

JBoss ESB 4.3 GA

Monitoring Guide

JBESB-MG-5/20/08

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Software Version

JBoss ESB 4.3 GA

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About This Guide

What This Guide Contains

The Monitoring Guide contains instructions on how to use the JBoss ESB monitoring console and how to extend it for your purposes. The Guide is current as of JBoss ESB 4.3 GA.

Audience

This guide is most relevant to engineers who are responsible for using JBoss ESB 4.3 GA installations and want to know how to monitor their ESB instance for performance.

Prerequisites

You will need the JBossESB distribution, source or binary to run the trailblazer. You will also need an instance of JBoss Application Server (jboss-4.2.2.GA or greater) or the JBoss ESB Server 4.3.GA.

Organization

This guide contains the following chapters:

- **Chapter 1, Installation:** an overview of the installation procedure.
- **Chapter 2, Monitoring:** a description of what you can monitor.

Documentation Conventions

The following conventions are used in this guide:

Table 1 Formatting Conventions

Convention	Description
<i>Italic</i>	In paragraph text, italic identifies the titles of documents that are being referenced. When used in conjunction with the Code text described below, italics identify a variable that should be replaced by the user with an actual value.
Bold	Emphasizes items of particular importance.
<i>Code</i>	Text that represents programming code.
Function Function	A path to a function or dialog box within an interface. For example, “Select File Open.” indicates that you should select the Open function from the File menu.
() and	Parentheses enclose optional items in command syntax. The vertical bar separates syntax items in a list of choices. For example, any of the following three items can be entered in this syntax: <pre><i>persistPolicy (Never OnTimer OnUpdate NoMoreOftenThan)</i></pre>
Note:	A note highlights important supplemental information.
Caution:	A caution highlights procedures or information that is necessary to avoid damage to equipment, damage to software, loss of data, or

Additional Documentation

In addition to this guide, the following guides are available in the JBoss ESB 4.3 GA documentation set:

1. **JBoss ESB 4.3 GA Administration Guide:** How to manage the ESB.
2. **JBoss ESB 4.3 GA Getting Started Guide:** Provides a quick start reference to configuring and using the ESB.
3. **JBoss ESB 4.3 GA Programmers Guide:** How to use JBossESB.
4. **JBoss ESB 4.3 GA Release Notes:** Information on the differences between this release and previous releases.
5. **JBoss ESB 4.3 GA Services Guides:** Various documents related to the services available with the ESB.

Contacting Us

Questions or comments about JBoss ESB 4.3 GA should be directed to our support team.

Installation

Overview

The JBossESB monitoring console gathers information on the performance of different ESB services that are deployed and keeps historical state information over a period of time. As of JBoss ESB 4.2.0.GA, the monitoring console allows users to get message counts by service, action, and node, as well as other information like processing time, number of failed messages, bytes transferred, and last successful and failed message date time.

The monitoring console is installed by automatically in the stand-alone ESB server and JbossAS. However, if you have need to install it manually then installing the JBoss ESB monitoring console is fairly easy. The console uses hsqldb as a database by default, so you can install with the steps of :

```
% cd tools/console/management-esb
% ant deploy
```

Point your browser to <http://localhost:8080/jbossesb>

Alternative database usage

If you'd like to use a database other than hsqldb as a back-end, the console has also been tested with Oracle and MySQL – and could be extended to use any JDBC/Hibernate-supported database.

In the management-esb directory there is a db.properties file. In order to change the database from hsqldb to MySQL or Oracle, edit this file and change the db property to “mysql” or “oracle” respectively. You will also need to add your JDBC driver into the server/<instance>/lib directory of your application server – JBoss ships with hsqldb.jar in this directory by default.

For MySQL, it also may be necessary to create the database “statistics” before deploying. Please look over the management-ds.xml for your database in the /management-esb/src/main/resources/<db> directory.

Collection Periods

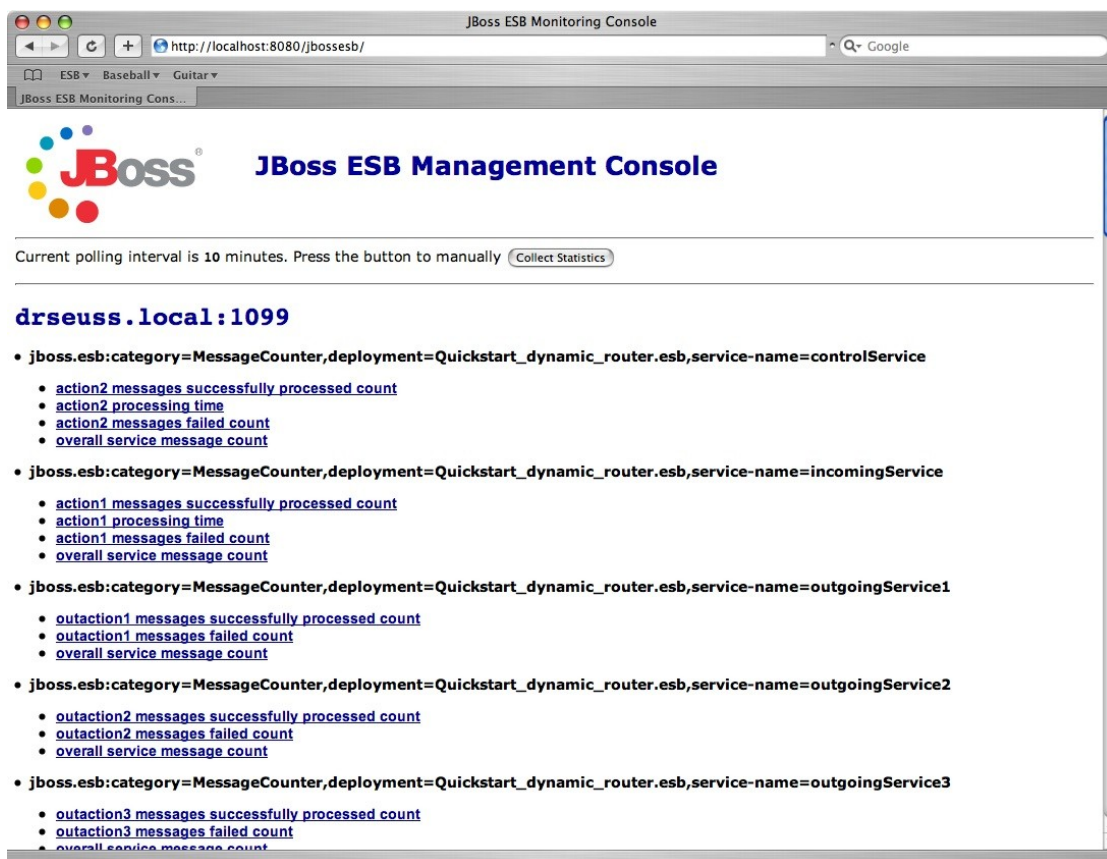
The period of time between data collections is 10 minutes by default, but it can be set to any period of minutes that is desired. The default collection period can be changed at build time by changing the “pollMinuteFrequency” property in management-esb/db.properties, or by changing the PollMinuteFrequency property in the jboss.esb:service=DataFileScheduler Mbean in the monitoring console or in jmx-console.

Monitoring

Console

The console can be found at <http://localhost:8080/jbossesb>

Below is a screenshot of the console. The console requests MBean information from each node within the ESB registry, and then displays it back. Any attribute that is a processing time a count is shown with a chart and a time sorted list, which all other data is displayed with just a time sorted list.



Polling

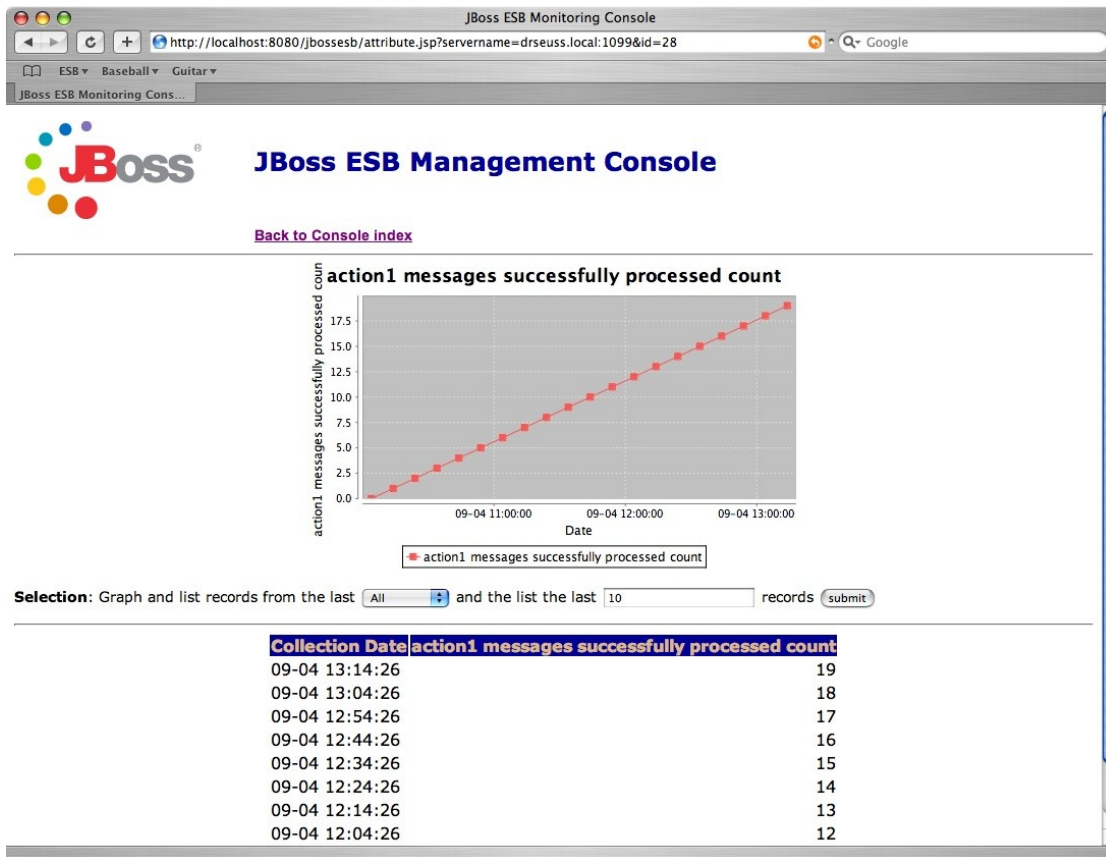
The console's polling default is 10 minutes, which can be changed at build time or through the jmx-console. The “Collect Statistics” button shown in the header allows a user to force a statistics collection.

Services

Each ESB service is displayed along with the processing time per action, processed count per action, failed count per action, and overall message count (per service). If you select any of these options, you should see a screen that charts the count or time you have selected.

By default, the last 10 records are displayed. You can display more records by changing the display records text box or you can change the charting time period (graph over the last 5 minutes, hour, day, week, month, or graph all records).

See below:



MessageCounter

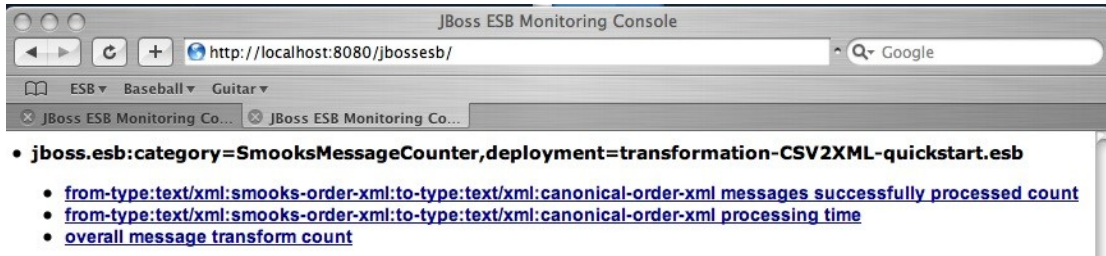
The monitoring console also provides an overall counter which counts all messages that pass through the ESB. The MessageCounter keeps track of the successful and failed message counts, as well as time and date.

- **jboss.esb:service=MessageCounter**

- [StateString](#)
- [LastSuccessfulMessageDate](#)
- [FailedMessageCount](#)
- [SuccessfulMessageCount](#)
- [TotalMessageCount](#)
- [AverageSuccessTime](#)
- [LastFailedMessageDate](#)
- [Name](#)

Transformations

For each Smooks Transformation that is registered, the monitoring console keeps track of the processed count for each transformation, processing time for each transformation, and the overall count for the transformation chain.



DeadLetterService

As has been mentioned in the Programmers Guide, the DeadLetterService (DLQ) can be used to store messages that cannot be delivered. This is a JBossESB service and can be monitored and inspected. Note, however, that the DLQ is not used if the underlying transport has native support, e.g., JMS. In which case you should inspect the JBossESB DLQ as well as any transport-specific equivalent.