

Grouper rules pattern - Remove invalid membership due to folder

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[Grouper rules](#)

If an entity falls out of any group in the IT organization groups (meaning not a central IT employee anymore), then remove them from group X

Assign this rule to the group where the membership should be removed.

Java example

```
//add a rule on stem:a saying if you are out of stem:b, then remove from stem:a
AttributeAssign attributeAssign = groupA
    .getAttributeDelegate().addAttribute(RuleUtils.ruleAttributeDefName()).getAttributeAssign();

AttributeValueDelegate attributeValueDelegate = attributeAssign.getAttributeValueDelegate();

attributeValueDelegate.assignValue(
    RuleUtils.ruleActAsSubjectSourceIdName(), "g:isa");
attributeValueDelegate.assignValue(
    RuleUtils.ruleActAsSubjectIdName(), "GrouperSystem");

//folder where membership was removed
attributeValueDelegate.assignValue(
    RuleUtils.ruleCheckOwnerNameName(), "stem2");
attributeValueDelegate.assignValue(
    RuleUtils.ruleCheckTypeName(),
    RuleCheckType.membershipRemoveInFolder.name());

//SUB for all descendants, ONE for just children
attributeValueDelegate.assignValue(
    RuleUtils.ruleCheckStemScopeName(),
    Stem.Scope.SUB.name());

//if there is no more membership in the folder, and there is a membership in the group
attributeValueDelegate.assignValue(
    RuleUtils.ruleIfConditionEnumName(),
    RuleIfConditionEnum.thisGroupAndNotFolderHasImmediateEnabledMembership.name());
attributeValueDelegate.assignValue(
    RuleUtils.ruleThenEnumName(),
    RuleThenEnum.removeMemberFromOwnerGroup.name());

//should be valid
String isValidString = attributeValueDelegate.retrieveValueString(
    RuleUtils.ruleValidName());

if (!StringUtils.equals("T", isValidString)) {
    throw new RuntimeException(isValidString);
}
```

GSH shorthand method

```
RuleApi.groupIntersectionWithFolder(actAsSubject, group, stem, Scope.SUB);
```

GSH test case

```

gsh 0% grouperSession = GrouperSession.startRootSession();
edu.internet2.middleware.grouper.GrouperSession: d53d7312930347649eda6fab89ad7ada, 'GrouperSystem', 'application'
gsh 1% groupA = new GroupSave(grouperSession).assignName("stem1:a").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem1:a' displayName='stem1:a' uuid='6557bf47e6d64c398a10ce4a16661c74'
gsh 2% groupB = new GroupSave(grouperSession).assignName("stem2:b").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem2:b' displayName='stem2:b' uuid='9dae005fc0d44358823fc1e1107def92'
gsh 3% groupC = new GroupSave(grouperSession).assignName("stem2:sub:c").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem2:sub:c' displayName='stem2:sub:c' uuid='c7290e9b53e045f8a6ee0c3a7f9ecd3f'
gsh 4% stem = StemFinder.findByName(grouperSession, "stem2", true);
stem: name='stem2' displayName='stem2' uuid='5a68107654494485909e58f9b3c02b42'
gsh 5% RuleApi.groupIntersectionWithFolder(SubjectFinder.findRootSubject(), groupA, stem, Stem.Scope.SUB);
gsh 6% addMember("stem2:b", "test.subject.0");
true
gsh 7% addMember("stem1:a", "test.subject.0");
true
gsh 8% delMember("stem2:b", "test.subject.0");
true
gsh 9% hasMember("stem1:a", "test.subject.0");
false
gsh 10% addMember("stem2:sub:c", "test.subject.0");
true
gsh 11% addMember("stem1:a", "test.subject.0");
true
gsh 12% delMember("stem2:sub:c", "test.subject.0");
true
gsh 13% hasMember("stem1:a", "test.subject.0");
false
gsh 14% addMember("stem2:sub:c", "test.subject.0");
true
gsh 15% addMember("stem2:b", "test.subject.0");
true
gsh 16% addMember("stem1:a", "test.subject.0");
true
gsh 17% delMember("stem2:b", "test.subject.0");
true
gsh 18% hasMember("stem1:a", "test.subject.0");
true
gsh 19% delMember("stem2:sub:c", "test.subject.0");
true
gsh 20% hasMember("stem1:a", "test.subject.0");
false
gsh 21%

```

GSH daemon test case

```
gsh 0% grouperSession = GrouperSession.startRootSession();
edu.internet2.middleware.grouper.GrouperSession: 0d49834d98554f169f051ef935a02a73, 'GrouperSystem', 'application'
gsh 1% groupA = new GroupSave(grouperSession).assignName("stem1:a").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem1:a' displayName='stem1:a' uuid='ce47626ff0ec484cbe6eb615b7ed3d45'
gsh 2% groupB = new GroupSave(grouperSession).assignName("stem2:b").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem2:b' displayName='stem2:b' uuid='c88ff0d791f143279a3f429734209c1e'
gsh 3% groupC = new GroupSave(grouperSession).assignName("stem2:sub:c").assignCreateParentStemsIfNotExist(true).
save();
group: name='stem2:sub:c' displayName='stem2:sub:c' uuid='5ab490b25b9c4f32aa0c7d0d1d6acd8a'
gsh 4% stem = StemFinder.findByName(grouperSession, "stem2", true);
stem: name='stem2' displayName='stem2' uuid='32afc339e5be416d89e6dd03921b9d6f'
gsh 5% RuleApi.groupIntersectionWithFolder(SubjectFinder.findRootSubject(), groupA, stem, Stem.Scope.SUB);
edu.internet2.middleware.grouper.attr.assign.AttributeAssign: AttributeAssign
[id=258ed40a395d47dc9e80a5055ce5018c,action=assign,attributeDefName=etc:attribute:rules:rule,
  group=Group[name=stem1:a,uuid=ce47626ff0ec484cbe6eb615b7ed3d45]]
gsh 6% addMember("stem1:a", "test.subject.0");
true
gsh 7% addMember("stem1:a", "test.subject.1");
true
gsh 9% addMember("stem2:b", "test.subject.1");
true
gsh 10% status = GrouperLoader.runOnceByJobName(grouperSession, GrouperLoaderType.GROUPER_RULES);
loader ran successfully: Ran rules daemon, changed 0 records
gsh 11% hasMember("stem1:a", "test.subject.0");
false
gsh 12% hasMember("stem1:a", "test.subject.1");
true
gsh 13%
```