

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

```
select * from grouper_message where queue_name = 'sampleChangeLogMessagingQueue'
```

Output

ID	SENT_TIME_MICROS	GET_ATTEMPT_TIME_MILLIS	GET_ATTEMPT_COUNT	STATE
GET_TIME_MILLIS	FROM_MEMBER_ID	QUEUE_NAME		
MESSAGE_BODY				
HIBERNATE_VERSION_NUMBER	ATTEMPT_TIME_EXPIRES_MILLIS			

abf5c09d478c461cbbdba383b8cc8c36b	1459135864111000	1459135866870	1	PROCESSED
1459135866908 12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"67911ea515f7480bb8aa363913bae196","contextId":"fefeb029bad24a7bbbccd3c9ca730348","createdOnDb":"1459135800303000","sequenceNumber":519,"changeLogTypeCategory":"attributeDefName","changeLogTypeAction":"addAttributeDefName","field_id":"d5e2e4797f7f47d98cb4b1b128f11dcd","field_attributeDefId":"48194ee1d1fc490a8bf6cd519a4c569a","field_name":"etc:attribute:messages:grouperMessageQueues:sampleChangeLogMessagingQueue","field_stemId":"4f6befbf61e845048949c69988e97335"}]}				
2	1459136160297			
78a894922a7b4e2fbf773712e49366d9	1459135864197000	1459135866876	1	PROCESSED
1459135866918 12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"bb3dd51d5a3b443bb33a76d55e42169a","contextId":"fefeb029bad24a7bbbccd3c9ca730348","createdOnDb":"1459135800307000","sequenceNumber":520,"changeLogTypeCategory":"attributeDefNameSet","changeLogTypeAction":"addAttributeDefNameSet","field_id":"52d8f023771a454b80e6b838212a1e41","field_type":"self","field_ifHasAttributeDefNameId":"d5e2e4797f7f47d98cb4b1b128f11dcd","field_thenHasAttributeDefNameId":"d5e2e4797f7f47d98cb4b1b128f11dcd","field_parentAttrDefNameSetId":"52d8f023771a454b80e6b838212a1e41","field_depth":0}]}]}				
2	1459136160297			
8c6fffc63b10c4062985cf4ea2642d771	1459135864200000	1459135866882	1	PROCESSED
1459135866925 12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"0cb099fc58de4b4a9394c1fc26c30070","contextId":"8bd9d6ae6c3f4f1abe50f638d15db3ea","createdOnDb":"1459135800484000","sequenceNumber":521,"changeLogTypeCategory":"attributeAssign","changeLogTypeAction":"addAttributeAssign","field_id":"8a717241cb4c433a6675580d86fe5a2","field_attributeDefNameId":"d5e2e4797f7f47d98cb4b1b128f11dcd","field_attributeAssignActionId":"7d282b660ef64bc68430a76c6d0d430c","field_assignType":"any_mem","field_ownerId1":"bd83c57c43e747b7b4055a29e51e7dce","field_ownerId2":"12cf184d43d342a49c6a28c8a45c39ff","field_attributeDefNameName":"etc:attribute:messages:grouperMessageQueues:sampleChangeLogMessagingQueue","field_action":"receive","field_disallowed":"F"}]}				
2	1459136160297			
a68b34e129564741bdb2c3ea0a43e7cb	1459135924023000	1459135927856	1	PROCESSED
1459135927992 12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"0cb099fc58de4b4a9394c1fc26c30070","contextId":"737e0d0b0f944f7cbfc6e4db38072ccf","createdOnDb":"1459135864098000","sequenceNumber":522,"changeLogTypeCategory":"attributeAssign","changeLogTypeAction":"addAttributeAssign","field_id":"6fb44d44b24f41159ae0de234f73923c","field_attributeDefNameId":"d5e2e4797f7f47d98cb4b1b128f11dcd","field_attributeAssignActionId":"daffb9d7a18a432da05839565d189969","field_assignType":"any_mem","field_ownerId1":"bd83c57c43e747b7b4055a29e51e7dce","field_ownerId2":"12cf184d43d342a49c6a28c8a45c39ff","field_attributeDefNameName":"etc:attribute:messages:grouperMessageQueues:sampleChangeLogMessagingQueue","field_action":"send_to_queue","field_disallowed":"F"}]}				
2	1459136210756			
5ce8355fd09e4c54b2a73a3e3db2c71f	1459147264043000	1459147267614	1	GET_ATTEMPTED
(null) 12cf184d43d342a49c6a28c8a45c39ff sampleChangeLogMessagingQueue {"event":[{"changeLogTypeId":"79fc53db683646f5a72b33fb60cb0fde","contextId":"e8d766d21c5b462a81079072387500be","createdOnDb":"1459147220097000","sequenceNumber":523,"changeLogTypeCategory":"membership","changeLogTypeAction":"addMembership","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":"48855d4d8b58446fa9eee00dfd6ca211","field_subjectIdentifier":"GrouperSystem"}]}				
1	1459147547011			
6d81706e4d264da0867a81b82838a02e	1459147264051000	1459147267661	1	GET_ATTEMPTED

```
(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
```