

Sterling B2B Integrator



# ActiveMQ Modularization

*Version 5.2*



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**Note**

Before using this information and the product it supports, read the information in "Notices" on page 5.

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## ActiveMQ Modularization

IBM® Sterling B2B Integrator uses ActiveMQ as part of its ASI (application server independent) deployment mode.

- ActiveMQ can be clustered when Sterling B2B Integrator is clustered.
- ActiveMQ runs in its own JVM with its own dynamic classpath which eliminates the dependencies that have made upgrades difficult in the past.
- Applications that require a JMS system can use the modularized ActiveMQ.

### Installation and Configuration

No additional setup or configuration is necessary to use modularized ActiveMQ. The Sterling B2B Integrator installation process configures the system to use it out of the box for both cluster ActiveMQ and non-cluster ActiveMQ.

However, if you plan to use clustering, you may choose a different configuration by editing the `activemqconfig.xml` file. Before editing this file, read the `readme_cluster.txt` file. It contains information about how to use the options in the `activemqconfig.xml` file. Both files are located in the Sterling B2B Integrator `install_dir/activemq/conf` folder.

### Standalone ActiveMQ Commands

- To start the standalone ActiveMQ server, first ensure the ActiveMQ dynamic configuration file (`activemqconfig.xml.in`) and ActiveMQ configuration XML file (`activemqconfig.xml`) are present in the `<install_dir>/install/activemq/conf` directory. Then, from the `install_dir/bin`, run: `startActiveMQ.sh` (`startActiveMqWindowService.cmd`)
- To stop the standalone ActiveMQ server, from the `install_dir/bin`, run: `stopActiveMQ.sh` (`stopActiveMqWindowService.cmd`)

### Monitoring ActiveMQ Activity from jconsole

1. Install the supported JDK on your computer. Refer to the system requirements for this information.
2. Find the `ACTIVEMQ_JMX_PORT` in `install_dir/properties/sandbox.cfg` after the Sterling B2B Integrator environment comes up, and make a note of it. You will need this port number later in this procedure.
3. In Windows, open a command prompt window (run `cmd.exe` from the Windows Start > Run option).
4. Type the following command: `cd <jdk_dir>\bin run jconsole` (where `<jdk_dir>` is the name of the jdk home directory).
5. In the jconsole, select the Advanced tab.
6. Paste the following in the jmx field: `service:jmx:rmi:///jndi/rmi://host:<ACTIVEMQ_JMX_PORT>/jmxrmi` (where `<ACTIVEMQ_JMX_PORT>` is the port number you looked up in Step 2).
7. Click Connect.
8. Follow the directory to find ActiveMQ.

## Mandatory Startup for ActiveMQ

The `startActivemqMandatory` parameter in the `install_dir/properties/activeMQ.properties` file controls whether the remaining processes are started if ActiveMQ fails to start. The default setting for this parameter is `false`. To change this, you can create an extension file for Sterling B2B Integrator (for example, `activeMQ.properties_clumpName_ext.in`) and specify the following entry: `startActivemqMandatory=true|false`

Where:

True = if `activemq` fails to start, the rest of processes will not be started.

False = if `activemq` fails to start, continue to start the rest of the processes.

- To start the standalone ActiveMQ server, first ensure the ActiveMQ dynamic configuration file (`activemqconfig.xml.in`) and ActiveMQ configuration XML file (`activemqconfig.xml`) are present in the `install_dir/activemq/conf` directory. Then, from the `install_dir/bin`, run: `startActiveMQ.sh` (`startActiveMqWindowService.cmd`)
- To stop the standalone ActiveMQ server, from the `install_dir/bin`, run: `stopActiveMQ.sh` (`stopActiveMqWindowService.cmd`)

## Using an External ActiveMQ Environment

**Note:** This should only be done by experienced users.

ActiveMQ is bundled in the install; however you can use a different ActiveMQ environment by modifying certain files. The bundled ActiveMQ is version 5.1.

To use an external ActiveMQ environment:

1. Shut down your environment.
2. Change `ACTIVEMQ_PORT` in `sandbox.cfg` to point to your own ActiveMQ environment.
3. Remove `startActiveMQ.sh` from `install_dir/bin/run.sh.in`.
4. Remove `stopActiveMQ.sh` from `install_dir/bin/hardstop.sh.in`.
5. In the `install_dir/event.properties.in` file, change `remote.protocol_config=client` connection to your ActiveMQ environment.
6. Run `install_dir/bin/setupfile.sh`.
7. Restart your environment.

## Changing the Cluster Setting for Bundled ActiveMQ

The configuration file for the bundled ActiveMQ is `install_dir/activemq/conf/activemqconfig.xml`.

You can manually change the broker setting to fit your Sterling B2B Integrator needs. You can also extend this file with `activemqconfig_clumpname_ext.xml` to configure your own beans.

**Note:** Before making any changes, read `install_dir/activemq/conf/readme_cluster.txt`.



## Enabling and Accessing the ActiveMQ Admin UI

**Note:** As of V5.2.6, the ActiveMQ Admin UI is disabled by default. To enable it, see the instructions below.

To enable the ActiveMQ Admin UI, do the following steps:

1. Go to `<install_dir>/activemq/conf/activemqconfig.xml.in`
2. Uncomment the following section:

```
<!--
<jetty xmlns=
"http://mortbay.com/schemas/jetty/1.0"
SCIOVERRIDEName="activemq-ui">
<connectors>
<nioConnector port="&ACTIVEMQ_CONSOLE_UI_PORT;" />
</connectors>
<userRealms>
<jaasUserRealm name="adminRealm" loginModuleName="adminLoginModule"
callbackHandlerClass="org.mortbay.jetty.plus.jaas.callback.DefaultCallbackHandler">
</jaasUserRealm>
</userRealms>
<handlers>
<webAppContext contextPath="/admin"
resourceBase="&INSTALL_DIR;/activemq/webapps/admin"logUrlOnStart="true" />
</handlers>
</jetty>
-->
```

3. Stop Sterling B2B Integrator.
4. Run `<install_dir>/bin/setupfiles.sh`.
5. Start Sterling B2B Integrator.

To access the ActiveMQ Admin UI, do the following steps:

1. Use the following information for the URL:

`http://server_name:port_number/admin`

Where *server\_name* is the name of the Sterling B2B Integrator server, and *port\_number* is the base port number of the Sterling B2B Integrator server plus 58.

2. Enter your user name and password for UI access authentication. There are two default users available. For information about the two default users, or about creating or deleting a user, see `readme_admin_ui.txt` in `install_dir/activemq/conf`.



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