

# JMS Transport Adapter configuration

- [Overview](#)
- [Concept](#)
- [Operation Scenarios](#)
- [Prerequisites](#)
- [Installation and run steps](#)
  - [Configuration for ActiveMQ](#)
    - [Installation and run steps \(after rev. 66518\)](#)
    - [Installation and run steps \(prior rev. 66518\)](#)
  - [Configuration for TIBCO EMS](#)
    - [On TIBCO EMS side](#)
    - [On FIXEdge side](#)
- [Configuration](#)
- [Troubleshooting](#)

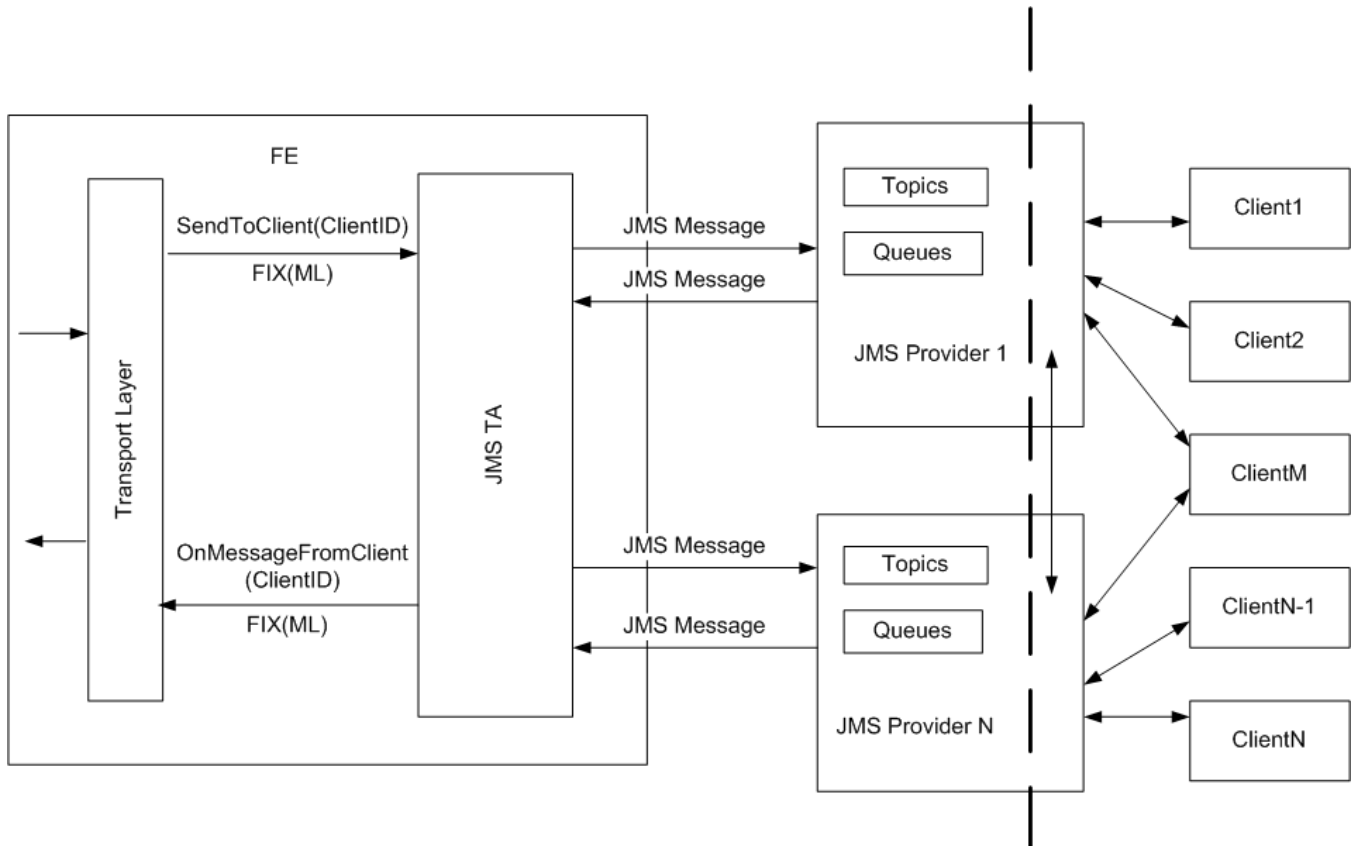
## Overview

This document contains description of the main features of JMS Transport Adaptor for FixEdge and common steps required to install JMS Transport Adaptor (JMS TA) for the FIX Edge.

## Concept

The JMS Adaptor for FIX Server (hereinafter JMS Adaptor) is intended for communication with FIX Server from third-part applications via JMS. JMS TA is a library that exposes a set of methods for communicating with FixEdge's Transport Layer. Also, JMS TA gives a transport, which implements JMS protocol for transmitting/receiving data to/from JMS provider(s):

- JMS TA performs packaging of FIX(ML) messages to JMS Messages (Binary or Text) with further sending to appropriate JMS provider(s);
- JMS TA performs extracting of FIX(ML) messages from received JMS Messages with further sending it to Transport Layer;



## Operation Scenarios

During FIX server start-up Transport Layer creates JMS connection for each Client Name listed in configuration **ClientNames property** with specified Session Type, Topic, Ack mode and other properties created.

- After success creation of Connection to JMS Provider - notification to Transport Layer is sent via onLogon() with ClientName as parameter;
- After success disconnect from JMS Provider - notification to Transport Layer is sent via onLogout() with ClientName as parameter;
- After successful registration in Transport Layer, JMS TA starts processing incoming messages from JMS Provider(s) and routing outgoing messages from TL to JMS provider(s).

## Prerequisites

Path to jvm libraries should be specified in PATH variable if installation goes in Linux (E.g.: /home/user/work/environment/jdk1.7.0/jre/lib/amd64/server).

For FIXEdge prior to v5.7:

- Java Runtime Environment 1.6 or higher
- Path to jvm libraries should be specified in PATH variable if installation goes in Windows . (E.g.: C:\Program Files (x86)\Java\jre7\bin\server)

## Installation and run steps

### Configuration for ActiveMQ

#### Installation and run steps (after rev. 66518)

1. Install FIXEdge for Windows (use "tar xvf" commands for Linux/Solaris)
2. Put jmsTADll-xx.dll (libjmsTADll-xx.so and symlink libjmsTA.so for Linux/Solaris) file from JMSAdaptor package into bin directory of FIXEdge
3. Copy "jms-ta-distribution" directory to FIXEdge's configuration directory (e.g FixEdge1/conf/)
4. Copy JVM\_Options.jvmopts from Package/DOC/ to FixEdge1/conf/
5. Add path to appropriate activemq\*.jar to java classpath in JVM\_Options.jvmopts file e.g.:

#### JVM\_Options.jvmopts

```
Windows: -Djava.class.path=(...);FixEdge1/conf/jms-ta-distribution/tool/lib/activemq-all-5.3.2.jar;  
Linux: -Djava.class.path=(...);../FixEdge1/conf/jms-ta-distribution/tool/lib/activemq-all-5.3.2.jar;
```

6. Configure paths to logs in jms-ta-distribution/etc/log4j.properties . Paths to logs dir must be absolute.
7. Configure JMS adapter in FIXEdge.properties.  
Add TransportLayer.JMSTA to TransportLayer.TransportAdapters, so in result you will get "TransportLayer.TransportAdapters = TransportLayer.JMSTA"  
And add JMS session parameters, for example:

## FIXEdge.properties

```
# Transport Layer Section
TransportLayer.TransportAdapters = TransportLayer.JMSTA
TransportLayer.JMSTA.Description = JMS Transport Adaptor
TransportLayer.JMSTA.DllName = bin/jmsTADll-vc10-MD-x64.dll // Use libJMSTA.so for Linux
TransportLayer.JMSTA.JVMOptionsFile = FixEdge1/conf/JVM_Options.jvmopts // Use ../FixEdge1/conf
/JVM_Options.jvmopts for Linux
TransportLayer.JMSTA.ConnectionNames = Connection1
TransportLayer.JMSTA.ClientNames = ProducerSession, ConsumerSession

TransportLayer.JMSTA.Connection.Connection1.InitialContextFactory = org.apache.activemq.jndi.
ActiveMQInitialContextFactory
TransportLayer.JMSTA.Connection.Connection1.ProviderURI = tcp://10.17.12.244:61616
TransportLayer.JMSTA.Connection.Connection1.User = test
TransportLayer.JMSTA.Connection.Connection1.Password = test
TransportLayer.JMSTA.Connection.Connection1.ConnectionFactory = queueConnectionFactory
TransportLayer.JMSTA.Connection.Connection1.Reconnect = false
TransportLayer.JMSTA.Connection.Connection1.ReconnectTries = 3
TransportLayer.JMSTA.Connection.Connection1.ReconnectInterval = 500

TransportLayer.JMSTA.Client.ProducerSession.ConnectionName = Connection1
TransportLayer.JMSTA.Client.ProducerSession.StorageDir = ../FixEdge1/log
TransportLayer.JMSTA.Client.ProducerSession.SessionType = Producer
TransportLayer.JMSTA.Client.ProducerSession.MessagingMode = Queue
TransportLayer.JMSTA.Client.ProducerSession.DestinationURI = MyQueue
TransportLayer.JMSTA.Client.ProducerSession.DeliveryMode = NoPersist
TransportLayer.JMSTA.Client.ProducerSession.TimeToLive = 100000
TransportLayer.JMSTA.Client.ProducerSession.SessionAckMode = Auto
TransportLayer.JMSTA.Client.ProducerSession.MessageType = Text
TransportLayer.JMSTA.Client.ProducerSession.Transacted = true
TransportLayer.JMSTA.Client.ProducerSession.DurableSubscription = false
TransportLayer.JMSTA.Client.ProducerSession.DurableSubscriptionName = DurableTest

TransportLayer.JMSTA.Client.ConsumerSession.ConnectionName = Connection1
TransportLayer.JMSTA.Client.ConsumerSession.StorageDir = ../FixEdge1/log
TransportLayer.JMSTA.Client.ConsumerSession.SessionType = Consumer
TransportLayer.JMSTA.Client.ConsumerSession.MessagingMode = Queue
TransportLayer.JMSTA.Client.ConsumerSession.DestinationURI = MyQueue
TransportLayer.JMSTA.Client.ConsumerSession.DeliveryMode = NoPersist
TransportLayer.JMSTA.Client.ConsumerSession.TimeToLive = 100000
TransportLayer.JMSTA.Client.ConsumerSession.SessionAckMode = Auto
TransportLayer.JMSTA.Client.ConsumerSession.MessageType = Text
TransportLayer.JMSTA.Client.ConsumerSession.Transacted = false
TransportLayer.JMSTA.Client.ConsumerSession.DurableSubscription = false
TransportLayer.JMSTA.Client.ConsumerSession.DurableSubscriptionName = DurableTest
```

Note: TransportLayer.JMSTA.Connection.Connection1.ProviderURI = tcp://10.17.12.244:61616 - *host:port* of Apache ActiveMQ Message Broker.

According to this configuration, FIXEdge will establish connection (Connection1) with ActiveMQ on 10.17.12.244:61616 *host:port*. This connection will be used by two JMS sessions: ProducerSession will receive FIX messages and send converted messages into MyQueue queue of ActiveMQ (producer session), ConsumerSession will receive JMS messages from MyQueue queue of ActiveMQ and convert them into FIX (consumer session).

- Use Package/Doc/BL\_Config.xml from JMSTA Package as BL Rule. (Copy to FixEdge1/conf dir)  
According to that BL rule and to JMS adapter configuration: FIX messages from FIXCLIENT1 will be converted into JMS and sent to ActiveMQ using producer session JMSPTestSession, then consumers session JMSPTestSession2 will get these JMS messages from ActiveMQ, convert it back to FIX and send messages to FIXCLIENT2.
- ActiveMQ configuration (You can get it from [official site](#)).
  - In conf/activemq.xml add <destination> to <broker> section:

### conf/activemq.xml

```
<destinations>
  <queue physicalName="MyQueue" />
</destinations>
```

- b. Start ActiveMQ using bin/activemq.bat
10. Enable UnregisteredAcceptors in FixEdge1/conf/engine.properties (UnregisteredAcceptor.CreateSession = true)
11. Start FIXEdge
12. Start, for example, SimpleClient (or HSBC tool) and establish FIXCLIENT1-FIXEDGE, FIXCLIENT2-FIXEDGE sessions with FIXEdge
13. Send FIX messages to FIXCLIENT1-FIXEDGE session
14. Messages from FIXCLIENT1-FIXEDGE session should be received in FIXCLIENT2-FIXEDGE Session
15. Open ActiveMQ admin console. Messages Enqueued and Messages Dequeued counters on Queues and Topics page should be changing with each sent message.

## Installation and run steps (prior rev. 66518)

- ...
3. Unpack jms-ta-distribution\*.zip to FixEdge1/conf/
  - 4-5. In FixEdge1/conf directory create JVM\_Options.jvmopts file with:

### JVM\_Options.jvmopts

```
-Xms232m
-Xmx512m
-Xrs
-Djava.class.path=FixEdge1/conf/jms-ta-distribution/lib/jms-ta-jni-1.2.2.jar;FixEdge1/conf/jms-ta-distribution/lib/jms-ta-core-1.2.2.jar;FixEdge1/conf/jms-distribution-1.2.2/lib/activemq-all-A.B.C.jar;FixEdge1/conf/;
```

Where 1.2.2 - numbers in version of jms-distribution.  
A.B.C - numbers in version of activemq jar-file.

6. Copy log4j.properties file (on older version it is logback.xml) from FixEdge1/conf/jms-distribution/etc to FixEdge1/conf
7. ...
8. Configure BL\_Config.xml as:

### BL\_Config.xml

```
<?xml version="1.0" encoding="UTF-8" ?>
<FIXEdge>
<BusinessLayer>
  <Rule>
    <Source>
      <FixSession SenderCompID="FIXCLIENT1" TargetCompID="FIXEDGE"/>
    </Source>
    <Action>
      <Send Name="ProducerSession" />
    </Action>
  </Rule>
  <Rule>
    <Source Name="ConsumerSession" />
    <Action>
      <Send>
        <FixSession SenderCompID="FIXEDGE" TargetCompID="FIXCLIENT2"/>
      </Send>
    </Action>
  </Rule>
  <DefaultRule>
    <Action>
      <DoNothing/>
    </Action>
  </DefaultRule>
</BusinessLayer>
</FIXEdge>
```

## Configuration for TIBCO EMS

### On TIBCO EMS side

1. In C:\ProgramData\TIBCO\_HOME\tibco\cfgmngmt\ems\data\tibemsd.conf file set  
authorization = enabled

```
user_auth = local // Not sure if this is required
```

2. Using TIBCO EMS admin tool og GEMS create user "fixedge\_dev" with password "fixedge\_dev"
3. Using TIBCO EMS admin tool og GEMS create TOPIC "fixedge.deals"
4. In "fixedge.deals" topic set isSecure property to "true"
5. Assign "Subscribe To Topic", "Create Durable" and "Use Durable" permissions for "fixedge\_dev" user
6. There is no need in manual creation of DURABLE. FIXEdge will create it automatically.

## On FIXEdge side

1. Install FIXEdge for Windows (use "tar xvf" commands for Linux/Solaris)
2. Put jmsTADll-xx.dll (libjmsTADll-xx.so and symlink libjmsTA.so for Linux/Solaris) file from JMSAdaptor package into bin directory of FIXEdge
3. Copy "jms-ta-distribution" directory to FIXEdge's configuration directory (e.g FixEdge1/conf/)
4. Copy JVM\_Options.jvmopts from Package/DOC/ to FixEdge1/conf/
5. Copy appropriate tibjms.jar library from TIBCO EMS (for example, it can be located into C:/tibco/ems/6.3/lib/) to, for example, jms-ta-distribution/tool/lib/ folder and add path to this library to classpath in JVM\_Options.jvmopts, e.g.:

### JVM\_Options.jvmopts

```
-Djava.class.path=(...);FixEdge1/conf/jms-ta-distribution/tool/lib/tibjms.jar;
```

6. Configure consumer connection parameters in the FIXEdge.properties, e.g.:

### FIXEdge.properties

```
TransportLayer.TransportAdapters = TransportLayer.JMSTA

TransportLayer.JMSTA.Description = JMS Transport Adaptor
TransportLayer.JMSTA.DllName = bin/jmsTADll-vc10-MD-x64.dll
TransportLayer.JMSTA.JVMOptionsFile = FixEdge1/conf/JVM_Options.jvmopts
TransportLayer.JMSTA.ConnectionNames = Connection1
TransportLayer.JMSTA.ClientNames = fixedge_recv_dev // This will be used as ClientID of durable

TransportLayer.JMSTA.Connection.Connection1.InitialContextFactory = com.tibco.tibjms.naming.
TibjmsInitialContextFactory
TransportLayer.JMSTA.Connection.Connection1.ProviderURI = tcp://epuakyiw1476:7222
TransportLayer.JMSTA.Connection.Connection1.User = fixedge_dev
TransportLayer.JMSTA.Connection.Connection1.Password = fixedge_dev
TransportLayer.JMSTA.Connection.Connection1.ConnectionFactory = TopicConnectionFactory
TransportLayer.JMSTA.Connection.Connection1.ReconnectTries = 2000000
TransportLayer.JMSTA.Connection.Connection1.ReconnectInterval = 2000
TransportLayer.JMSTA.Connection.Connection1.Reconnect = true

## Topic Consumer client
TransportLayer.JMSTA.Client.fixedge_recv_dev.ConnectionName = Connection1
TransportLayer.JMSTA.Client.fixedge_recv_dev.SessionType = Consumer
TransportLayer.JMSTA.Client.fixedge_recv_dev.MessagingMode = Topic
TransportLayer.JMSTA.Client.fixedge_recv_dev.DestinationURI = fixedge.deals
TransportLayer.JMSTA.Client.fixedge_recv_dev.DeliveryMode = NoPersist
TransportLayer.JMSTA.Client.fixedge_recv_dev.TimeToLive = 100000
TransportLayer.JMSTA.Client.fixedge_recv_dev.SessionAckMode = Auto
TransportLayer.JMSTA.Client.fixedge_recv_dev.MessageType = Text
TransportLayer.JMSTA.Client.fixedge_recv_dev.StorageDir = FixEdge1/log
TransportLayer.JMSTA.Client.fixedge_recv_dev.DurableSubscription = true
TransportLayer.JMSTA.Client.fixedge_recv_dev.DurableSubscriptionName = fixedge.deals
```

If you need to configure consumer and producer, then you should repeat steps 2 and 5 from "On TIBCO EMS side" instruction and in FIXEdge. properties configuration should look like:

## FIXEdge.properties

```
TransportLayer.TransportAdapters = TransportLayer.JMSTA

TransportLayer.JMSTA.Description = JMS Transport Adaptor
TransportLayer.JMSTA.DllName = bin/jmsTADll-vc10-MD-x64.dll
TransportLayer.JMSTA.JVMOptionsFile = FixEdgel/conf/JVM_Options.jvmopts
TransportLayer.JMSTA.ConnectionNames = Connection1,Connection2
TransportLayer.JMSTA.ClientNames = fixedge_rcv_dev,fixedge_send_dev

TransportLayer.JMSTA.Connection.Connection1.InitialContextFactory = com.tibco.tibjms.naming.
TibjmsInitialContextFactory
TransportLayer.JMSTA.Connection.Connection1.ProviderURI = tcp://epuakyiw1476:7222
TransportLayer.JMSTA.Connection.Connection1.User = fixedge_dev
TransportLayer.JMSTA.Connection.Connection1.Password = fixedge_dev
TransportLayer.JMSTA.Connection.Connection1.ConnectionFactory = TopicConnectionFactory
TransportLayer.JMSTA.Connection.Connection1.ReconnectTries = 2000000
TransportLayer.JMSTA.Connection.Connection1.ReconnectInterval = 2000
TransportLayer.JMSTA.Connection.Connection1.Reconnect = true

TransportLayer.JMSTA.Connection.Connection2.InitialContextFactory = com.tibco.tibjms.naming.
TibjmsInitialContextFactory
TransportLayer.JMSTA.Connection.Connection2.ProviderURI = tcp://epuakyiw1476:7222
TransportLayer.JMSTA.Connection.Connection2.User = fixedge
TransportLayer.JMSTA.Connection.Connection2.Password = fixedge
TransportLayer.JMSTA.Connection.Connection2.ConnectionFactory = TopicConnectionFactory
TransportLayer.JMSTA.Connection.Connection2.ReconnectTries = 2000000
TransportLayer.JMSTA.Connection.Connection2.ReconnectInterval = 2000
TransportLayer.JMSTA.Connection.Connection2.Reconnect = true

## Topic Consumer client
TransportLayer.JMSTA.Client.fixedge_rcv_dev.ConnectionName = Connection1
TransportLayer.JMSTA.Client.fixedge_rcv_dev.SessionType = Consumer
TransportLayer.JMSTA.Client.fixedge_rcv_dev.MessagingMode = Topic
TransportLayer.JMSTA.Client.fixedge_rcv_dev.DestinationURI = fixedge.deals
TransportLayer.JMSTA.Client.fixedge_rcv_dev.DeliveryMode = NoPersist
TransportLayer.JMSTA.Client.fixedge_rcv_dev.TimeToLive = 100000
TransportLayer.JMSTA.Client.fixedge_rcv_dev.SessionAckMode = Auto
TransportLayer.JMSTA.Client.fixedge_rcv_dev.MessageType = Text
TransportLayer.JMSTA.Client.fixedge_rcv_dev.StorageDir = FixEdgel/log
TransportLayer.JMSTA.Client.fixedge_rcv_dev.DurableSubscription = true
TransportLayer.JMSTA.Client.fixedge_rcv_dev.DurableSubscriptionName = fixedge.deals

## Topic Producer client
TransportLayer.JMSTA.Client.fixedge_send_dev.ConnectionName = Connection2
TransportLayer.JMSTA.Client.fixedge_send_dev.SessionType = Producer
TransportLayer.JMSTA.Client.fixedge_send_dev.MessagingMode = Topic
TransportLayer.JMSTA.Client.fixedge_send_dev.DestinationURI = fixedge.deals
TransportLayer.JMSTA.Client.fixedge_send_dev.DeliveryMode = NoPersist
TransportLayer.JMSTA.Client.fixedge_send_dev.TimeToLive = 100000
TransportLayer.JMSTA.Client.fixedge_send_dev.SessionAckMode = Auto
TransportLayer.JMSTA.Client.fixedge_send_dev.MessageType = Text
TransportLayer.JMSTA.Client.fixedge_send_dev.StorageDir = FixEdgel/log
TransportLayer.JMSTA.Client.fixedge_send_dev.DurableSubscription = false
TransportLayer.JMSTA.Client.fixedge_send_dev.DurableSubscriptionName = fixedge.deals
```

7. Configure BL Rules in BL\_Config.xml to put received FIX messages to "fixedge\_send\_dev" client and get messages from "fixedge\_rcv\_dev" client
8. Start TIBCO EMS
9. Start FIXEdge

## Configuration

The JMS adaptor is configured by means of the following properties:

Property name	Description	Required	Default Value
TransportLayer. TransportAdapters	Comma delimited list of TA. Separate configuration section for each listed client should be specified. <b>JMSTA</b> should be specified here.	Y	
TransportLayer. JMSTA.Description	TA Description	Y	JMS Transport Adaptor
TransportLayer. JMSTA.DllName	TA library file name	Y	
TransportLayer. JMSTA. JVMOptionsFile	TA configuration file name	Y	
TransportLayer. JMSTA.AllowReject Messages	When option is true, JMS rejects messages if unable to send to the MQ or error was fired. False by default.	N	false
TransportLayer. JMSTA.AllowRepea tedStatusNotification	When option is true, JMS allows to call onLogout() callback if no onLogon() callback was called. False by default.	N	false
TransportLayer. JMSTA. ConnectionNames	Comma delimited list of TA connections. Separate configuration section for each listed connection should be specified	Y	
TransportLayer. JMSTA. ClientNames	Comma delimited list of TA clients. Separate configuration section for each listed client should be specified	Y	
<b>Connections parameters</b>			
TransportLayer. JMSTA.Connection. [ConnectionName]. InitialContextFactory	JNDI option. The fully qualified class name of the factory class that will create the initial context. An initial context is the starting point for naming operations.	C, required if JNDI mechanism is used	
TransportLayer. JMSTA.Connection. [ConnectionName]. ProviderURI	JMS provider URI that defines where the Connection that is created is to connect to as well as the protocol that should be used, for example TCP/IP. Additionally configuration information can be encoded in the URI.	Y	
TransportLayer. JMSTA.Connection. [ConnectionName]. User	User name	Y	
TransportLayer. JMSTA.Connection. [ConnectionName]. Password	User Password	Y	
TransportLayer. JMSTA.Connection. [ConnectionName]. ConnectionFactory	JNDI option. Connection factory object name in the JNDI object store.	C, required if JNDI mechanism is used	
TransportLayer. JMSTA.Connection. [ConnectionName]. Reconnect	Enables or disables reconnect procedure for connection restore	N	false
TransportLayer. JMSTA.Connection. [ConnectionName]. ReconnectTries	Number of reconnect tries or -1 for an infinite number of attempts	N	3
TransportLayer. JMSTA.Connection. [ConnectionName]. ReconnectInterval	Fixed interval in milliseconds between reconnection attempts	N	2000
<b>Clients parameters</b>			
TransportLayer. JMSTA.Client.[Clien tName]. ConnectionName	Name of primary connection used by client. Connection should be registered in ConnectionNames enumeration and has all required parameters	Y	
TransportLayer. JMSTA.Client.[Clien tName].StorageDir	Directory where persistence file is stored in case the communication problem	Y, if persistent mode is enabled	

TransportLayer. JMSTA.Client.[ClientName]. SessionType	Session type:  <ul style="list-style-type: none"> <li>• <b>Producer</b> - session is a message producer</li> <li>• <b>Consumer</b> - session is a message consumer</li> </ul>	Y	
TransportLayer. JMSTA.Client.[ClientName]. MessagingMode	Session messaging mode:  <b>Queue - Point-To-Point.</b> Each message is addressed to a specific queue, and receiving clients extract messages from the queue(s) established to hold their messages. Queues retain all messages sent to them until the messages are consumed or until the messages expire.  <b>Topic - Publish/Subscribe.</b> In a pub/sub product or application, clients address messages to a topic. Publishers and subscribers are generally anonymous and may dynamically publish or subscribe to the content hierarchy. The system takes care of distributing the messages arriving from a topic's multiple publishers to its multiple subscribers. Topics retain messages only as long as it takes to distribute them to current subscribers.	Y	
TransportLayer. JMSTA.Client.[ClientName]. DestinationURI	URI of session destination (Queue name)	Y	
TransportLayer. JMSTA.Client.[ClientName]. DeliveryMode	Specifies whether sent messages are lost if the JMS provider fails.  <b>Persist</b> - instructs the JMS provider to take extra care to ensure that a message is not lost in transit in case of a JMS provider failure. A message sent with this delivery mode is logged to stable storage when it is sent.  <b>NoPersist</b> - does not require the JMS provider to store the message or otherwise guarantee that it is not lost if the provider fails.  <b>NOTE:</b> used only for Producer sessions.	N	Persist
TransportLayer. JMSTA.Client. [ClientName]. TimeToLive	This value defines a message expiration time (in seconds) that is the sum of the message's time-to-live and the GMT when it is sent (for transacted sends, this is the time the client sends the message, not the time the transaction is committed).	Y	3
TransportLayer. JMSTA.Client.[ClientName]. SessionAckMode	Defines mode in which the Session will acknowledge the messages that it receives and dispatches.  <b>Auto</b> - With this acknowledgement mode, the session automatically acknowledges a client's receipt of a message either when the session has successfully returned from a call to receive or when the message listener the session has called to process the message successfully returns.  <b>Client</b> - With this acknowledgement mode, the client acknowledges a consumed message by calling the message's acknowledge method. Acknowledging a consumed message acknowledges all messages that the session has consumed. When client acknowledgement mode is used, a client may build up a large number of unacknowledged messages while attempting to process them.  <b>DupsOk</b> - This acknowledgement mode instructs the session to lazily acknowledge the delivery of messages. This is likely to result in the delivery of some duplicate messages if the JMS provider fails, so it should only be used by consumers that can tolerate duplicate messages. Use of this mode can reduce session overhead by minimizing the work the session does to prevent duplicates.	N	Auto
TransportLayer. JMSTA.Client.[ClientName]. MessageType	JMS Message type used for this session.  <b>Bytes</b> - A stream of interpreted bytes. This message type is for literally encoding a body to match an existing message format.  <b>Text</b> - Data is stored as a string. This message type is useful for exchanging simple text messages and for more complex character data, such as XML documents.  <b>Custom</b> - The ability to use your own message type. This message type is useful for adaptation to already existing systems. For this message type property <i>TransportLayer.JMSTA.Client.[ClientName].CustomMessageType</i> is required.	Y	
TransportLayer. JMSTA.Client. [ClientName]. CustomMessageType	Class of custom message type implementation. This should be the implementation of one of the interface: - <i>com.epam.fixengine.jms.client.consumer.IFromMessageConverter</i> - <i>com.epam.fixengine.jms.client.consumer.IToMessageConverter</i>  <b>NOTE:</b> used only for Custom message type.	Y, if MessageTy pe is Custom	
TransportLayer. JMSTA.Client.[ClientName]. Transacted	Sending/consuming of messages in the session is transacted.  <b>true</b> - transacted.  <b>false</b> - not transacted. The value is used by default.	N	false
TransportLayer. JMSTA.Client. [ClientName]. TransactionBatchSize	Max number of message for one transaction. Take from queue the available number of message but no more than that specified in this property.  <b>NOTE:</b> used only if transacted is enabled.	N	20
TransportLayer. JMSTA.Client. [ClientName]. QueueSize	Max number of messages in queue. Message is queued until successfully sent. Waiting for space to become available if the queue is full.	N	100



TransportLayer. JMSTA.Client. [ClientName]. QueuePersistent	Store messages in file until it committed. It allows to restore and send messages after a sudden cardiac application.  <b>true</b> – persistent queue.  <b>false</b> – in memory queue. Faster but less safe, some messages may be lost after restart.	N	false
TransportLayer. JMSTA.Client. [ClientName]. QueueNormalFileSi ze	After reaching this size, adapter waits when the queue will be empty for to truncate file. File size in Mbytes.  <b>NOTE:</b> used only for persistent queue.	N	10
TransportLayer. JMSTA.Client. [ClientName]. QueueMaxFileSize	After reaching this size, adapter truncate the file and overwrites the messages that are queued. File size in Mbytes.  <b>NOTE:</b> used only for persistent queue.	N	50
TransportLayer. JMSTA.Client.[Clien tName]. DurableSubscription	Durable topic subscriptions allows receiving messages published while the subscriber is not active. Durable subscriptions offer the reliability of queues to the publish/subscribe message domain.  <b>true</b> - Subscription is durable.  <b>false</b> - Subscription is not durable.  <b>NOTE:</b> <ul style="list-style-type: none"><li>used only for Consumer sessions.</li><li>checks that Producer sends messages with Persistent delivery mode.</li></ul>	N	false
TransportLayer. JMSTA.Client.[Clien tName]. DurableSubscriptio nName	Durable subscription name.	Y, required if DurableSub scription set to true.	
TransportLayer. JMSTA.Client. [ClientName]. ConnectionsCount	Number of JMS connections.  Adaptor will open given amount of connections to JMS server for given session to send simultaneously.  <b>NOTE:</b> Please pay attention that if a number of connection is greater then 1 that there is no guaranty that messages will be placed to JMS in the same order they were received by adapter.	N	1
TransportLayer. JMSTA.Client. [ClientName]. ThreadsPerConnect ion	Number of threads per one JMS connection. Adaptor will open given amount of JMS sessions for each JMS connection to send simultaneously.  <b>NOTE:</b> Please pay attention that if a number of thread per connection is greater then 1 that there is no guaranty that messages will be placed to JMS in the same order they were received by adapter.	N	1

**Note** that all changes in properties file are applied only after FixEdge restart.

## Troubleshooting

- On linux all relative paths should be set from FIXEdge bin/ directory (e.g /home/user/B2BITS/FixEdge/v.5.8.0.x/bin) because packages for various OS has different values of FIXEdge.RootDir parameter in FIXEdge.properties.