

Alfresco Out of Process application with python

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Point of view: support: identifying/understanding problems

The slides and code are at:

<https://github.com/alexmadon/presentationTQ2024>

Plan

1. ActiveMQ protocols
2. Out of Process application with python and STOMP
3. Mirroring queues into topics

ActiveMQ protocols

active MQ transport connectors and protocols

- amqp: Java [Advanced Message Queuing Protocol](#) (see also [JMS](#))
- stomp: python (and many many others, including java)

See [activemq.xml](#):

```
<!--  
  The transport connectors expose ActiveMQ over a given protocol to  
  clients and other brokers. For more information, see:  
  
  http://activemq.apache.org/configuring-transport.html  
-->  
<transportConnectors>  
  <!-- DOS protection, limit concurrent connections to 1000 and frame size to 100MB -->  
  <transportConnector name="openwire" uri="tcp://0.0.0.0:61616?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>  
  <transportConnector name="amqp" uri="amqp://0.0.0.0:5672?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>  
  <transportConnector name="stomp" uri="stomp://0.0.0.0:61613?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>  
  <transportConnector name="mqtt" uri="mqtt://0.0.0.0:1883?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>  
  <transportConnector name="ws" uri="ws://0.0.0.0:61614?maximumConnections=1000&wireFormat.maxFrameSize=104857600"/>  
</transportConnectors>
```

Note: if you run activemq in docker

You may need to expose the stomp port (update you `compose.yaml`):

```
activemq:
  image: alfresco/alfresco-activemq:5.18-jre17-rockylinux8
  ports:
    - "8161:8161" # Web Console
    - "61616:61616" # OpenWire
    - "61613:61613" # Stomp
```

check with `docker ps -a`

```
docker ps -a
53cf03bb2484    alfresco/alfresco-activemq:5.18-jre17-rockylinux8    ...0.0.0.0:61613->61613/tcp...
```

STOMP

STOMP = Streaming Text Oriented Messaging Protocol

<https://stomp.github.io/>

https://en.wikipedia.org/wiki/Streaming_Text_Oriented_Messaging_Protocol

STOMP is a very simple and easy to implement protocol, coming from the HTTP school of design;

<https://stomp.github.io/implementations.html>

we will use `stomp-py` :

<https://github.com/jasonrbriggs/stomp.py>

<https://pypi.org/project/stomp-py/>

ActiveMQ and python

ActiveMQ and python: why?

- you can use python to consume the event2 topic *out of process apps* (**SDK is not mandatory**)
- you can use python to *debug* the queue (transformers) with AMQ mirrors
- easy

Benefits of *loose coupling*: performance + freedom

Example: <https://hyland.atlassian.net/browse/MNT-24580>

ActiveMQ and python: event2 demo

```
pip3 install stomp.py
```

or

```
apt-get install python3-stomp
```

or ...

DEMO1

Active MQ queue mirrors

<https://activemq.apache.org/mirrored-queues.html>

add in [activemq.xml](#)

```
<destinationInterceptors>  
  <mirroredQueue copyMessage = "true" postfix=".qmirroraux" prefix="" />  
</destinationInterceptors>
```

Active MQ rendition and transformer queues mirroring

Make sure you use remote transforms (not local):

```
transform.service.enabled=true  
local.transform.service.enabled=false
```

<https://hyland.atlassian.net/browse/MNT-23454>

<https://hyland.atlassian.net/browse/MNT-23478>

Note on debug server (ACS) side: messages org.apache.camel DEBUG are truncated

- camel is an apache project <https://camel.apache.org/>
(<https://github.com/apache/camel/tree/main>)
- set DEBUG an org.apache.camel at
<http://localhost:8080/alfresco/s/enterprise/admin/admin-log-settings>

```
2023-06-13 11:47:00,734  DEBUG [component.jms.JmsConfiguration] [eventAsyncDequeueThreadPool1]
Sending JMS message to: topic://alfresco.repo.event2 with message: ActiveMQTextMessage
...
text = {"specversion":"1.0","type":"org.alfresco.eve...rities":[]}}
```

(DEMO2)

Note: you can also develop custom T-engine

Again: Benefits of *loose coupling*: performance + freedom

- in Java (another SDK)

<https://docs.alfresco.com/content-services/latest/develop/repo-ext-points/content-transformers-renditions/#developing-a-new-t-engine>

<https://github.com/Alfresco/acs-packaging/blob/master/docs/creating-a-t-engine.md>

- in python: no SDK but protocol is simple

QA

Thank You!

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