

Kafka Transport

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Overview

The Parasoft Kafka Transport Extension adds support for the Apache Kafka transport to applicable messaging client tools in SOAtest. This enables you to take full advantage of SOAtest's rich interface when configuring, sending, and validating messages sent over Kafka.

Requirements

- Apache Kafka brokers 0.10.0.0 or later
- Parasoft SOAtest 9.10.0 or later

Installation

This artifact can be installed from the UI or the command line.

UI Installation

1. Choose **Parasoft > Preferences**.
2. In the **System Properties** preferences page, click **Add JARs**.
3. In the file chooser that opens, select **kafka.jar**.
4. Click **Apply** and restart SOAtest.

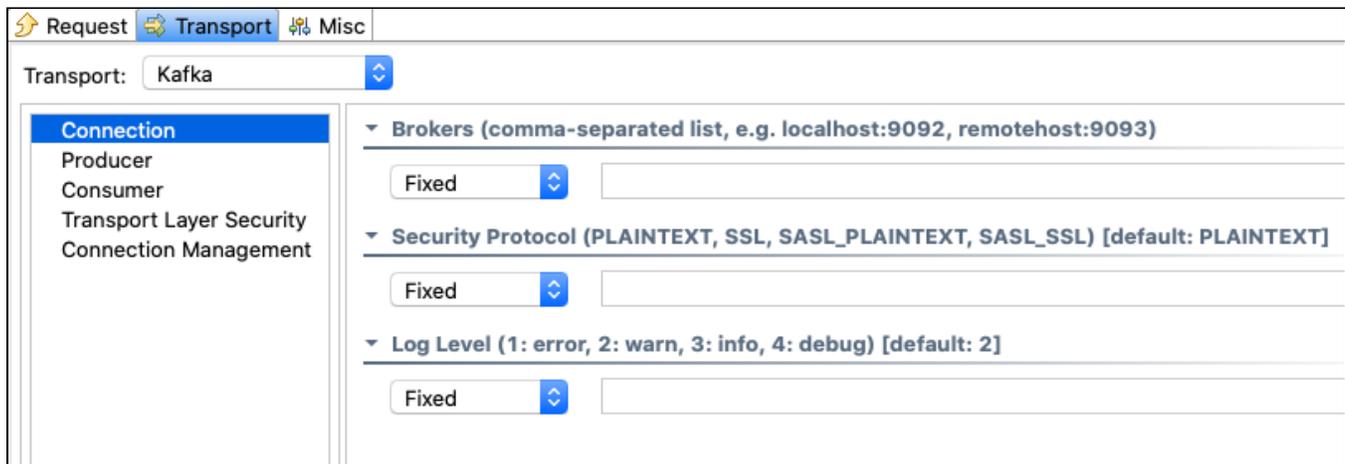
Command Line Installation

Add the kafka.jar file to the system.properties.classpath property in your localsettings properties file. For example:

```
system.properties.classpath=<path to jar>/kafka-transport-1.1.jar
```

Usage

You can configure your message client tools (e.g., [SOAP Client](#), [EDI Client](#), and [Messaging Client](#)) to use the Kafka Transport by enabling it in the tool's **Transport** tab. Choose **Kafka** from the Transport drop-down menu and configure the available options.



If your system has more than one custom extension, choose **Kafka** from the Select implementation drop-down menu.

Configuration

The transport can be configured as a producer, consumer, or both. To configure the transport as a producer only, leave the consumer configuration settings empty. To configure the transport as a consumer only, leave the producer configuration settings empty.

Connection Settings

Brokers	Specify a comma-separated list of servers where Kafka is running, including the ports.
Security Protocol	<p>Specifies the security protocol. You can specify following values:</p> <ul style="list-style-type: none">• <code>PLAINTEXT</code> - Specifies an unauthenticated, non-encrypted channel.• <code>SSL</code> - Specifies for an SSL channel.• <code>SASL_PLAINTEXT</code> - Specifies an SASL-authenticated, non-encrypted channel. This option requires additional configuration (see SASL_PLAINTEXT and SASL_SSL).• <code>SASL_SSL</code> - Specifies an SASL-authenticated, SSL channel. This option requires additional configuration (see SASL_PLAINTEXT and SASL_SSL). <p>The Transport Layer Security (TLS) settings will be applied when this Security Protocol is set to either <code>SSL</code> or <code>SASL_SSL</code>.</p> <p>SASL_PLAINTEXT and SASL_SSL</p> <p>You cannot fully configure the <code>SASL_PLAINTEXT</code> and <code>SASL_SSL</code> security protocols in the UI fields provided. If you want to use these security protocols, you must create a configuration file and adjust the <code>sasl.jaas.config</code> property to include the <code>com.parasoft.soavirt.kafka.shaded</code> package prefix. The following example demonstrates how to configure the package for the plain login module:</p> <pre>com.parasoft.soavirt.kafka.shaded.apache.kafka.common.security.plain.PlainLoginModule</pre> <p>Specify the file in the Additional Settings File Path field under the Producer Settings or Consumer Settings.</p>
Log Level	Specify how much information you want logged to the console. The default is 2 (warn).

Producer Settings

Topic	Specify the name of a topic to which the producer will write messages.
Partition	Specify the integer number for the partition in a topic (e.g., 0, 1, 2). If empty, the record key will be used to generate a partition number.
Record Key Serializer	Specify whether the key should be written/sent as a string or as null. The default value is <code>string</code> .
Record Key	Specify the record key.
Idempotent	Specify <code>true</code> to insure that only one message and no duplicates will be sent to the broker. Default is <code>false</code> .
Request Timeout	Specify the how long to wait in milliseconds to send and receive an acknowledgment before timing out. Default is 30000.
Additional Settings File Path	Specify a properties file containing additional settings that may be required to connect to your application. This setting is optional. If this field is empty, SOAtest will use default Kafka settings for any additional settings your application may require that are not available in the UI.

Consumer Settings

Topic	Specify the name of a topic or a comma-separated list of topics to which the consumer should subscribe. You can specify a partition within the topic with a colon and the integer number for the partition. For example, <code>topic1:0</code> .
Group id	Specify the group to which the consumer belongs. This property is required when partition is not specified with the topic.
Offset	Specify the position within a topic/partition to begin reading records.
Poll interval	Specify a duration in milliseconds between polling. Default is 100.

Max Poll Records	Specify the maximum number of records to poll between intervals. Default is 500.
Commit Offsets	Specify a mode for committing offsets. Commits are points in the partition at which the consumer can resume processing records. <ul style="list-style-type: none"> • <code>autoCommit</code>: In this mode, Kafka will determine offset commits. • <code>lastProcessedMessage</code>: In this mode, the last message processed is set as the commit offset. • <code>off</code>: In this mode, no offsets are committed. Default is <code>autoCommit</code> .
Timeout	Specify how many milliseconds the consumer should wait for messages to be published to the subscribed topic/partition before disconnecting. Default is 30000.
Additional Settings File Path	Specify a properties file containing additional settings that may be required to connect to your application. This setting is optional. If this field is empty, SOAtest will use default Kafka settings for any additional settings your application may require that are not available in the UI.

Transport Layer Security

TLS Protocol	Defines the Transport Layer Protocol to use when establishing a secure connection. Default: <code>TLSv1.2</code>
Security Provider	The name of the security provider used for TLS connections. Default value is the default security provider of the JVM.
Key Store File Location	Defines an absolute or relative path to the asset (.tst, .pva, .pvn) key store file.
Key Store Type	Defines the type of Key Store File provided. Different Key Store Types can be handled depending on the security providers that have been loaded into the JVM. If additional security providers have been added to the JVM, check the security provider's documentation to gather the available Key Store Type names.
Key Store Password	Defines the password to be used to extract the keys/certificates from the Key Store File. If left blank, an attempt will be made to extract the keys without a password.
Key Password	Specifies the password of the private key in the key store file. This setting is optional for clients.
Trust Store File Location	Defines an absolute or relative path to the asset (.tst, .pva, .pvn) Trust Store file. Default: <code>Trust All Certificates</code>
Trust Store Type	Defines the type of Trust Store File provided. Different Trust Store Types can be handled depending on the security providers that have been loaded into the JVM. If additional security providers have been added to the JVM, check the security provider's documentation to gather the available Trust Store Type names.
Trust Store Password	Defines the password to be used to extract the keys/certificates from the Trust Store File. If left blank, an attempt will be made to extract the keys without a password.

Connection Management Settings

Keep connection alive	Enable this option to keep the client connection alive and reused for subsequent publishing.
Close connection after test execution	Enable this option to close the client connection directly after publishing.

Third-party Content

This extension includes items that have been sourced from third parties as outlined below.

- Apache Kafka clients ([Apache License 2.0](#))

Additional license details are available in this plugin's licenses folder.