into the Grouper application at https://grouper.stage.iam.harvard.edu/grouper. Grouper Stage requires that you are logged into VPN.

Grouper is an OpenSource application from the Internet2 consortium. Additional information beyond the basics of Grouper presented in this guide are available on the Internet2 site. Suggested links as follows:

- [https://spaces.internet2.edu/display/Grouper/Glossary](https://spaces.internet2.edu/display/Grouper/Glossary) Grouper Glossary (e.g. privileges definitions).
- [https://spaces.internet2.edu/display/groupertrain/Grouper+Training#GrouperTraining-u](https://spaces.internet2.edu/display/groupertrain/Grouper+Training#GrouperTraining-u) Grouper Training for End Users – New Grouper UI Part 1-5. Five 10 min. videos explaining the Grouper UI; navigation, search, groups, folders, memberships, etc.
Important! IAM conventions are contained in green boxes in this document. It is highly recommended to follow the IAM conventions to ensure consistent group implementations across Harvard and to mitigate issues with downstream systems.

Examples and images in this document will use the Harvard Web Publishing (HWP) department folder.

1. Create a Folder

You may want to create additional folders beneath your “managed” group folder in order to organize your school/department’s groups, however it is not required.

Tip: Some thought should be given to a folder structure that is appropriate for your school/department before you begin creating groups. While it is possible to move groups from one folder to another, it will change that group’s ID and may break applications that rely on the group’s ID.

- Log into the Grouper application using your HarvardKey. Grouper requires you to be logged into VPN.
  
  Production Environment – https://grouper.iam.harvard.edu/grouper

  Stage Environment – https://grouper.iam.harvard.edu/grouper

- In Grouper, navigate in the left Browse folders window down to your “managed” folder beneath your school/department’s folder.

- Double-click the “managed” folder to bring it up in the main window.

- You can navigate in the main window under Name or along the breadcrumb trail at the top.

- Click More actions, and select Create new folder in the dropdown menu.
• A colon-separated folder name displays in Create in this folder. This is called the namespace of the “managed” folder.

• Enter a Folder name for the subfolder using the following convention. The Folder name is the folder’s display name that is shown in the Grouper UI. It can be changed to a more human readable form after creating the folder.

  Folder Naming Convention
  o All lowercase alphanumeric characters
  o Separate words with a hyphen (e.g. training-consulting)
  o Do not use spaces or any other special characters
  o Append names with a hyphen and the school/dept name (e.g. training-consulting-hwp)
  o Keep it short and simple

• The Folder ID is automatically filled in as you type the folder name.

• Enter a Description for the folder which more clearly defines it, especially if acronyms are used. When you are done, click Save.

• Select the Privileges tab.

• Scroll down to your name and click on the black checkmark under Admin to deselect your direct admin privileges. This was given to you automatically because you created the folder.

• Select OK if asked if you are sure you want to change the privileges of the folder.

• Notice that the checkmark is gray, indicating that you still have indirect Admin privileges. This is because you have been set up to inherit these privileges by default for every folder under the managed folder.
- Navigate back to your “managed” folder using the breadcrumb trail at the top of the window to see a list of the additional folders you have created.

- For each additional folder you wish to create click More actions, and select Create new folder in the dropdown menu. Then repeat the steps in this section for creating folders.

In order to build out a folder structure that is appropriate for your school/department you may want to create additional folders beneath folders in a nesting fashion.

- Click a folder under Name to bring it up in the main window (e.g. training-consulting-hwp). Then select More actions, and Create new folder. Repeat the steps in this section for each nested folder you wish to create.
2. Edit a Folder

If you made an error when creating the folder, for instance if you forget to append the name with your school/department, you may edit it. Also, edit it if you want to change the folder name to a more human-readable format.

- To edit the folder, bring it up in the main window and select the click the orange Edit folder button, or select More actions and then Edit folder.

- Correct the error and/or change the folder name to a more human-readable format.

A Folder name can have spaces and other special characters but try to keep them short and simple for ease of navigation in the Grouper UI.

- When you are done, click Save.
3. Delete a Folder

If you accidently created the folder in the wrong location, it is better to delete the folder and re-create it in the correct location, rather than moving it to the new location. This is because a folder’s prior location is stored as an alternate name for the folder which could cause unintended outcomes with applications that make use of the alternate name.

- To delete the folder, bring it up in the main window and select More actions. Then select Delete folder.
- Click the Delete button to confirm or the Cancel button if you made a mistake.

You can only delete empty folders. If there are groups beneath the folder you must delete them first before deleting the folder.
4. Create a Managed Group

By default, managed groups are only visible within the Grouper UI to the delegated group administrators of the managed folder, and the IAM group administrators. They will not be seen by other delegated group administrators.

- Navigate to the “managed” folder beneath your school/department folder, or to another folder nested beneath your “managed” folder if there are any. The group will be create beneath whichever folder is selected in the main window.
- Click on the Folder contents tab.
- Click More actions, and select Create new group in the dropdown menu.

Convention: If the managed group you are creating will contain members listed explicitly by name (e.g. Megan Smith) then you should add them to a group whose name begins with “members-” as shown in the following examples. The “members-” group is then used to create the final managed group as will be explained. This ensures that your managed group is auto-updated whenever a person’s affiliation becomes inactive.

- Enter a Group name for the “members-” managed group using the following convention. The Group name is the group’s display name that is shown in the Grouper UI. It can be changed to a more human readable form after creating the group.

  Group Naming Convention

  - All lowercase alphanumeric characters
  - Separate words with a hyphen (e.g. training-consulting)
  - Do not use spaces or any other special characters
  - Append names with a hyphen and the school/dept name (e.g. training-consulting-hwp)
  - Keep it short and simple
  - Start the group name with “members-” if members are explicitly named (e.g. members-poi-hwp will contain a list of people by name).

- The Group ID is automatically filled in as you type the Group name.
- Enter a Description for the group which more clearly defines it, especially if acronyms are used.
- When you are done, click Save.

Important! The Group ID is the unique identifier for the group. It should rarely change, if ever.
• To see more details about the group you just created, click **More** to open the detail section on the screen.

• To close the details section click **Less**.
- As we did when creating a folder, select the **Privileges** tab.

- Scroll down to your name and click on the black checkmark under **Admin** to deselect your direct admin privileges. This was given to you automatically because you created the group.

- Select **OK** if asked if you are sure you want to change the privileges of the group.

Notice that the checkmark is gray, indicating that you still have indirect Admin privileges. This is because you have been set up to inherit these privileges by default for every group under the managed folder.

- Navigate back to your “managed” folder.

- Notice the group you created is listed beneath any folders that may exist beneath the “managed” folder.

In Grouper, folders will list first followed by the groups in alphabetical order.
5. Add Members to a Managed Group

- Click on your managed group to bring it into the main window (e.g. members-poi-hwp).
- Select Add members.

In this example the group will contain all the people in HWP who have an active POI role, such as a consultant or contractor.

- In Member name or ID, enter the first and last name of the person you want to add to the group. Grouper will search the IAM registry and provide a dropdown list. Alternatively, enter the person’s HUID, NetID or email to limit the selection.
- Select the person from the dropdown list.
- Keep the Default privileges selected, and click Add.
- This person will be added as a Direct member of the group.
- Click Add members again and repeat the process to add all persons to the group.
- When you finished, select Add Members again to close the Add Members section of the window.

Grouper contains people with HUIDs as well as XIDs. If a person has both, they will list twice. Take care to select the intended digital identity.

You may see groups listed in the dropdown list as well as individuals because you can add a group as a member of another group. This will be covered under “Adding Groups as a Member of a Group” later on in this document.
6. Create a Composite Group

Convention: If a managed group contains people listed by name we want to ensure that the managed group is auto-updated whenever the affiliation of a person in the group becomes inactive.

To do this we create a composite group which intersects the “members-” group with either a reference or a bundled group. The resultant membership of the composite group are individuals who exist in both groups.

Since reference and bundled group only contain members with a current affiliation (e.g. student), once anyone in the “members-” group becomes non-current (e.g. they graduate) they will automatically be removed from the composite group. This is shown in the following examples.

- Navigate back to your “managed” folder.
- Create another new group.
- By convention, name the group the same name as the “members-” group but remove the “members-” portion, (e.g. poi-hwp)
- As we did when creating the “members-” group, select the Privileges tab. Scroll down to your name and click on the black checkmark under Admin to deselect your direct admin privileges. Select OK if asked if you are sure you want to change the privileges of the group.

- Select the Members tab.
- Click More actions and select Edit Composite.
- Select Yes to open the composite window.
- Enter a portion of the “members” group name (e.g. members-poi-hwp) until you see it listed in the dropdown, then select it.
- Select and (intersection) for the operation.
- Enter a portion of an appropriate reference, bundled, or managed group name (e.g. huit:poi) until you see it listed in the dropdown, then select it.
- When you are done, click Save.

**Convention:** For higher security and better performance, select a reference, bundled, or other managed group that narrows the composite intersection to as small a list as possible. For example; selecting the reference group “POI in HUIT” limits the intersection to only those in HUIT who have an active POI role. Therefore, if a POI such as a contractor working in HUIT, was to move to a school, they would be automatically removed from the resultant (e.g. poi-hwp) group.

- Notice that the composite you just created is described in the Members tab.
• Navigate back to your “managed” folder to see the two groups you’ve just created.

**Convention:** The composite group (e.g. poi-hwp) is the group to use in downstream systems to ensure that a person is auto-removed when their affiliation ends.

The “members” group (e.g. members-poi-hwp) should not be used in downstream systems. Its purpose is to be used in the composite group of the same name (e.g. poi-hwp).

7. **Add a Group as a Member of another Group**

A group may be added as member of another group.

This will add all the members of the group as indirect members of the group they are added to. The group itself is added as a direct member.

You can add other managed groups, bundled groups, or reference groups as members of other groups.

For this example we are going to create a group containing the reference group for all employees in HUIT plus the poi-hwp managed group you created earlier.

• Navigate back to your “managed” folder.

• **Create another group** called “employees-huit-poi-hwp” as shown.

• **Select Add members**, and enter a portion of the managed group “poi-hwp” until you see it listed in the dropdown, then select it and click Add.
The group you added, “poi-hwp”, is added as a direct member of the “employees-huit-poi-hwp” group.

Since the “poi-hwp” group had only one member, Mary Smith, she was added as an indirect member of the “employees-huit-poi-hwp” group.

- Next, enter a portion of the reference group “HUIT Active Employees” until you see it listed in the dropdown, then select it and click Add.

This action will add an extensive list of people to your group. In our example Active Employees in HUIT, adds 600+ individuals.

Notice the following in the display of a group with many members:

- Individual names as well as group names are listed alphabetically. In our example the “Active Employees in HUIT” group lists alphabetically along with other names beginning with the letter “A”.

- By default, the window will display only the first 50 names alphabetically.

- Scroll to the bottom of the window to see the total number of members

- Use the First, Prev, Next and Last buttons to navigate through the list.
A large list of members can be difficult to navigate. Use the Filter for features to facilitate navigation.

- To find just one member in a large member list, enter their name in the Filter for feature and click the Apply filter button.
- Click the Reset button to return to the full list of members.

Since groups, as well as all the individuals in the group, will show in the membership list, it may be tedious to find them. Use the Filter for feature as a short cut.

- To find the groups that were added as members, select Has direct membership in the Filter for feature and click the Apply filter button.
- Click the Reset button to return to the full list of members.

8. Remove Members of a Group

You can only remove individuals or groups with a Direct membership to your group.

When a group is added as a member to your group, it is added with a Direct membership, however all of its members are added to your group with an Indirect membership.

When the group is removed from your group, all of its indirect members are also removed from your group.

- Navigate to the employees-huit-poi-hwp group.
- Apply the Has direct membership filter as described in the prior section.
9. Delete a Group
If you accidently created the group in the wrong location, it is better to delete the group and re-create it in the correct location, rather than moving it to the new location. This is because a group’s prior location is stored as an alternate name for the group which could cause unintended outcomes with applications that make use of the alternate name.

- To delete the group, bring it up in the main window and click More action and select Delete group.
- Click the Delete button to confirm.
10. Add Members in Bulk to a Group

Multiple members may be added to a group in bulk using the Import feature.

- Navigate back to your “members-poi-hwp” group.
- Click **More actions** and select **Import members**.

- Select the **Copy/paste a list of member IDs** button.
- Enter or copy a list of NetID, HUID, UUID or EPPN identifiers of the individuals you wish to add into the **Enter member IDs** box.
  
  A member’s ID (identifier) must be unique, therefore, their name or email cannot be used to import them.

- Click the **Validate entities** button.
  
  If you are using Internet Explorer (IE), when adding a large list of members using import it may result in the creation of a .json file. Your system will ask you if you want to open the .json file. If this happens switch to another browser such as Google, Firefox or Safari.
- Any member IDs that were not found in Grouper will list at the top of the screen in a red Error message.

- The names of individuals corresponding to the member IDs that were found in Grouper are listed alphabetically by first name.

- Click the gray X next to a name to remove that person from the import list.

- Check Replace existing members? to remove all members from the group and replace them with the members in the list.

- Add additional members by entering their name or identifier in Member name or ID, select them from the dropdown list, and then click Add another member.

- Select the Copy/paste a list of member IDs button to start over from your original list of identifiers.

- When you are done, click Add Members. Your list of members will be added to your group, or will replace all members of your group if you checked Replace existing members?

You may import the same members multiple times to your group, as they will only appear once in the membership list.

Adding members using the Import a file feature is not covered in this document but is explained on the screen when you select the Import a file button.
11. Make a Managed Group Visible in the Group Picker

Harvard has implemented a Group Picker widget to allow OpenScholar site owners, and Confluence Wiki and WordPress Blog space owners to select Reference, Bundled and Managed groups from within their applications in order to control access to the site/space.

By default, Reference and Bundled groups are visible in the Group Picker. When you create a managed group, however, it will not be visible by default.

To make a managed group visible to a site or space owner they must be given “view” privileges within Grouper.

- Select the managed group to bring it up in the main window.
- Select the Privileges tab, and click Add members.
- Enter a portion of the site/space owner name or a group name until you see it listed in the dropdown list, then select it.
- Check off the VIEW privilege, and click Add.
- The View privilege has a black check indicating a direct membership, whereas the individual names have a gray check indicating an indirect membership. In other words, these names were added indirectly because they were part of the “Active Employees in HUIT” group.

End of this Guide