Getting Started with jBPM

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CONFIDENTIAL Designator

About the Presenter

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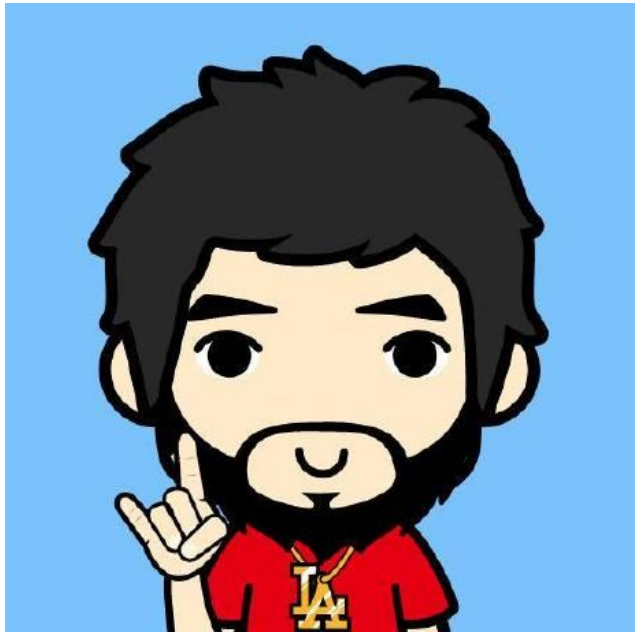

- Banco de Dados @ FATEC São José dos Campos 2010
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Schedule

- About the tool
- Execution Engine (Kie Server)
- Authoring and Process Management with Business Central
- jBPM Installation
- Exploration

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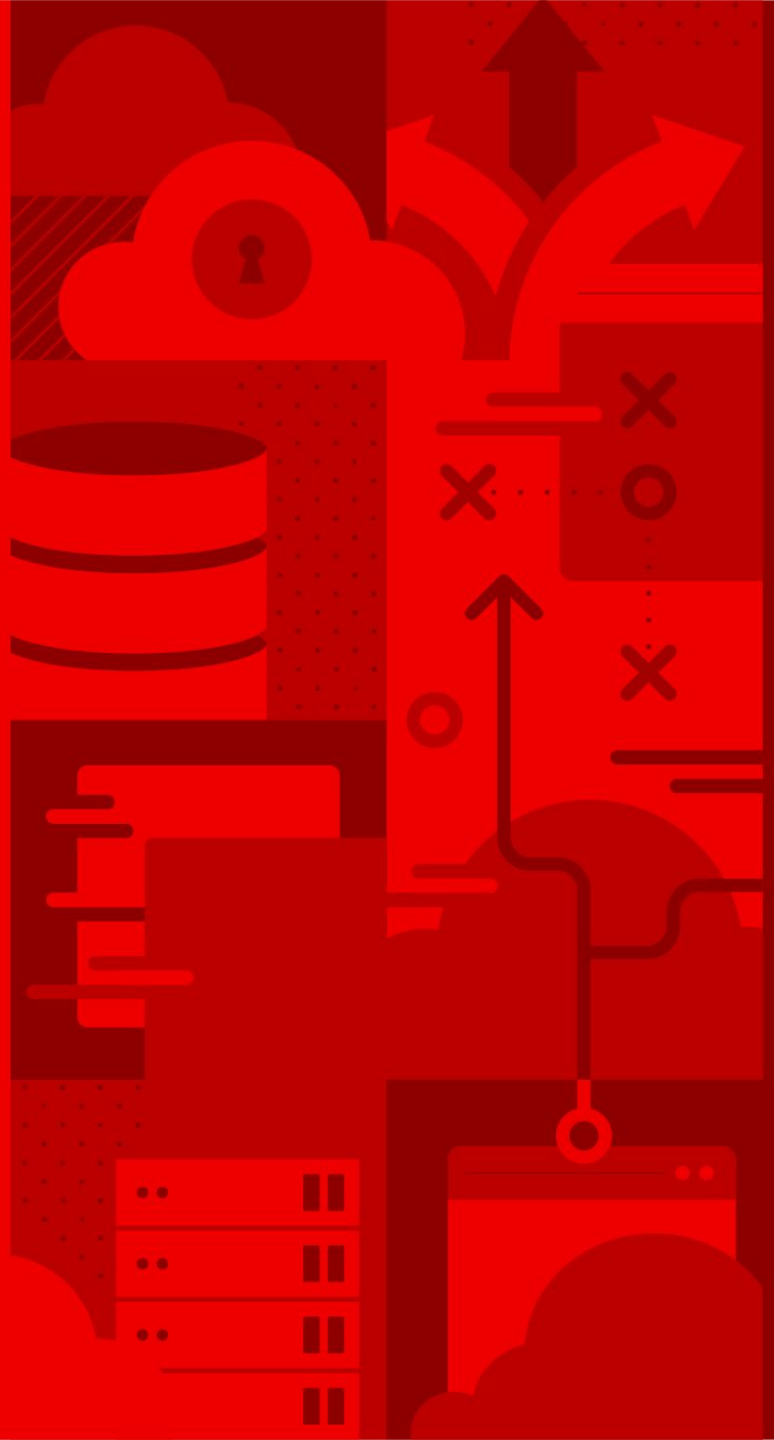

About jBPM

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About jBPM

jBPM is a toolkit for building business applications to help automate business processes and decisions.

jBPM is one of the projects under the KIE umbrella, along with *Drools*, *OptaPlanner* and *Kogito*.

jbpm.org

What you can do with jBPM

You can currently **author**, **execute** and **manage** and **monitor**:

- Business Processes (BPMN2)
- Case Management (BPMN2 and CMMN)
- Decision Management (DMN)
- Business Rules (DRL)
- Business Optimization (Solver)

Running jBPM

Business applications can mainly be planned in **two** ways:

- **Embedded** in Java applications using jBPM libraries:
  - E.g. Create a spring-based business app in: start.jbpm.org

- **Decoupled**, by installing the business app in the Execution Engine (Kie Server)

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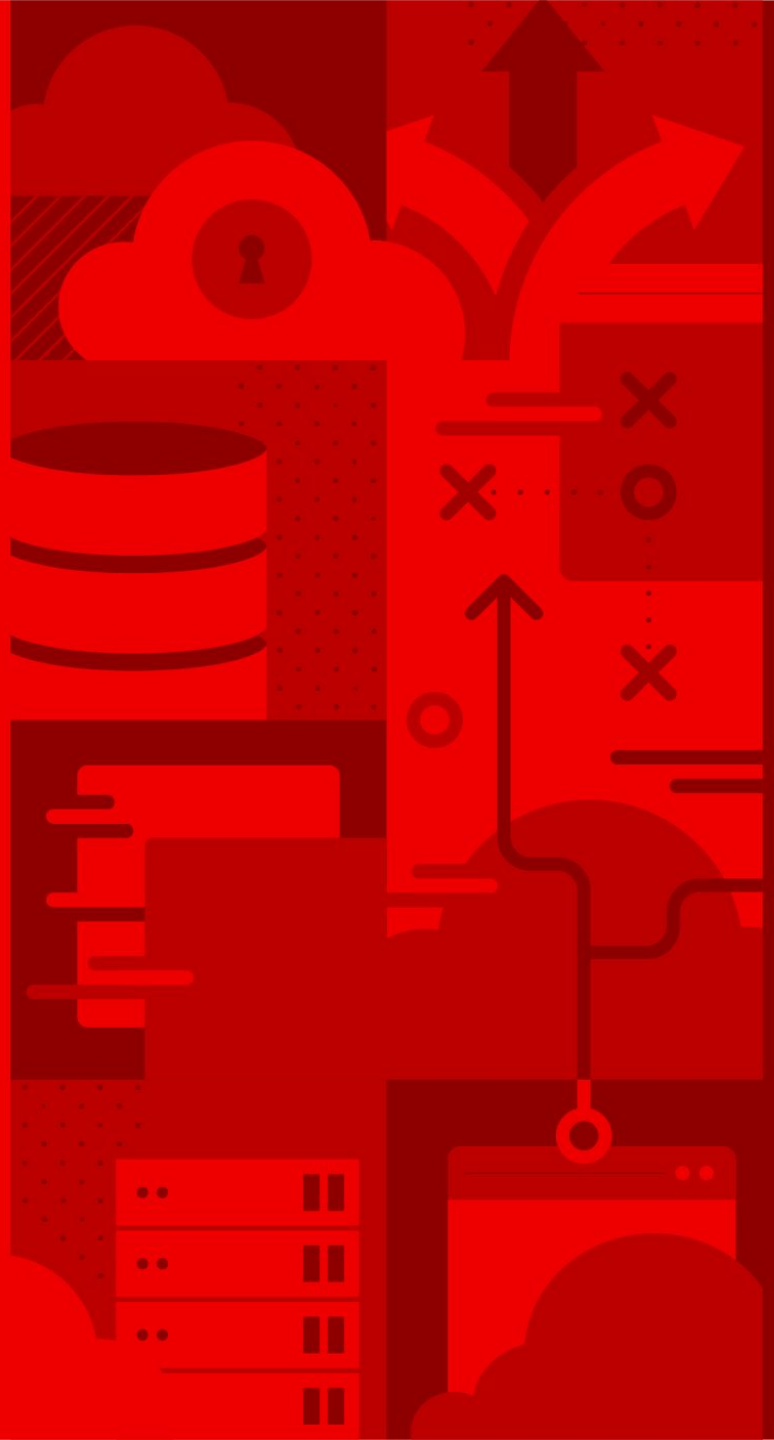

Kie Server

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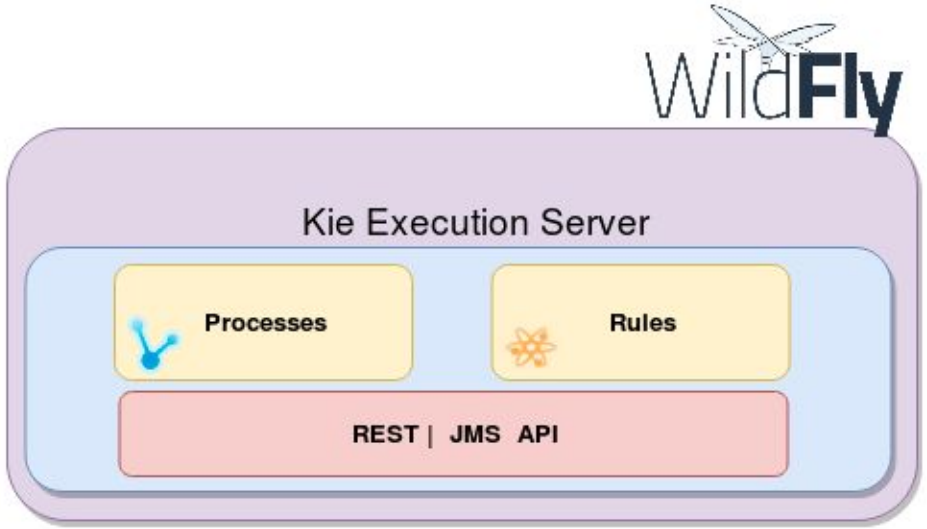
Kie Server

Kie Server is a Java web application aimed to run Business Process and Business Rules. It runs on Java application servers and expose business processes and rules using REST and JMS.



More at: https://karinavarela.me/2020/05/13/know-kie-server-let-the-engine-work-for-you/

Installing projects on Kie Server

- The data objects and all other business assets are packaged in special JARs called **KJARs** (Knowledge JAR)
- Once deployed, KJARs are exposed as **Kie Containers**
- Client applications can use REST or JMS APIs to interact with Kie Server (e.g. manage business processes, run business rules)

More at: https://karinavarela.me/2020/05/05/key-concepts-of-jbpm/

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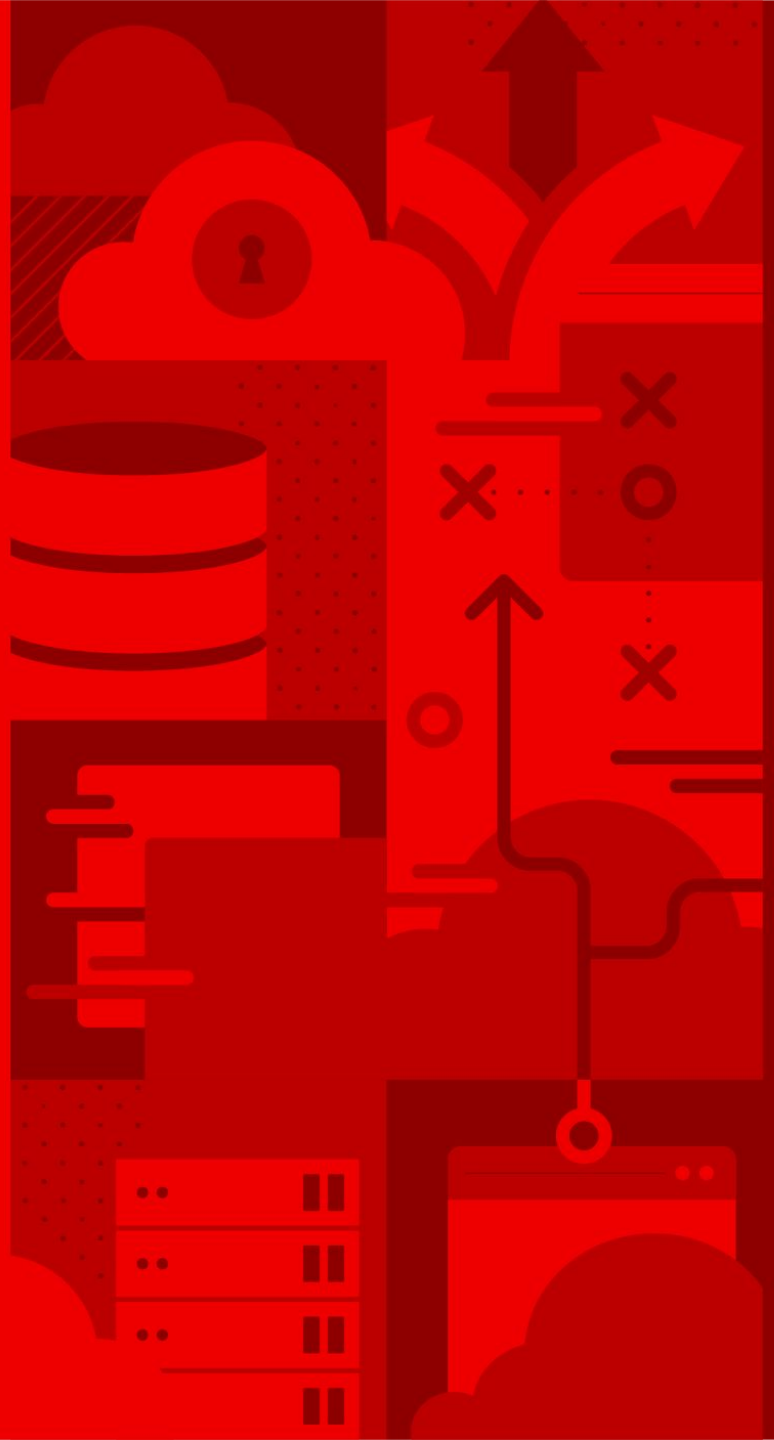
Execution Modes

Kie Server can run in two modes:

- **Unmanaged**: Clients connect direct to Kie Server to manage containers
- **Managed**: Kie Server connects to a controller application using an open API.
  - **Business Central**, available out-of-the-box, can be used as a controller;
  - You can also develop custom controllers if you will.



Business Central

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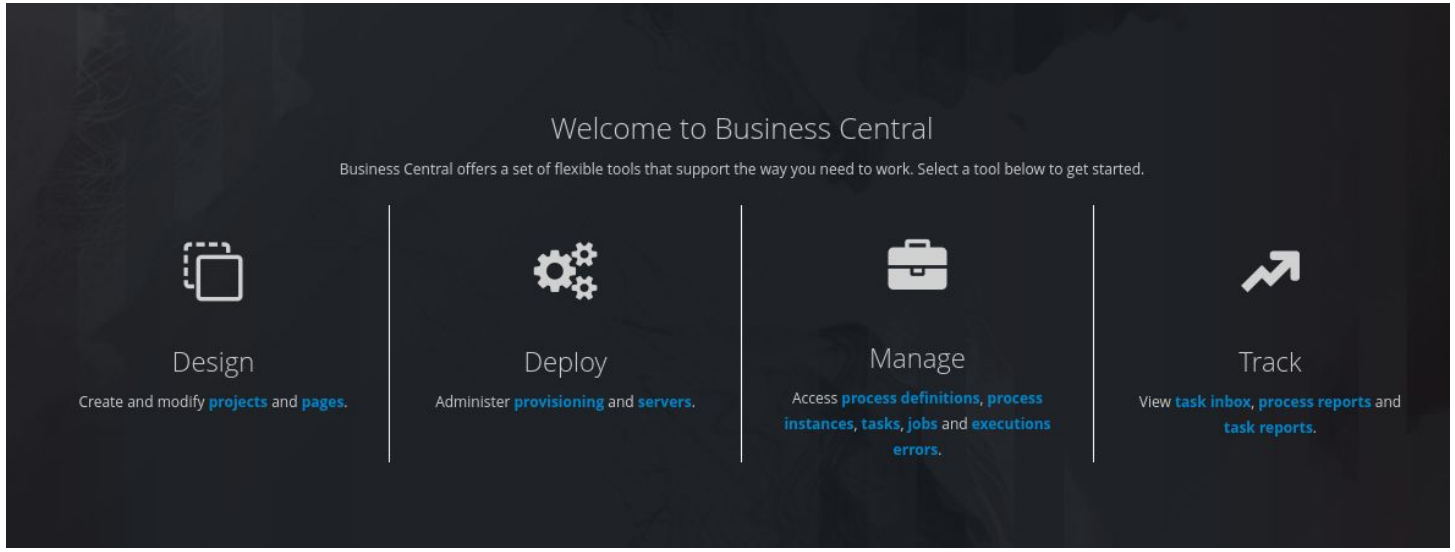
Business Central

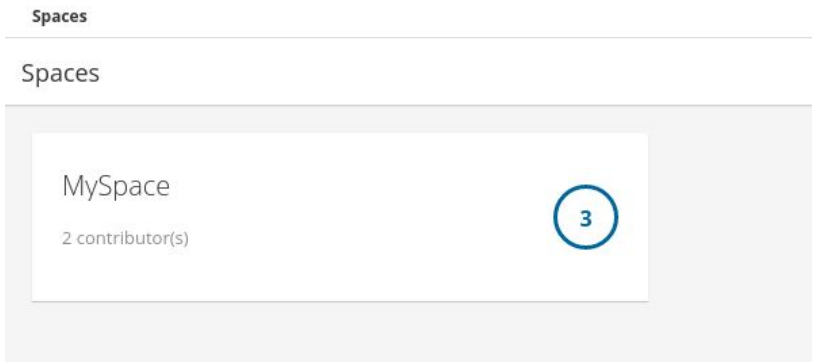
Business Central (BC) is an **authoring** environment to create projects that contains business assets and **manage** and **monitor** business processes running in Kie Server.

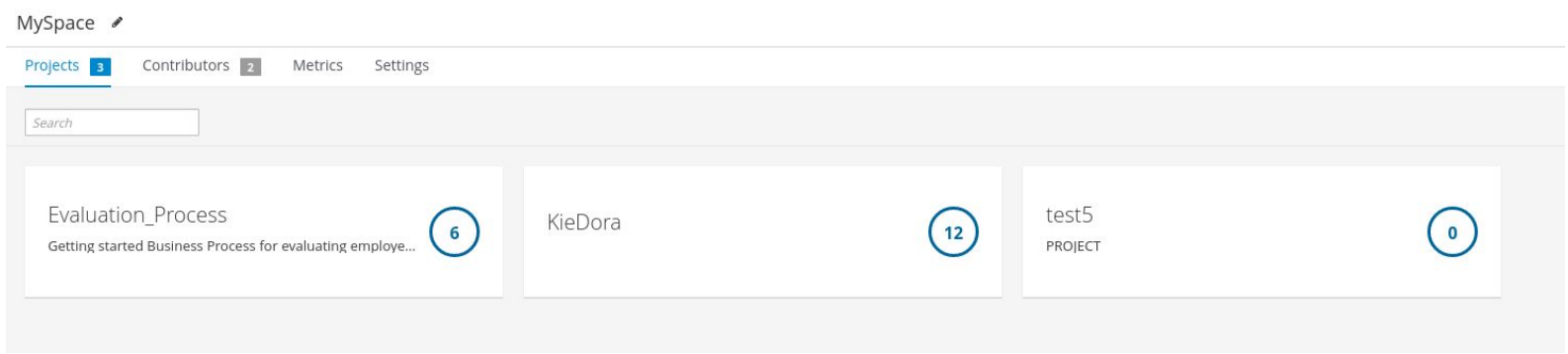


More at: https://karinavarela.me/2020/05/13/business-central-authoring-business-monitoring-and-more/

Space and Projects

A **Space** is a group of projects. Each **project** is versioned in a git repository.





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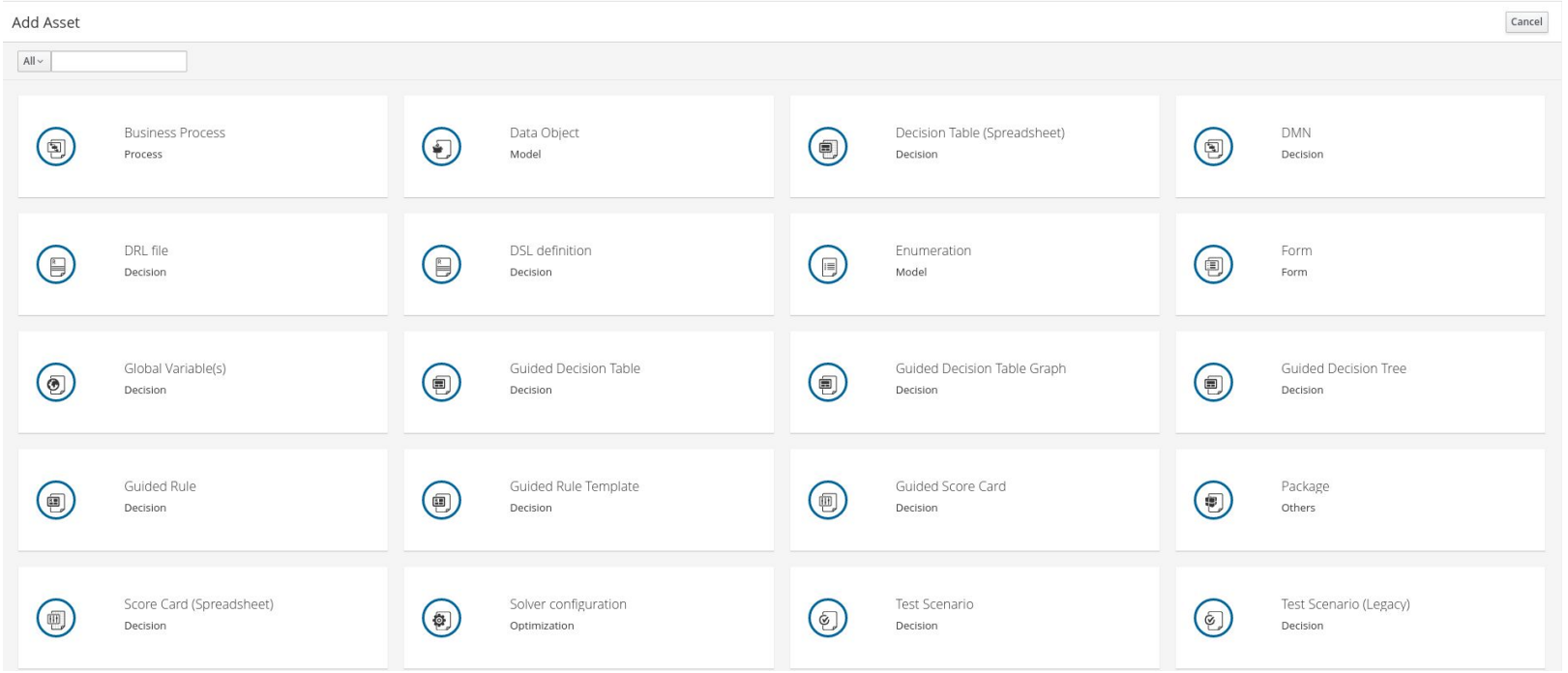
Project assets

A BC project is a maven project that contains several types of assets.
When packaged, it becomes a KJAR that can run on Kie Server.



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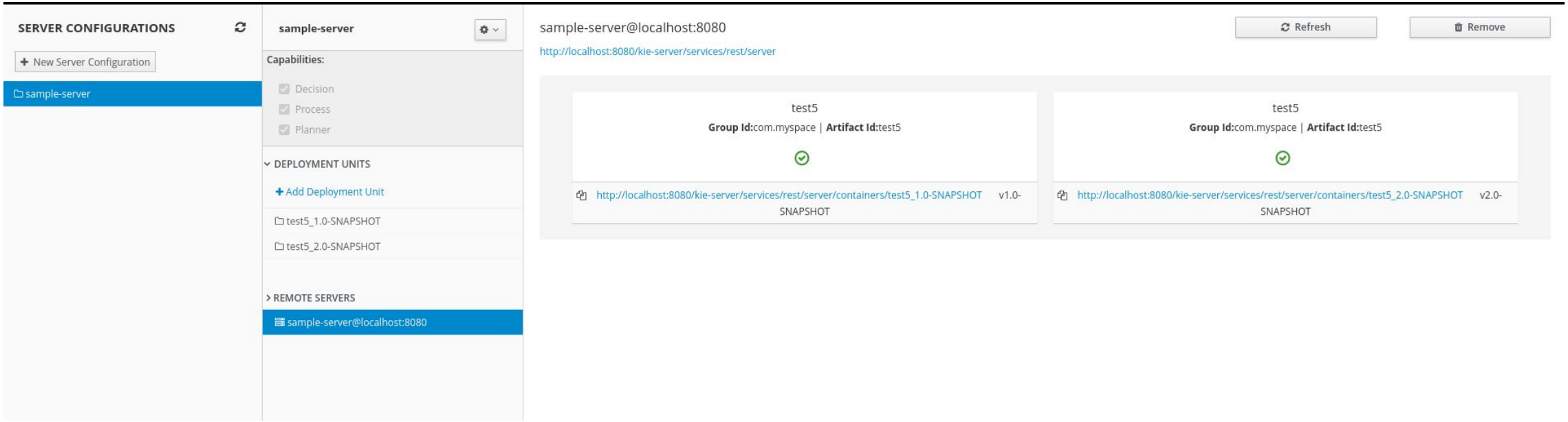
Kie Server Controller

BC can connect to Kie Server and be used as a controller.

In other words, from BC we can deploy our projects to connected Kie Servers.



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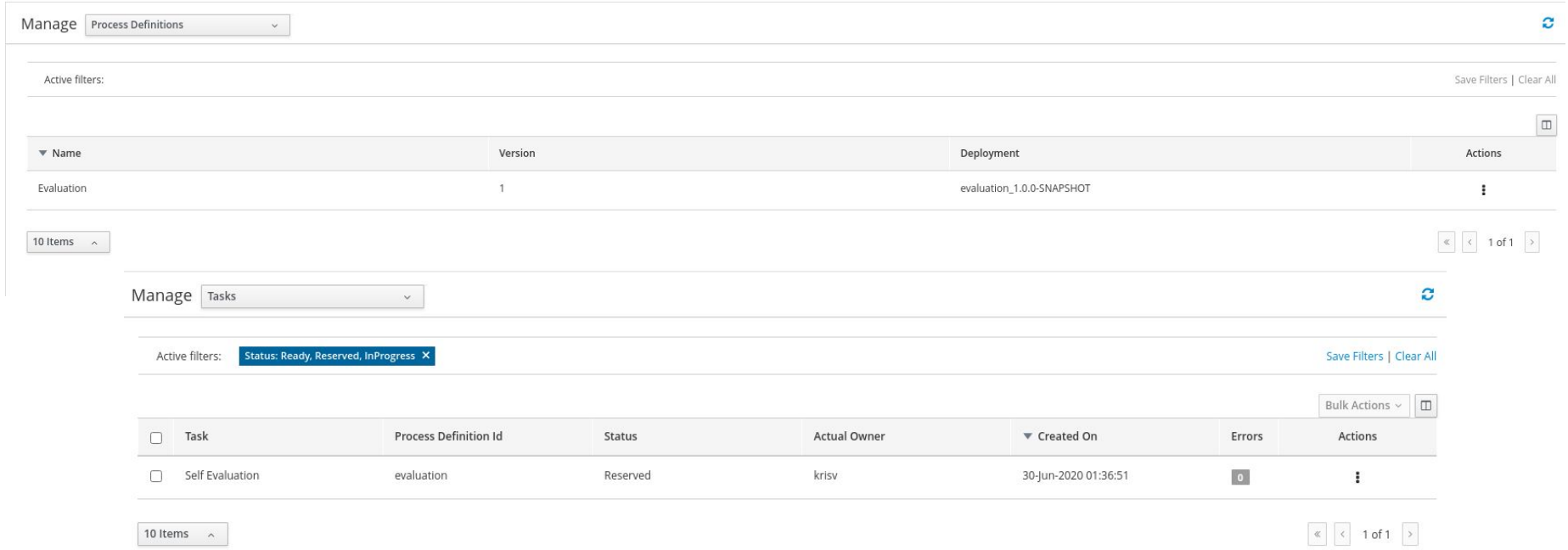
Managing Business Process

BC provides an UI to interact with processes running on Kie Server



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Monitoring Business Process Execution

Instance Details | Process Variables | Documents | Logs | Diagram

Node Actions

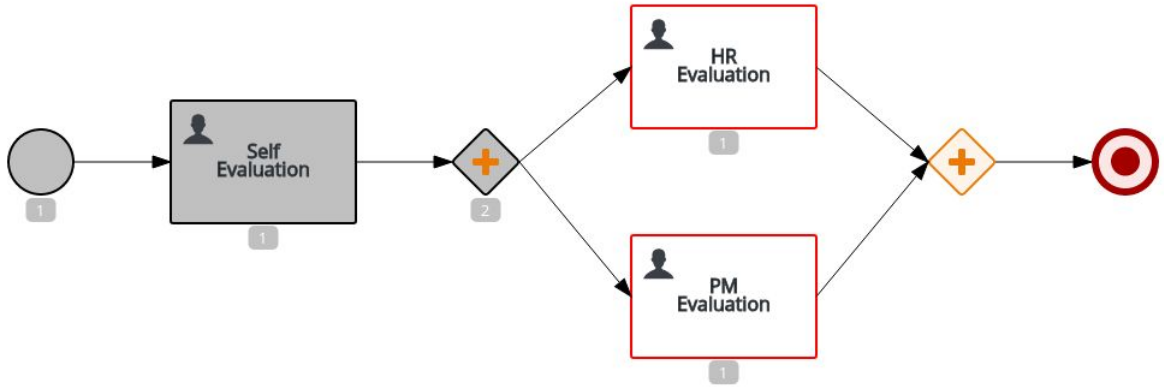
Nothing selected

Node Instances 6

Process Diagram

- 100% +

Show instance badges



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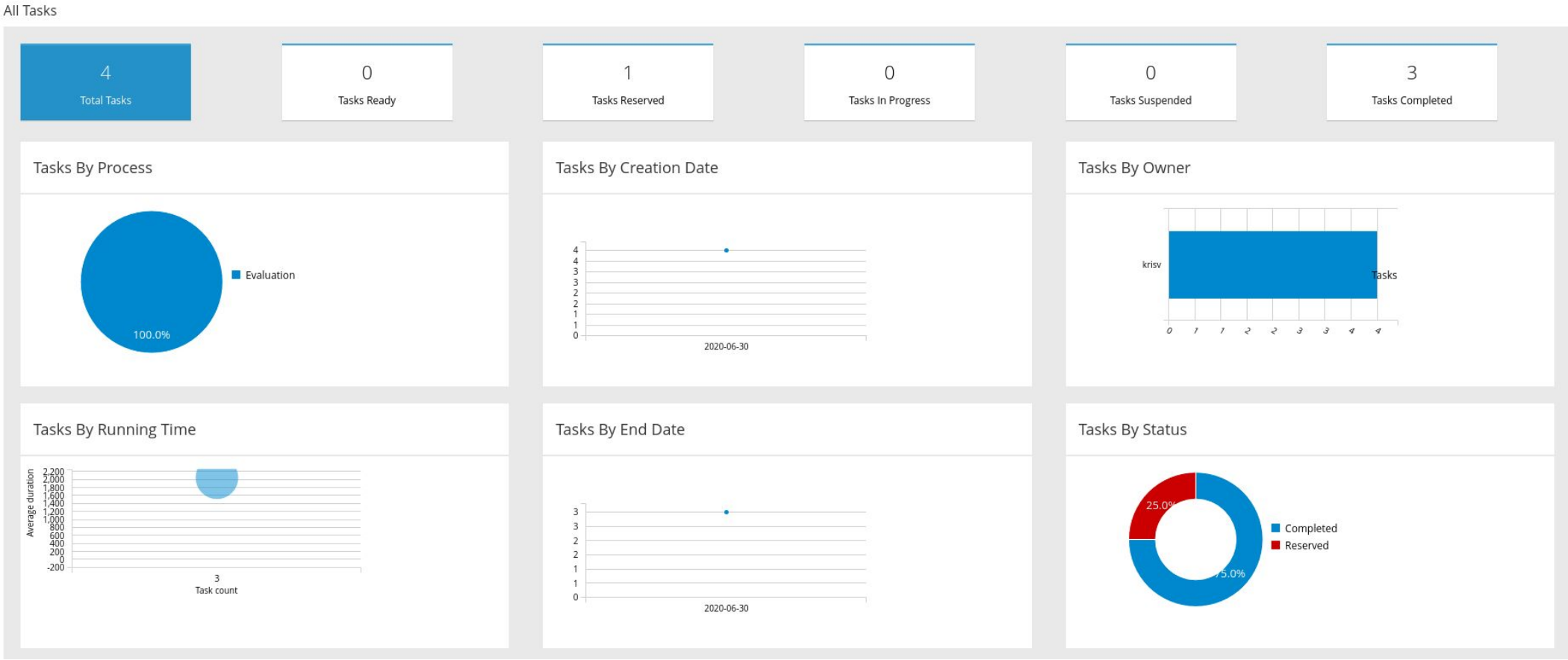
Monitoring Business Process Execution



More at: https://karinavarela.me/2020/05/01/critical-decision-making-kpi/

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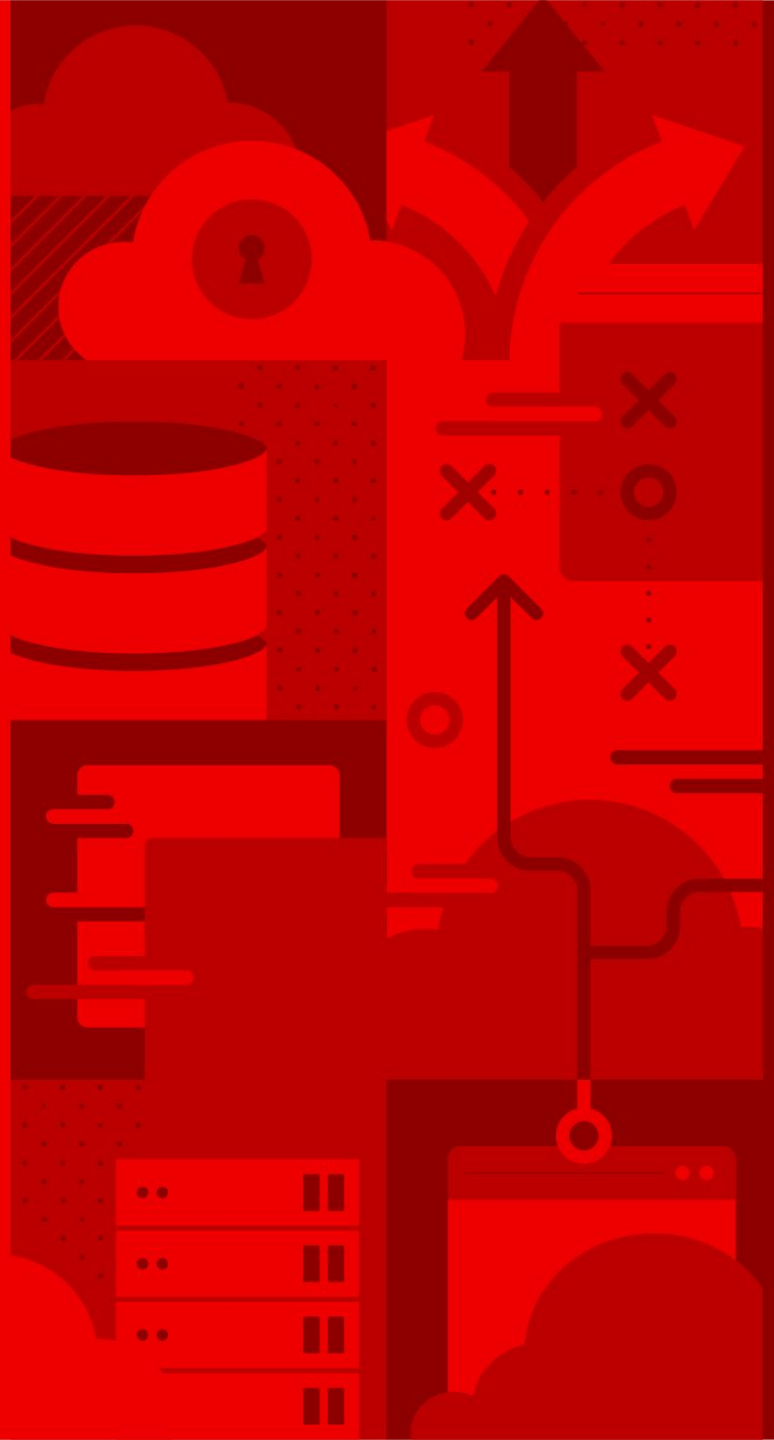

jBPM Installation

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jBPM Installation

Different ways to install and run jBPM:

- Individually install and configure components (bc, kie server)
- Pre-configured bundle (jbpm-dist). Go to ***jbpm.org*** and click on

- Community Docker image

```
docker run -p 8080:8080 -p 8001:8001 -d --name jbpm-server-full jboss/jbpm-server-full:latest
```


More at: https://karinavarela.me/2020/05/04/getting-started-with-jbpm/

Running jBPM Bundle

The jBPM bundle is pre-configured and you can easily run it to try jBPM:

- Java JDK 8 or 11 is a requirement
- Download the zip file at http://jbpm.org - Unzip it!
- Run the script `standalone.sh` or `standalone.bat` which is in `${ROOT_FOLDER}/bin/`
- Wait for the server to boot. A log like this should be displayed:
  `"WFLYSRV0025: WildFly Full 19.1.0.Final (WildFly Core 11.1.1.Final) started in XXXXXms"`
- Go to http://localhost:8080/business-central and login as one of pre-configured users (e.g. *krisv/krisv*)

More at: https://karinavarela.me/2020/05/04/getting-started-with-jbpm/

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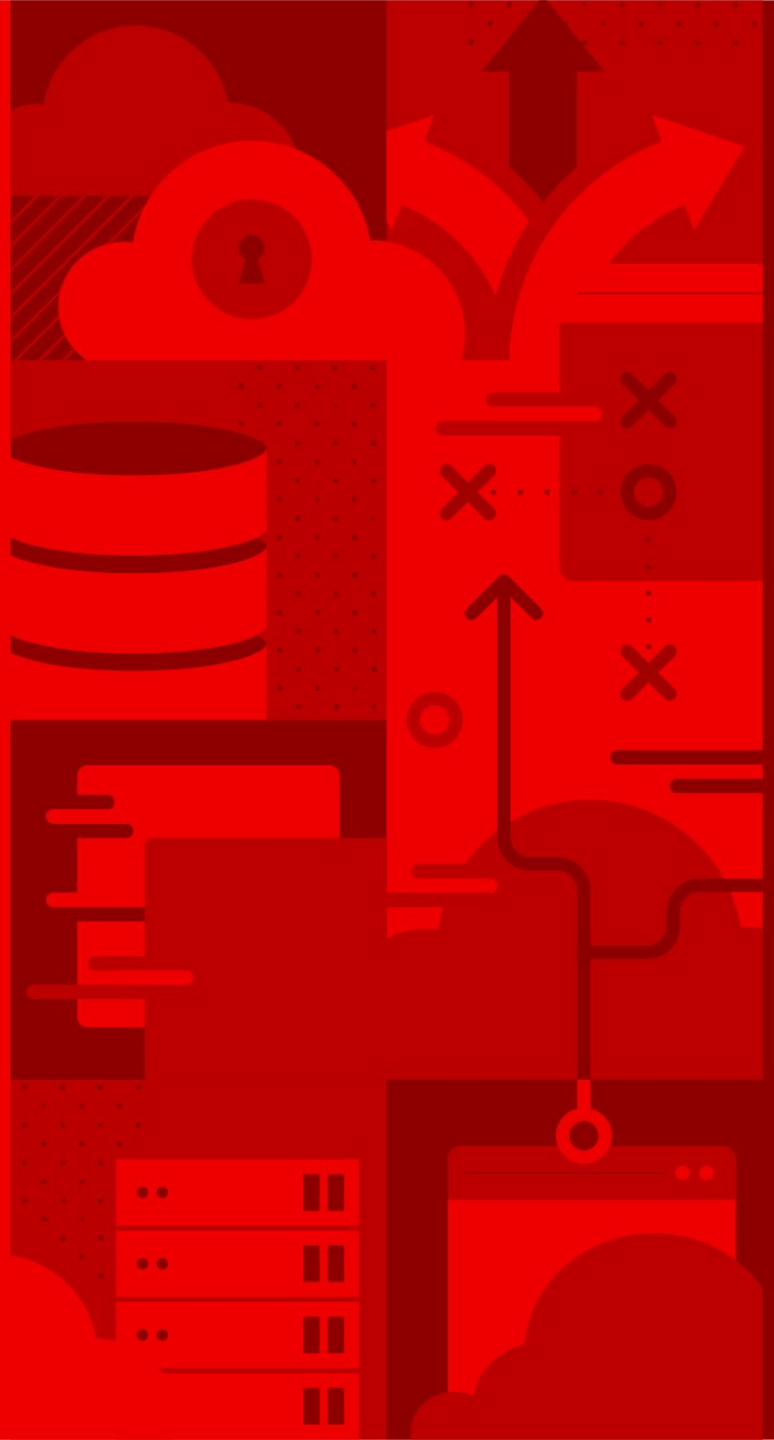

Exploring jBPM

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Thank You!

See more

- ★ **kogito.kie.org**
- ★ **kie.org**
- ★ **jbpm.org**

linkedin.com/showcase/red-hat-developer

youtube - bit.ly/2YRIWTk

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