



Introducing Honeycomb

An Open Source Release Automation
Solution for Be Informed



Introducing Honeycomb: An Open Source Release Automation Solution for Be Informed

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Summary

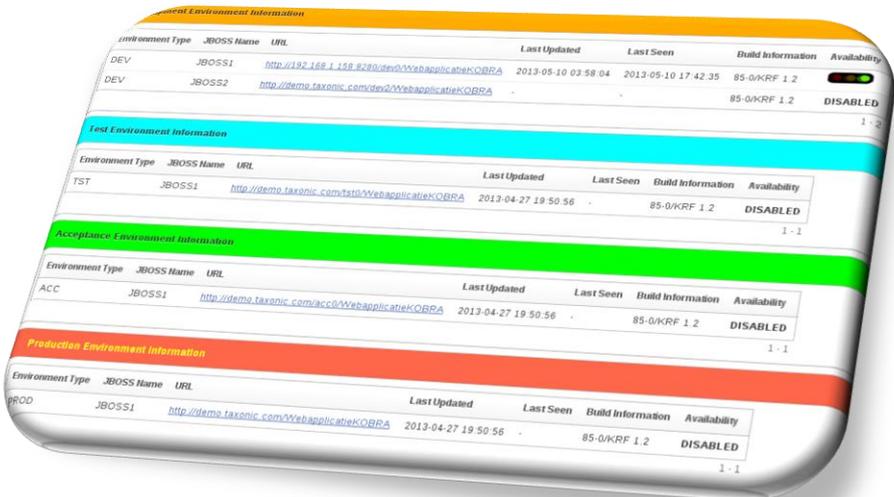
Everyone can sense the pressure during project execution. All the more so when it is a complex project which has to deliver on many levels. Many consecutive or even parallel sprints and increments result in a sequence of intermediate releases and installations. The majority of the activities involved in the release and deployment process require coordinative support for all the disciplines to get the job done. The Honeycomb Deployment Process Manager (or Honeycomb for short) provides the tools to achieve this. It provides simplicity and process consistency.

Manual execution of the activities leading to a deployment can be time-consuming, complex and prone to errors. Honeycomb is a web based application suite which enables project members — modelers, testers, application administrators, and so on — to cooperate seamlessly. Honeycomb offers the following functions:

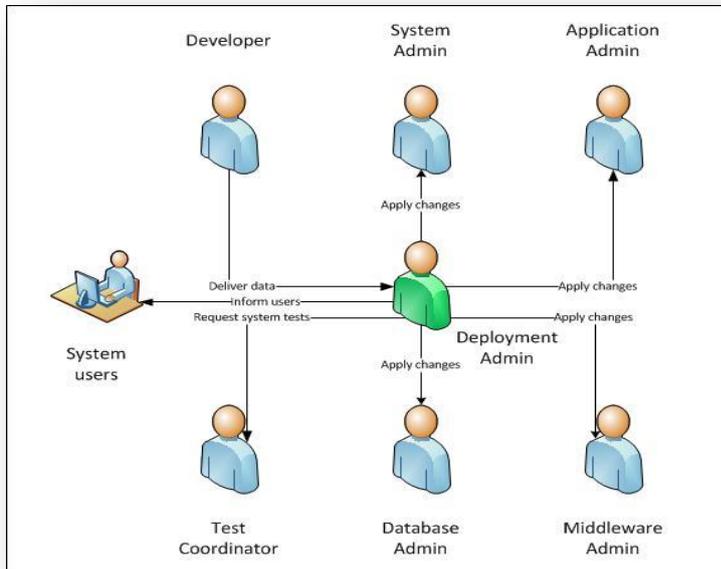
- Automatically deploy Be Informed projects
- On-demand micro & macro Be Informed deployments
- Functional Release & Build information
- Detailed DTAP environment information

Honeycomb’s ergonomic web interface allows you to manage the consistency in the technical layers of even the largest Be Informed environments, with many people involved, throughout the entire life-cycle of the project.

Honeycomb manages end-to-end processing, from compiling the build to starting up the changed environment and informing the project members of the updated environment.



Managing the deployment process



A Be Informed deployment contains configuration items of many different types: BIXML-files containing models, configuration files, static items, database scripts, data sources, binaries, WARs, JARs, EARs and so on.

During the execution of a Be Informed deployment process, complex dependencies arise. Many different people have to be stand-by: DBA, system administrators, technical administrators and even

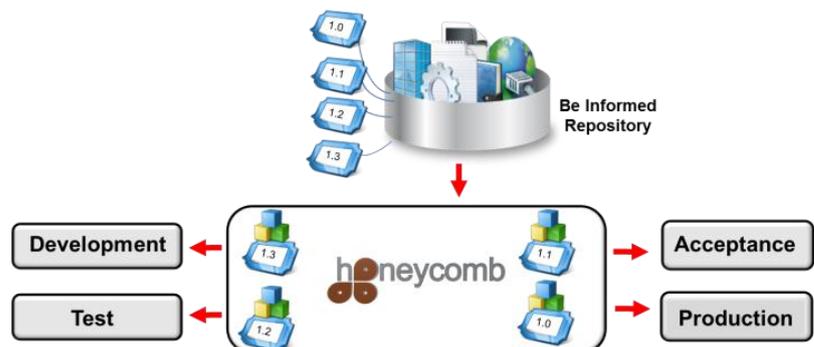
modelers and developers may be required to intervene when something unexpected occurs. Due to the separation of roles and responsibilities, everyone only has a partial understanding of the situation.

With Honeycomb, this partial understanding is turned into one holistic overview that combines information from all the different contributors. It provides different kinds of management reporting so that every question can be answered right away. Honeycomb can be configured to apply changes in all required areas, and execute predefined pre- and post-commands.

Integrating Be Informed in the environment

Honeycomb integrates seamlessly with Team Repository — the Be Informed repository and versioning tool for artifacts created in Studio — and is 100% compatible with both Be Informed 3.x and Be Informed 4.x.

Based on this integration, Honeycomb combines detailed information from Team Repository with detailed information about the structure of the DTAP-environment: databases, identity providers, SSO-solutions, and so on. It monitors which variant of which version of which



component runs in which part of the environment, on-site and off-site. It makes sure the correct business rules are executed out whenever a change is made.

Build comparing

Honeycomb enables you to compare builds and to understand the differences between them. Once changes are understood, it is easy to solve problems whenever they arise. Patches can be created and managed.

Script & config file repository

Honeycomb has its own script & config file repository. It uses the interpreters and shells available on the destination systems where the scripts are run (MS Windows command prompt, bash, sh), so there is no need to learn new scripting languages.

The screenshot displays the Honeycomb web interface for configuring a deployment profile. At the top, there is a 'Instances' section with a 'Delete' button and a 'Create' button. Below this is a 'Select Instance' dropdown menu currently set to 'logical, JBOSS1, DEV, 85-0/KRF 1.2'. The main content area is divided into two columns. The left column, titled 'Deployment Profile (Files)', contains a table with the following data:

Config File	File name	File Location	Install Sequence	Select Item
Edit KRF login-config.xml	login-config.xml	\${JBOSS_HOME}/server/\${INSTANCE_NAME}/conf	1	<input type="checkbox"/>
Edit KRF server.properties	server.properties	\${JBOSS_HOME}/server/\${INSTANCE_NAME}	2	<input type="checkbox"/>
Edit KRF web.xml	web.xml	\${JBOSS_HOME}/server/\${INSTANCE_NAME}/deploy/\${WEBAPP_WAR_NAME}/WEB-INF	3	<input type="checkbox"/>
Edit BeInformed jboss-web.xml	jboss-web.xml	\${JBOSS_HOME}/server/\${INSTANCE_NAME}/deploy/\${WEBAPP_WAR_NAME}/WEB-INF	4	<input type="checkbox"/>

Below the table is a 'Download' link and a page indicator '1 · 4'. The right column contains two sections: 'Pre-Commands' and 'Post-Commands'. The 'Pre-Commands' section has a table with one entry:

Config File	File name	Install Sequence	Select Item
Stop JBoss	stop_\${INSTANCE_NAME}	0	<input type="checkbox"/>

Below this table is a 'Download' link and a page indicator '1 · 1'. The 'Post-Commands' section has a table with one entry:

Config File	File name	Install Sequence	Select Item
Start JBoss	start_\${INSTANCE_NAME}	99	<input type="checkbox"/>

Below this table is a 'Download' link and a page indicator '1 · 1'.

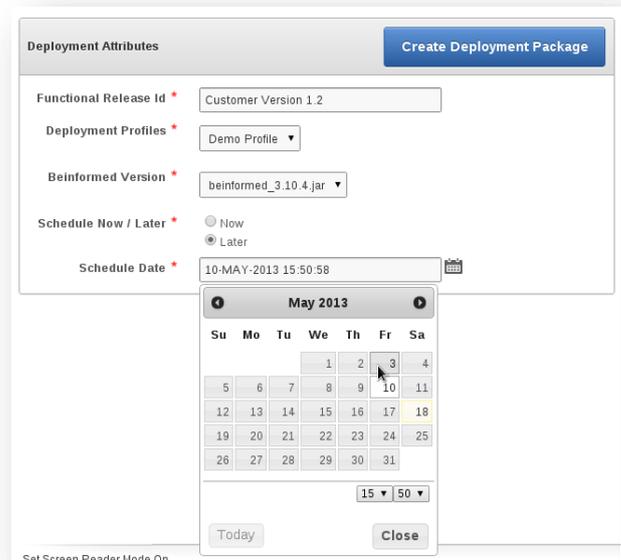
The script repository is used to make scripts available for one or more environments and execute it for these. For instance, a "start application server" script can often be reused across environments.

Configuration files can be added freely, like "server-properties.xml", "login-config.xml", and so on. Also, Honeycomb has its own variable substitution system, which will assign all variables using an intuitive inheritance scheme. Each variable can be set at the environment level, the instance level, or both where the most restrictive variable assignment is done by the combination of environment and instance.

Scheduling

Honeycomb allows its users to schedule build creation, patch creation, and even the eventual deployment on a selected environment.

The schedule "create build" allows one to plan a "build" at a future point in time, to make it available to others. When the task is executed, it will create the build automatically and make it available for deployment in other environments.



Monitoring and signaling

Last Seen	Build Information	Availability
2013-05-10 17:42:35	85-0/KRF 1.2	
-	85-0/KRF 1.2	DISABLED

Honeycomb automatically monitors all environments and provides detailed reports on their availability.

Once can choose to disable monitoring of an environment by disabling the monitoring for that specific instance.

Should an environment unexpectedly be unavailable, Honeycomb can be configured to send an alarm signal automatically.

Application architecture

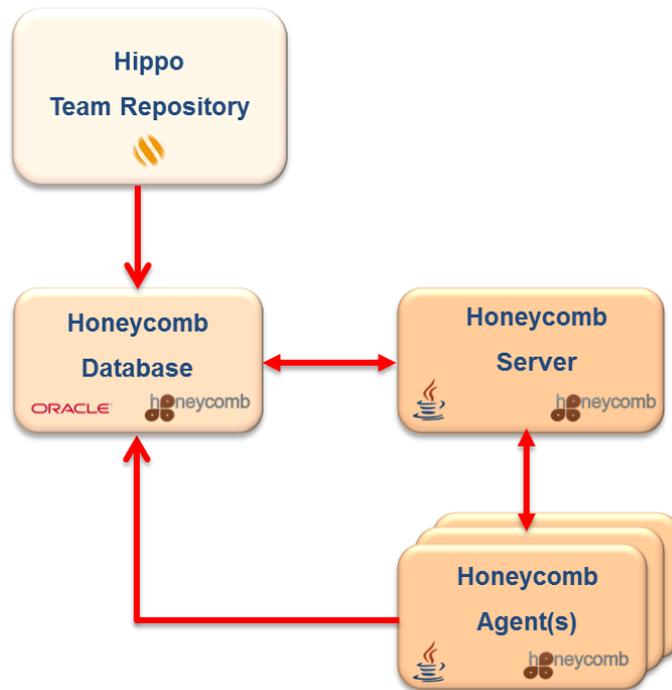
Honeycomb is architected using the following components:

- Honeycomb Database
- Honeycomb Server
- Honeycomb Agent

The Honeycomb database is based on the Oracle XE Edition, which is free to use and distribute.

The Honeycomb Server is a Java based server. It listens for events generated by Java agents using RMI.

The Honeycomb Agent is a remote client connecting to the server. It uses two way communication when applying changes to the system.



Open Source

Honeycomb is the result of years of experience and lessons-learned in large Be Informed implementation projects. Now, Taxonic shares this tool-set with the world, free of charge, through the Open Source licensing model. Among the benefits this offers to your organization are the following:

- Fully customizable, when necessary even at the source code level
- Openness and transparency
- No licensing costs

What the CTO says:

“The Honeycomb Deployment Process Manager is a valuable Open Source tool. I highly recommend using tools like these in large-scale Be Informed projects for managing the release and deployment process.”

—Jan Verbeek, CTO at Be Informed



About Taxonic

Taxonic is thought-leader in the application of semantic technologies in business processes. Focusing on dynamic case management, semantic search and linked data, we help organizations to become a master of adaptivity. Our expertise includes the entire spectrum from structuring knowledge models to architecting the technical infrastructure.

About the authors



As CTO, Reza is responsible for technology strategy which includes information and operations technologies. He is also responsible for development, design, improvement and delivery of products and projects within Taxonic. Reza has over 25 years IT experience and for the past 16 years he worked as an Enterprise Solution Architect at Logica.



As Information Systems Engineer at Taxonic, Waqaar Beg is responsible for the technical implementation of information & taxonomic systems. After completing his higher education, he worked several years nationally and internationally in all the segments of IT. Before starting at Taxonic, Waqaar was a Database Administrator at CGI.

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