

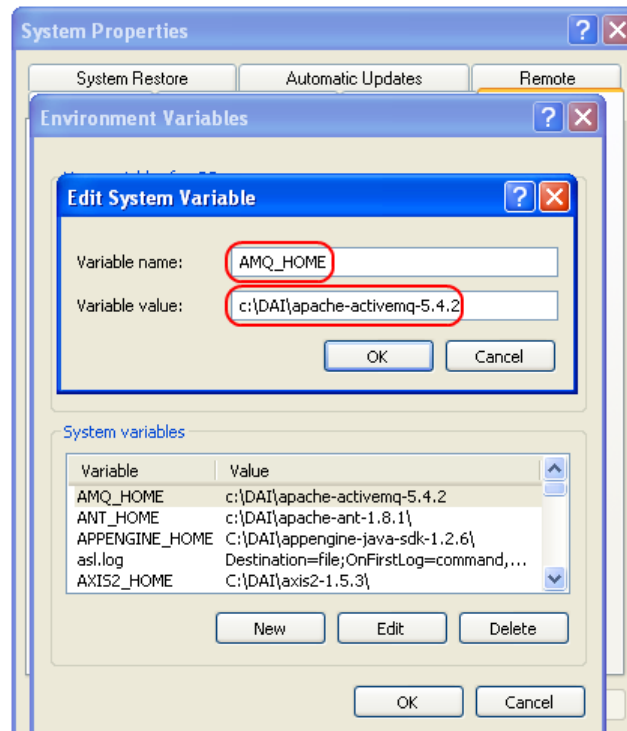
JMS cu Active MQ

1. Utilizare Active MQ

- Se aduce și se desface arhiva Ant (daca nu exista deja). Se adauga calea catre ANT la calea de cautare, folosind interfata specifica sau comanda urmatoare:

```
set path=%path%;f:\ant\bin
```

- Se aduce de la <http://activemq.apache.org/download.html> arhiva ActiveMQ **apache-activemq-5.4.2-bin.zip** care se desface intr-un director numit in continuare AMQ_HOME (poate fi c:\activemq).



- Se urmareste fisierul “**user-guide.html**” din directorul AMQ_HOME.
- Se adauga directorul AMQ_HOME\bin la variabila PATH.

Subdirectorul “**example**” contine cateva exemple de folosire a ActiveMQ, care se executa prin diferite actiuni “target” din fisierul “build.xml”, interpretat de utilitarul ANT. Fisierul “build.xml” contine la inceput o serie de proprietati care pot fi modificate pentru a selecta diverse variante ale exemplului cu producatori si consumatori de mesaje.

Exemplul producator-consumator necesita (cel puțin) trei ferestre linie de comanda:

- Pentru lansare broker de mesaje (Active MQ).

```

C:\DAI\apache-activemq-5.4.2\example>activemq
Java Runtime: Sun Microsystems Inc. 1.6.0_11 C:\Program Files\Java\jdk1.6.0_11\jre
Heap sizes: current=5056k free=4207k max=520256k
JVM args: -Dcom.sun.management.jmxremote -Dorg.apache.activemq.UseDedicatedTaskRunner=true -Djava.util.logging.config.file=logging.properties -Dactivemq.classpath=C:\DAI\apache-activemq-5.4.2\bin\..\conf;C:\DAI\apache-activemq-5.4.2\bin\..\conf; -Dactivemq.home=C:\DAI\apache-activemq-5.4.2\bin\.. -Dactivemq.base=C:\DAI\apache-activemq-5.4.2\bin\..
ACTIVEMQ_HOME: C:\DAI\apache-activemq-5.4.2\bin\..
ACTIVEMQ_BASE: C:\DAI\apache-activemq-5.4.2\bin\..
Loading message broker from: xbean:activemq.xml
INFO | Refreshing org.apache.activemq.xbean.XBeanBrokerFactory$1[e1e0ff2f: startup date [Tue Dec 14 23:41:16 EET 2010]; root of context hierarchy
WARN | destroyApplicationContextOnStop parameter is deprecated, please use shutdown hooks instead
INFO | PLListStore: C:\DAI\apache-activemq-5.4.2\bin\..\data\localhost\tmp_storage started
INFO | Using Persistence Adapter: KahadbPersistenceAdapter[C:\DAI\apache-activemq-5.4.2\bin\..\data\kahadb]
INFO | ActiveMQ 5.4.2 JMS Message Broker (localhost) is starting
INFO | For help or more information please see: http://activemq.apache.org/
INFO | Listening for connections at: tcp://rfg:61616
INFO | Connector openwire Started
INFO | ActiveMQ JMS Message Broker (localhost, ID:rfg-1402-1292362878562-0:1) started
INFO | jetty-7.1.6.v20100715
INFO | ActiveMQ WebConsole initialized.
INFO | Initializing Spring FrameworkServlet 'dispatcher'
INFO | ActiveMQ Console at http://0.0.0.0:8161/admin
INFO | Initializing Spring root WebApplicationContext
INFO | camel-osgi.jar/camel-spring-osgi.jar not detected in classpath
INFO | Apache Camel 2.4.0 (CamelContext: camel) is starting
INFO | JMX enabled. Using ManagedManagementStrategy.
INFO | Found 4 packages with 15 @Converter classes to load
INFO | Loaded 146 type converters in 0.422 seconds
INFO | Connector vm://localhost Started
INFO | Route: route1 started and consuming from: Endpoint[activemq://example.0]
INFO | Started 1 routes
INFO | Apache Camel 2.4.0 (CamelContext: camel) started in 0.984 seconds
INFO | Camel Console at http://0.0.0.0:8161/camel
INFO | ActiveMQ Web Demos at http://0.0.0.0:8161/demo
INFO | RESTful file access application at http://0.0.0.0:8161/fileserver
INFO | Started SelectChannelConnector[0.0.0.0:8161
  
```

- Pentru lansare producator de mesaje.

```

C:\DAI\apache-activemq-5.4.2\example>ant producer
Buildfile: C:\DAI\apache-activemq-5.4.2\example\build.xml
init:
compile:
[javac] C:\DAI\apache-activemq-5.4.2\example\build.xml:150: warning: 'includeantruntime' was not set, defaulting to build.sysclasspath=last; set to false for repeatable builds
producer:
[echo] Running producer against server at $url = tcp://localhost:61616 for subject $subject = TEST.FOO
[java] Connecting to URL: tcp://localhost:61616
[java] Publishing a Message with size 1000 to queue: TEST.FOO
[java] Using non-persistent messages
[java] Sleeping between publish 0 ms
[java] Running 1 parallel threads
[java] [Thread-1] Sending message: 'Message: 0 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 1 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 2 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 3 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 4 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 5 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 6 sent at: Tue Dec 14 23:45:28 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 7 sent at: Tue Dec 14 23:45:29 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 8 sent at: Tue Dec 14 23:45:29 EET 2010 ...'
[java] [Thread-1] Sending message: 'Message: 9 sent at: Tue Dec 14 23:45:29 EET 2010 ...'
  
```

- Pentru lansare consumator de mesaje.

```

C:\DAI\apache-activemq-5.4.2\example>ant consumer
Buildfile: C:\DAI\apache-activemq-5.4.2\example\build.xml
init:
compile:
[javac] C:\DAI\apache-activemq-5.4.2\example\build.xml:150: warning: 'includeantruntime' was not set, defaulting to build.sysclasspath=last; set to false for repeatable builds
consumer:
[echo] Running consumer against server at $url = tcp://localhost:61616 for subject $subject = TEST.FOO
[java] Connecting to URL: tcp://localhost:61616
[java] Consuming queue: TEST.FOO
[java] Using a non-durable subscription
[java] Running 1 parallel threads
[java] [Thread-1] We are about to wait until we consume: 2000 message(s) then we will shutdown
[java] [Thread-1] Received: 'Message: 0 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 1 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 2 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 3 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 4 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 5 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 6 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 7 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 8 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
[java] [Thread-1] Received: 'Message: 9 sent at: Tue Dec 14 23:44:44 EET 2010 ...' (length 1000)
  
```

1.1. Cerinta 1

Utilizare coada de mesaje intre un producator si un consumator de mesaje:

- Se modifica in fisierul "build.xml" valoarea proprietatii "sleepTime" la 1000 (ms) si valoarea proprietatii "max" la 25 (numarul de mesaje trimise inainte de oprire):

```

18 <project name="Inbox" default="help" basedir=".">
19
20 <property name="class.dir" value="target/classes" />
21 <property name="activemq.home" value=".." />
22
23 <!-- example program defaults -->
24 <property name="url" value="tcp://localhost:61616" />
25 <property name="topic" value="false" />
26 <property name="subject" value="TEST.FOO" />
27 <property name="durable" value="false" />
28 <property name="max" value="2000" />
29 <property name="parallelThreads" value="1" />
30 <property name="messageSize" value="1000" />
31 <property name="clientId" value="consumer1" />
32 <property name="producerClientId" value="null" />
33 <property name="timeToLive" value="0" />
34 <property name="sleepTime" value="1000" />
35 <property name="transacted" value="false" />
36 <property name="reply-subject" value="" />
37 <property name="verbose" value="true"/>
38 <property name="ack-mode" value="AUTO_ACKNOWLEDGE"/>
39 <property name="receive-time-out" value="0"/>
40 <property name="subscribers" value="1"/>
41 <property name="batch" value="10"/>

```

- Se opreste si apoi porneste broker-ul de mesaje:

```

C:\WINDOWS\system32\cmd.exe - activemq
INFO : ActiveMQ JMS Message Broker (localhost, ID:rfg-2360-1292363807797-0:1) started
INFO : jetty-7.1.6.v20100715
INFO : ActiveMQ WebConsole initialized.
INFO : Initializing Spring FrameworkServlet 'dispatcher'
INFO : ActiveMQ Console at http://0.0.0.0:8161/admin
INFO : Initializing Spring root WebApplicationContext
INFO : camel-osgi.jar/camel-spring-osgi.jar not detected in classpath
INFO : Apache Camel 2.4.0 (CamelContext: camel) is starting
INFO : JMX enabled. Using ManagedManagementStrategy.
INFO : Found 4 packages with 15 @Converter classes to load
INFO : Loaded 146 type converters in 0.422 seconds
INFO : Connector vm://localhost Started
INFO : Route: routel started and consuming from: Endpoint[activemq://example.01]
INFO : Started 1 routes
INFO : Apache Camel 2.4.0 (CamelContext: camel) started in 0.906 seconds
INFO : Camel Console at http://0.0.0.0:8161/camel
INFO : ActiveMQ Web Demos at http://0.0.0.0:8161/demo
INFO : RESTful file access application at http://0.0.0.0:8161/fileserver
INFO : Started SelectChannelConnector@0.0.0.0:8161
INFO : ActiveMQ Message Broker (localhost, ID:rfg-2360-1292363807797-0:1) is shutting down
INFO : ActiveMQ Message Broker (localhost, ID:rfg-2360-1292363807797-0:1) is shutting down
INFO : Connector openwire Stopped
INFO : Connector vm://localhost Stopped
INFO : PLISTore:C:\DAI\apache-activemq-5.4.2\bin\..\data\localhost\tmp_storage stopped
INFO : Stopping async queue tasks
INFO : Stopping async topic tasks
INFO : Stopped KahadB
INFO : Connector openwire Stopped
INFO : ActiveMQ JMS Message Broker (localhost, ID:rfg-2360-1292363807797-0:1) stopped
INFO : ActiveMQ JMS Message Broker (localhost, ID:rfg-2360-1292363807797-0:1) stopped
Terminate batch job (Y/N)? y

C:\DAI\apache-activemq-5.4.2\example>activemq
Java Runtime: Sun Microsystems Inc. 1.6.0_11 C:\Program Files\Java\jdk1.6.0_11\jre
Heap sizes: current=5056k free=4207k max=520256k
JVM args: -Dcom.sun.management.instronote -Xmx512M -Dorg.apache.activemq.UseDedicatedTaskRunner=true -Djava.util.logg
ing.config.file=logging.properties -Dactivemq.classpath=C:\DAI\apache-activemq-5.4.2\bin\..\conf;C:\DAI\apache-activemq-
5.4.2\bin\..\conf; -Dactivemq.home=C:\DAI\apache-activemq-5.4.2\bin\..\ -Dactivemq.base=C:\DAI\apache-activemq-5.4.2\bin\
..
ACTIVEMQ_HOME: C:\DAI\apache-activemq-5.4.2\bin\..
ACTIVEMQ_BASE: C:\DAI\apache-activemq-5.4.2\bin\..
Loading message broker from: xbean:activemq.xml
INFO : Refreshing org.apache.activemq.xbean.XBeanBrokerFactory$1$1e0ff2f: startup date [Tue Dec 14 23:57:50 EET 2010];
root of context hierarchy
WARN : destroyApplicationContextOnStop parameter is deprecated, please use shutdown hooks instead
INFO : PLISTore:C:\DAI\apache-activemq-5.4.2\bin\..\data\localhost\tmp_storage started
INFO : Using Persistence Adapter: KahadBPersistenceAdapter[C:\DAI\apache-activemq-5.4.2\bin\..\data\kahadb]
INFO : KahadB is version 3
INFO : Recovering from the journal ...
INFO : Recovery replayed 1 operations from the journal in 0.016 seconds.
INFO : ActiveMQ 5.4.2 JMS Message Broker (localhost) is starting
INFO : For help or more information please see: http://activemq.apache.org/
INFO : Listening for connections at: tcp://rfg:61616
INFO : Connector openwire Started
INFO : ActiveMQ JMS Message Broker (localhost, ID:rfg-2423-1292363872360-0:1) started
INFO : jetty-7.1.6.v20100715
INFO : ActiveMQ WebConsole initialized.
INFO : Initializing Spring FrameworkServlet 'dispatcher'
INFO : ActiveMQ Console at http://0.0.0.0:8161/admin
INFO : Initializing Spring root WebApplicationContext
INFO : camel-osgi.jar/camel-spring-osgi.jar not detected in classpath
INFO : Apache Camel 2.4.0 (CamelContext: camel) is starting
INFO : JMX enabled. Using ManagedManagementStrategy.
INFO : Found 4 packages with 15 @Converter classes to load
INFO : Loaded 146 type converters in 0.422 seconds
INFO : Connector vm://localhost Started
INFO : Route: routel started and consuming from: Endpoint[activemq://example.01]
INFO : Started 1 routes
INFO : Apache Camel 2.4.0 (CamelContext: camel) started in 0.922 seconds
INFO : Camel Console at http://0.0.0.0:8161/camel
INFO : ActiveMQ Web Demos at http://0.0.0.0:8161/demo
INFO : RESTful file access application at http://0.0.0.0:8161/fileserver
INFO : Started SelectChannelConnector@0.0.0.0:8161

```

- Se reporneste producatorul de mesaje.
- Se reporneste consumatorul de mesaje:

Se vor afisa alternativ fereastra consumatorului si a producatorului.

Se observa ca mesajele trimise de producator sunt memorate pana cand porneste consumatorul, care le preia din coada si le afiseaza in fereastra unde a fost lansat:

Se va opri si reporni producatorul (fara a opri consumatorul).

Se va porni mai intai consumatorul si apoi producatorul, comutand alternativ intre cele doua ferestre.

1.2. Cerinta 2

Utilizare topica de mesaje cu unul sau mai multi producatori si unul sau mai multi consumatori:

- Se modifica in fisierul “build.xml” valoarea proprietatii “topic” la “true” (proprietatea “durable” sa fie “false”).

```

18 <project name="Inbox" default="help" basedir=".">
19
20     <property name="class.dir" value="target/classes" />
21     <property name="activemq.home" value=".." />
22
23     <!-- example program defaults -->
24     <property name="url" value="tcp://localhost:61616" />
25     <property name="topic" value="true" />
26     <property name="subject" value="TEST.FOO" />
27     <property name="durable" value="false" />

```

- Se reporneste producatorul de mesaje.
- Se reporneste consumatorul de mesaje:
- Se deschide o alta fereastră linie de comanda si se lanseaza un alt consumator de mesaje:
- Se deschide o alta fereastră linie de comanda si se lanseaza un alt producator de mesaje:

Se comuta intre ferestre pentru a vedea ce afiseaza consumatorii (si producatorii) de mesaje.

Se observa ca fiecare consumator incepe sa primeasca mesaje din momentul lansarii sale deci din momentul inscrierii la topica respectiva.

1.3. Cerinta 3

Utilizare topica durabila de mesaje cu unul sau mai multi producatori si unul sau mai multi consumatori.

- Se modifica in fisierul “build.xml” valoarea proprietatii “topic” la “true” si valoarea proprietatii “durable” la “true”:

```

18 <project name="Inbox" default="help" basedir=".">
19
20     <property name="class.dir" value="target/classes" />
21     <property name="activemq.home" value=".." />
22
23     <!-- example program defaults -->
24     <property name="url" value="tcp://localhost:61616" />
25     <property name="topic" value="true" />
26     <property name="subject" value="TEST.FOO" />
27     <property name="durable" value="true" />

```

- Se porneste producatorul intr-o fereastră.
- Se porneste consumatorul intr-o fereastră.

Se observa ca sunt preluate si mesajele emise inainte de pornirea consumatorului.

Se va incerca pornirea unui al doilea consumator si se va observa ca nu pot fi mai multi consumatori la o aceeași topica cu mesaje durabile:

```

C:\DAI\apache-activemq-5.4.2\example>ant consumer
Buildfile: C:\DAI\apache-activemq-5.4.2\example\build.xml
init:
compile:
[javac] C:\DAI\apache-activemq-5.4.2\example\build.xml:150: warning: 'includeantruntime' was not set, defaulting to
build.sysclasspath=last; set to false for repeatable builds
consumer:
[echo] Running consumer against server at $url = tcp://localhost:61616 for subject $subject = TEST.FOO
[java] Connecting to URL: tcp://localhost:61616
[java] Consuming topic: TEST.FOO
[java] Using a durable subscription
[java] Running 1 parallel threads
[java] [javax.jms.InvalidClientIDException: Broker: localhost - Client: consumer1 already connected from /127.0.0.1:
3552
[java] at org.apache.thread-1 Caught: javax.jms.InvalidClientIDException: Broker: localhost - Client: consumer
1 already connected from /127.0.0.1:3552
[java] at org.apache.activemq.broker.BrokerFilter.addConnection(RegionBroker.java:243)
[java] at org.apache.activemq.broker.BrokerFilter.addConnec552
[java] tion(BrokerFilter.java:85)
[java] at org.apache.activemq.advisory.AdvisoryBroker.addConnection(AdvisoryBroker.java:78)
[java] at org.apache.activemq.broker.BrokerFilter.addConnection(BrokerFilter.java:85)
[java] at org.apache.activemq.broker.BrokerFilter.addConnection(BrokerFilter.java:85)

```

1.4. Cerinta 4

Se va executa si studia aplicatia “requester”.

- Se modifica in fisierul “build.xml” valoarea proprietatii “reply-subject” la “TEST.FOO”:

```

18 <project name="Inbox" default="help" basedir=".">
19
20   <property name="class.dir" value="target/classes" />
21   <property name="activemq.home" value=".." />
22
23   <!-- example program defaults -->
24   <property name="url" value="tcp://localhost:61616" />
25   <property name="topic" value="true" />
26   <property name="subject" value="TEST.FOO" />
27   <property name="durable" value="true" />
28   <property name="max" value="25" />
29   <property name="parallelThreads" value="1" />
30   <property name="messageSize" value="1000" />
31   <property name="clientId" value="consumer1" />
32   <property name="producerClientId" value="null" />
33   <property name="timeToLive" value="0" />
34   <property name="sleepTime" value="1000" />
35   <property name="transacted" value="false" />
36   <property name="reply-subject" value="TEST.FOO" />
37   <property name="verbose" value="true"/>
38   <property name="ack-mode" value="AUTO_ACKNOWLEDGE"/>
39   <property name="receive-time-out" value="0"/>
40   <property name="subscribers" value="1"/>
41   <property name="batch" value="10"/>

```

- Se porneste aplicatia “requester” in doua ferestre separate:

ant requester

Se vor observa si statisticile afisate in final:

```

item37\cmd.exe
[Java] Sending message: Message
[Java] Waiting for response mess
[Java] Response message: Message

[Java] Sending message: Message
[Java] Waiting for response mess
[Java] Response message: Message

[Java] Sending message: Message
[Java] Waiting for response mess
[Java] Response message: Message

[Java] Done.
[Java] connection <
[Java] session <
[Java] messageCount< count: 0 unit: count startTime: 1292365585454 lastSampleTime: 1292365585454 description: N
umber of messages exchanged >
[Java] messageRateLine< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0.0 a
veragePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585454 lastSampleTime: 1292365585454 d
escription: Time taken to process a message (throughput rate) >
[Java] pendingMessageCount< count: 0 unit: count startTime: 1292365585454 lastSampleTime: 1292365585454 descrip
tion: Number of pending messages >
[Java] expiredMessageCount< count: 0 unit: count startTime: 1292365585454 lastSampleTime: 1292365585454 descrip
tion: Number of expired messages >
[Java] messageWaitTime< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0.0 a
veragePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585454 lastSampleTime: 1292365585454 d
escription: Time spent by a message before being delivered >
[Java] durableSubscriptionCount< count: 0 unit: count startTime: 1292365585454 lastSampleTime: 1292365585454 de
scription: The number of durable subscriptions >
[Java]
[Java] producers <
[Java] producer topic://TEST.FOO <
[Java] messageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 descriptio
n: Number of messages processed >
[Java] messageRateLine< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0
.0 averagePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585469 lastSampleTime: 12923655854
69 description: Time taken to process a message (throughput rate) >
[Java] pendingMessageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 des
cription: Number of pending messages >
[Java] expiredMessageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 des
cription: Number of expired messages >
[Java] messageWaitTime< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0
.0 averagePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585469 lastSampleTime: 12923655854
69 description: Time spent by a message before being delivered >
[Java]
[Java] consumers <
[Java] consumer topic://TEST.FOO <
[Java] messageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 descriptio
n: Number of messages processed >
[Java] messageRateLine< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0
.0 averagePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585469 lastSampleTime: 12923655854
69 description: Time taken to process a message (throughput rate) >
[Java] pendingMessageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 des
cription: Number of pending messages >
[Java] expiredMessageCount< count: 0 unit: count startTime: 1292365585469 lastSampleTime: 1292365585469 des
cription: Number of expired messages >
[Java] messageWaitTime< count: 0 maxTime: 0 minTime: 0 totalTime: 0 averageTime: 0.0 averageTimeExMinMax: 0
.0 averagePerSecond: 0.0 averagePerSecondExMinMax: 0.0 unit: millis startTime: 1292365585469 lastSampleTime: 12923655854
69 description: Time spent by a message before being delivered >
[Java]
[Java]
[Java]
[Java]
BUILD SUCCESSFUL
Total time: 29 seconds
C:\ND\apache-activemq-5.4.2\example>

```

1.5. Cerinta 5

Se va executa si studia aplicatia cu mesaje si tranzactii.

- Se deschide o fereastra linie de comanda si se intra in subdirectorul “AMQ_HOME/example/transactions”.
- Se executa un “target” din fisierul “build.xml”:

ant transactions_demo

```

C:\WINDOWS\system32\cmd.exe
C:\DAI\apache-activemq-5.4.2\example\transactions>ant transactions_demo
Buildfile: C:\DAI\apache-activemq-5.4.2\example\transactions\build.xml

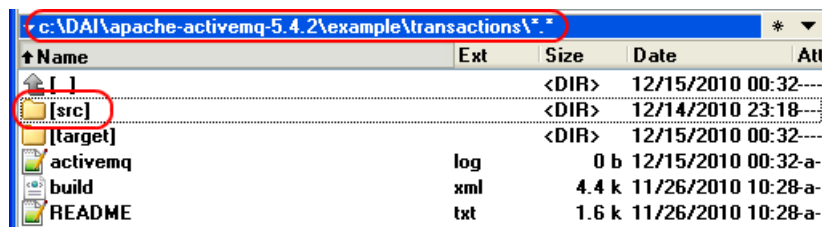
init:
[mkdir] Created dir: C:\DAI\apache-activemq-5.4.2\example\transactions\target\classes

compile:
[javac] C:\DAI\apache-activemq-5.4.2\example\transactions\build.xml:55: warning: 'includeantruntime' was not set, de
faulting to build.sysclasspath=last; set to false for repeatable builds
[javac] Compiling 4 source files to C:\DAI\apache-activemq-5.4.2\example\transactions\target\classes

transactions_demo:
[java] Vendor: Retailer ordered 4 Computer(s)
[java] Vendor: ordered 4 Monitor(s)
[java] Vendor: ordered 4 Hard Drive(s)
[java] Retailer: Ordered 4 computers.
[java] Monitor Supplier: Vendor ordered 4 Monitor
[java] Monitor Supplier: Sent 4 Monitor(s)
[java] HardDrive Supplier: Vendor ordered 4 HardDrive
[java] HardDrive Supplier: Sent 4 HardDrive(s)
[java] Vendor: Comitted Transaction 1
[java] Monitor Supplier: committed transaction
[java] javax.jms.JMSException: Simulated Database Error.
[java] at Vendor.run(Vendor.java:111)
[java] at java.lang.Thread.run(Thread.java:619)
[java] HardDrive Supplier: committed transaction
[java] Vendor: Completed processing for order 1
[java] Vendor: sent 4 computer(s)
[java] Vendor: committed transaction 2
[java] Retailer: Order Filled
[java] Vendor: JMSException Occured: Simulated Database Error.
[java] Retailer: Ordered 1 computers.
[java] Vendor: Rolled Back Transaction.
[java] javax.jms.JMSException: Simulated Database Error.
[java] at Vendor.run(Vendor.java:111)
[java] at java.lang.Thread.run(Thread.java:619)
[java] Vendor: JMSException Occured: Simulated Database Error.
[java] Vendor: Rolled Back Transaction.
[java] Vendor: Retailer ordered 1 Computer(s)
[java] Vendor: ordered 1 Monitor(s)
[java] Vendor: ordered 1 Hard Drive(s)
[java] Monitor Supplier: Vendor ordered 1 Monitor
[java] HardDrive Supplier: Vendor ordered 1 HardDrive
[java] Monitor Supplier: Sent 0 Monitor(s)
[java] HardDrive Supplier: Sent 1 HardDrive(s)

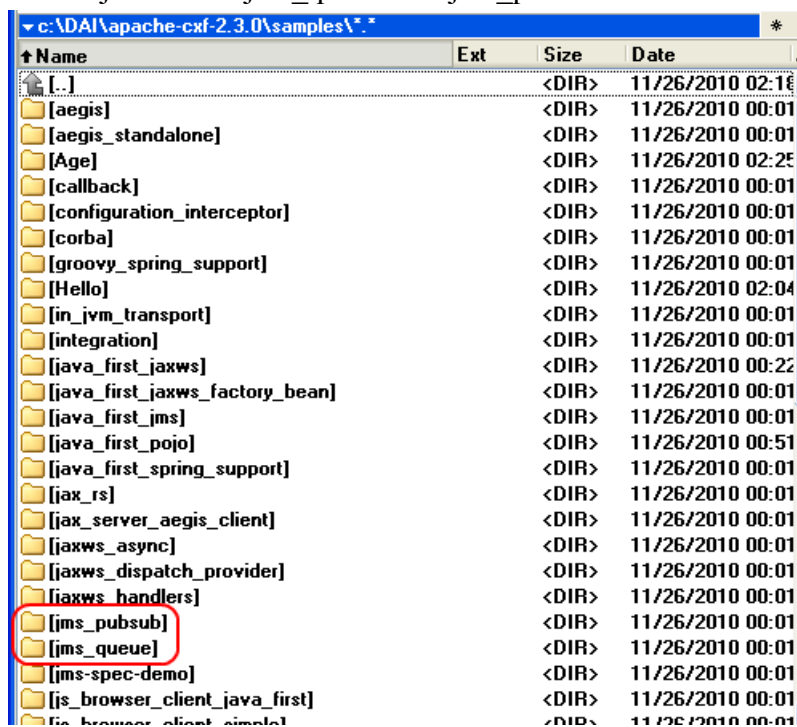
```

- Se vor studia sursele din subdirectorul “src”:



2. Servicii Web care folosesc JMS

Directorul CXF_HOME\samples contine doua exemple de servicii Web realizate prin mesaje JMS (ActiveMQ) si nu prin mesaje SOAP: “jms_queue” si “jms_pubsub”:



2.1. Cerinta 6

Sa se citeasca instructiunile de operare din fisierul README.txt si sa se execute acest exemplu (sunt necesare produsele Apache Ant, Apache CXF si Apache ActiveMQ).

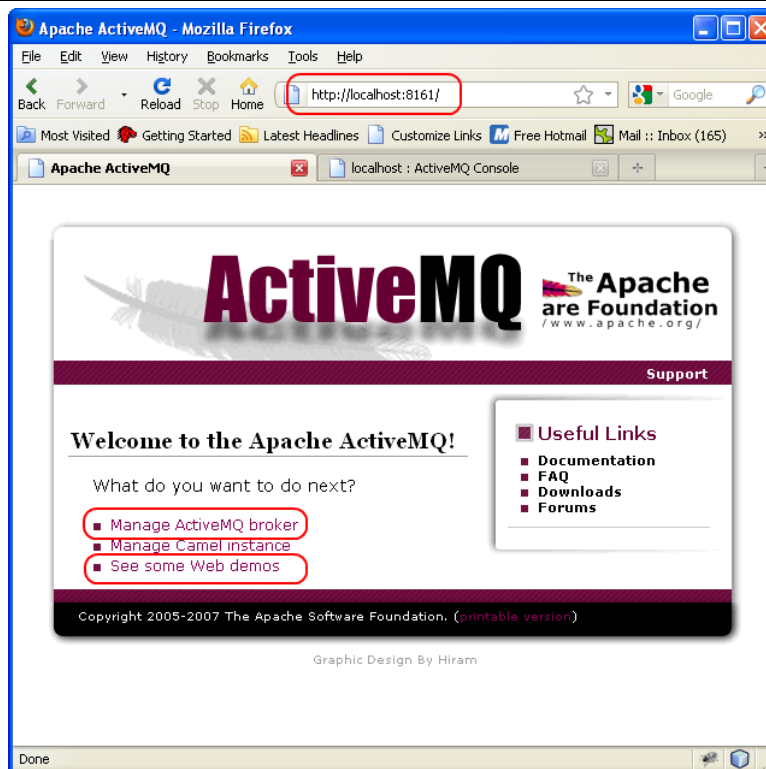
Sa se studieze sursele claselor (subdirectorul “src”) si fisierul “build.xml”.

Desi exista un fisier WSDL, acest serviciu nu poate fi testat cu SoapUI deoarece nu foloseste protocolul SOAP.

3. Monitorizare Active MQ

Versiunea 4.2 permite si monitorizarea Active MQ prin intermediul unui navigator Web, la adresa:

<http://localhost:8161/>



Accesati consola de administrare de la adresa:

<http://localhost:8161/admin>

Urmariti exemplele disponibile la adresa:

<http://localhost:8161/demo/>

4. Resurse

Resurse utile:

- <http://activemq.apache.org/index.html>
- <http://activemq.apache.org/getting-started.html>
- <http://activemq.apache.org/articles.html>
- <http://download.oracle.com/javaee/6/tutorial/doc/>
- <http://www.oracle.com/technetwork/java/javaee/documentation/index.html>