



WebSphere ILOG RTS-RuleXpress  
Bridge V1.0  
Installation, Configuration and  
User Guide

## **COPYRIGHT NOTICE**

© Copyright IBM Corp. 1987, 2011

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

### **Trademarks**

IBM, the IBM logo, ibm.com, and WebSphere are trademarks or registered trademarks of International Business Machines Corp., in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at [Copyright and trademark information](#).

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Other company, product, or service names may be trademarks or service marks of others.

## *Table of Contents*

Installation and Configuration .....	4
Installing the IBM ILOG RTS-RuleXpress Bridge .....	4
Integrating code into Rule Team Server .ear/.war file .....	4
Customizing the extension model .....	5
Configuring the set of properties to be exchanged .....	7
Configuring the properties imported from RuleXpress .....	7
Configuring the set of properties to be exported to RuleXpress .....	8
Restoring import and export configuration to the original state .....	9
User Guide .....	10
Overview .....	10
Importing rules from RuleXpress .....	11
Exporting rules to RuleXpress .....	12
Working with rules with shared metadata .....	12

## *Installation and Configuration*

In this chapter you will learn how to install the IBM ILOG RTS-RuleXpress Bridge into your Rule Team Server application and how to configure the properties to be exchanged between Rule Team Server and RuleXpress.

For information on installing and configuring the RuleXpress side of the integration, please see the documentation provided by RuleArts.

---

### **Installing the IBM ILOG RTS-RuleXpress Bridge**

Installing the IBM ILOG RTS-RuleXpress Bridge involves the following steps:

1. Integrate the additional code into your Rule Team Server .ear/.war file via provided ant tasks
2. Deploy the new .ear/.war file
3. Customize the extension model in both Rule Studio and Rule Team Server to include the new properties to be used to hold RuleXpress information.

---

### **Integrating code into Rule Team Server .ear/.war file**

1. Unzip the ruleexpress.zip file contents into your WebSphere ILOG BRMS<sup>1</sup> <InstallDir> into a sub-folder named 'ruleexpress.'
2. From the <InstallDir>/ruleexpress folder, run the ant task to take your existing Rule Team Server .ear/.war file and re-package it with the additional code:

- a. For JRules

```
ant -f build.xml
```

- b. For Rules for .NET

```
ant - f build.NET.xml
```

The generated .ear/.war file will be located at <InstallDir>/ruleexpress/applicationserver/\${AppServer}.

---

<sup>1</sup> WebSphere ILOG BRMS refers to either WebSphere ILOG JRules or WebSphere ILOG Rules for .NET

---

## Archive Deployment

The archive files (EAR/WAR/RAR) resulting from the above steps can be deployed to a server in different ways. Refer to the WebSphere ILOG RTS Installation guides for details.

---

## Customizing the extension model

An extension model file (.brmx/.xsd)<sup>2</sup> file is provided with the integration tool, but if you have already customized your extension model, you will first need to integrate the additions from this file with your own custom extension model file.

The extension model file can be found in <InstallDir>/rulexpress/data.

The RuleXpress Statement has a special renderer referenced in the .brmx extension model file: `StatementPropertyEditorRenderer`. This renderer transforms the XML structure of the RuleXpress statement into a user-friendly readable format. For other custom properties, you will normally use the `RuleXpressPropertyEditorRenderer` to get a basic property editor in Rule Team Server. You can also create your own renderer.

No additions to any custom extension model data file (.brdx file) you may be using are needed.

Message property files for English can be found in <InstallDir>/rulexpress/data.

You may modify copies of this file for additional locales.

1. Use the Rule Team Server Installation Manager to customize the extension model in Rule Team Server. See the following section of the Rule Team Server documentation for more information: WebSphere ILOG Rule Team Server Online Help > Configure: Manage your project configuration > Using the Installation Manager.

**Note:** *You must be logged in as an administrator (rtsAdmin rights).*

2. Use the Rule Team Server Installation Manager to add the custom messages that are needed for the WebSphere ILOG RTS-RuleXpress Bridge.

**Note:** *You must be logged in as an administrator (rtsAdmin rights).*

3. In Rule Studio, apply the custom rule model changes
  - a. For JRules, in Rule Studio, in the Preferences dialog, select the new model extension (.brmx) file to be used. See the following section in the JRules documentation for more information: WebSphere ILOG JRules User Guide > Customizing > Customizing Rule Studio > Integrating Rule Model Extensions into Rule Studio.
  - b. For Rules for .NET, in Rule Studio, in the Properties pages for the rule project go to the Schema Library page of the Common Properties folder. Import the schema file (.xsd) that holds the extensions. See the following

---

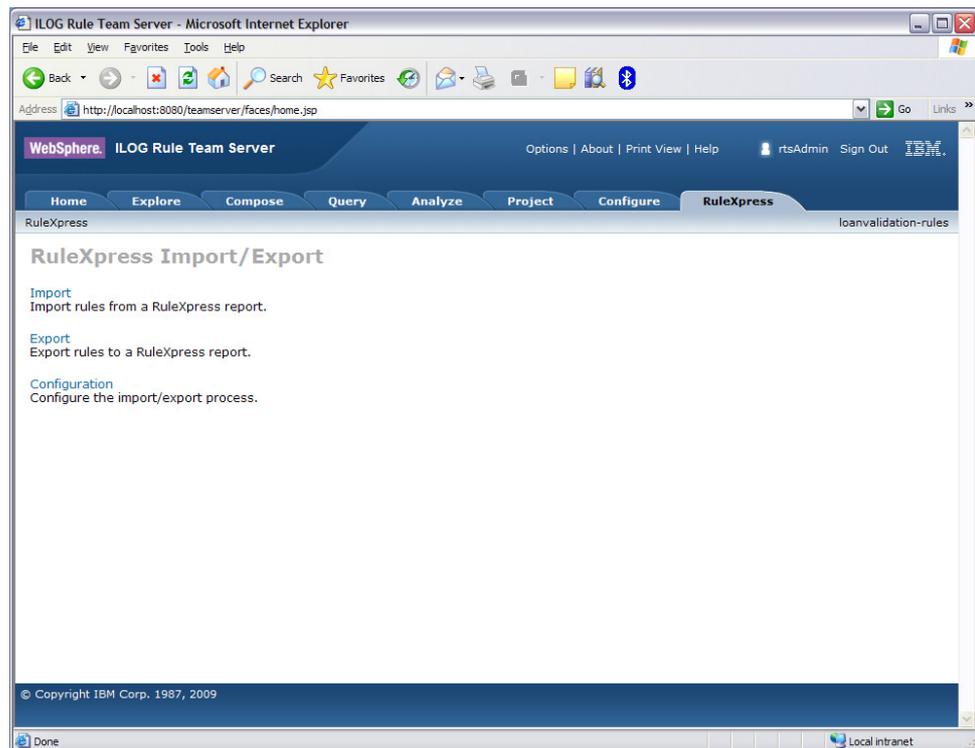
<sup>2</sup> For Rules for .NET, use the .xsd file to integrate the custom properties into Rule Studio and the .brmx file to integrate the properties into Rule Team Server.

section in the Rules for .NET documentation for more information:  
WebSphere ILOG Rules for .NET User Guide > Rule Studio Online Help >  
Creating rule projects > Configuring the rule project > Defining custom  
properties and custom artifact types

**Note:** *You must have the same model extensions in Rule Studio and Rule  
Team Server for synchronization to work properly.*

The RTS-RuleXpress Bridge is now ready to be used. You should notice some changes in  
your Rule Team Server environment:

- A new custom tab named **RuleXpress**.



**Figure 1 - Custom RuleXpress tab**

- New custom properties visible in the Details view of a Business Rule.

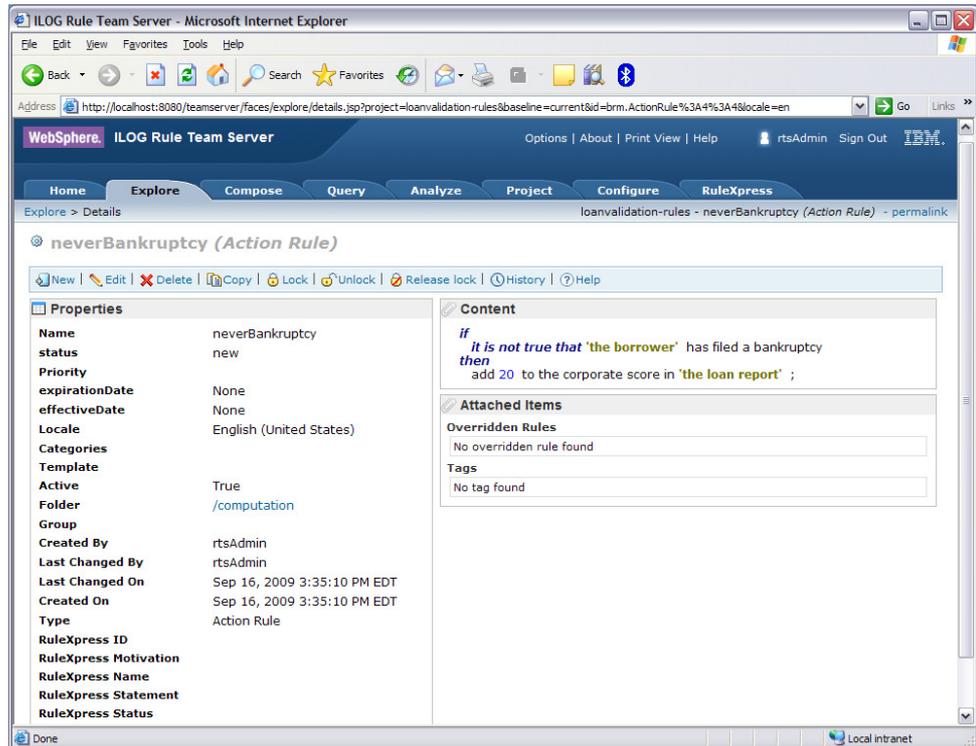


Figure 2 - RuleXpress Properties in Details View

## Configuring the set of properties to be exchanged

You can configure the set of properties to be included in both the import and export exchanges with RuleXpress. For import configuration, you must know the names used in RuleXpress for the group and property names, as well as the type of property. The property must be included in the export file sent from RuleXpress; see the RuleXpress documentation for how to manage the export. You must also have properties defined in Rule Team Server into which you will map the RuleXpress properties. For information on extending the Rule Team Server metamodel, see *Customizing the extension model* and the general Rule Team Server documentation on the subject.

For export configuration, you must know the name of the property in RuleXpress to which the property will be mapped. You can select any property available in Rule Team Server. All exported properties belong to the ILOG Properties group in RuleXpress.

### Configuring the properties imported from RuleXpress

1. Go to the **RuleXpress** tab and click **Configuration**.
2. Click **Edit** to enable editing of both import and export configuration

**Note:** *The RuleXpress Rule ID and RuleXpress Rule Statement are displayed above the Import configuration table; they cannot be modified in the configuration. It is also strongly recommended that you do not delete the RuleXpress Name property from the configuration, as this will cause a problem when rules are created in Rule Team Server and exported to RuleXpress.*

3. To change the mapping of an existing property
  - a. Select the checkbox to the left of the property name and click **Edit**.
  - b. Modify the RuleXpress Property Group, RuleXpress Property Name, RuleXpress Property Type and RTS Rule Property as needed to form the desired mapping.
  - c. Click **Save**.

**Note:** *If you change the mapping of an imported property, there may be impacts on existing data stored in RTS properties to which the property was/is now mapped. The property to which it was mapped will retain any information that had been previously imported into it. The property to which it is now mapped will have data overwritten if new information is found on a subsequent import.*

4. To add a new mapping
  - a. Click **New**
  - b. Enter the RuleXpress Property Group, RuleXpress Property Name, RuleXpress Property Type and RTS Rule Property as needed to form the desired mapping.
  - c. Click **Save**.
5. To delete a mapping, select the checkbox to the left of the property name and click **Delete**.
6. When finished with all import configuration, click **Save**.

If no RTS Property Type is available for mapping, there are no items in the custom extension model that have not already been mapped.

### **Configuring the set of properties to be exported to RuleXpress**

1. Go to the **RuleXpress** tab and click **Configuration**.
2. Click **Edit** to enable editing of both import and export configuration.

**Note:** *All exported properties are managed in the ILOG Properties group in RuleXpress, so this is noted above the table of exported properties; the selection of Group is disabled when editing the export configuration.*

3. To change the mapping of an existing property
  - a. Select the checkbox to the left of the property name and click **Edit**.
  - b. Modify the RTS Rule Property, RuleXpress Property Name, and RuleXpress Property Type as needed to form the desired mapping.
  - c. Click **Save**.
4. To add a new mapping
  - a. Click **New**.
  - b. Enter the RTS Rule Property, RuleXpress Property Name, and RuleXpress Property Type as needed to form the desired mapping.
  - c. **Click Save**.
5. To delete a mapping, select the checkbox to the left of the property name and click **Delete**.
6. When finished with all export configuration, click **Save**.

### **Restoring import and export configuration to the original state**

If, at any time, you want to revert to the original state of the import/export configuration

1. Click **Restore Default**.
2. Click **Yes** in the pop-up dialog to confirm.

---

## Overview

The WebSphere ILOG RTS-RuleXpress Bridge allows customers to maintain synchronized information between business users maintaining their business policies in RuleXpress and policy managers, business analysts and developers working in Rule Team Server on the implementation of those business policies.

In RuleXpress, business users manage terms and business policies without concern, necessarily, for the implementation of those policies. Some policies may be implemented in a business rule management system, others in code (if they rarely change), and others may not be implemented in any automated system. Some may be implemented in more than one system. The key for the business users is that they can manage all of their business policies in one tool that provides them the flexibility they need to manage them effectively. Part of this flexibility is a freedom of expressiveness of the language used for writing the business policy statements.

In WebSphere ILOG BRMS, business analysts and developers build implementations of rule-based systems which can later be maintained by policy managers as well as the analysts and developers who built the system. The business rules are expressed in Business Action Language (BAL), which is a natural language-like language, but it must follow syntax to ensure that the rule engine can interpret them.

At companies where both RuleXpress and Rule Team Server are in use, the RuleXpress information on business policies that are implemented in WebSphere ILOG BRMS is useful to have in Rule Team Server while the implementation form of the rules is developed. Likewise, the WebSphere ILOG BRMS expression of the business policy and other properties about the implementation is good information for the RuleXpress users to have at hand when managing the business policies in RuleXpress. The WebSphere ILOG RTS-RuleXpress Bridge enables information to be shared on both sides to improve alignment between the business policies as defined by the business users and the implementation of those business policies in WebSphere ILOG BRMS.

To maintain the information in each tool, XML files are transferred between RuleXpress and Rule Team Server. An XML file from RuleXpress is imported into Rule Team Server, resulting in the creation of new rules or the updating of rules that match those previously exchanged with RuleXpress. Similarly, an XML file exported from Rule Team Server can be imported into RuleXpress, resulting in the creation of new rules or the updating of rules that match those previously exchanged with Rule Team Server.

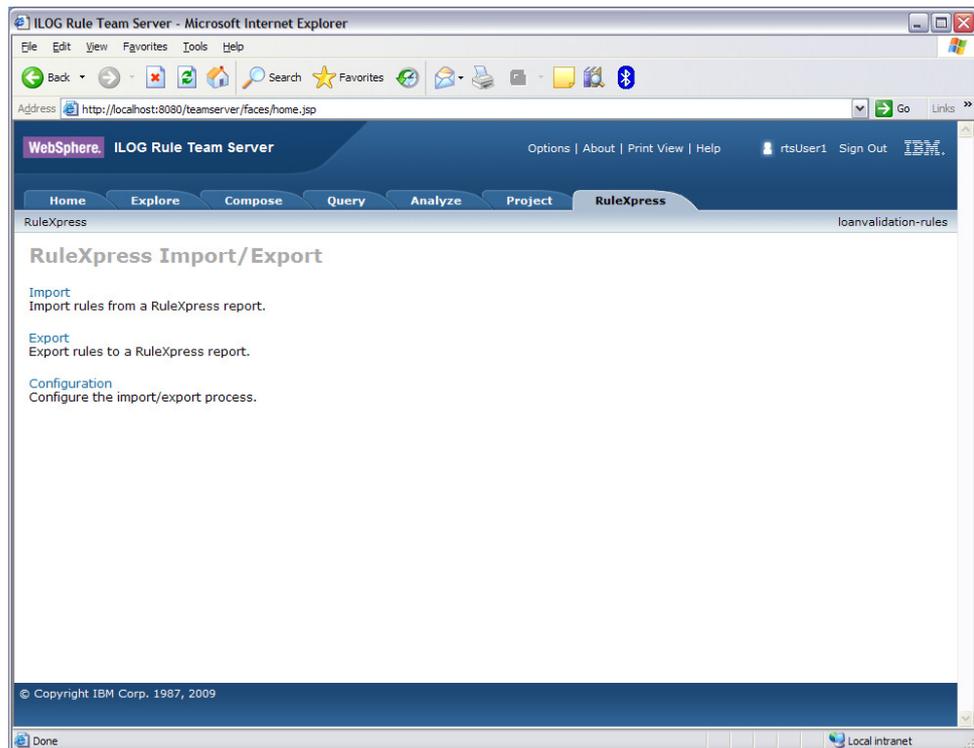
The following sections describe importing into and exporting from Rule Team Server. For details on how the import into and export from RuleXpress works, please see the documentation available with RuleXpress.

## Importing rules from RuleXpress

Importing rules from RuleXpress into Rule Team Server creates new rules in Rule Team Server or updates existing rules in Rule Team Server, depending on whether a match is found between the incoming rule and the set of rules already in Rule Team Server. Matches are made based on one of two criteria: 1) a RuleXpress Rule ID - the rule was previously imported from RuleXpress 2) a Rule Team Server Rule ID - the rule originated in Rule Team Server and was exported to RuleXpress.

The information imported from RuleXpress is inserted into custom properties in Rule Team Server. A default extension model is provided with the WebSphere ILOG RTS-RuleXpress Bridge, but you can create your own extensions to map selected properties from RuleXpress into custom Rule Team Server properties. See *Configuring the set of properties to be exchanged* for more information.

No automatic translation of RuleXpress expression to the WebSphere ILOG Business Action Language is performed by the WebSphere ILOG RTS-RuleXpress Bridge. After importing the rules from RuleXpress, a rule author in Rule Team Server must create the corresponding BAL rule statement in the project.



**Figure 3 - Custom RuleXpress tab**

1. In Rule Team Server, go to the **RuleXpress** tab and click **Import**.

**Note:** You must have an xml file output from RuleXpress.

2. **Browse** to select the xml file output from RuleXpress and click **OK**.
3. View the information about the rules to be imported.

- a. Each rule is shown with its import status (whether it will be created as a new rule or is an update to an existing rule) and any Comments (for example, if the rule is marked for update, how the incoming rule was matched to the existing rule in Rule Team Server).
  - b. Clear the checkbox for each rule that you want to exclude from the import.
4. Click **Import** to update the Rule Team Server repository with the information from RuleXpress.
  5. View the summary of the import activity.
  6. Click **OK** to return to the main **RuleXpress** tab page.
  7. To view the imported rules, go to the **Explore** tab and view the rules in the **Business Rules** smart view. All imported rules are placed into the top-level folder. You can then organize them as appropriate in the Rule Team Server folder structure.

**Note:** Any new rules from RuleXpress will have only a Rule Name, basic administrative properties (for example, Created By) and the RuleXpress information. The rule author in Rule Team Server must fill in the content of the rule and other relevant Rule Team Server properties.

---

## Exporting rules to RuleXpress

Exporting rules to RuleXpress creates an XML file that can be imported into RuleXpress. All rules from the current project can be exported, or you can select the rules to be exported based on a query. Only rules from the current project can be exported, even if the query included dependencies. The information included in the export file can be configured to include any properties of interest. See *Configuring the set of properties to be exchanged* for more information.

1. Go to the **RuleXpress** tab and click **Export**.
2. If desired, select a predefined query to limit the set of rules exported. See the Rule Team Server documentation for more information on creating queries: [Rule Team Server Online Help > Query: Search Your Projects](#).
3. Click **Export**.
4. Save the file to a location from which you will retrieve it when importing into RuleXpress.
  - a. You can also **Open** the file to view its contents.

Refer to the documentation provided with RuleXpress for importing the file into RuleXpress.

---

## Working with rules with shared metadata

When you import a new rule from RuleXpress into Rule Team Server, the following information is filled in for the rule in Rule Team Server:

- ◆ Name - copied from the RuleXpress Rule Signifier
- ◆ Default values for Rule Team Server properties as normal for a rule created within Rule Team Server, for example the Created On, Last Changed On values.
  - The Created By, Last Changed By user is recorded as the Rule Team Server user performing the import

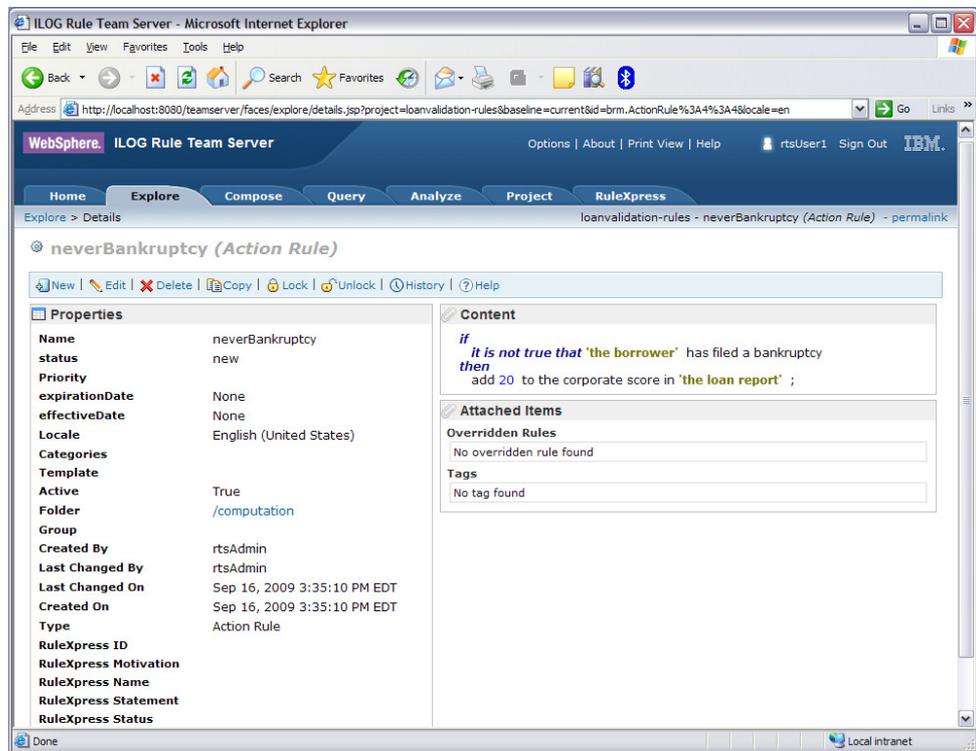
◆ Values for RuleXpress properties from the XML import file:

- RuleXpress ID (mandatory)
- RuleXpress Statement (mandatory)

And by default with the provided extension model:

- RuleXpress Motivation
- RuleXpress Status
- RuleXpress Name

The RuleXpress properties are read-only in Rule Team Server. You can view the values by viewing the Details view of the rule. Click on the hyperlink of the rule name in the **Explore** tab or select the rule and Click **Details**. See the Rule Team Server documentation for more information: [Rule Team Server Online Help](#) > [Explore: Manage Your Projects](#) > [Displaying the Details](#).



**Figure 4 - Details View of a Business Rule**

**Notes:**

1. The Content of the rule is not filled in by the import. This must be entered by a rule author after the rule is imported from RuleXpress.
2. Although the name given to the new rule is the RuleXpress rule name, the name is editable in Rule Team Server. The user can change the Rule Team Server name without any impact on the RuleXpress rule information.