

ESB Monitoring Guide

4.2

JBoss Enterprise SOA Platform



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The SOA Platform edition of the JBoss ESB Monitoring Guide

ESB Monitoring Guide: JBoss Enterprise SOA Platform

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About This Guide

1. 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 4.2.1 GA.

2. Audience

This guide is most relevant to engineers who are responsible for using JBoss ESB 4.2.1 GA installations and want to know how to monitor their ESB instance for performance.

3. 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-4.2.1.GA or greater) or the JBoss ESB Server 4.2.1.GA.

4. Organization

This guide contains the following chapters:

1. [Chapter 1, Installation](#): an overview of the installation procedure.
2. [Chapter 2, Monitoring](#): a description of what you can monitor.

5. Additional Documentation

In addition to this guide, the following guides are available in the JBoss ESB 4.2.1 GA documentation set:

1. JBoss ESB 4.2.1 GA Administration Guide: How to manage the ESB.
2. JBoss ESB 4.2.1 GA Getting Started Guide: Provides a quick start reference to configuring and using the ESB.
3. JBoss ESB 4.2.1 GA Programmers Guide: How to use JBossESB.
4. JBoss ESB 4.2.1 GA Release Notes: Information on the differences between this release and previous releases.
5. JBoss ESB 4.2.1 GA Services Guides: Various documents related to the services available with the ESB.

6. Contacting Us

Questions or comments about JBoss ESB 4.2.1 GA should be directed to our support team.

7. Document Conventions

Certain words in this manual are represented in different fonts, styles, and weights. This highlighting indicates that the word is part of a specific category. The categories include the following:

Courier font

Courier font represents commands, file names and paths, and prompts .

When shown as below, it indicates computer output:

```
Desktop      about.html    logs          paulwesterberg.png
Mail         backupfiles   mail          reports
```

Courier font

Bold Courier font represents text that you are to type, such as: **service jonas start**

If you have to run a command as root, the root prompt (#) precedes the command:

```
# gconftool-2
```

italic Courier font

Italic Courier font represents a variable, such as an installation directory:

```
install_dir/bin/
```

font

Bold font represents **application programs** and **text found on a graphical interface**.

When shown like this: **OK** , it indicates a button on a graphical application interface.

Additionally, the manual uses different strategies to draw your attention to pieces of information. In order of how critical the information is to you, these items are marked as follows:



Note

A note is typically information that you need to understand the behavior of the system.



Tip

A tip is typically an alternative way of performing a task.



Important

Important information is necessary, but possibly unexpected, such as a configuration change that will not persist after a reboot.



Caution

A caution indicates an act that would violate your support agreement, such as recompiling the kernel.



Warning

A warning indicates potential data loss, as may happen when tuning hardware for maximum performance.

8. We Need Feedback

If you find a typographical error in the *ESB Monitoring Guide*, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a report in JIRA: <http://jira.jboss.com/jira/> against the Documentation component of the *SOA Platform* project.

When submitting a bug report, be sure to mention the manual's identifier:

ESB_MON

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.

Installation

1. 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 :

1. `% cd tools/console/management-esb%`
2. `ant deploy`

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

1.1. Alternative database usage

HSQLDB is not recommended or supported for production use in the SOA Platform. The console has been tested with Oracle and MySQL as a backend – and could be extended to use any JDBC/Hibernate-supported database.

Changing the backend database is quite straightforward. 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.

1.2. 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=DataFilerScheduler` 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.

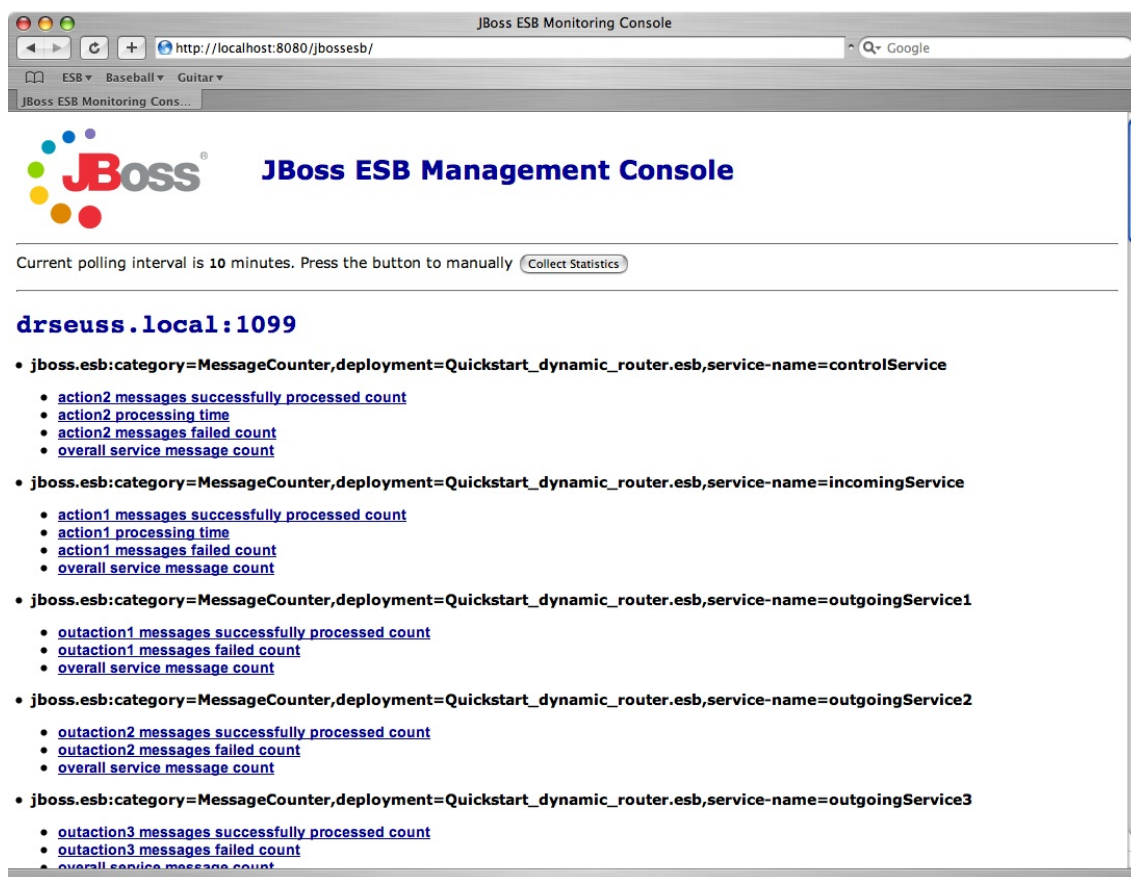


Figure 2.1. Console

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) as illustrated below.

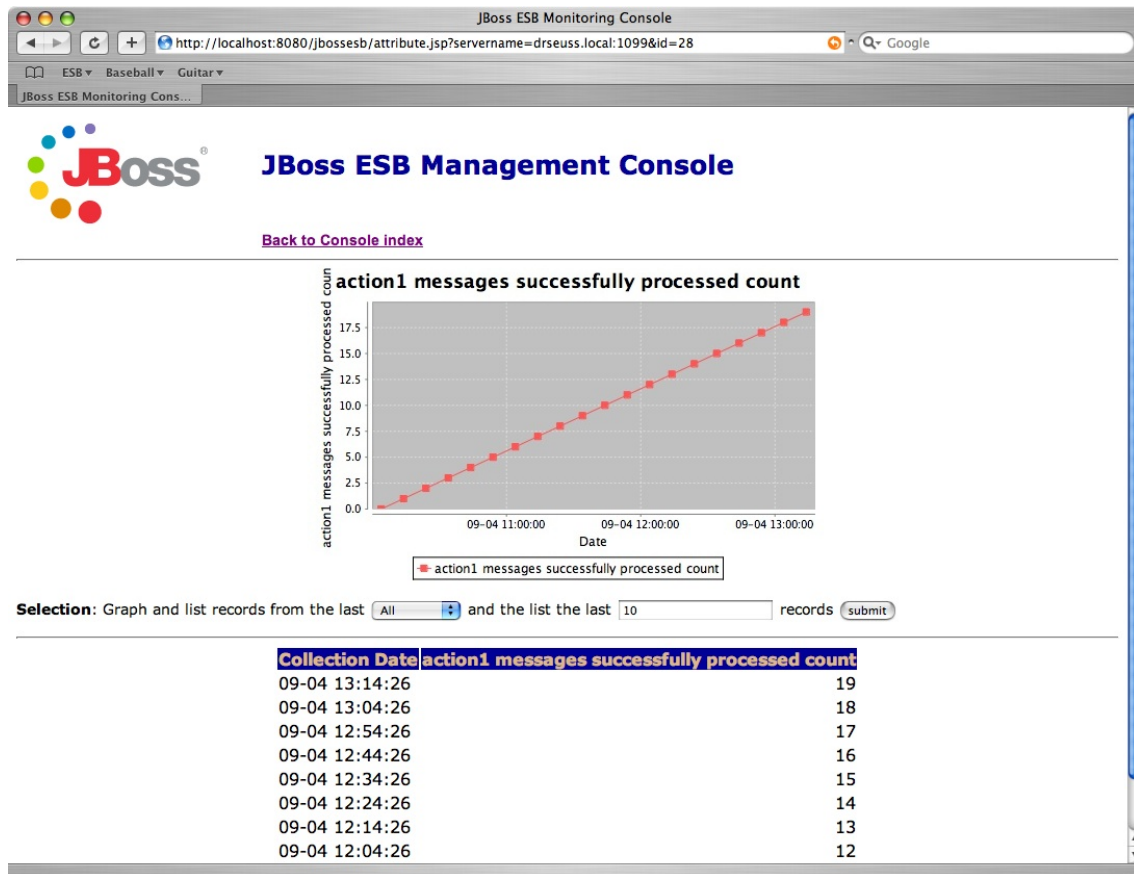


Figure 2.2. Services

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](#)

Figure 2.3. MessageCounter

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.

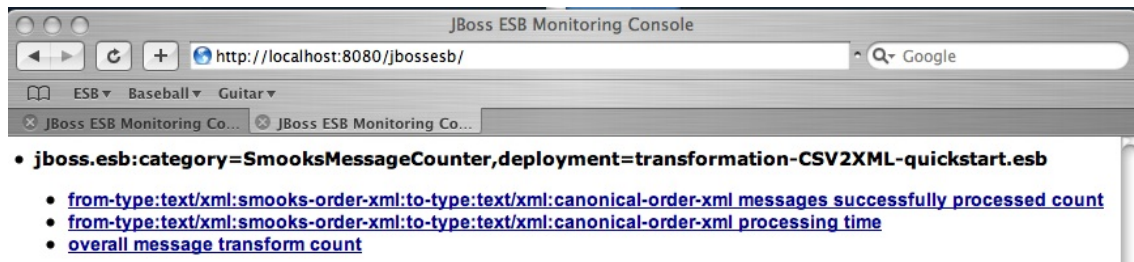


Figure 2.4. Transformations

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.

Appendix A. Revision History

Revision History

Revision 1.0

11/8/2007

samson kittoli

initial file conversion to xml.

