

Overview

QuickRules Standard Edition 4.0 is a complete Business Rules Management Solution for the Java/J2EE platform, with features supporting the entire business rules lifecycle. This document lists the minimum hardware and software configurations required to install and run the product, as well as a summary of the feature set supported by the product.

Highlights

Rule Development IDE completely re-written on the Eclipse platform

Easier Learning curve => Faster Learning => Lesser time to become productive

Developers no longer need to learn 2 different environments in order to use the power of the QuickRules BRMS platform. Familiarity with the Eclipse UI allows them to start developing business rules immediately.

Easier integration of the RuleBuilder into 3rd party systems / products

The RuleBuilder IDE uses EMF for storing the business rules, allowing developers to:

1. Integrate the business rules data model into proprietary data models.
2. Use the business rules data model to generate custom rule development environments conforming to their applications' requirements.
3. Use the pre-packaged rule development screens in their own applications.

Quick and Easy integration into 3rd-party technologies

The RuleBuilder IDE can be used with 3rd-party Eclipse-based plug-ins, allowing developers to:

1. Develop business rules at the same time as designing the business process (BPM), or setting up the business intelligence (BI) scenarios.
2. Develop business rules that use data stored in a RDBMS, OLAP, LDAP, and other data repositories.

Client Application architecture agnostic

To remove any restrictions on the architecture of the Client Applications, the Runtime Engine supports deployment as:

1. Plain-java component: The rules repository can be either a file system folder, or a RDBMS server
2. EJB component: With out-of-the-box support for a large number of commercial and open-source Application Servers (see listing below), and for any JDBC-compliant RDBMS engine.
3. Web Service: With out-of-the-box support for deployment on Apache / Tomcat, as well as for all major commercial and open-source Application Servers.
4. Message-driven Bean (MDB): With out-of-the-box support for integration with JMS and MQ-Series.

Productivity enhancements for Rule Developers

Integration of the RuleBuilder IDE into the Eclipse platform makes the industrial strength productivity of the Eclipse platform now available for QuickRules BRMS Rule Developers. Developing rules is now at least 2 - 5 times faster than using the previous versions of QuickRules BRMS.

Productivity Enhancements for Business Users

Business Users can now create / modify “FlowRulesets” using a point-click interface in the WebEditor, simplifying the process and removing the requirement for knowing the Flow Language.

Model complex business logic easily using QuickRules BRMS

QuickRules BRMS allows you to capture your business policies as a combination of Sequential Rules (FlowRulesets), spreadsheet-like Decision Tables, and plain vanilla IF-THEN rules (RETE Rules), enabling real-world business logic to be captured and managed easily.

Capturing conflicting and time-based business logic

QuickRules BRMS exposes a construct known as a “Mutex”, allowing conflicting business logic to be captured and enforced easily. Time-based business logic (weekend-only, for example) can be captured and enforced using “effectivities”.

Support for Year-end consolidation, Historical Pricing, Re-generation of old statements

QuickRules BRMS allows business rules to be associated with a “validity” period. Using this feature, the Client Application can execute previous version of business rules by querying on the data on which they were valid. Year-end consolidation, historical pricing scenarios, re-generation of old statements in case of customer queries, etc. are supported out-of-the-box

System Requirements

Hardware

256 MB RAM minimum (512 MB recommended)
300 MB free disk space

Java Requirements

Engine: JRE 1.3.1 or above
Builder: JRE 1.4 or above
WebEditor: JRE 1.3.1 or above

Eclipse Requirements

Eclipse IDE 3.1
EMF 2.1
GEF 3.1

Major Application Servers supported

IBM Websphere Advanced 5.1.1.x, 6.0.2.3
IBM WSAD 5.x or above
BEA Weblogic 7.0, 8.1, 9.0
JBoss 3.2.x and 4.0.x
Oracle 10g AS or above
SunOne Application Server 7.0
Pramati 4.1 or above

Toolset

QuickRules Engine

Inference Rules, Decision Tables, and Flows
Caching / pooling for efficient memory management
Deploy as plain-Java / EJB / MDB / WebService

QuickRules Builder IDE

Eclipse-based graphical user interface for IT personnel
Design, implement, test, and deploy business rules

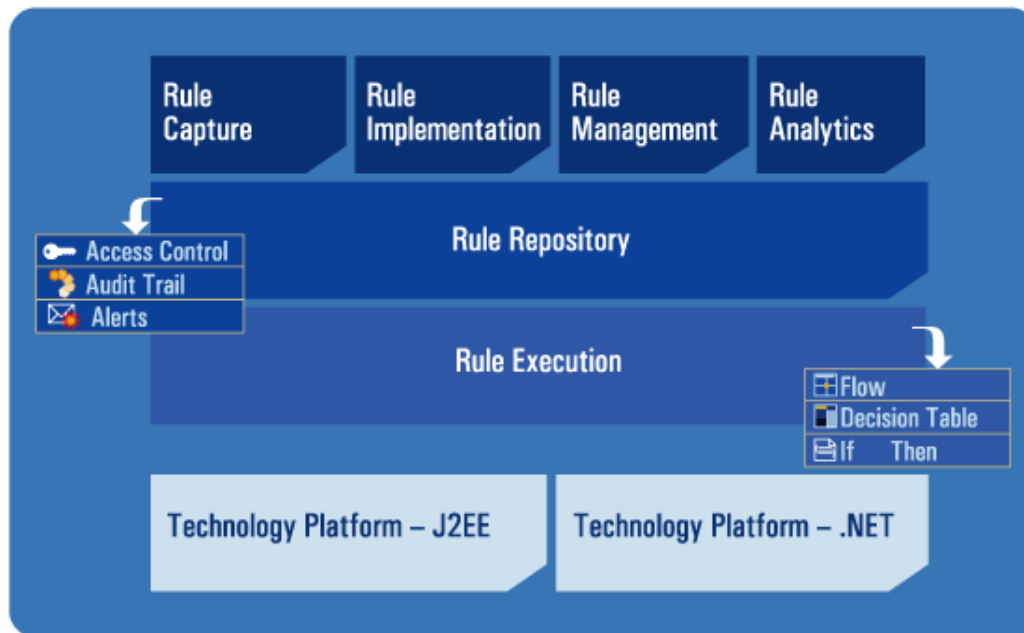
QuickRules WebEditor

Web-based rule governance module for business managers and business users
Edit, test, and upload changes to rules in real time
Customizable Rule Consistency Check for rule stability and correctness

Product API

Develop custom rule editors
Monitor rule execution in the Engine in real-time
Access and control loading and invocation of rules

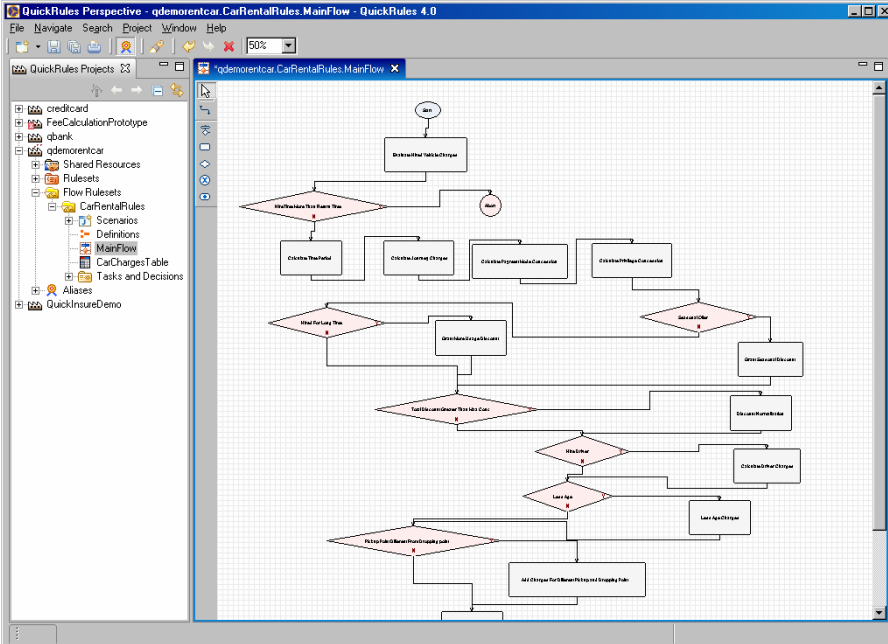
Platform Architecture



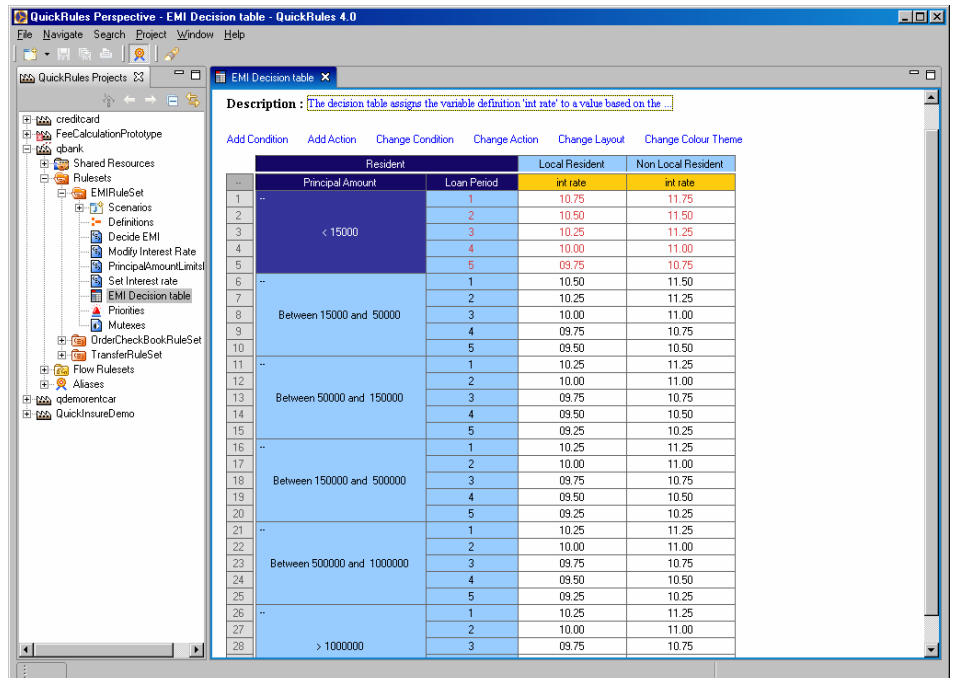
Features	Builder IDE	WebEditor	Engine	API
<p>Rule Deployment The ability to export business rules to databases for secure storage. This feature is provided in the QuickRules Builder.</p>				
<ul style="list-style-type: none"> ▪ Deploy business rules to File System Folders ▪ Deploy business rules to JDBC compliant databases 	<p>✓ ✓</p>			<p>✓ ✓</p>
<p>Rule Governance The ability to maintain business rules (change them as business scenarios change) after they have been deployed to production environments from across the enterprise.</p> <p>The QuickRules WebEditor provides the features required for performing the tasks involved in managing change.</p>				
<ul style="list-style-type: none"> ▪ Add/edit/delete business rules at runtime ▪ Add/edit/delete rulesets at runtime ▪ Add/delete business objects at runtime ▪ Test business rules at runtime ▪ Upload changes to the rule repository ▪ Supports versioning of rulesets and reverting to older versions (“Version Control” feature with Rollback support) ▪ View logs of the changes made to business rules, by whom and why (“Audit Trail” feature) ▪ Restrict access of business users depending their role to ensure that unauthorized/inadvertent access (“Access Control” feature) 	<p>✓ ✓ ✓ ✓ ✓</p>	<p>✓ ✓ ✓ ✓ ✓ ✓ ✓</p>		<p>✓ ✓ ✓ ✓ ✓</p>
<p>Rule Execution The ability to accept business data from client applications, infer the relevant policies applicable to the data, execute the business rules, and return the results back to the client application.</p> <p>The QuickRules Engine provides the functionality required for executing the business rules.</p>				
<ul style="list-style-type: none"> ▪ Execute business rules based on business data and rule properties (effectivity, mutual exclusion, preconditions, as-of date) ▪ Cache multiple copies of business rules to provide parallel execution in a multi-threaded environment. ▪ Check periodically for updates to business rules and refresh the cache automatically ▪ Allow execution of multiple rulesets using a single API call in batch mode ▪ Provide trace functionality to let clients track the execution profile ▪ Integrate into Client-Server applications 			<p>✓ ✓ ✓ ✓ ✓</p>	<p>✓ ✓ ✓ ✓ ✓</p>

Features	Builder IDE	WebEditor	Engine	API
<ul style="list-style-type: none"> ▪ Integrate into N-Tier web-based applications ▪ Integrate into SOA-based applications ▪ Integrate into Desktop-based applications ▪ Use file system folders as rule repository ▪ Use JDBC compliant RDBMS engines as rule repository ▪ Compliance with JSR-94 Specification 			<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓
<p>Integration into 3rd – party applications The ability to integrate the product into 3rd-party Applications.</p> <p>The QuickRules BRMS RuleBuilder is built on top of the Eclipse Framework, and uses EMF as the underlying data object model. This allows developers to plug-and-play the IDE components in their front-ends.</p> <p>The QuickRules BRMS WebEditor is built on top of JSP templates, allowing developers to customize the pages or integrate them into their front-ends, as required.</p> <p>The QuickRules BRMS runtime can be deployed as a plain-Java component, in EJB mode, as a Message-Driven Bean (MDB), or as a WebService.</p>				
<ul style="list-style-type: none"> ▪ Allow developers to use the RuleBuilder IDE components in other graphical user interfaces ▪ Allow Eclipse-based applications to use/extend the RuleBuilder IDE data model ▪ Allow Eclipse-based applications to generate custom Rule Editing components using the RuleBuilder IDE data model ▪ Allow developers to use the WebEditor JSP pages in other graphical user interfaces ▪ Allow Web-based applications to use/invoke the WebEditor API model ▪ Allow Web-based applications to generate custom Rule Editing components using the WebEditor API ▪ Deploy the runtime as a plain-Java component ▪ Deploy the runtime in EJB mode ▪ Deploy the runtime as a Message-Driven Bean (MDB) ▪ Deploy the runtime as a WebService 	<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none">

Product Screenshots



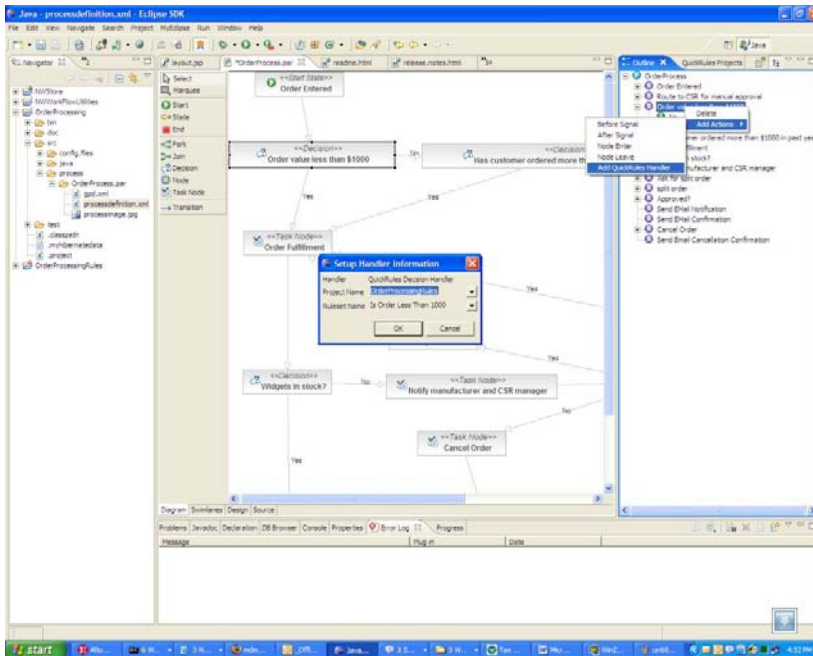
Eclipse-based Rule Development IDE showing "Flow" rules



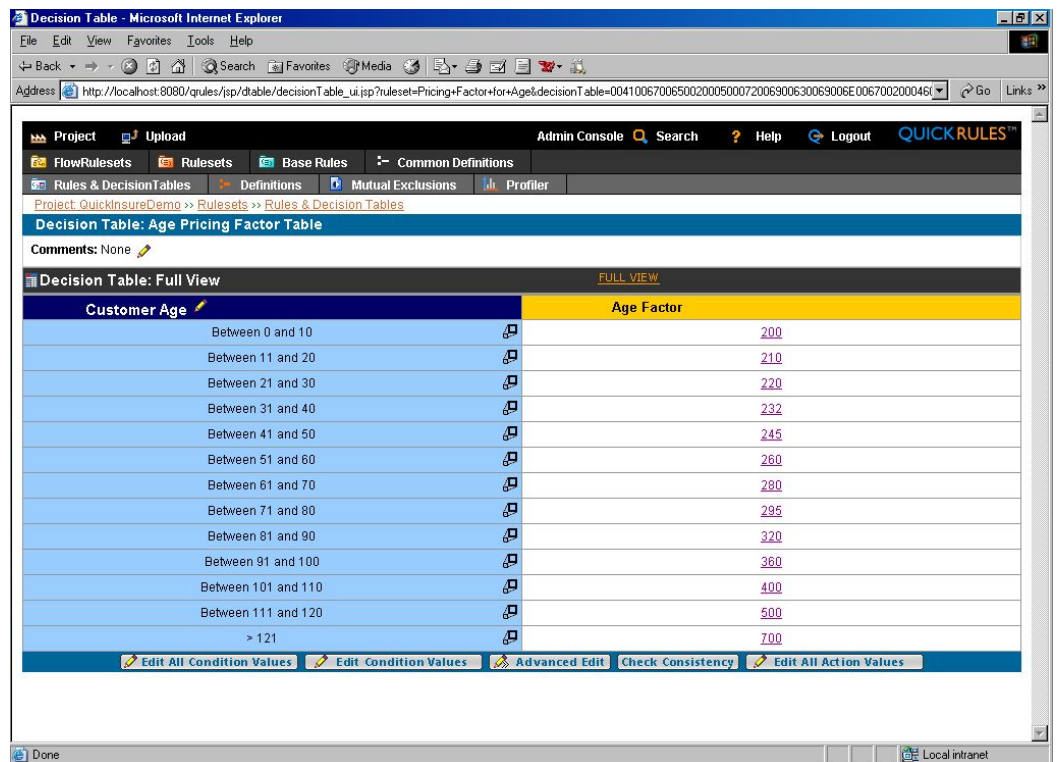
Description: The decision table assigns the variable definition 'int rate' to a value based on the

	Resident	Local Resident	Non Local Resident
Principal Amount	Loan Period	int rate	int rate
< 15000	1	10.75	11.75
	2	10.50	11.50
	3	10.25	11.25
	4	10.00	11.00
	5	09.75	10.75
Between 15000 and 50000	1	10.50	11.50
	2	10.25	11.25
	3	10.00	11.00
	4	09.75	10.75
	5	09.50	10.50
Between 50000 and 150000	1	10.25	11.25
	2	10.00	11.00
	3	09.75	10.75
	4	09.50	10.50
	5	09.25	10.25
Between 150000 and 500000	1	10.25	11.25
	2	10.00	11.00
	3	09.75	10.75
	4	09.50	10.50
	5	09.25	10.25
Between 500000 and 1000000	1	10.25	11.25
	2	10.00	11.00
	3	09.75	10.75
	4	09.50	10.50
	5	09.25	10.25
> 1000000	1	10.25	11.25
	2	10.00	11.00
	3	09.75	10.75

Eclipse-based Rule Development IDE showing Decision Tables



Integration with jBPM Business Process Management Tool



Customer Age	Age Factor
Between 0 and 10	200
Between 11 and 20	210
Between 21 and 30	220
Between 31 and 40	232
Between 41 and 50	245
Between 51 and 60	260
Between 61 and 70	280
Between 71 and 80	295
Between 81 and 90	320
Between 91 and 100	360
Between 101 and 110	400
Between 111 and 120	500
> 121	700

WebEditor showing Decision Tables