

# Grouper messaging send receive change log adapter example

Configure a message sender (change log format) in grouper-loader.properties

```
#####  
## Messaging integration with change log  
#####  
# note, change "messagingSample" in key to be the name of the consumer. e.g. changeLog.consumer.  
myAzureConsumer.class  
changeLog.consumer.changeLogMessagingSample.class = edu.internet2.middleware.grouper.changeLog.  
ChangeLogConsumerToMessage  
changeLog.consumer.changeLogMessagingSample.quartzCron =  
changeLog.consumer.changeLogMessagingSample.messagingSystemName = grouperBuiltinMessaging  
changeLog.consumer.changeLogMessagingSample.queueOrTopicName = sampleChangeLogMessagingQueue  
changeLog.consumer.changeLogMessagingSample.messageQueueType = queue
```

As long as this is not edited in grouper-loader.properties, and the messagingSystemName is grouperBuiltinMessaging, the queue and privileges will be created:

```
#####  
## Messaging overall settings for daemon jobs  
#####  
# auto create built in queues, topics, privileges  
loader.messaging.settings.autocreate.objects = true
```

Make a messaging listener that will print out messages from that queue

```
#####  
## Messaging listener using the change log consumer API  
#####  
# note, change "messagingListenerChangeLogConsumer" in key to be the name of the listener. e.g. messaging.  
listener.myAzureListener.class  
#  
# keep this class to be MessagingListenerToChangeLogConsumer  
messaging.listener.messagingListenerChangeLogConsumerPrint.class = edu.internet2.middleware.grouper.messaging.  
MessagingListenerToChangeLogConsumer  
messaging.listener.messagingListenerChangeLogConsumerPrint.changeLogConsumerClass = edu.internet2.middleware.  
grouper.changeLog.consumer.PrintTest  
messaging.listener.messagingListenerChangeLogConsumerPrint.quartzCron = 0 * * * * ?  
messaging.listener.messagingListenerChangeLogConsumerPrint.messagingSystemName = grouperBuiltinMessaging  
messaging.listener.messagingListenerChangeLogConsumerPrint.queueName = sampleChangeLogMessagingQueue
```

Create events via GSH

```
GrouperSession grouperSession = GrouperSession.startRootSession();  
Group group = new GroupSave(grouperSession).assignName("test:testGroup").assignCreateParentStemsIfNotExist  
(true).save();  
addMember("test:testGroup", "GrouperSystem");  
delMember("test:testGroup", "GrouperSystem");
```

See the output

```
Change log entry: membership -> addMembership, null  
Change log entry: membership -> deleteMembership, null
```

Query messages



```
(null)          12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"
0d304c632bc34416a1f4fa3c7f4b11ef","contextId":"b1251f6de6794f8a9ec47edaef96af87","createdOnDb":
1459147225213000,"sequenceNumber":524,"changeLogTypeCategory":"membership","changeLogTypeAction":"
deleteMembership","field_id":"3a2703bee8a24db5b8c1b6ed4ddc7e57","field_fieldName":"members","field_subjectId":"
GrouperSystem","field_sourceId":"g:isa","field_membershipType":"flattened","field_groupId":"
5b4f7610e2104aa295ddb58df237356f","field_groupName":"test:testGroup","field_memberId":"
12cf184d43d342a49c6a28c8a45c39ff","field_fieldId":"48855dad8b58446fa9eee00dfd6ca211","
field_subjectIdentifier0":"
GrouperSystem"}]}
1                1459147547011
6 row(s) in 71 ms
```