redhat

JBOSS ENTERPRISE

BRMS

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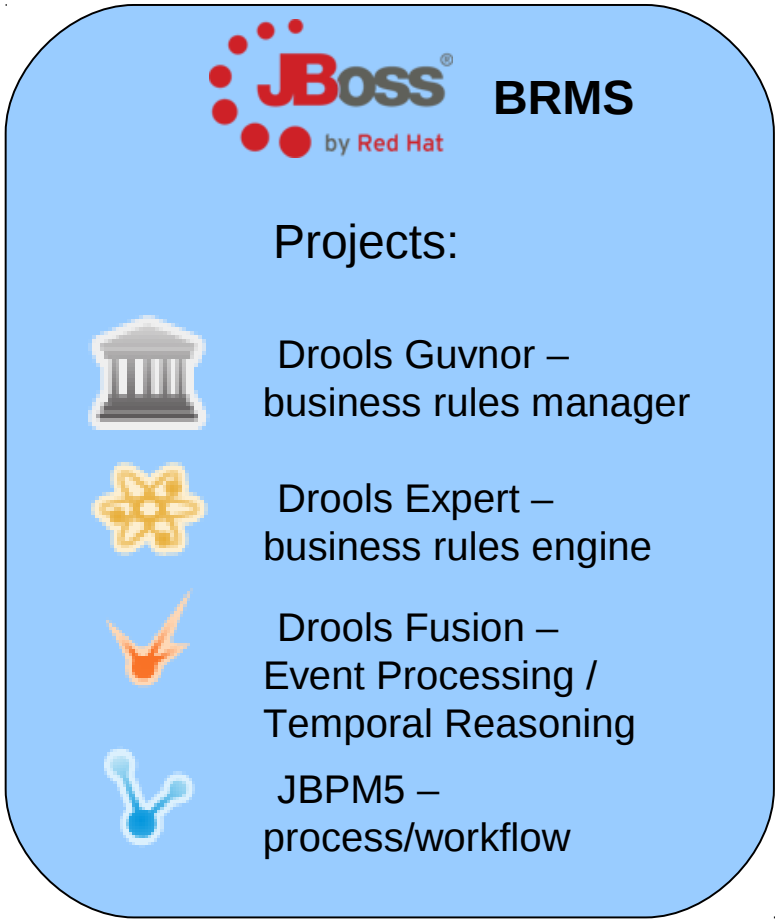
AGENDA

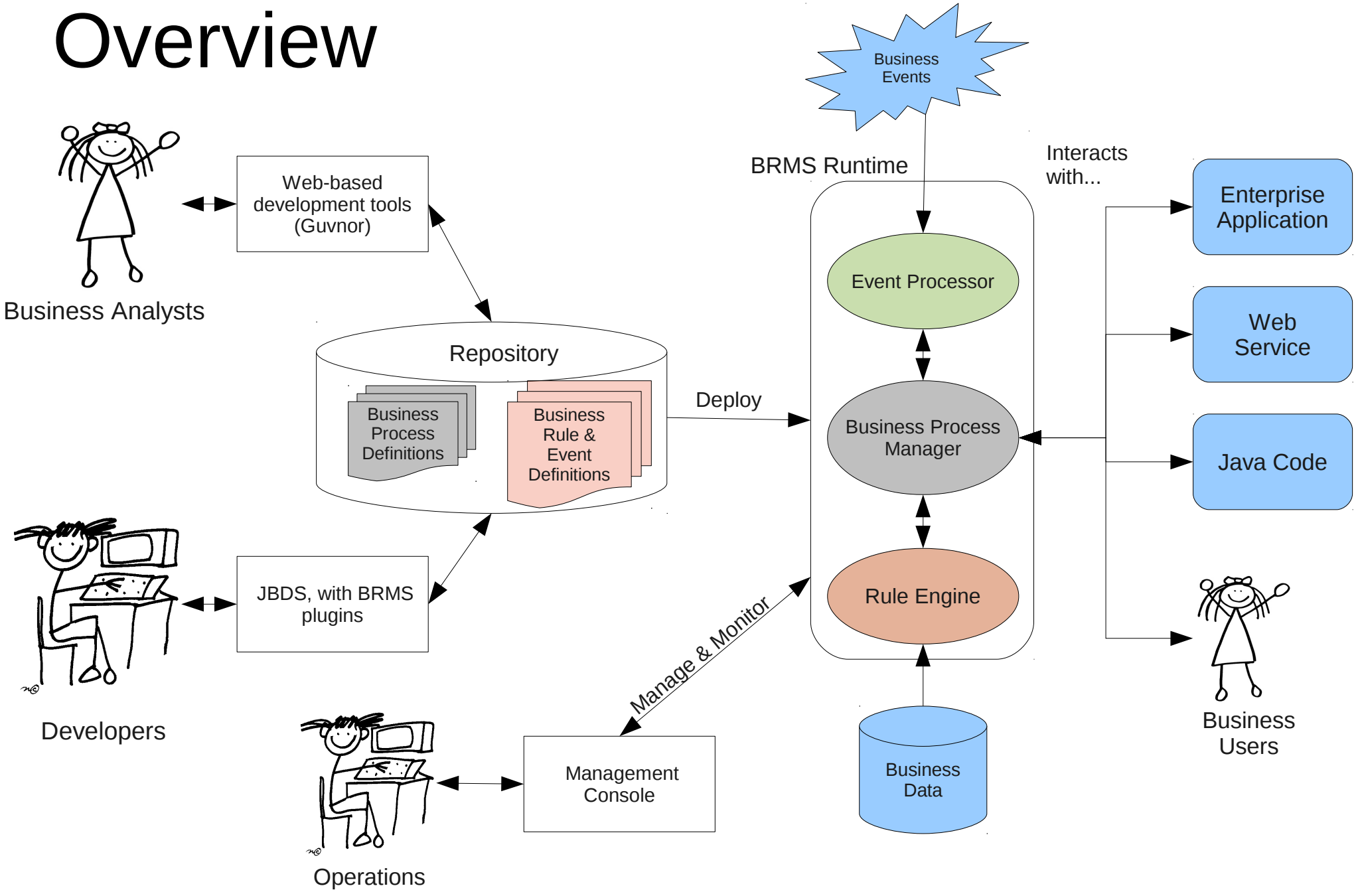
- What is?
- Overview
- Competitors
- JBoss Competitive Differentiation
- Deployment options
- BPM Basics
- Process modeling
- Highlights
- Repository
- Managment
- jBPM3 → jBPM5
- Rules engine
- Tools options
- CEP Models
- Rules creation options

BRMS – What is?

A Single Distribution for Business Rules, Business Process and Complex Event Processing...



Overview


Business Events
BRMS Runtime
Interacts with...
Business Analysts
Web-based development tools (Guvnor)
Repository
Business Process Definitions
Business Rule & Event Definitions
Deploy
Event Processor
Business Process Manager
Rule Engine
Enterprise Application
Web Service
Java Code
Business Users
Developers
JBDS, with BRMS plugins
Manage & Monitor
Management Console
Operations
Business Data

Competitors

IBM (WODM , Lombardi BPM)

- Top down sales, beginning with CEO/CFO driven by services
- Considered feature rich but very expensive to implement
- We win with developers and are challenging with Business Analysts

Progress (Corticon rules)

- Just announced re-org, divesting Savvion BPM
- Opportunity to target Savvion users
- Narrowing focus to rules & events for financial trading

PegaSystems PegaRules

- Sells BPM and Business Process Automation
- Complex and expensive
- Heavy weight

Drools / jBPM JBoss.org

- Community version of BRMS, attracts developers
- Business execs and IT professionals deploying more complex solutions tend toward BRMS
- ROI and cost savings with BRMS subscription

JBoss Competitive Differentiation

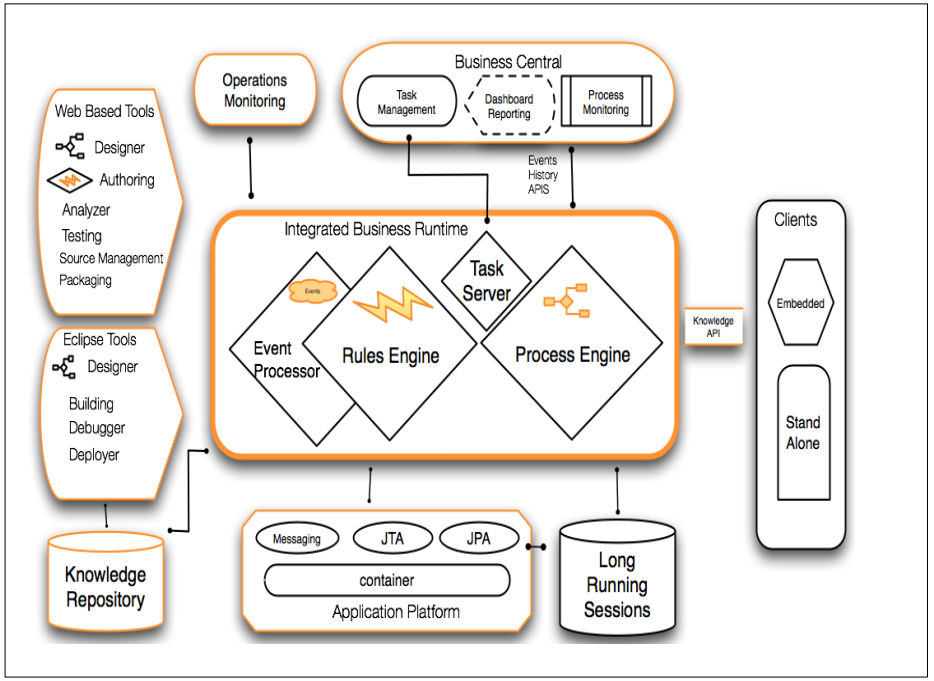
Strengths

- **JBoss BRMS is less than 2% the cost of IBM WODM**
- **Parity on significant functionality**
- **Single distribution with Business Rules, BPM and CEP**
- **Open, standards-based**
- **Lightweight – short time to value**
- **Short learning curve – developers already using it**

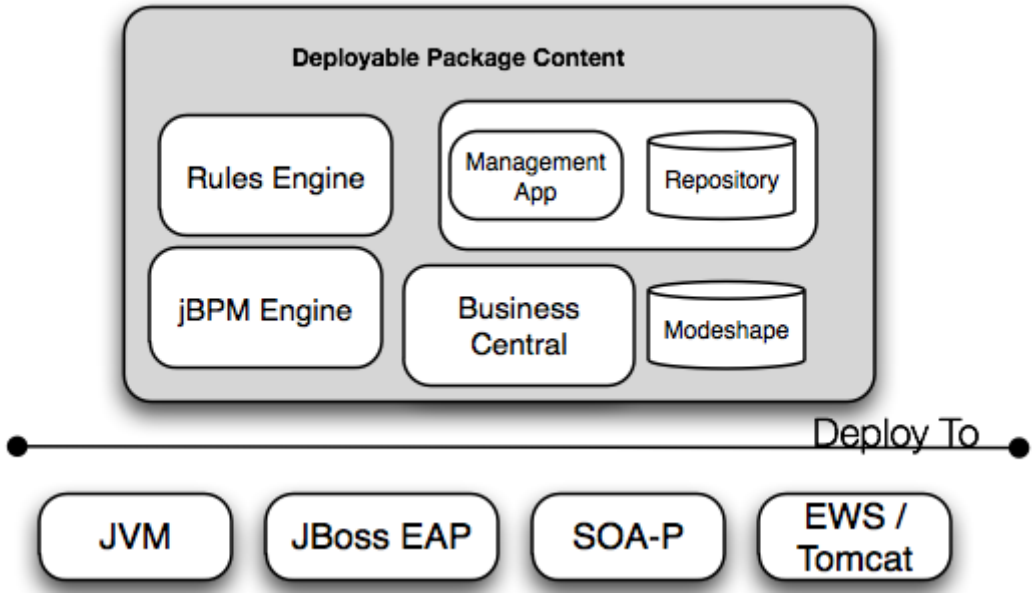
Weaknesses

- **Usability for the business analyst**
  - **Simulation & verification / BAM & reporting**
  - **Docs**

Deployment options

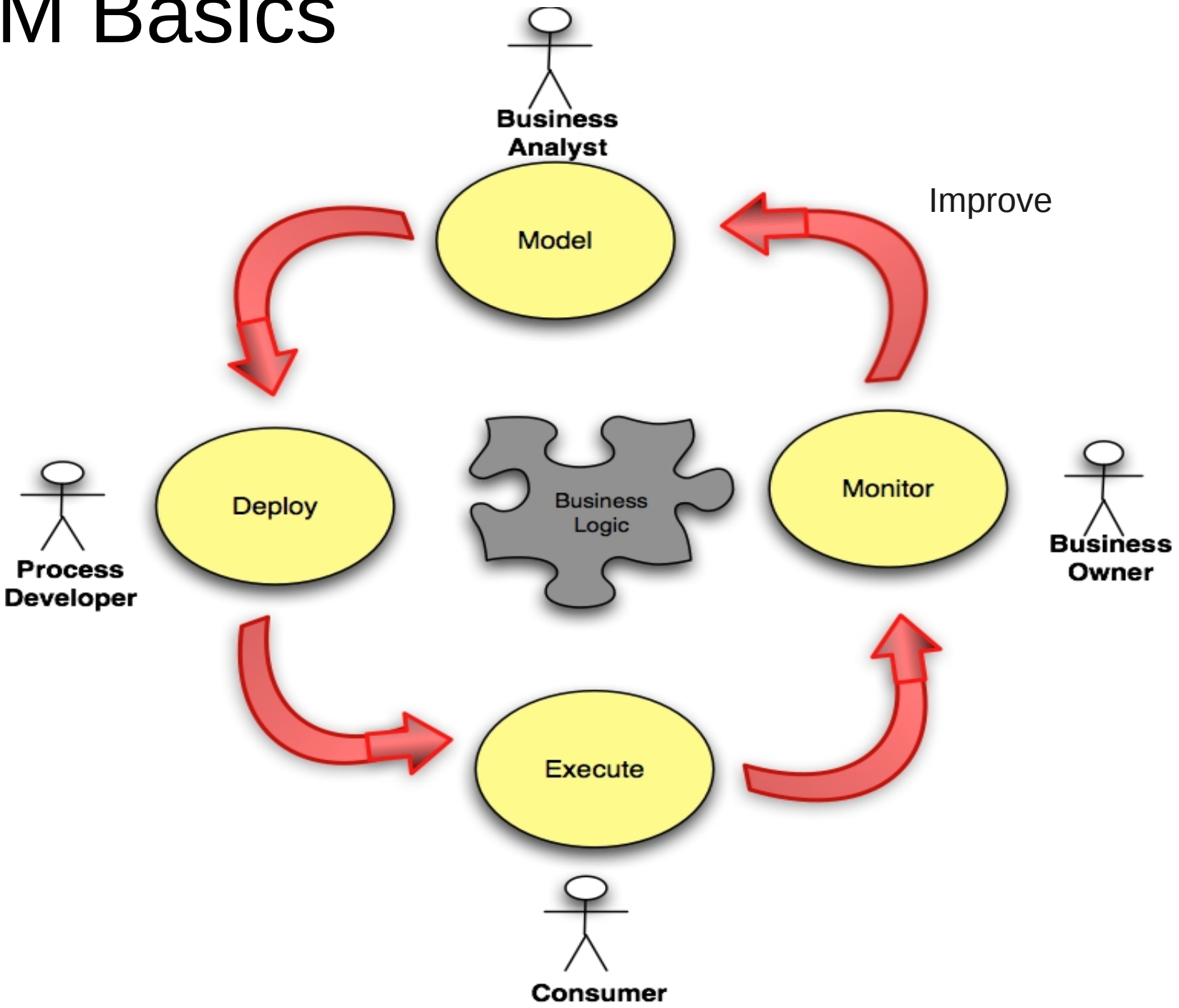


- Stand Alone Package
- Well integrated
- Best Out of the Box Experience



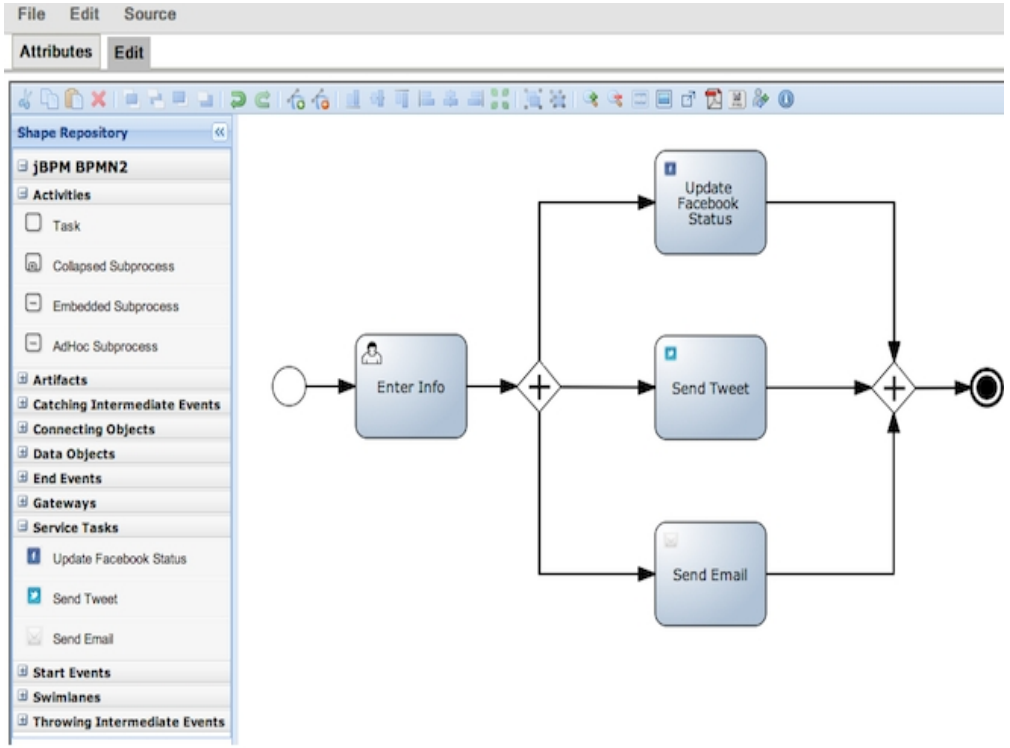
- Lightweight Package
- Flexibility of Container
- Deploy to lightweight containers like Tomcat

BPM Basics

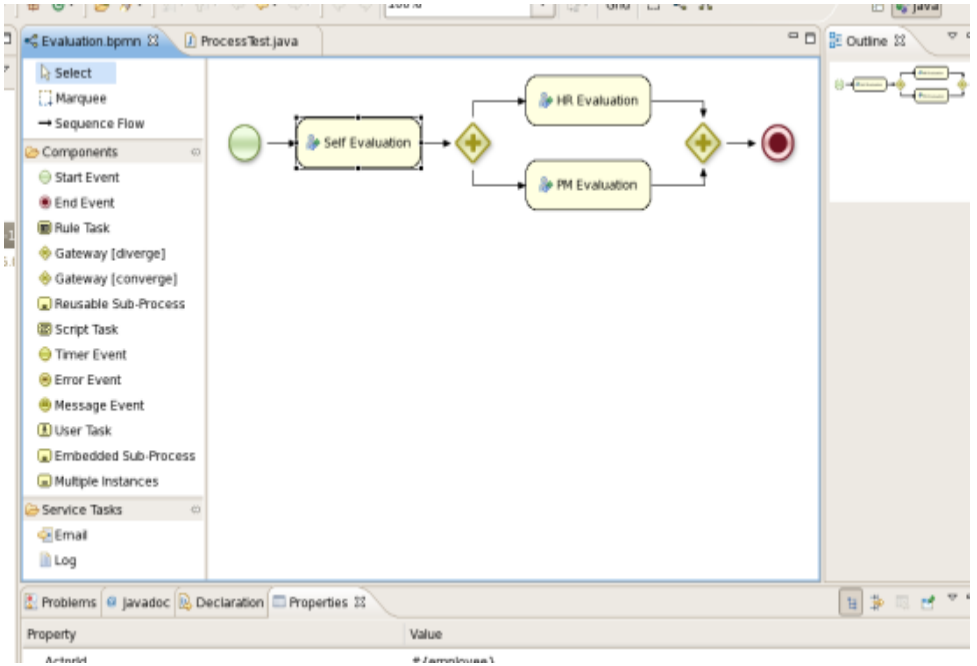

Business Analyst
Model
Improve
Deploy
Business Logic
Monitor
Process Developer
Business Owner
Execute
Consumer

Process modeling

Web Based Modeling Tools

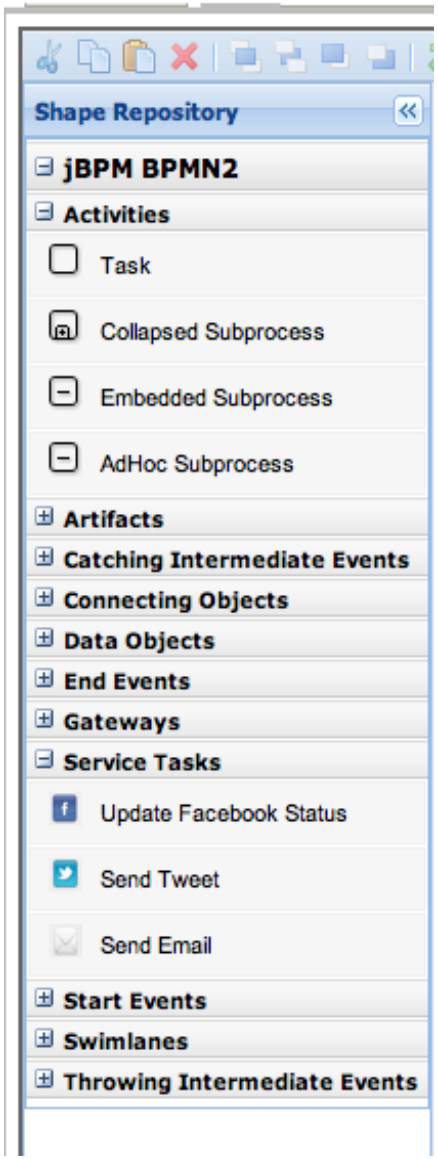


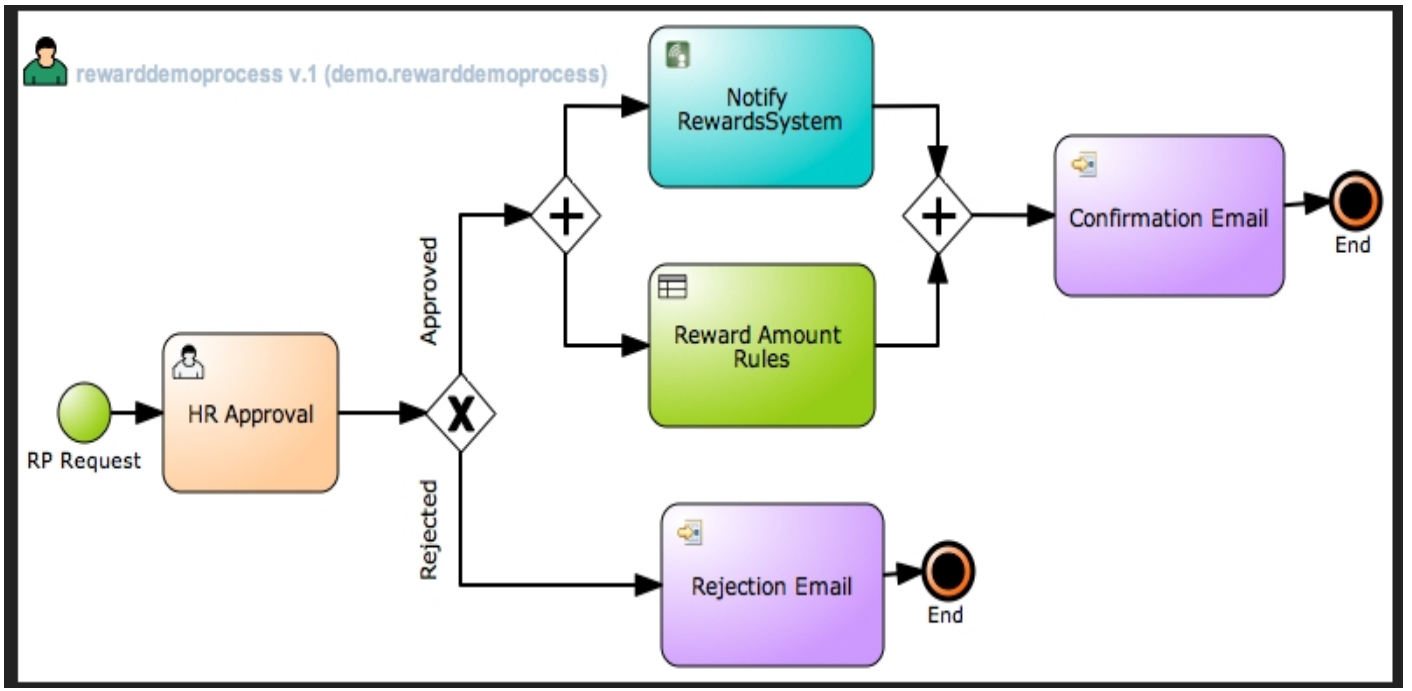
IDE Based Modeling Tools



- Create BPMN2 Process Definition
- Common Design Time Repository – Store, Manage, Version
- Create Process Definitions, Validate, Package, Deploy
- Develop Userforms, Integrate other Business Assets (rules etc)
- Import BPMN2 Definitions – Developed by other tools

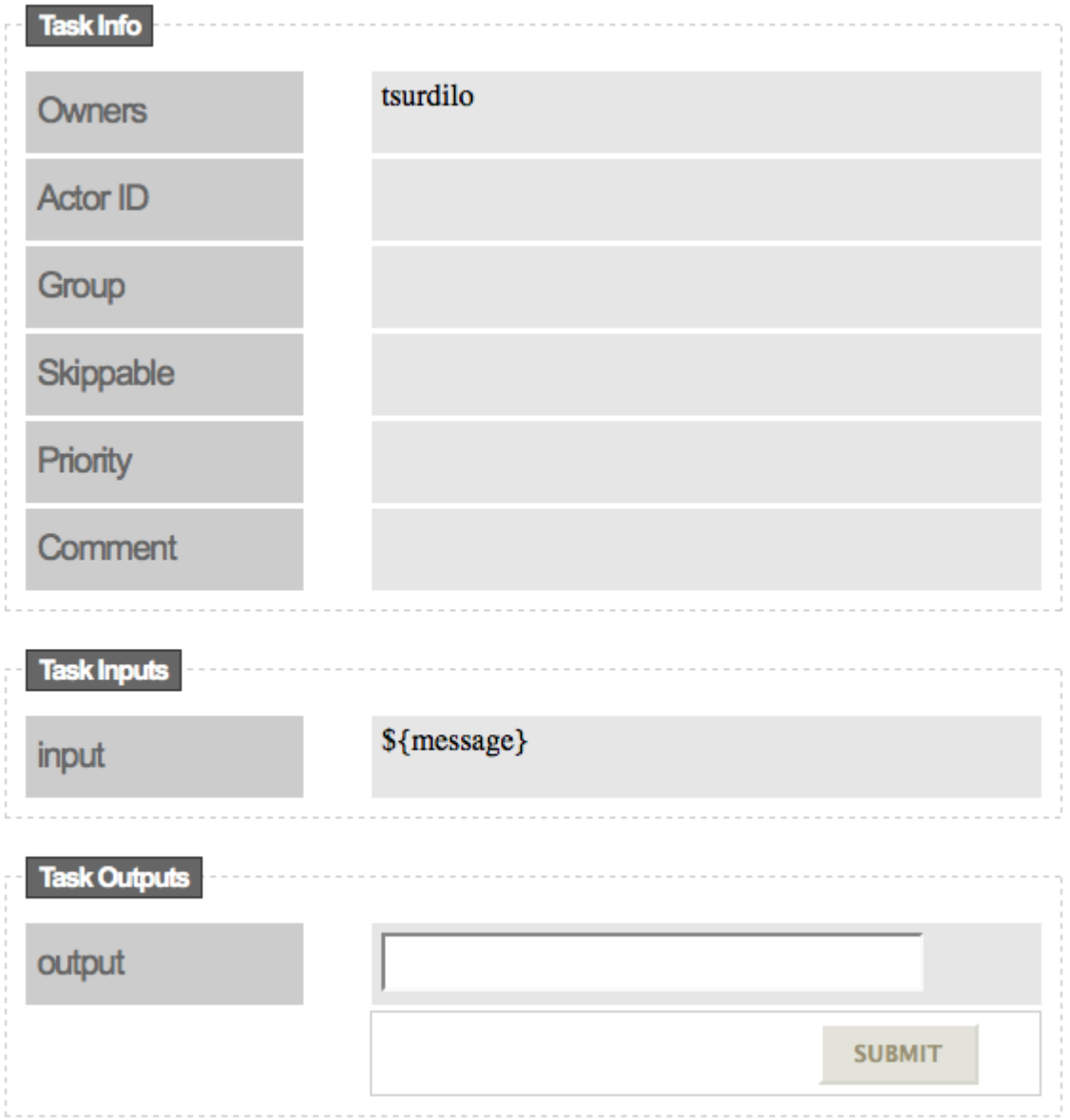
Highlights





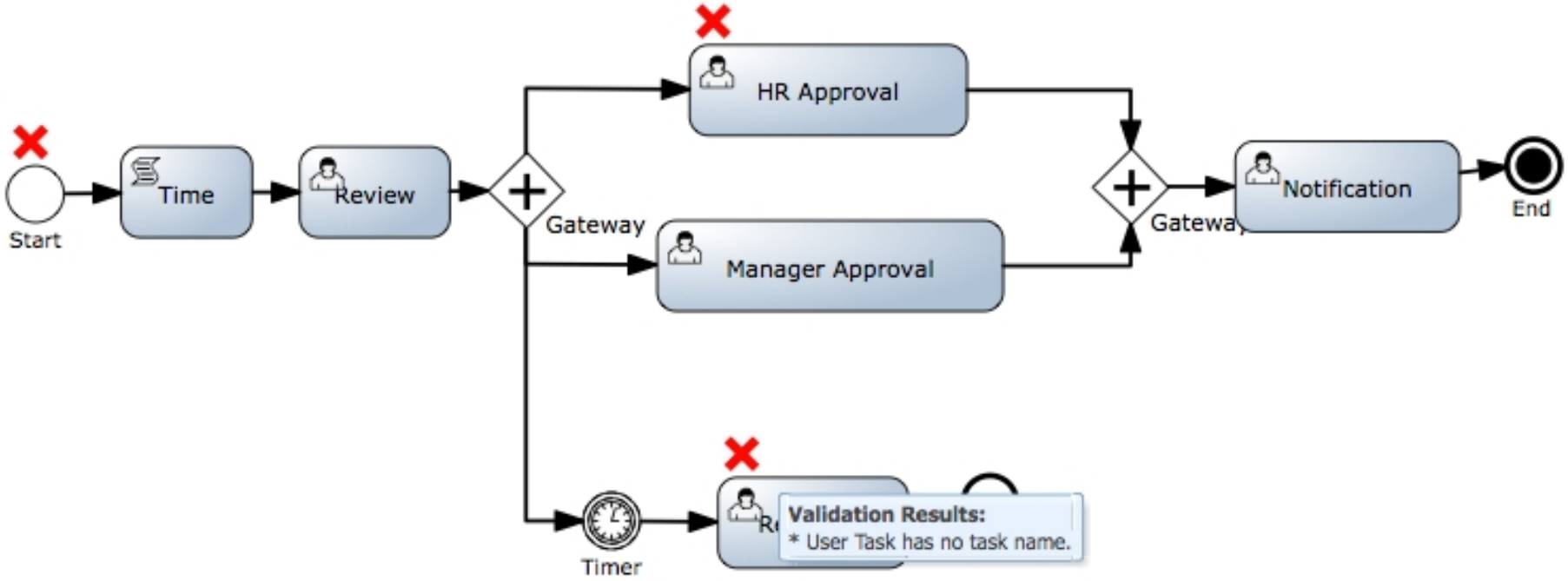
- Fully Integrated with BRMS Guvnor – On-stop business modeling tool
- Rich set of BPMN2 elements – Drag and drop on canvas
- Domain Specific Nodes – Add your own tasks to the list
- Generate PDF or PNG documents of process definition
- Embeddable Designer – Allows adopting designer in your own tool

Highlights – User forms



- Create Task Forms and Process Forms in the designer
- Forms necessary for Workflow kick off and Human task inputs
- These forms are used when process instance is created – Business Central
- Inline editing within the process definition

Highlights – Visual validation



- Visually validate the process definition before packaging

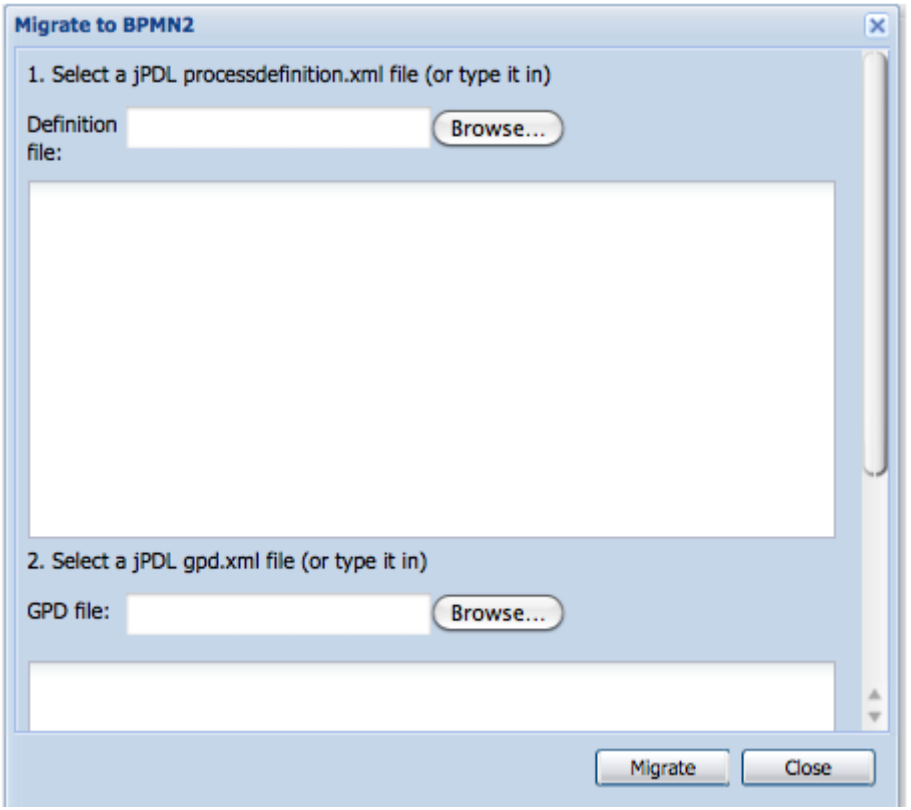
Repository

- Central Knowledge / Asset Repository
- Store – Models, Process Def, Rule Def, Images, Anything Else
- Can store and manage any kind of assets
- Based on JCR 2.0
- Version Control
- Can also be accessed by WebDAV and HTTP
- ***New – Access through REST***
- Further persists to RDBMS

Managment

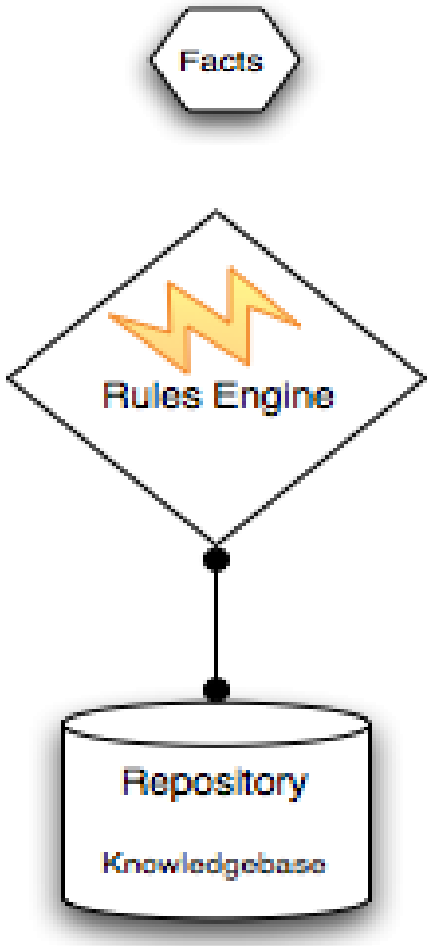
- Pluggable to JON
- Monitor long running sessions
- Monitor knowledgebase params for each KB
- View list of running sessions
- List of active rules in sessions
- For each rule session params
- Session params like
  - No. of facts
  - Total firing time
  - Avg firing time
  - Total activations

jBPM 3 → 5 tools



- Not a Supported feature of the product.
- Community Supported Migration Tool - https://github.com/droolsjbpm/jbpmmigration

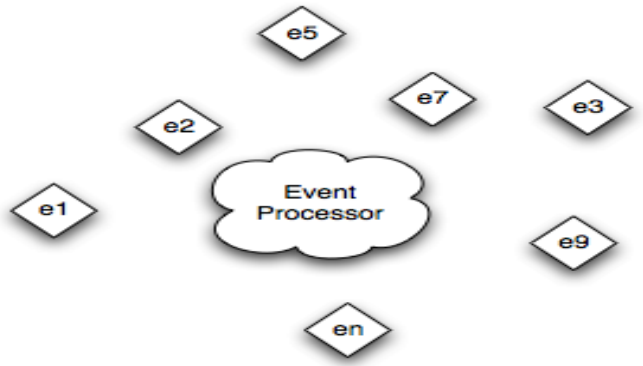
Rules engine



- Support Inference
- Implements ReteOO algorithm
- Embeddable, lightweight
- Highly performant
- Scalable and most stable
- Supports Declarative Programming

CEP Models

Cloud Mode



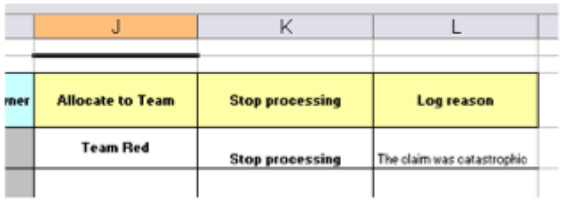
- Default Mode – All facts and events are loaded before reasoning
- Many to many pattern matching by the engine
- No notion of flow of time, no clock synchronization
- Ordering is not required
- Event lifecycle managed by user
- Sliding window is not needed

Stream Mode

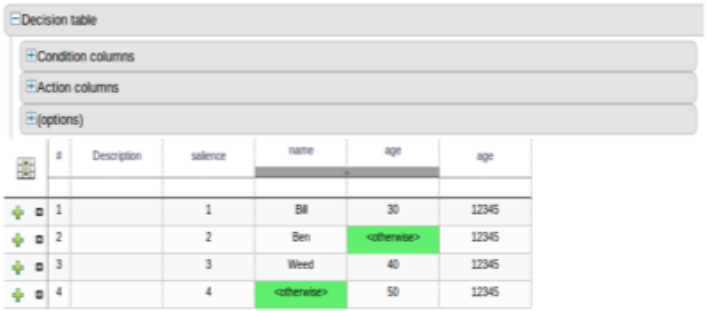
- Events must be time-ordered
- Engine synchronizes between streams using session clock
- Engine applies the notion of flow
- Engine manages the event lifecycle
- Sliding window option could be used
- Negative patterns could be used. Ex. Fire detected, no sprinkler turned on in 10 sec sound alarm

Rule creation options

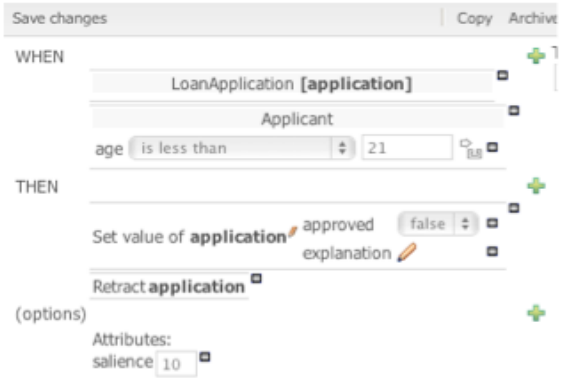
Spreadsheet

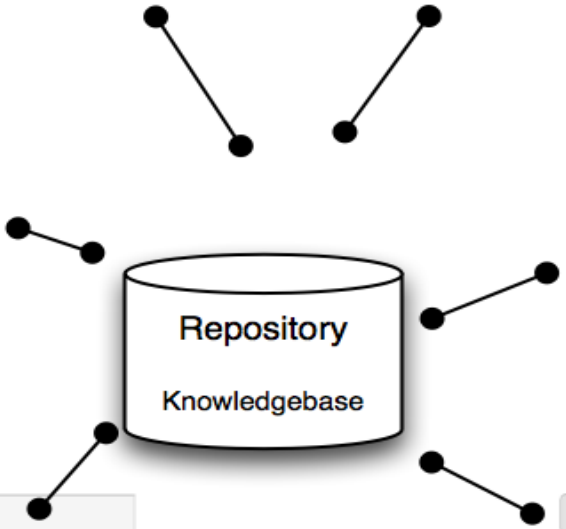


Decision Table

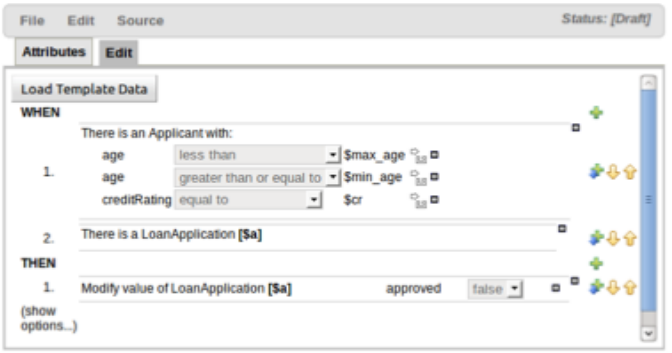


Guided Editor





Rule Templates



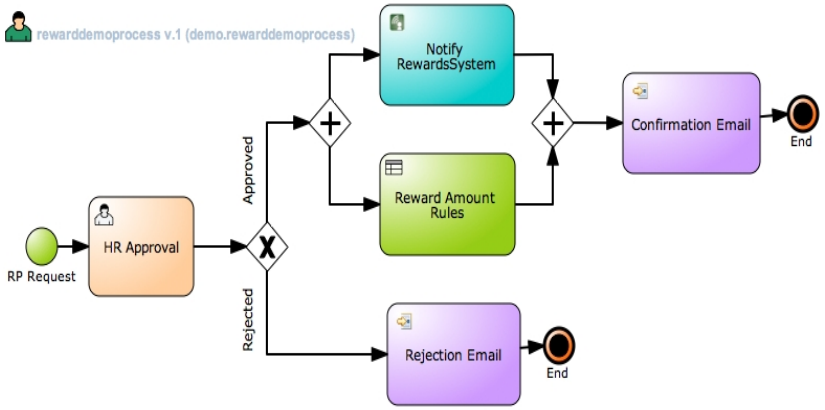
DRL

```
rule "When there is a fire turn on the sprinkler"
when
    Fire($room : room)
    $sprinkler : Sprinkler( room == $room, on == false )
then
    modify( $sprinkler ) { setOn( true ) };
    System.out.println( "Turn on the sprinkler for room " + $room.getName() );
end
```

DSL

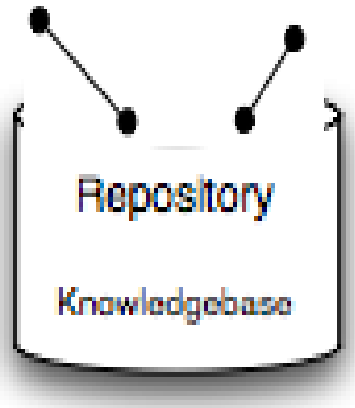
Tools options

Business User Friendly – Web Based

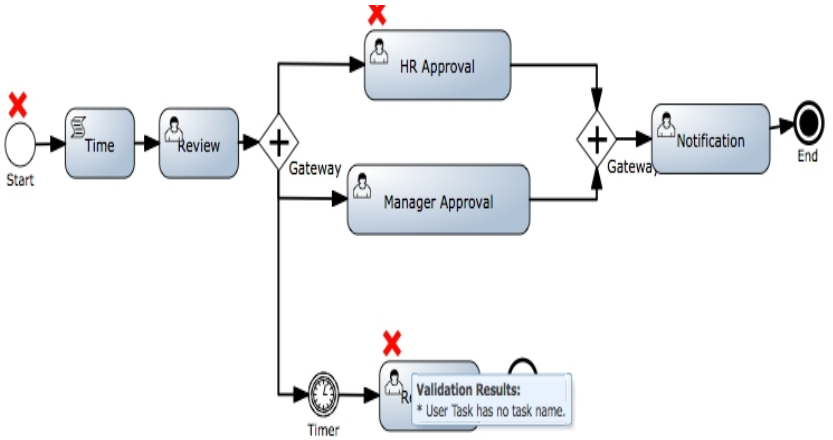


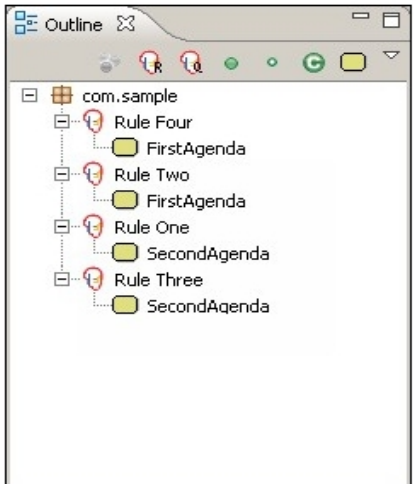
Decision table

	#	Description	Age < 35	BMW	Audi	Premium 1000
			Applicant [$a]	Vehicle [$v]		
			age [<35]	make [==BMW]	make [==Audi]	
	1		☑	☑	☑	☐
	2		☐	☑	☑	☐
	3		☑	☐	☑	☐
	4		☐	☐	☑	☐
	5		☑	☑	☐	☐
	6		☐	☑	☐	☐
	7		☑	☐	☐	☐
	8		☐	☐	☐	☐



Developer Friendly – IDE Based





Questions?