



# **JBoss Enterprise SOA Platform 5**

## **5.0.0 Release Notes**

Late breaking & important information related to the 5.0.0 release  
Edition 5.0.0



# JBoss Enterprise SOA Platform 5 5.0.0 Release Notes

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Edition 5.0.0

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## Abstract

These Release Notes contain important and late-breaking information related to the 5.0.0 release of the JBoss Enterprise SOA Platform. For the latest version of these release notes please refer to the online documentation available at .

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## 1. OVERVIEW

JBoss Enterprise SOA Platform is a certified, tested, and supported platform for developing Enterprise Application Integration and Service Oriented Architecture solutions.

It integrates a number of stable and scalable open source frameworks and solutions including Hibernate, Seam, JBoss Transactions, JBoss Clustering, the JBoss Application Server, and JBoss Enterprise Service Bus (ESB) to provide an infrastructure for enterprise SOA applications.

These community developed and enterprise certified and supported products have been combined and tested to provide a solid, robust, and scalable platform. Powered by legendary JBoss innovation and backed by Red Hat engineering and quality assurance, JBoss Enterprise SOA Platform is the platform of choice for a new generation of enterprise applications.

## 2. NEW FEATURES IN 5.0

The JBoss Enterprise SOA Platform version 5.0 is a major release with many updated and new components.

### Apache jUDDI v3

The JBoss ESB now uses Apache jUDDI version 3 as its UDDI registry. This new version implements the UDDIv3 specification and includes a subscription API in addition to a new web console.

### New Administration Consoles

The JBoss Enterprise SOA Platform includes new several new consoles:

- JBoss SOA Administration Console
- Web Services Console (listing deployed services)
- jUDDI Registry Console (UDDI Browser, publisher, subscription and search)

The new JBoss SOA Administration Console replaces the JBoss ESB Management Console from previous releases.

The JBoss Management Console is now considered deprecated but can still be accessed at <http://localhost:8080/web-console>.

### Message Level Alerting

This new feature provides monitoring and alerting at both the action and service level. Any individual message that exceeds a defined processing time or size can generate a Message Alert that can be accessed using the JMX Console. The JBoss Operations Network Server (JON) ESB plugin collects the Message Alerts and generates JON Events.

This feature is demonstrated in the **messagealerts** quickstart.

### New HTTP Gateway

The new HTTP gateway supports the HTTP methods of GET, PUT, POST and DELETE; provides full access to the URL arguments and query string; and allows the modification of response headers.

The new quickstart **http\_gateway** demonstrates how to use basic authentication and how to map ESB exceptions to HTTP error codes.

### New UDP Listener

A new UDP listener based on Apache Mina has been added and is demonstrated in the quickstart **udp\_gateway**.

### XSLT Transformer Action

The new **XsltAction** action provides dedicated support for XSLT transformations.

The use of **XsltAction** is demonstrated in the **webservice\_proxy\_versioning** quickstart.

For more complex transformations such as large message splitting and for native support of EDI, CSV, JSON, and Java related inputs/outputs you should use the Smooks transformer action.

### New XPath and Regex Router Support

**ContentBasedRouter** now includes support for **XPath** and **Regex** (regular expressions) in addition to JBoss Rules.

The quickstart **fun\_cbr** demonstrates all three options for content-based routing. See the service definitions of **XPath\_FuncBRService\_ESB** and **Regex\_FuncBRService\_ESB** in the **jboss-esb.xml** of this quickstart for an example of **XPath** and **Regex** respectively.

### Schema Validation

A new XSD schema validation action has been added, **SchemaValidationAction**.

### New Web Service Proxy Action

The new **SOAPProxy** action provides support for the invocation of external Web Service endpoints and the re-publication of WSDL through the ESB. The allows for location abstraction, service versioning, complex routing, and message and WSDL transformations.

Several new quickstarts have been added to illustrate some of the capabilities:

- **webservice\_proxy\_basic** - exposing an external web service through the ESB.
- **webservice\_proxy\_routed** - content-based routing to different external webservice endpoints.
- **webservice\_proxy\_security** - using SSL and **basic-auth**.
- **webservice\_proxy\_versioning** - handling external web service versioning.

### Synchronous Service Invocation action

Synchronous service invocation from ESB services can now be performed using the new **SyncServiceInvoker** message routing action. The response from the invoked service is then available in the calling service's action pipeline.

### Updated to Business Rules Engine v5

The Business Rules Engine (JBoss Rules) has been upgraded to version 5.

### Technology Preview of SAML

Single Sign On (SSO) capabilities based on SAML tokens are provided using Picketlink v1.0 as a Technology Preview.

The quickstart `security_saml` demonstrates this capability.

### **JBoss Enterprise Application Server 5.0**

The JBoss Enterprise Application Server 5.0 (JBoss EAP 5.0) is based on the JBoss AS 5.1.x family and is the latest release of the world's most popular application server. JBoss EAP 5.0 represents the state of the art with the second generation JBoss Microcontainer-based enterprise Java run-time.

In addition to supporting the latest Java EE specification (Java EE 5), JBoss EAP 5.0 integrates many of the best enterprise class services for advanced messaging, persistence, transactions, caching and high-availability.

### **JBoss Microcontainer**

The JBoss Microcontainer is a refactoring of the modular JBoss JMX Microkernel. It is a lightweight kernel that manages the loading, lifecycle and dependencies between POJOs. Together with a Servlet/JSP container, an EJB container, deployers, and management utilities, the JBoss Microcontainer provides a standard Java EE 5 profile.

### **JBoss Cache**

JBoss Cache provides replication for EJB and HTTP session state and supports distributed entity caching for JPA. It also provides superior performance and scalability with the new MultiVersion Concurrency Control (MVCC) locking scheme.

### **JBoss Web Services**

JBoss Web Services is a framework that provides support for the latest JAX-WS specification as well as a plugin architecture for supporting alternative Web Services Stacks.

## **2.1. Technology Previews**

JBoss Enterprise SOA Platform 5.0 includes the following features as *Technology Previews* only:

- Support for SAML Tokens
- JBoss Rules Fusion

The JBoss Rules Fusion is an API for Event Drive Architecture (EDA) and is provided as a Technology Preview. It is accessible from the JBoss Rules API but the JBoss ESB does not currently provide any support for it. You will need to create your own custom actions to interact with Fusion functions from the ESB.

Technology Preview features are not fully supported, may not be functionally complete, and are not intended for production use. These features are included to provide customers with early access to upcoming product innovations, enabling them to test functionality and provide feedback during the development process.

Red Hat JBoss support will provide commercially reasonable efforts to resolve any reported issues that customers experience when using these features.

## **3. COMPONENTS OF THE 5.0.0 RELEASE**

The JBoss Enterprise SOA Platform 5.0.0 Release includes the following component versions:

**Table 1. JBoss Enterprise SOA Platform Component Versions**

Component	Version
JBoss EAP	5.0
JBoss ESB	4.7
JBoss Rules	5.0.1
JBoss jBPM	3.2.7.CR3
Apache jUDDI	3.0.1
PicketLink	1.0

## 4. REQUIREMENTS AND INSTALLATION

The JBoss Enterprise SOA Platform Getting Started Guide contains details of software and hardware requirements as well as detailed installation instructions.

The JBoss Enterprise SOA Platform Getting Started Guide can be found online at [http://www.redhat.com/docs/en-US/JBoss\\_SOA\\_Platform/](http://www.redhat.com/docs/en-US/JBoss_SOA_Platform/).

## 5. DOCUMENTATION

The documentation for the JBoss Enterprise SOA Platform is available online at [http://www.redhat.com/docs/en-US/JBoss\\_SOA\\_Platform](http://www.redhat.com/docs/en-US/JBoss_SOA_Platform) and contains the following documents:

- Release Notes
- Getting Started Guide
- ESB Administration Guide
- ESB Programmer's Guide
- ESB Services Guide
- JBoss Rules 5 Reference Guide
- jBPM Reference Guide
- Smooks User Guide

Documentation for the JBoss Enterprise Application Platform (EAP) is available online at [http://www.redhat.com/docs/en-US/JBoss\\_Enterprise\\_Application\\_Platform/](http://www.redhat.com/docs/en-US/JBoss_Enterprise_Application_Platform/).

## 6. PRODUCT SUPPORT AND LICENSE WEBSITE LINKS

## Support Processes

<http://www.redhat.com/support/process/>

## Production Support Scope of Coverage

<http://www.redhat.com/support/policy/soc/production>

## Production Support Service Level Agreement

<http://www.redhat.com/support/policy/sla/production/>

## Developer Support Scope of Coverage

<http://www.redhat.com/support/policy/soc/developer/>

## Developer Support Service Level Agreement

<http://www.redhat.com/support/policy/sla/developer/>

## Product Update and Support Policy by Product

[http://www.redhat.com/security/updates/jboss\\_notes/](http://www.redhat.com/security/updates/jboss_notes/)

## JBoss End User License Agreement

[http://www.redhat.com/licenses/jboss\\_eula.html](http://www.redhat.com/licenses/jboss_eula.html)

## 7. OBTAINING SOURCE CODE

The source code for this and earlier JBoss Enterprise SOA Platform releases are available from the Red Hat JBoss Customer Support Portal at <https://support.redhat.com/jbossnetwork/>.

## 8. KNOWN ISSUES IN THIS RELEASE

The following issues are known to exist in the 5.0.0 release of the JBoss Enterprise SOA Platform and will be fixed in a subsequent release.

### 8.1. JBoss Enterprise SOA Platform

<https://jira.jboss.org/jira/browse/SOA-1825>

Multiple warning messages are written to the `server.log` file when the **Administration Console** is started. It is safe to ignore these messages, some of which come from **Seam** classes, whilst others emanate from the console, indicating that the native component cannot be utilized to perform "discovery" operations.

<https://jira.jboss.org/jira/browse/SOA-1673>

Seam applications that include their own `jbpm-jpd1.jar` cannot use the provided jBPM-ESB integration (e.g. `EsbNotifier`) within a jBPM process to invoke ESB services that are hosted on the same server. This is due to classloader issues between the jBPM classes in the Seam application and the jBPM ESB Services.

There are three possible workarounds:

1. If possible, deploy the Seam application to a different server instance than the JBoss Enterprise SOA Platform instance that is hosting the ESB service.
2. If invoking ESB Services is the only use of jBPM in the Seam application :
  - o Remove the jbpml-jpdl.jar and jBPM process archive from the EAR
  - o Deploy the jBPM process archive separately from the Seam application using the jBPM console.
3. If jBPM is used by the Seam application for other purposes, e.g. Seam Pageflow :
  - o Enable class namespace isolation within the Seam application.
  - o Create a custom ActionHandler to call the ESB Service.
  - o Make the custom ActionHandler available to the classloader.
  - o Modify the jBPM process definition to invoke the custom ActionHandler.

Refer to <http://community.jboss.org/wiki/WorkaroundforSeamESBjBPMClassloadingIssue> for more details of how to implement the second workaround.

Refer to <http://community.jboss.org/wiki/JbossClassLoadingUseCases> for more information about JBoss Class Loading.

### <https://jira.jboss.org/jira/browse/SOA-1915>

Do not use the CXF technical preview with this release of the JBoss Enterprise SOA Platform. There has been no verification that it works. This is a preview of technology that provides support for the Apache CXF Web Services Stack.

In addition, if this technical preview is installed over the JBoss Enterprise SOA Platform server installation, the only fallback is to remove the SOA Platform completely and reinstall it from scratch.

### <https://jira.jboss.org/jira/browse/JBPAPP-3618>

The JBoss Native package for JBoss Enterprise Application Platform 5.0.0 is incompatible with the version of JBoss Web used in JBoss Enterprise SOA Platform 5.0.0. It will cause a JVM crash if used.

## 8.2. jBPM

### <https://jira.jboss.org/jira/browse/SOA-1596>

The **jBPM Console** will throw an exception when used to view a running process instance if the process definition used `<fork>` with `<state>`, `<task>` or `<node async="true">`.

To workaround this issue:

- Open the file `jbpml-console.war/app/t_tokens.xhtml` in an editor.
- Find the XML element:

```
<gd:sort source="#{token.availableTransitions}" target="#
{transitions}" entryVar="e"
    argument="#{e.name}"/>
```

- Change the XML element to:

```
<gd:sort if="#{!empty token.availableTransitions}"
  source="#{token.availableTransitions}" target="#
{transitions}" entryVar="e"
  argument="#{e.name == null ? '' : e.name}"/>
```

After making this change, the exception will not occur. The change does not affect functionality.

### 8.3. JBoss Operations Network

<https://jira.jboss.org/jira/browse/SOA-1916>

When you try to delete an ESB archive using the JON Console, the associated queues are not removed. They remain there, displaying as **DOWN**. Furthermore, if you try to delete these queues, an `java.lang.IllegalStateException` exception will occur.

<https://jira.jboss.org/jira/browse/JOPR-419>

When the server is started without the `-c` configuration switch, the profile named **default** is run. This is correct operation. Unfortunately, JON erroneously assumes that the **production** profile is run instead. JON also mistakenly assumes that the binding address is 0.0.0.0 if this has not been specified. To ensure that JON recognizes the default profile and binds to the correct address of 127.0.0.1, always use the `-c` and `-b` parameters. By doing so, JON will recognize the platform.

<https://jira.jboss.org/jira/browse/SOA-1656>

The ability to set up a message's individual processing time in **JON** for alerts does not work by default.

To work around this problem, firstly add the alerting feature (`alertTimeThreshold` and `alertLengthThreshold`) to the ESB deployment.

Having done so, you must then set up alerts for events filtered from the server log. Do this using the **JON GUI**.

Another issue with **JON** event logging is that the alerts mechanism may be delayed in starting for an indefinite period of time (possibly between fifteen and fifty minutes in some cases.) Whilst this delay is occurring, all JON Alerts are lost and will never be seen. (However, **WARN** messages, emanating from the **SOA Platform Server Console**, will be displayed in the **EVENTS** view.)

<https://jira.jboss.org/jira/browse/SOA-952>, <https://jira.jboss.org/jira/browse/SOA-1077>,  
<https://jira.jboss.org/jira/browse/SOA-1168>

The JON plug-in's "Message Count" feature is incorrectly displaying a total number of messages for the ESB server, deployment, services and actions. It should actually be showing a rolling average.

### 8.4. JBoss Enterprise Service Bus

<https://jira.jboss.org/jira/browse/SOA-1600>

**JUDDI v3** uses Hibernate to create its database. This is different to the other ESB components, which use SQL scripts. This will be standardized in a future release.

<https://jira.jboss.org/jira/browse/SOA-1875>

When a new **BusinessEntity** with two names is published, the jUDDI Browser will display two businesses instead of one. This is because the user interface treats business names as strings and does not check them for uniqueness: the keys are the only unique identifiers.

<https://jira.jboss.org/jira/browse/JBESB-3147>

There is an inconsistency between the **FTP Gateway Listener** and the **FTP Notifier**. The **FTP Gateway Listener** can accept non-alpha numeric characters whilst the **FTP Notifier** cannot. In the latter case, fields must be URL encoded. For instance, a # character must be entered as **%23** to work in the **Notifier**. If you enter an illegal character, the **Notifier** will not work.

<https://jira.jboss.org/jira/browse/JBESB-3028>

If SOAPProxy is configured to obtain the WSDL for a proxied service URL, a warning is logged, because the web service responds with a content length which either exceeds the limit or is unspecified.

<https://jira.jboss.org/jira/browse/SOA-1660>

When sending messages, the alerts will appear in the **JMX Console**. If you then log into the **Administration Console**, the **java.lang.NullPointerException** will appear once per minute. This exception only appears in the log; it is not visible in the **JMX Console** itself.

Note that you can use the **JMX Console** to display message alerts (**jboss.esb:service=MessageAlerts**). However, if the SOA Platform is monitored by JON or if the **Administration Console** has been accessed, message alerts will disappear when the **Mbean view** is refreshed because the **MessageAlerts** queue will be emptied.

<https://jira.jboss.org/jira/browse/JBESB-3038>

Currently, the **spring\_aop** quick start does not work with signed **JARs**. If you try to run **ant deploy** for this quick start, an **org.jboss.deployers.client.spi.IncompleteDeploymentException** will be thrown.

To work around this issue, replace the **cglib JARs** with unsigned versions.

<https://jira.jboss.org/jira/browse/JBESB-3035>

When the Web Service proxy is used to invoke a one-way web service, it erroneously throws a run-time exception with **HTTP Code 500**, which is returned to the client together with a fault message. **HTTP Code 500** is invalid in these situations as only **Code 200** or **202** should ever be returned as the message was successfully transmitted to the ESB.

<https://jira.jboss.org/jira/browse/SOA-1564>

Currently, the default ESB **handler** class for the UDP Gateway is hard-coded into the XSD schema and cannot be changed or removed.

<https://jira.jboss.org/jira/browse/JBESB-2911>, <https://jira.jboss.org/jira/browse/JBPAPP-3002>

A web service's WSDL will be invalid and return a 404 error if the web service is deployed embedded within an ESB archive and the **WAR** does not contain the **WEB-INF/jboss-web.xml** file.

<https://jira.jboss.org/jira/browse/JBESB-2442>

Currently, **Scout** creates a new **AuthToken** for every invocation that occurs through the **BusinessQuery/BusinessLifecycle** Managers. This results in rapid growth of the jUDDI authentication table.

A possibly way to work around this problem is to delete rows within certain timestamp parameters. For instance, all rows created more than ten minutes ago could be removed.

[https://jira.jboss.org/jira/browse/JBESB-2085](https://jira.jboss.org/jira/browse JBESB-2085)

The default configuration for the SOA Platform includes the setting `java.awt.headless` set to **true**. This is required for the embedded console to function. However both the **groovy\_gateway** Quickstart and the Hypersonic database manager require that this value be set to **false** and therefore will not work. If you require either of these items you can change this setting in `run.conf`, but doing this will disable the embedded console.

<https://jira.jboss.org/jira/browse/ SOA-1562>

Currently, a new **DocumentBuilder** is created for each incoming message. This has a minor impact upon system performance.

## 8.5. JBoss Rules and BRMS

<https://jira.jboss.org/jira/browse/ SOA-1874>

The JBoss Enterprise SOA Platform 5.0.0 is not compatible with the JBoss Enterprise BRMS Platform 5.0.0. Use JBoss Enterprise BRMS Platform 5.0.1.

<https://jira.jboss.org/jira/browse/ SOA-1707>

The BRP Rule Agent is designed to use a local cached copy of a rules package if the BRMS is offline. At the moment, when this happens, error messages are generated, which might confuse users. These messages can be ignored as the locally cached copy is, in fact, being used successfully.

## 8.6. JBoss Developer Studio

<https://jira.jboss.org/jira/browse/ JBIDE-5597>

Using the **Full Publish** option in the **JBossAS** view to republish a `jboss-esb.xml` project does not work.

To work around this issue, remove the project from the server and then add it again.

<https://jira.jboss.org/jira/browse/ JBIDE-5596>

The ESB node properties for **input/output** variables grow larger than the jBPM panel when the latter is resized, to the point where the user must scroll left to see all of the buttons.

To work around this problem, click on a different node on the jBPM panel and then click back on the ESB Service node. Next, click on the **input/output** subpanel and it will be the correct size again.

<https://jira.jboss.org/jira/browse/ JBIDE-5659>

The ESB examples packaged with JBoss Developer Studio 3.0 do not work correctly with JBoss Enterprise SOA Platform 5.0.

## 9. POSSIBLE ISSUES MIGRATING TO 5.0

Read this section to learn about the differences between JBoss Enterprise SOA Platform 5.0 and previous versions that may cause difficulties when moving your applications to version 5.0.

As a matter of best practice, Red Hat recommends that you test all of your existing applications on this new version of the JBoss Enterprise SOA Platform before deploying it in your production environment.

### Changed behavior regarding JAR files in ESB archives

The JBoss Enterprise SOA Platform 5.0 requires that **JAR** files in **ESB** archives are placed in either the root directory of the archive, the `/jars` directory, or the `/lib` directory. Previous versions did not have this restriction.

### Potential Performance Issues Related to Logging

Logging has changed in this release. Do not copy your customized logging definitions over from past releases or you may encounter performance problems.

Refer to <https://jira.jboss.org/jira/browse/SOA-1754> to learn more about this issue.

Refer to the EAP Administration and Configuration Guide at [http://www.redhat.com/docs/en-US/JBoss\\_Enterprise\\_Application\\_Platform/](http://www.redhat.com/docs/en-US/JBoss_Enterprise_Application_Platform/) to learn how logging has changed.

### HttpResponse is not backwards compatible

The `HttpResponse` class in 5.0 is not backwards compatible with previous versions because of changes made to unify the ESB HTTP classes. This was done as a part of the new servlet-based HTTP gateway.

Applications and services that use `HttpResponse` will have to be updated before they can be deployed on JBoss Enterprise SOA Platform 5.0. The changes required are summarized in [Table 2, "Refactoring requirements for HttpResponse"](#).

**Table 2. Refactoring requirements for HttpResponse**

Pre-5.0.0 code	5.0.0 code
<code>org.jboss.soa.esb.actions.routing.http.HttpResponse</code>	<code>org.jboss.soa.esb.http.HttpResponse</code>
<code>org.jboss.soa.esb.actions.routing.http.HttpHeader</code>	<code>org.jboss.soa.esb.http.HttpHeader</code>
<code>HttpResponse.getHeaders()</code>	<code>HttpResponse.getHttpHeaders()</code>

### Reusing Existing Databases

The JBoss Enterprise SOA Platform creates new databases for its components to use. Databases from community versions have not been tested and may not work. If the use of existing databases is needed, then contact Red Hat JBoss Support for advice.

### Groovy Scripting

Groovy has undergone a major update from version 1.0 to 1.5.4. Be aware that many changes were made to the language and, whilst most scripts will still work, you may find that some will need minor work. Ensure that you test them as part of your migration process. See <http://groovy.codehaus.org/Documentation> for more information.

## Smooks

Smooks no longer supports the addToList option. Update any configurations that rely upon this option so that they instead use the newer <jb:bean> configuration namespace, which can handle lists. See the "Java Binding" chapter in the *Smooks User Guide* for more information.

## The jBPM console now supports authentication

The non-secured version of the jBPM console is no longer needed for process deployment because the jBPM console now supports authentication for deployment. The process deployer is available at <http://localhost:8080/gpd-deployer/> . This replaces the deployers from previous versions, <http://localhost:8080/app/upload> and <http://localhost:8080/upload> .

## A. REVISION HISTORY

<b>Revision 5.0.0-51.400</b> Rebuild with publican 4.0.0	<b>2013-10-31</b>	<b>Rüdiger Landmann</b>
<b>Revision 5.0.0-51</b> Rebuild for Publican 3.0	<b>2012-07-18</b>	<b>Anthony Towns</b>
<b>Revision 1.0-0</b> Created	<b>Wed Feb 17 2010</b>	<b>David Le Sage, Darrin Mison</b>