Business Process Management with JRULE

Applies to:
Exchange Infrastructure, Business Process Management

Summary
JRule is a Business Rule Management offering from ILog that can be used to create business rules for automatic decision making and monitor business processes effectively. This article provides an overview of BPM with the help of JRule.

Author(s): Hemant Negi
Company: HCL Technologies
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Author Bio
The author is currently working with HCL Technologies in SAP NetWeaver Practice
Overview

Business process management (BPM) is a snapshot of the business process requirements in the form of a process model. BPM software enables to collect real-time data and help the Business Analyst and Decision Mangers to sort out the issue related to business.

JRule6 is a process modeling and decision making tool from ILoG. JRule comes with Eclipse based IDE called ILOG Rule Studio. The JRules Repository is divided into two sets of Rule Repositories (one for business users and the other for developers) that are kept in synchronization by the Rule execution server, thus it is a fully integrated Rule Studio.

BPMN (Business Process Modeling Notation) is a flow chart based notation for defining the business processes. It is the result of an agreement between various modeling tool vendors who had their own proprietary notations. With the help of this notation a business process developed by an analyst can be directly applied to the BPM engine instead of taking it through human interpretation & translation into other languages.

A BRMS (Business Rule Management System) isolates the pure business logic of a project from the control logic and presentation code, and puts it into a rule base space. Effectively, a BRMS moves verification back to the business department where it belongs. Using a BRMS, the business users write & modify the rule. The IT department is responsible for the construction of the system so as to ensure that it is fast, scalable, and easily maintainable.

JRule Description

ILOG's JRule is a tool which helps Business Analyst, Developers & Managers to implement & manage business rules. It supports common standards like JDBC, EJB, J2EE, JMS etc.

Some features of this tool are as follows:

Rule flow - Analyst can graphically create rule flows.
**Decision table editor** - Used where multiple conditions are repeated in many rules


**Web rule editor** - Helps business analyst to develop the business rule.

**Debugger** - To debug set of rules, decision tables & BOM.

JRule includes rule language that use domain term so that the user can express rules in Natural language. It also includes a no of reusable software components provided as APIs. The web console of rule execution server provides comprehensive runtime view of the deployed rule set & their execution performance. The rule execution service is composed of several components that can be optionally deployed within the application.

**JRule Architectural Framework**

The Rule editor is a Java based application that is used for development of business rules. The eclipse based IDE is normally used by the IT personnel to debug rules and decision tables as they are executed by the rule engine. The profiler evaluates the runtime performance of a rule set.

JRule makes Business Rule Management System (BRMS) the rule language, a Business Action Language (BAL)

The main benefit of JRule is that it implements business vocabulary/terms rather than the technical terms, thus making it an extremely useful tool for business users.
Example:

IF THE EMPLOYEE IS FROM HCL THEN
3% DISCOUNT ON NOKIA MOBILE PHONE

JRule Builder is a GUI based Java application for rule testing and extraction. It is a J2ee Servlet that provides basic rule management.

The Rule repository acts as a central storage for business rules. JRule has the ability to abstract business logic from Java representation. Rules are invoked by calling the rule engine. It also has a decision engine to integrate rule based service into a BPM decision.

Business Rule Engine (BRE) was developed to help facilitate and execute these rules. A BPM guides an application through a series of steps, whereas a BRE guides the application through the rules (i.e., decisions) that determine these steps.

**Decision Tree**

A Decision Tree displays the set of business rule in one graphical diagram. The decision table is based on the schema of the decision process.

![Decision Tree Diagram]

**JRule for BPM**

A BRMS adds decision capabilities to applications and workflow type processes. It provides various tools for writing, deploying, and managing business rules throughout their life cycle. These tools are geared towards both business and IT users, enabling both types of users to add, delete, or modify rules through permission based access.

**BRMS Benefits**
Better decision-making - Business users may test their strategies in an offline environment and then implement the best ones.

Improved operational efficiency - Automation of rules as opposed to recoding involves less human interaction, which in turn decreases the chance of human error.

Control is returned to business strategists - Business strategies can be handled directly by business strategists not IT. Rule management capabilities are extended to business users by giving them the ability to make changes directly.

Audit trails - BRMS can track how a set of rules have changed over time.

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<thead>
<tr>
<th>Sno</th>
<th>BPM Functionality</th>
<th>JRule Features</th>
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<tbody>
<tr>
<td>1</td>
<td>Process Definition</td>
<td>Rule based activities for expressing business rules. It expands &amp; collapses sub processes. Layouts for process diagrams</td>
</tr>
<tr>
<td>2</td>
<td>Process Administration</td>
<td>Displays process diagram so it is easily deciphered by the managers &amp; performance can be measured/improved</td>
</tr>
<tr>
<td>3</td>
<td>Business Activity Monitoring</td>
<td>Table/chart views to show activity status &amp; monitor the process</td>
</tr>
<tr>
<td>4</td>
<td>Business Performance Analysis</td>
<td>Reuse of process diagram as designed during the definition phase to detect &amp; rectify the problem.</td>
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Conclusion

In nutshell, ILog JRule makes BPM practical by providing innovative tools for authoring, deploying & managing business rule across the organization. JRule is designed to meet the needs of architects, business analysts, developers, policy mangers & system admin as it provide a single environment for modeling, coding, debugging & deploying rule applications.
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