



pointing the way

# White Papers

jBPM

JBoss Business Process Management



## Introduction

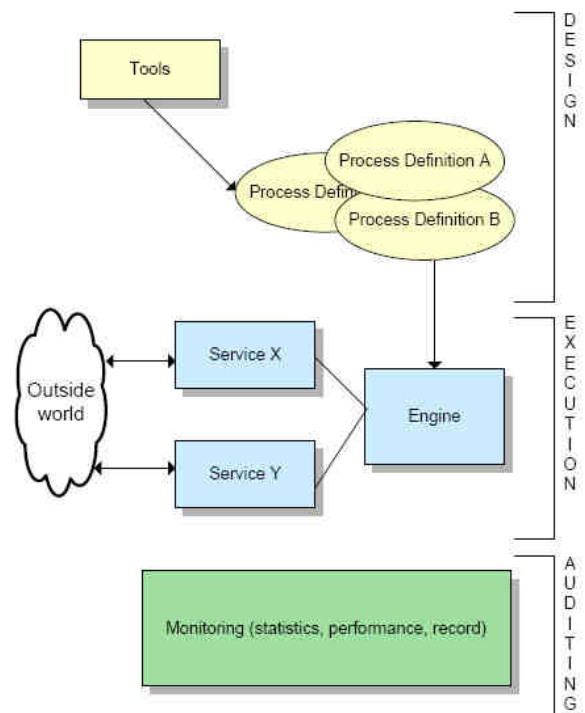
This paper describes jBPM, JBoss solution for business process management that can run on JBoss Application Server.

## Background

Business Process Management offers a programmatic structure for designing transactions and executing them using automated decision, tasks and sequence flows.

BPM systems require participation of two responsibility levels: business and technical. Business level must prepare a formal procedures description that sometimes is difficult and inefficient. Technical level translates business into executable functions.

Hopefully, this process allows avoiding the error prone during transformation from business to given implementation. In the past, BPM implementations disappointed with technical result of defined workflows because they introduced more technical issues than they solved. By today's BPMs we could expect much more.



**Three practices of BPM: design, execution and auditing.**



BPM has three distinct practices:

- ✓ Process design: designing existing and new processes,
- ✓ Process execution: execution of event involving software processes and human activities,
- ✓ Process monitoring: auditing processes that can be recorder, reported and optimized.

First step is to design a workflow or a business process that can be supported using tools like visual process editor. In execution phase main role plays an engine that uses process definitions and services (to communicate with outside world). Engine executes and manages states of workflows/business processes.

## Solution

jBPM was created to let software engineers to share the same concepts and frameworks as business analysts. It provides a graphical modelling tool and domain-specified language to accomplish this goal. JBoss jBPM brings a embedded workflow and enterprise business process automation. Its process execution engine integrates with service oriented architecture and automates workflows in Java and Web applications to reduce business process error and enhance business performance. jBPM can be used in the simplest environments or scale to clustered J2EE application environments. JBoss jBPM focused on providing more accessible, open source and easier to apply BPM system and believe that establishing a community will push BPM's standard forward.

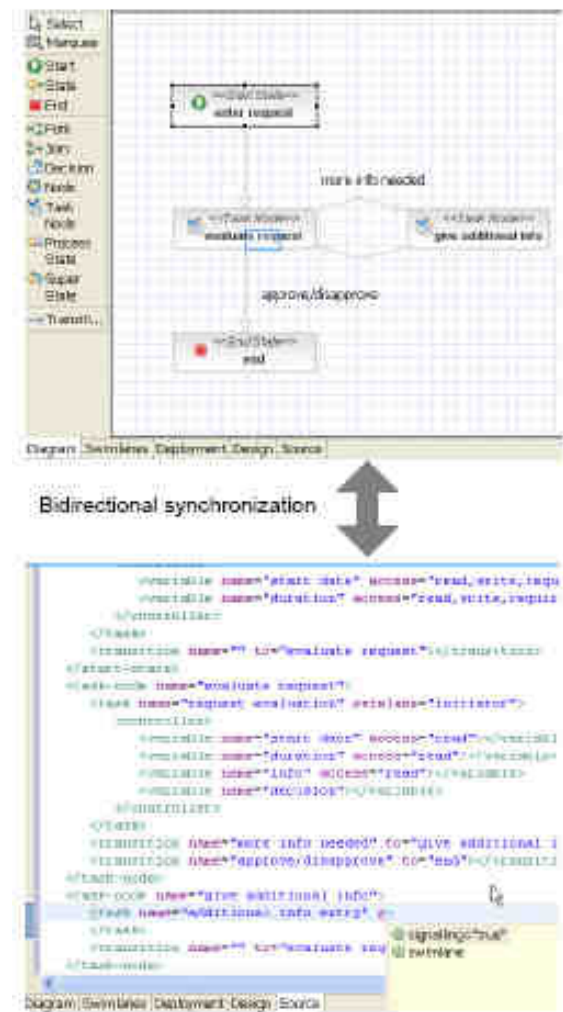
## When to use jBPM

BPM system requires business processes implementation but they offer greater flexibility then in typical enterprise application. BPM solves a problem with integration of enterprise applications. Sometimes it is extremely difficult to find and expose business logic in traditional enterprise application that can lead to delays and unplanned costs. Implemented BPM system in your company will ease combining business processes and workflows between two systems by process

definition separation and common process definition language.

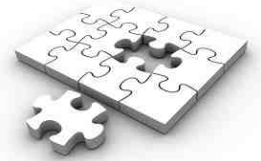
## Process Definition Tool

Visual process definition tool is easy to use even by non technical user. It is possible to “drag & drop” elements or write an XML file. The approach does not matter because there is bidirectional synchronization between visual design and file configuration.



## Three practices of BPM: design, execution and auditing.

Other BPM solutions are expensive, required investment of time and training without guarantee of success. Comparing to JBoss solution, single



developer can introduce himself to jBPM even within half day.

## jBPM Features

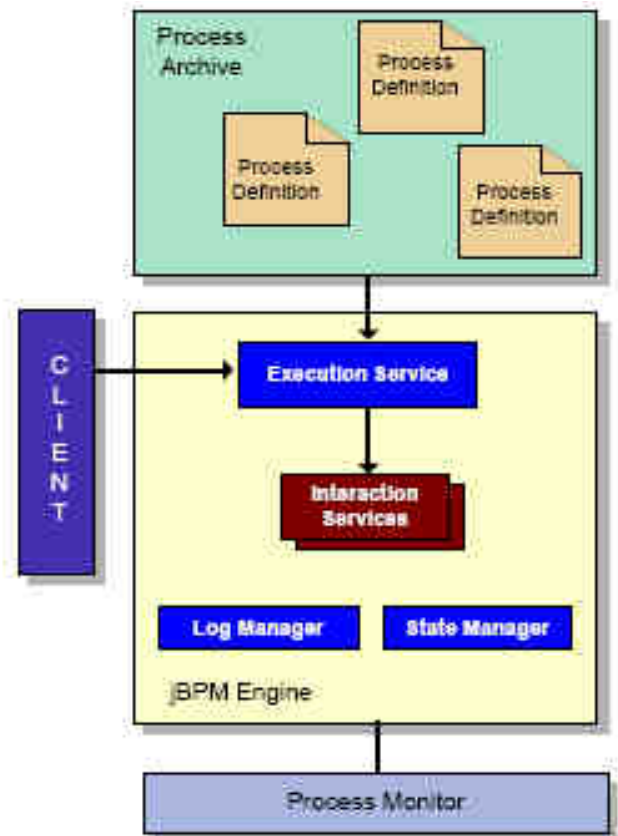
- ✓ Unifying the definition, execution and administration of workflow processes with centralized platform to manage interactions with users and systems.
- ✓ Flexible and scalable process engine (supporting multiple-process languages using the same, scalable engine).
- ✓ Pluggable architecture (extensible and customizable architecture).
- ✓ Integration with JBoss Seam (for simplifying and unifying the EJB and JSF component models).
- ✓ Easy programming model (jPDL that blends Java and declarative programming techniques).
- ✓ Modular and can run with JBoss Enterprise Middleware or other Java EE middleware platform.

## jPDL

JBoss Process Definition Language is based on a model of nodes, transactions and actions. jPDL specifies an xml schema and mechanism to package all process definition related files. Process archive created from process definition files contains a process definition graph, information about actions and tasks. Archive is passed to process engine for execution.

## jBPM Architecture

Process definitions are stored in files in process archive. On client request process engine executes defined process actions, maintains process state, and logs all process events. Process monitor tracks, audits, and reports the state of processes as they execute. Interaction services expose application functions or data to be used in process executions.



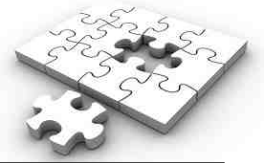
## Conclusion

JBoss jBPM provides an open source platform for designing and developing workflows and business process management systems. It gives a tool to graphical processes modeling that can be used even by business analysts. jBPM facilitates more agile implementation of business processes which are described in a common dialect for developers and business people. Unique process-oriented programming model merges the best of Java and declarative programming techniques in order to create an easy to understand process graphs. JBoss solution for business processes can be quickly evaluated by single developer to see jBPM benefits. That makes jBPM solution worth to get know.

## Links

JBoss jBPM Home Page

<http://www.jboss.com/products/jbpm>



jBPM White Paper

[http://www.jboss.com/pdf/jbpm\\_whitepaper.pdf](http://www.jboss.com/pdf/jbpm_whitepaper.pdf)

JBoss jBPM Graphical Process Designer

<http://docs.jboss.org/jbpm/v3/gpd/>

Manage Your Business Processes with JBoss

jBPM

<http://www.javaworld.com/javaworld/jw-05-2006/jw-0522-jbpm.html>