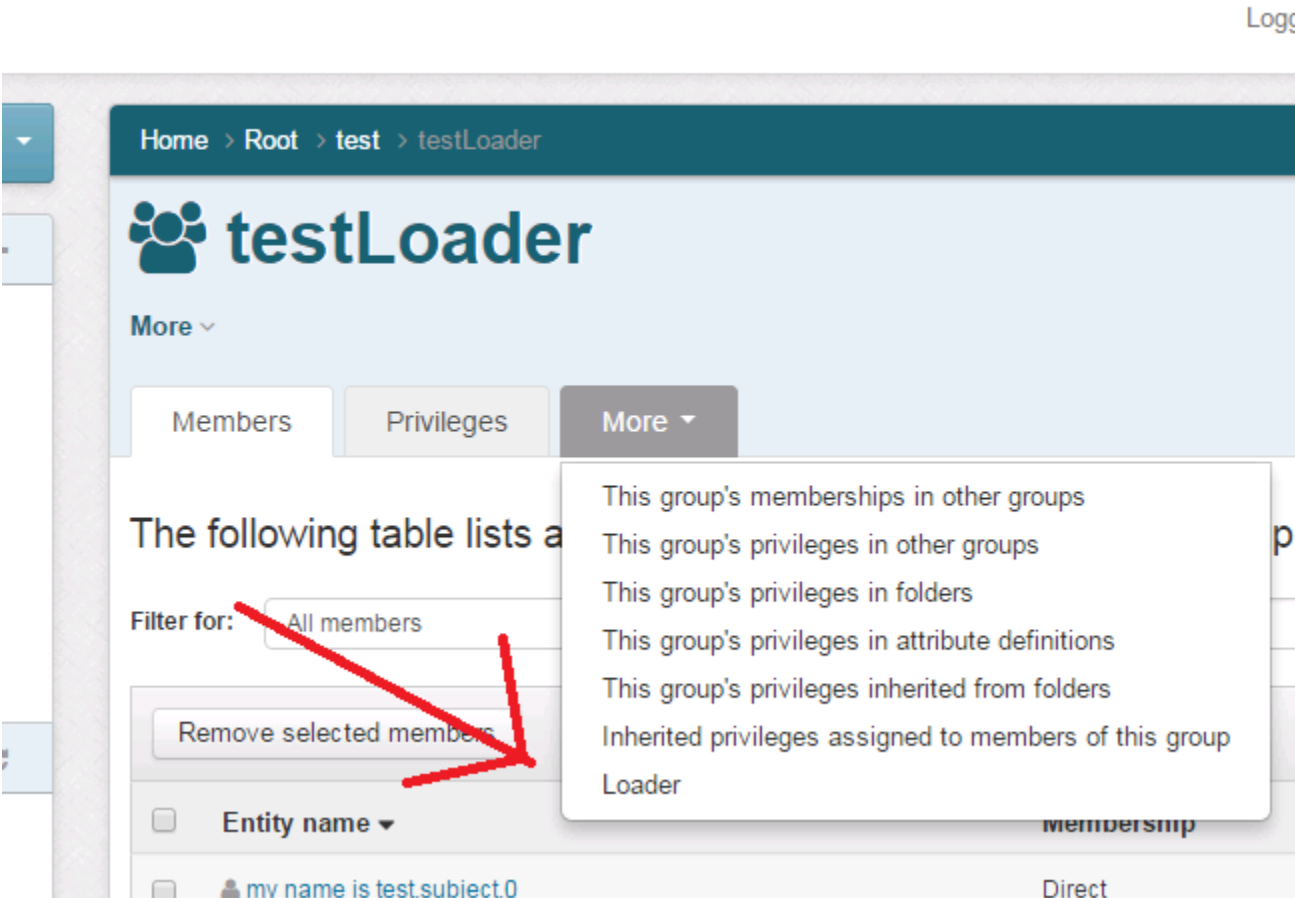


# Edit Grouper loader settings

|                           |                                   |                                |                                          |                                         |                                              |
|---------------------------|-----------------------------------|--------------------------------|------------------------------------------|-----------------------------------------|----------------------------------------------|
| <a href="#">Wiki Home</a> | <a href="#">Deploying Grouper</a> | <a href="#">Grouper Guides</a> | <a href="#">Grouper Deployment Guide</a> | <a href="#">Community Contributions</a> | <a href="#">Internal Developer Resources</a> |
|---------------------------|-----------------------------------|--------------------------------|------------------------------------------|-----------------------------------------|----------------------------------------------|

Edit loader settings in the UI. This screen provides documentation and validation for loader configuration

Access the edit loader screen



up

test

testLoader

testLoader

More actions

More

Members

Privileges

More

Loader settings

Loader actions

This group has loader configuration

|               |                                                                                                                                                                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source type   | SQL<br>pull the members from a SQL database. Can be SQL or LDAP                                                                                                                                                                                             |
| Loader type   | SQL_SIMPLE<br>the SQL query loads the members of this group. Can be SQL_SIMPLE                                                                                                                                                                              |
| Database name | grouper<br>jdbc:mysql://localhost:3306/grouper_v2_3<br>server ID that is configured in the grouper-loader.properties that identifies the connection information to the database server. Note: "grouper" means use the Grouper registry database connection. |

View loader settings

View loader logs

Run loader process to sync group

Loader diagnostics

Edit loader configuration

Schedule loader process

Edit SQL simple job

## Edit loader settings

Loader actions ▾

Loader

Yes, has loader configuration ▾

if this group has loader configuration

Source type

SQL ▾ \*

pull the members from a SQL database. Can be SQL or LDAP

Loader type

SQL\_SIMPLE: the SQL query loads the members of this group ▾ \*

the SQL query loads the members of this group. Can be SQL\_SIMPLE or SQL\_GROUP\_LIST

Database name

grouper - jdbc:mysql://localhost:3306/grouper\_v2\_3 ▾ \*

jdbc:mysql://localhost:3306/grouper\_v2\_3

server ID that is configured in the grouper-loader.properties that identifies the connection information to the database server. Note: "grouper" means use the Grouper registry database connection.

SQL query

SELECT subjectId AS subject\_id FROM SUBJECT ▾ \*

query for memberships. Since this is SQL\_SIMPLE, the SUBJECT\_ID or SUBJECT\_IDENTIFIER or SUBJECT\_ID\_OR\_IDENTIFIER column is required, and the SUBJECT\_SOURCE\_ID column is optional (but recommended for better performance). SUBJECT\_ID has the best performance, and SUBJECT\_IDENTIFIER and SUBJECT\_ID\_OR\_IDENTIFIER are slower since they require subject API lookups. If the data has group names as members, it must be in a SUBJECT\_IDENTIFIER column.

Schedule type

CRON - (recommended) Cron setting runs on a certain schedule ▾ \*

Cron setting runs on a certain schedule. Can be CRON (recommended) or START\_TO\_START\_INTERVAL

Schedule

0 0 6 \* \* ? ▾ \*

At 6:00 AM

Quartz cron-like string (if CRON schedule type): Seconds Minutes Hours Day-of-Month Month Day-of-Week Year (optional field).

e.g. 0 0 6 \* \* ? is everyday at 6am

Priority

3

this job has lower than the default and middle priority of 5

Require members in other group(s)

Save

Cancel

Edit SQL list of groups job

## Edit loader settings

Loader actions ▾

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Loader                            | <div>Yes, has loader configuration ▾</div> <div>if this group has loader configuration</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Source type                       | <div>SQL ▾ *</div> <div>pull the members from a SQL database. Can be SQL or LDAP</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Loader type                       | <div>SQL_GROUP_LIST: the SQL query loads the members of multiple groups ▾ *</div> <div>the SQL query loads the members of multiple groups. Can be SQL_SIMPLE or SQL_GROUP_LIST</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Database name                     | <div>grouper - jdbc:mysql://localhost:3306/grouper_v2_3 ▾ *</div> <div>jdbc:mysql://localhost:3306/grouper_v2_3<br/>server ID that is configured in the grouper-loader.properties that identifies the connection information to the database server. Note: "grouper" means use the Grouper registry database connection.</div>                                                                                                                                                                                                                                                                                                                           |
| SQL query                         | <div>SELECT 'testtestLoadedGroup' AS group_name, subjectId AS subject_id FROM SUBJECT ▾ *</div> <div>query for memberships. Since this is SQL_GROUP_LIST, the required GROUP_NAME column holds the group system name of the membership. the SUBJECT_ID or SUBJECT_IDENTIFIER or SUBJECT_ID_OR_IDENTIFIER column is required, and the SUBJECT_SOURCE_ID column is optional (but recommended for better performance). SUBJECT_ID has the best performance, and SUBJECT_IDENTIFIER and SUBJECT_ID_OR_IDENTIFIER are slower since they require subject API lookups. If the data has group names as members, it must be in a SUBJECT_IDENTIFIER column.</div> |
| Schedule type                     | <div>CRON - (recommended) Cron setting runs on a certain schedule ▾ *</div> <div>Cron setting runs on a certain schedule. Can be CRON (recommended) or START_TO_START_INTERVAL</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Schedule                          | <div>0 0 6 * * ? ▾ *</div> <div>At 6:00 AM<br/>Quartz cron-like string (if CRON schedule type): Seconds Minutes Hours Day-of-Month Month Day-of-Week Year (optional field).<br/>e.g. 0 0 6 * * ? is everyday at 6am</div>                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Priority                          | <div></div> <div>this job has the default and middle priority of 5</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Require members in other group(s) | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Group query (metadata on groups)  | <div></div> <div>query (optional) for SQL_GROUP_LIST which should return cols: group_name, group_display_name (optional), group_description (optional). This should return all groups managed by this job. The name and display name are the full folder path. If there is a column named any of the following: readers, viewers, admins, updaters, optins, optouts, group_attr_readers, group_attr_updaters, then the data in the column (comma separated subjectId's or subjectIdentifiers which can include group names) will be assigned to that group's privilege list. Note you can use inherited privileges on a folder instead.</div>            |
| Groups like sql part              | <div></div> <div>sql like string (e.g. school:orgs:%org%_systemOfRecord), and the loader should be able to query group names to see which names are managed by this loader job. So if a group falls off the loader resultset (or is moved), this will help the loader remove the members from this group. Note, if the group is used anywhere as a member or composite member, it wont be removed.</div>                                                                                                                                                                                                                                                 |
| Grouper types applied to groups   | <div></div> <div>comma separated GroupTypes which will be applied to the loaded groups. e.g. addIncludeExclude</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <div>Save Cancel</div>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Edit LDAP simple job

## Edit loader settings

Loader actions ▼

|                                   |                                                                                                                                                                                                                                                            |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Loader                            | <div>Yes, has loader configuration ▼</div> <div>if this group has loader configuration</div>                                                                                                                                                               |
| Source type                       | <div>LDAP ▼ *</div> <div>pull the members from an LDAP server. Can be SQL or LDAP</div>                                                                                                                                                                    |
| Loader type                       | <div>LDAP_SIMPLE: the LDAP filter loads members of this group ▼ *</div> <div>loaded from LDAP filter which returns subject ids or identifiers. Can be LDAP_SIMPLE, LDAP_GROUP_LIST, or LDAP_GROUPS_FROM_ATTRIBUTES</div>                                   |
| Server ID                         | <div>personLdap - ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu ▼ *</div> <div>ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu<br/>server ID that is configured in the grouper-loader.properties that identifies the connection information to the LDAP server</div>   |
| LDAP filter                       | <div>(&amp; (cmuAndrewCommonNamespacedId=*dest*) (objectClass=cmuPerson)) *</div> <div>LDAP filter returns objects that have subjectIds or subjectIdentifiers</div>                                                                                        |
| Subject attribute name            | <div>guid *</div> <div>attribute name of the returned object the holds subject IDs or identifiers</div>                                                                                                                                                    |
| Search base DN                    | <div>ou=person</div> <div>location that constrains the subtree where the filter is applicable. Note, this is relative to the base DN in the ldap server config in the grouper-loader.properties for this server. This makes the query more efficient</div> |
| Schedule                          | <div>0 0 8 * * ? *</div> <div>At 8:00 AM<br/>Quartz cron-like string (if CRON schedule type): Seconds Minutes Hours Day-of-Month Month Day-of-Week Year (optional field).<br/>e.g. 0 0 6 * * ? is everyday at 6am</div>                                    |
| Subject source ID                 | <div>▼</div> <div>source ID from the sources.xml that narrows the search for subjects. This is optional though makes the loader job more efficient</div>                                                                                                   |
| Subject lookup type               | <div>subjectId ▼</div> <div>can be either: subjectId (most efficient, default), subjectIdentifier (2nd most efficient), or subjectIdOrIdentifier</div>                                                                                                     |
| Search scope                      | <div>SUBTREE_SCOPE ▼</div> <div>how deep to search in LDAP. Can be OBJECT_SCOPE, ONELEVEL_SCOPE, or SUBTREE_SCOPE (default)</div>                                                                                                                          |
| Priority                          | <div></div> <div>this job has the default and middle priority of 5</div>                                                                                                                                                                                   |
| Subject expression                | <div></div> <div>JEXL expression language fragment that processes the subject string before passing it to the subject API. e.g.<br/>\${loaderLdapEiUtils.convertDnToSpecificValue(subjectId)}</div>                                                        |
| Require members in other group(s) | <div></div>                                                                                                                                                                                                                                                |

Save

Cancel

## Edit LDAP list of groups job

## Edit loader settings

Loader actions ▼

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Loader                            | <div>Yes, has loader configuration ▼</div> <div>if this group has loader configuration</div>                                                                                                                                                                                                                                                                                                                                               |
| Source type                       | <div>LDAP ▼ *</div> <div>pull the members from an LDAP server. Can be SQL or LDAP</div>                                                                                                                                                                                                                                                                                                                                                    |
| Loader type                       | <div>LDAP_GROUP_LIST: the LDAP filter returns groups with members which are loaded by this loader. The LDAP filter returns group objects, and the group objects have a list of subjects. Can be LDAP_SIMPLE, LDAP_GROUP_LIST, or LDAP_GROUPS_FROM_ATTRIBUTES ▼ *</div>                                                                                                                                                                     |
| Server ID                         | <div>personLdap - ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu ▼ *</div> <div>ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu<br/>server ID that is configured in the grouper-loader.properties that identifies the connection information to the LDAP server</div>                                                                                                                                                                                   |
| LDAP filter                       | <div>(&amp;(objectClass=cmuGroup)(cn=softdist2:system*)) ▼ *</div> <div>LDAP filter returns objects which are groups which have subjects in an attribute of each group</div>                                                                                                                                                                                                                                                               |
| Subject attribute name            | <div>member</div> <div>attribute name of the returned groups which holds subject IDs or identifiers</div>                                                                                                                                                                                                                                                                                                                                  |
| Search base DN                    | <div>ou=group</div> <div>location that constrains the subtree where the filter is applicable. Note, this is relative to the base DN in the ldap server config in the grouper-loader.properties for this server. This makes the query more efficient</div>                                                                                                                                                                                  |
| Schedule                          | <div>0 0 8 * * ? ▼ *</div> <div>At 8:00 AM<br/>Quartz cron-like string (if CRON schedule type): Seconds Minutes Hours Day-of-Month Month Day-of-Week Year (optional field).<br/>e.g. 0 0 6 * * ? is everyday at 6am</div>                                                                                                                                                                                                                  |
| Subject source ID                 | <div>cmuDirectory - CMU Directory ▼</div> <div>source ID from the sources.xml that narrows the search for subjects. This is optional though makes the loader job more efficient</div>                                                                                                                                                                                                                                                      |
| Subject lookup type               | <div>subjectId ▼</div> <div>can be either: subjectId (most efficient, default), subjectIdentifier (2nd most efficient), or subjectIdOrIdentifier</div>                                                                                                                                                                                                                                                                                     |
| Search scope                      | <div>SUBTREE_SCOPE ▼</div> <div>how deep to search in LDAP. Can be OBJECT_SCOPE, ONELEVEL_SCOPE, or SUBTREE_SCOPE (default)</div>                                                                                                                                                                                                                                                                                                          |
| Priority                          | <div></div> <div>this job has the default and middle priority of 5</div>                                                                                                                                                                                                                                                                                                                                                                   |
| Subject expression                | <div>\${loaderLdapEIUtils.convertDnToSpecificValue(subjectId)} ▼</div> <div>JEXL expression language fragment that processes the subject string before passing it to the subject API. e.g. \${loaderLdapEIUtils.convertDnToSpecificValue(subjectId)}</div>                                                                                                                                                                                 |
| Extra LDAP attributes             | <div>abc</div> <div>attribute names (comma separated) to get LDAP data for expressions in group name, displayName, description</div>                                                                                                                                                                                                                                                                                                       |
| Require members in other group(s) | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Groups SQL 'like' configuration   | <div>test:groupList:SOFTDIST2:SYSTEM:%</div> <div>sql like string (e.g. school:orgs:%org%_systemOfRecord), and the loader should be able to query group names to see which names are managed by this loader job. So if a group falls off the loader resultset (or is moved), this will help the loader remove the members from this group. Note, if the group is used anywhere as a member or composite member, it won't be removed.</div> |
| Group name expression             | <div>groupList:\${loaderLdapEIUtils.convertDnToSpecificValue(groupAttributes['dn'])} ▼</div> <div>JEXL expression language fragment that evaluates to the group name (relative to the stem of the group which has the loader definition). groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc</div>                                                                                                               |
| Group display name expression     | <div></div> <div>JEXL expression language fragment that evaluates to the group display name. groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc</div>                                                                                                                                                                                                                                                            |
| Group description expression      | <div></div> <div>JEXL expression language fragment that evaluates to the group description. groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc</div>                                                                                                                                                                                                                                                             |
| Grouper types applied to groups   | <div></div> <div>comma separated GroupTypes which will be applied to the loaded groups. e.g. addIncludeExclude</div>                                                                                                                                                                                                                                                                                                                       |
| Readers                           | <div></div> <div>comma separated subjectIds or subjectIdentifiers who will be allowed to READ the group memberships</div>                                                                                                                                                                                                                                                                                                                  |

|                   |                      |                                                                                                      |
|-------------------|----------------------|------------------------------------------------------------------------------------------------------|
| Viewers           | <input type="text"/> | comma separated subjectIds or subjectIdentifiers who will be allowed to VIEW the groups              |
| Admins            | <input type="text"/> | comma separated subjectIds or subjectIdentifiers who will be allowed to ADMIN the groups             |
| Updaters          | <input type="text"/> | comma separated subjectIds or subjectIdentifiers who will be allowed to UPDATE the group memberships |
| Opt ins           | <input type="text"/> | comma separated subjectIds or subjectIdentifiers who will be allowed to OPTIN to the group           |
| Opt outs          | <input type="text"/> | comma separated subjectIds or subjectIdentifiers who will be allowed to OPTOUT from the group        |
| Attribute readers | <input type="text"/> |                                                                                                      |

Edit LDAP groups from attributes job

## Edit loader settings

Loader actions ▼

|                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                      |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---|
| Loader                                                                                                                                                                                                                                                                                                                                                                            | Yes, has loader configuration ▼                                                                                      |   |
| if this group has loader configuration                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |   |
| Source type                                                                                                                                                                                                                                                                                                                                                                       | LDAP ▼ *                                                                                                             |   |
| pull the members from an LDAP server. Can be SQL or LDAP                                                                                                                                                                                                                                                                                                                          |                                                                                                                      |   |
| Loader type                                                                                                                                                                                                                                                                                                                                                                       | LDAP_GROUPS_FROM_ATTRIBUTES: the LDAP filter returns subjects with attribut ▼ *                                      |   |
| returns subjects which have a multi-valued attribute e.g. affiliations where groups will be created based on subject who have each attribute value. Can be LDAP_SIMPLE, LDAP_GROUP_LIST, or LDAP_GROUPS_FROM_ATTRIBUTES                                                                                                                                                           |                                                                                                                      |   |
| Server ID                                                                                                                                                                                                                                                                                                                                                                         | personLdap - ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu ▼ *                                                            |   |
| ldap://ldap.andrew.cmu.edu/dc=cmu,dc=edu<br>server ID that is configured in the grouper-loader.properties that identifies the connection information to the LDAP server                                                                                                                                                                                                           |                                                                                                                      |   |
| LDAP filter                                                                                                                                                                                                                                                                                                                                                                       | (&(objectClass=cmuPerson)(cmuAndrewId=a*)(cmuDepartment=Mechanical Engineering)(cmuDepartment=Biological Sciences)(c | * |
| LDAP filter returns objects which are subjects, and the subjects have attributes which will be the groups they are in                                                                                                                                                                                                                                                             |                                                                                                                      |   |
| Subject attribute name                                                                                                                                                                                                                                                                                                                                                            | cmuAndrewCommonNamespacedId *                                                                                        |   |
| attribute name of the returned users which holds subject ID or identifier                                                                                                                                                                                                                                                                                                         |                                                                                                                      |   |
| Search base DN                                                                                                                                                                                                                                                                                                                                                                    | ou=person                                                                                                            |   |
| location that constrains the subtree where the filter is applicable. Note, this is relative to the base DN in the ldap server config in the grouper-loader.properties for this server. This makes the query more efficient                                                                                                                                                        |                                                                                                                      |   |
| Schedule                                                                                                                                                                                                                                                                                                                                                                          | 0 0 8 * * ? *                                                                                                        |   |
| At 8:00 AM<br>Quartz cron-like string (if CRON schedule type): Seconds Minutes Hours Day-of-Month Month Day-of-Week Year (optional field).<br>e.g. 0 0 6 * * ? is everyday at 6am                                                                                                                                                                                                 |                                                                                                                      |   |
| Subject source ID                                                                                                                                                                                                                                                                                                                                                                 | cmuDirectory - CMU Directory ▼                                                                                       |   |
| source ID from the sources.xml that narrows the search for subjects. This is optional though makes the loader job more efficient                                                                                                                                                                                                                                                  |                                                                                                                      |   |
| Subject lookup type                                                                                                                                                                                                                                                                                                                                                               | subjectIdentifier ▼                                                                                                  |   |
| can be either: subjectId (most efficient, default), subjectIdentifier (2nd most efficient), or subjectIdOrIdentifier                                                                                                                                                                                                                                                              |                                                                                                                      |   |
| Search scope                                                                                                                                                                                                                                                                                                                                                                      | SUBTREE_SCOPE ▼                                                                                                      |   |
| how deep to search in LDAP. Can be OBJECT_SCOPE, ONELEVEL_SCOPE, or SUBTREE_SCOPE (default)                                                                                                                                                                                                                                                                                       |                                                                                                                      |   |
| Priority                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                      |   |
| this job has the default and middle priority of 5                                                                                                                                                                                                                                                                                                                                 |                                                                                                                      |   |
| Attribute filter expression                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                      |   |
| grouper loader LDAP JEXL expression to filter attributes in LDAP_GROUPS_FROM_ATTRIBUTES. e.g. \${attribute\value == 'a'    attribute\value == 'b'}<br>\${attribute\value != 'a' && attribute\value != 'b'} \${attributeName.toLowerCase().startsWith('st')} \${attributeName =~ '^fa.*\$' }                                                                                       |                                                                                                                      |   |
| Subject expression                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                      |   |
| JEXL expression language fragment that processes the subject string before passing it to the subject API. e.g.<br>\${loaderLdapEiUtils.convertDnToSpecificValue(subjectId)}                                                                                                                                                                                                       |                                                                                                                      |   |
| Group attribute name                                                                                                                                                                                                                                                                                                                                                              | cmuDepartment *                                                                                                      |   |
| attribute name of the filter result objects that holds the group name. Note, you can put multiple attribute names here comma separated                                                                                                                                                                                                                                            |                                                                                                                      |   |
| Require members in other group(s)                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                      |   |
| Groups SQL 'like' configuration                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                      |   |
| sql like string (e.g. school:orgs:%org%_systemOfRecord), and the loader should be able to query group names to see which names are managed by this loader job. So if a group falls off the loader resultset (or is moved), this will help the loader remove the members from this group. Note, if the group is used anywhere as a member or composite member, it wont be removed. |                                                                                                                      |   |
| Group name expression                                                                                                                                                                                                                                                                                                                                                             | groupsFromAttributes:\${groupAttribute}                                                                              |   |
| JEXL expression language fragment that evaluates to the group name (relative to the stem of the group which has the loader definition). groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc                                                                                                                                                              |                                                                                                                      |   |
| Group display name expression                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                      |   |
| JEXL expression language fragment that evaluates to the group display name. groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc                                                                                                                                                                                                                          |                                                                                                                      |   |
| Group description expression                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                      |   |
| JEXL expression language fragment that evaluates to the group description. groupAttributes['dn'] is a variable in scope as is groupAttributes['cn'] etc                                                                                                                                                                                                                           |                                                                                                                      |   |
| Grouper types applied to groups                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                      |   |
| comma separated GroupTypes which will be applied to the loaded groups. e.g. addIncludeExclude                                                                                                                                                                                                                                                                                     |                                                                                                                      |   |



**Readers**

comma separated subjectIds or subjectIdentifiers who will be allowed to READ the group memberships

**Viewers**

comma separated subjectIds or subjectIdentifiers who will be allowed to VIEW the groups

**Admins**

comma separated subjectIds or subjectIdentifiers who will be allowed to ADMIN the groups

**Updaters**

comma separated subjectIds or subjectIdentifiers who will be allowed to UPDATE the group memberships

**Opt ins**

comma separated subjectIds or subjectIdentifiers who will be allowed to OPTIN to the group

**Opt outs**

comma separated subjectIds or subjectIdentifiers who will be allowed to OPTOUT from the group

**Attribute readers**

comma separated subjectIds or subjectIdentifiers who will be allowed to READ the group attributes

**Attribute updaters**

comma separated subjectIds or subjectIdentifiers who will be allowed to UPDATE the group attributes

Save

Cancel