

1. *Business Rules Management System (BRMS)*

JBoss Drools

Draft 0.7 - 4th February 2008.

I'd appreciate any feedback that you may have on this document to brms-guide@firstpartners.net. Or check out the blog at <http://www.firstpartners.net.blog>.

And thanks to the Drools guys for a great piece of software: <http://labs.jboss.com/drools/>

Paul



1.1 What am I doing reading this?

If you are reading this, you probably have some sort of knowledge in your head. You might be in the Medical, Legal or Accountancy professions. You may be the only person in the company that understands how to process refunds to tractor dealers in the Chicago area. You may have the most experienced underwriter in the mortgage application department. Or you may be the person that they're most able to spare to talk to 'those guys in IT'. Perhaps you've taken part in one or more IT projects, or maybe this is your first one.

Whoever you are, you've got a problem. Maybe your group or team is too busy for the workload they have to do. Maybe you can't recruit enough people to work with you. Or maybe you can get the people, but it takes a long time and a lot of money to train them. Whatever the cause, there are not enough minds to go around, and costly or embarrassing mistakes are being made as a result.

You've probably already joked about being able to clone your key people. Wouldn't it be great to leave your clone working at the desk while you got some time on the beach. Or even while you got home on time. While JBoss Drools does not allow you to clone yourself, it does allow you to put your knowledge into a computer. Once there it can be copied, reviewed and keep on working after you go home.

Your second thought after hearing the 'put your knowledge into a computer' bit (after the relief) is probably 'if the computer knows what I know, will I be out of a job?'. Maybe. Or more likely you'll no longer do the routine 80% of your job that you hate – the rubbish that fills up your day. It means that you spend more of your time doing the 20% that you enjoy; talking to people, meeting customers, improving the process, planning your next golf (sorry business networking) trip –

whatever you find interesting.

This document is aimed at non-technical users, although it contains a lot of information that people that want to get under the covers of Drools will find useful. Don't worry though – if the entire extent of your PC skills is writing a couple of formula in Excel, then you're going to be ok.

1.2 What is a business rule?

You're going to be hearing a lot about 'business rules' over the next couple of pages, so it might be helpful to say clearly what it is. We use the term 'business rule' to show that the rule is non technical, so they could equally be called 'medical rules', 'financial rules', 'insurance rules', 'benefit payment rules' etc. It all depends on the organization you work for, and the particular niche that it finds itself in.

A business rule is any bit of knowledge that can be expressed in the following format:

- when 'something' is true, then do 'this'.

All companies and organisations already have business rules, even if they are implied (i.e. Unwritten) or buried (as code) in existing systems (e.g. the ones with black screens and green text). Examples of these rules may be:

- When football team wins a game, jump up and down and shout loudly
- When a staff member gets promoted give them a pay rise of 10%.
- When a person's salary is less than Eur 30,000, apply a tax rate of 20%
- When somebody leaves the office before 4pm, make sarcastic comment about 'taking a half-day vacation'.

Business rules themselves tend to be simple. Their power comes from the fact that there are many of them (tens, hundreds or even thousands). Just as you have many rules in your head (when you see a bear, run away) the trick is knowing when to apply them (what happens when you see a bear in the zoo?). Later we'll look at writing your rules clearly and testing them to ensure they do what you want.

Business rules should be written as clearly as possible (in English, or your human language of choice). While this makes your life easier when writing the rules, more importantly, it allows other people to review your rules in the future. Various estimates show that 95% of all effort on a system is in this 'review and update' phase, so clarity is one of the biggest gains of using rule engines.

What happens to my rules once I've written them (i.e. How do they get out into the real world?). That's one for the techie guys you work with to worry about (i.e. Outside the scope of this guide), but we'll give you enough information later so that you'll know what is going on.

1.3 So what is JBoss Drools and how can it help?

Your boss, somebody from the IT department or a consultant has mentioned JBoss Drools as part of the solution. After a good laugh at the name (it's a long story) you want to find out more. We'll answer this question in 2 parts: Who are JBoss, and what is the Drools team.

JBoss is a division of Red Hat ([NYSE:RHT](#)). What this means is Drools is backed by an industry leading company. And support from that company is available should you need it.

Even better, a key part of JBoss and Drools is Open Source. To put this in quality terms, both the JBoss and Drools teams are confident enough about their product to let you poke around inside – it's a bit like getting a tour of the Mercedes car factory. It also shows the confidence the team have in the quality of their support: If you don't think the support is good enough, you are free (and able!) to get 3rd parties to do the job to your satisfaction. Since the bulk of how JBoss / Red Hat makes their money is service related, they're pretty confident that won't be needed.

Drools is an advanced Rule Engine (and a lot more besides, as we shall see later). It allows you to state things that you know to be correct (e.g. If the expenses claim is above \$5000, then a senior manager needs to sign it off). As somebody who has knowledge of business rules, you'll be able to feed the Rule Engine with what you know. The tool that you use to do this is the Business Rules Management System.

1.4 The bigger picture

You're unlikely to go to the trouble of putting your knowledge into a Rules system and leave it at that. You've a problem that you're trying to solve. For that, you're going to use Rules as part of a bigger system.

Here's the 5 minute guide to almost any computer system: They take information from users (these days, mainly via a web page) , do something with it, then store it somewhere (normally in a Database). You may recognize some Database brand names such as Oracle, SQL Server or MySql - Think of them as a very big version of Excel. Sometimes the flow of information goes the other way – access information in the database, then show it on the web page. That's it. What are you paying all these IT consultants for?

Drools helps you with the middle 'do something with the information bit'. Here you apply the business knowledge (the stuff that's currently in your head) to the information passing through. We recommend Drools as one of the other options is to to put your brain into a glass jar (think mad scientist lab with rows of brains suspended in bubbling liquid) and wire it in somehow.

Members of your team : Unless you're a business user by day and techie by night, we don't expect you to build the entire web system by yourself. In general , as a business user, you'll supply two bits of information to the IT team. The rest should be considered 'plumbing' – stuff that should be done according to Industry standards / best practice , but that otherwise be hidden from you / the user

and should 'just work' (like water coming out of the tap).

The two sorts of information you'll generally need to provide are:

- The user's interactions with the completed system. For example , the web page the user uses to log in, the first screen they see after they log in, what the various buttons on this screen does. Entire books have been written on this subject so we won't go over it here.
- The actual business rules. Unlike the screens, this is 'behind the scenes' stuff. This is your knowledge applied to the data that's being capture on the web pages. Even if you don't use Drools / another Rule engine you'll still need to do this step. Otherwise , how will the system know that pay for prescriptions for Viagra, but not for aspirin?

Why can't the tech guys write the rules for me? The answer is the tech guys can but it's a bit like booking a flight through a travel agent rather than over the internet.

- Ever turned up at the airport and found that the travel agent got it wrong? Doing It yourself means that there is one less link in the chain to go wrong. Booking your own flight (and writing your own rules) is quicker and easier.
- Ever understood what all the hieroglyphic codes on the paper ticket meant? (I'm showing my age- most airlines phased out paper tickets years ago). The chances are if you give a technical person the rules to write they're probably going to do it in a computer language like C#, Java or VB. Nothing wrong with that. It's just that they might as well write it in Egyptian Hieroglyphics for all that you will able to understand it - no way are you going to be able to check if you got them write.
- For simple flights (e.g. Dublin – London return) booking online is fine. For multi-stop round the world tickets getting advice from a travel agent is often a good idea. Likewise for rules: write most of the simple ones yourself, then get the Tech guys to write the harder ones.

1.5 So how do I write the rules?

You've got four choices when it comes to writing rules:

- You can use the Business Rules Management System (BRMS) from Drools. This is a web based application that's aimed at people like you. Not only is it easy to use, but it can be setup once by the technical support for the entire team to use via Internet Explorer, Firefox or your favourite web browser. Strangely enough for a BRMS guide, this is the option we recommend, so we'll come back to it later.
- You could write the rules via a simple text editor like notepad. It's a bit masochistic and dull – staring at black and white text with no help as to what is expected. We mention it here only

to show that there is nothing special about the rules format – it's just plain text.

- You can write rules in Microsoft Excel, or any spreadsheet that can output excel like spreadsheets (e.g. Sun OpenOffice). You do have to follow a certain template (it's not that difficult once you see it). However, the excel format lends itself to rules that repeat themselves a lot (the sample Drools gives for Decision Tables is lots of different categories of car insurance claims).
- Use the Drools IDE, based on Eclipse. IDE stands for integrated development environment , so Eclipse is a bit like 'Microsoft Office for Techies'. Chances are your technical team are using it anyway (to write in a language called Java, although it can be used with other computer languages). The Drools IDE bit adds plugins to Eclipse to allow Rule Editing and debugging. The IDE is more powerful , but more complex. We'll talk about the extra features later, but most of the commonly used ones are already in the BRMS (and over time , the remainder will be implemented). It's possible to switch between the two (IDE and BRMS).

Whatever way you choose, the rules that get fed into the the rule engine are pretty much the same. In fact, the BRMS allows you to import and manage rules written as text / decision tables / via the IDE so following the BRMS for now is a good choice.

2. What is the BRMS

The BRMS (Business Rules Management System) is a web page that you open in Internet Explorer, Firefox, or your favourite internet browser. You've seen web pages before, right? The BRMS allows you to enter your knowledge as business rules via a web page.

At the start you can enter rules via the guided editor (a similar idea to the helpful 'wizards' that you might have come across in Windows). Later, as you get more used to the rules syntax you might want to edit the rules directly in the text editor.

There are a couple of other things the BRMS gives you over and above basic 'rules editing'

- Team Editing
- Version Management of Rules and related assets.
- Asset Management
- Deployment Mechanism
- Security (Login)
- Import and Export of data

2.2 Rule Engines and the BRMS

By now you should understand the concept that a rule engine allows you to capture your knowledge and allow it to be integrated into an enterprise web system. However, a rule engine isn't just a 'black box'. There's a couple of parts to it, that it's useful to know about (I don't know much about car mechanics , but I can check the oil and tyre pressures. We'll keep the Drools technical bits at that level).

- Rules Editor

- This is the choice of BRMS/ IDE / Decision Table or plain text file. All produce a similar underlying rule language. And the mechanism for deploying these rules (RuleAgent or some other equivalent) is similar.

- Rules Compiler

- Something needs to translate the near-english rules language into something the rules engine can understand – this is what the compiler does. Your main awareness of the compiler (as a BRMS user) is when it complains about that it does not understand the way the you are phrasing your rules.

- Runtime

- As the information flows through your system, something has to apply to the (compiled) rules to it. This is where the Drools Runtime comes in. In general , you don't worry about the technical aspects of this; you just care that there is something applying the business rules you have written in the live / production system.

- Fact Model

- So we have a working system, with information flowing from the web , modified by the rules, then saved in the database. Obviously, when writing our rules, we need to know what this information will be (will we ask the user for salary before or after tax? Will we ask the user what country they live in or just their post/zip code?). The information has to be in a certain format (think excel spreadsheet – we need to know which column the salary information is stored in , and if it's before or after tax). The description of the information we need and the format it is stored in is known as the fact model.

- Rather than writing the fact model in excel, most of the time it's written in Java. Don't worry; at the level we're working at (specifying the names of the information that we're collecting and if it's a number, piece of text etc) it's not that complicated; remember if you can handle Excel, you can do this. We've two approaches to building the fact model:

- For most of this guide, we'll assume that somebody else has done the analysis and that all the information that you need when writing the rules will magically be there.

Realistically, you're going to find things that are missing when you start writing your rules. The Drools technical guide has more information on how to build the fact model using Java.

–It's probably not beyond your ability to modify the fact model (just follow the recipe, even if you don't fully understand the low level details). The main reason you won't update it is that other parts of the system (the web screens, the database) also use the fact model – it's a key part of how the system is linked together. So change a bit here without talking to the other guys, and you risk breaking things for them.

An important note is that the BRMS helps you edit the rules, and typically does not form part of the production system that the end users will see – that task is left to the core rules engine.

2.3 What do I need beforehand (ask your tech support)

So you're ready to start playing with the BRMS? There's a couple of things that you need setup. Rather than explain it all here, get your friendly technical department to do the work for you: The guide is at: <http://labs.jboss.com/drools/documentation.html>

What you need is to ask for:

- The BRMS setup of on a Java Web Server like Tomcat or JBoss (both of which are freely available). This can either be on your PC, or a company server.
- The URL (website address) that you access the BRMS. Often this will be something like : <http://some-server-name/drools-jbrms>.
- The username and password that you'll login as. If they've followed a standard install , they will both be blank (they may have taken the option to secure it).

–Note that that security probably isn't an issue when you're 'playing' with the BRMS. Later you'll probably want to implement one of the security / signon options (there's more information on the security options in the Drools technical guide). Business Rules are pretty core to the company knowledge – you don't want people wantonly changing them, nor do you want the knowledge leaking (allowing people to 'game' the system).

- Sample Application: The BRMS comes pre loaded with some sample car insurance rules. Ask whoever is setting up the BRMS to leave those in place – we'll talk through the rules to show what each section does. These sample rules are easy enough to delete later.

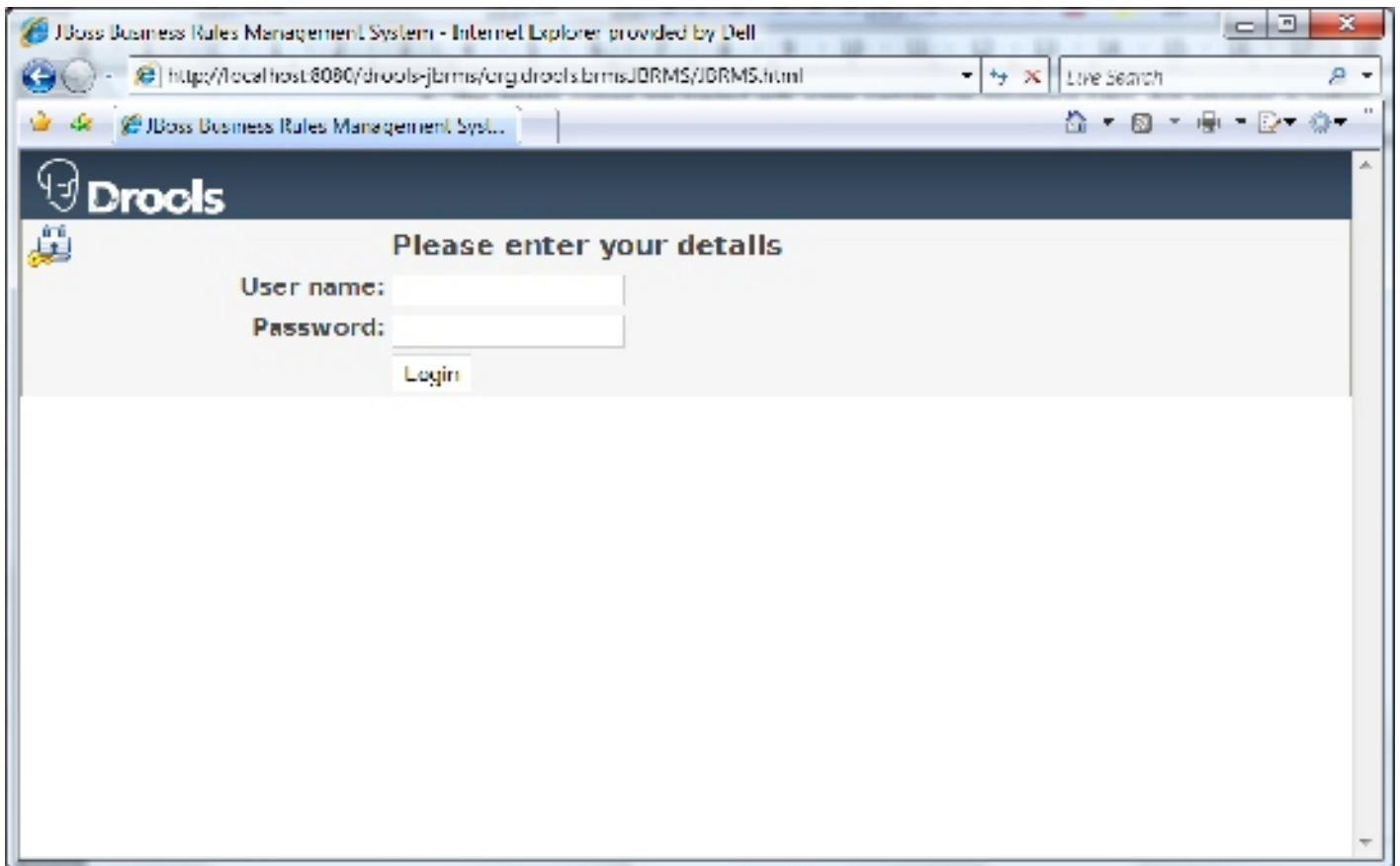
3.A Tour of the Business Rules Management System (BRMS).

3.1 Getting Started

The technical people probably gave you a web address similar to :

<http://someServerName:8080/drools-jbrms>. Open up a web browser - the screen shots below use Internet Explorer but the BRMS will also work with Firefox, Safari and most other browsers. Copy and paste the web address (the one your technical folks gave you , **not** the sample one above) into the browser.

You should see a screen similar to the one below. By default, **any username and password will be accepted** unless the version are using has been configured with extra security (e.g. To use your Windows account details). Click Login, and you'll be shown the Welcome screen.



3.2 Welcome Page

- There are three main areas to the welcome page

-The title bar (in navy) at the top of the page. This has the **Drools logo** on the left hand side, and an option to **sign out** on the right. This bar is present on all the BRMS screens.

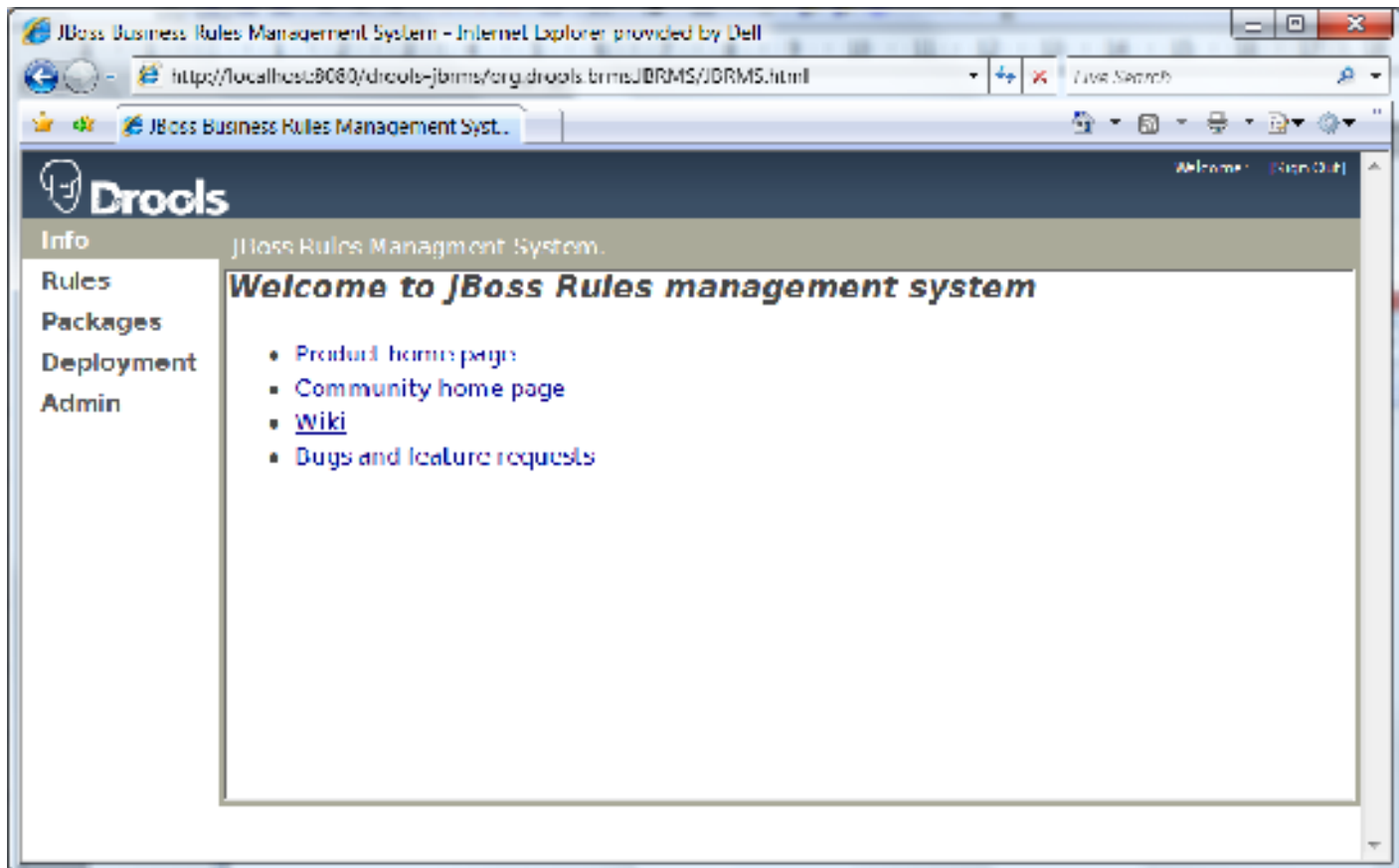
-The menu options (on the left hand side of the screen) are also present on all the BRMS screens. These options (Info ... Rules ... Packages etc) are the main way of navigating the BRMS system and are the ones that we are going to work through in the next couple of screen shots

-The main section of the page, which contains links back to the JBoss Drools project web pages. The links on these pages are useful for getting and asking for more help from the community of other Drools users.

- How to get more help

-The [Product home page](#) - this is the official home page, tailored more to a business audience. If you're trying to sell Drools BRMS to your boss, this is the place to go.

-The [Community home page](#) , a slightly more detailed resource. This gives links to a lot of useful resources, including the [Drools Technical Documentation](#).



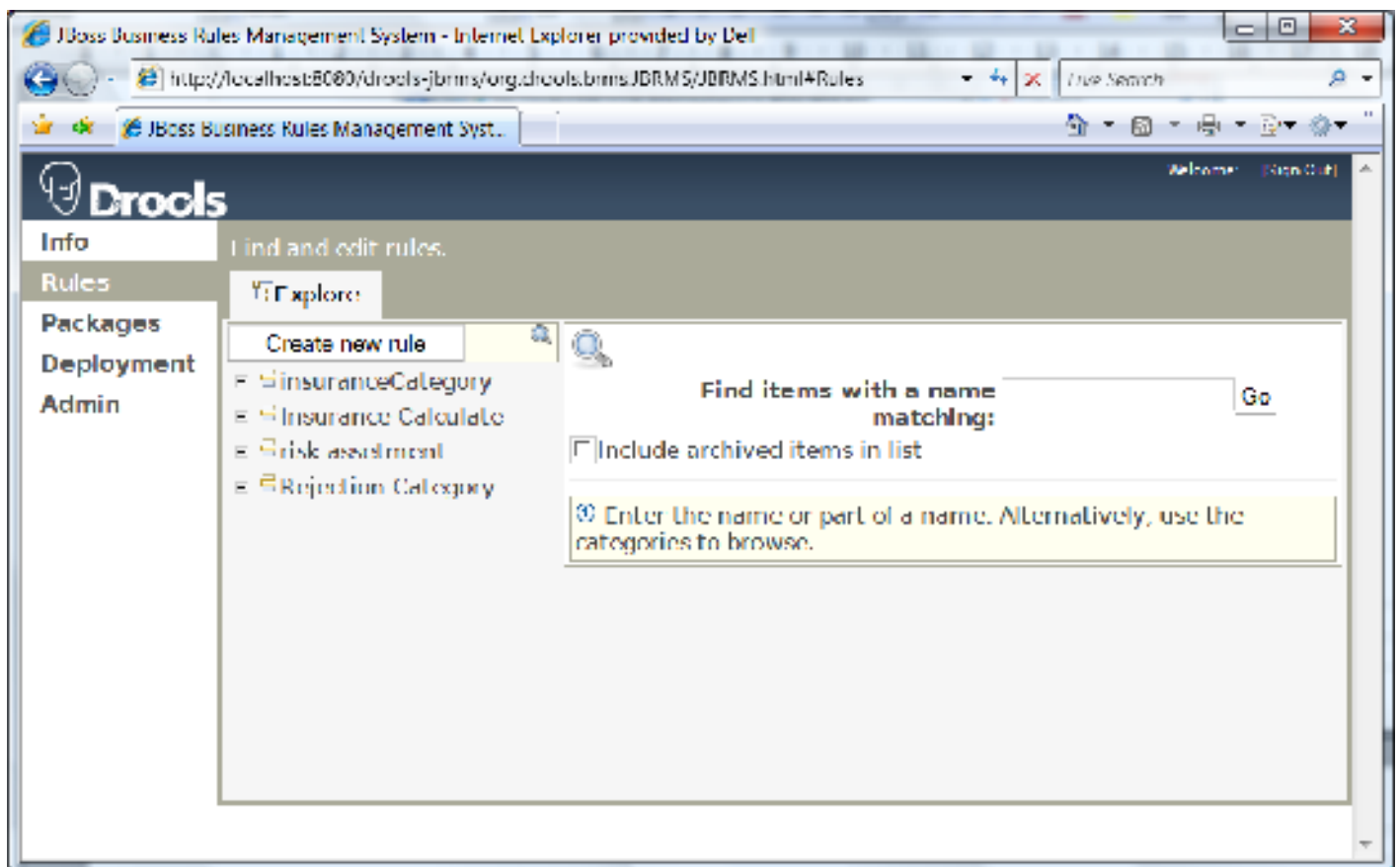
- The community page also links to the [user and dev mailing lists](#) – feel free to drop by and ask questions, but [read this guide first](#) – basically try and find if somebody has already asked the question before pressing the send button. They're nice guys but reading [How to ask Questions the smart way](#) will greatly increase your chances of getting a quick (and detailed) response.

-The [Wiki](#) is a much more rough and ready guide. It has guides of varying quality, dealing with specific issues (e.g. Deploying the BRMS on non-JBoss application servers). Wiki's are write-able as well as readable, so if you're doing something that doesn't appear to be documented here, think about adding it – the chances are the

solution is technical and generic enough to be sharable.

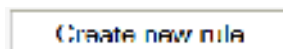
– the [Bugs and feature requests](#) shows you what the Drools development team is currently working on. Yes, when we said the project was open we meant it – you'll get waaay too much information, but better that than too little. If you feel something is missing from the current version, checking here might show that it's on it's way. And if you talk to the guys on the mailing lists (they really appreciate end user feedback), you might get your feature added here.

3.3 Rules Page

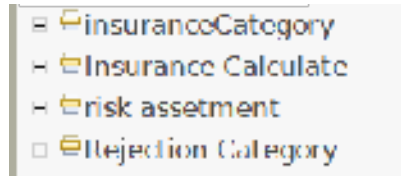


Click on the **Rules** Tab on the left hand side of the screen. You'll see (not surprisingly) the Rules Screen (screenshot above). This screen allow you to find, view and edit Business Rules. We'll be coming back to this screen in more detail when we get into the detail of editing and creating business rules. For now, the main parts of this screen are:

- A button (on the top left) : to create new Rules



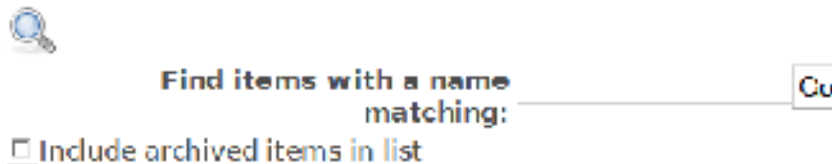
- A list of the available Categories.



-Categories are tags that we can add to more easily manage our rules – not really needed when we start out, but you'll be glad of them when you've hundreds of business rules. You'll see how to create and manage categories when we look at the Admin screen. Clicking on the '+' sign beside the category name will expand it so that you can see the rules in it. Rules can belong to one or more categories.

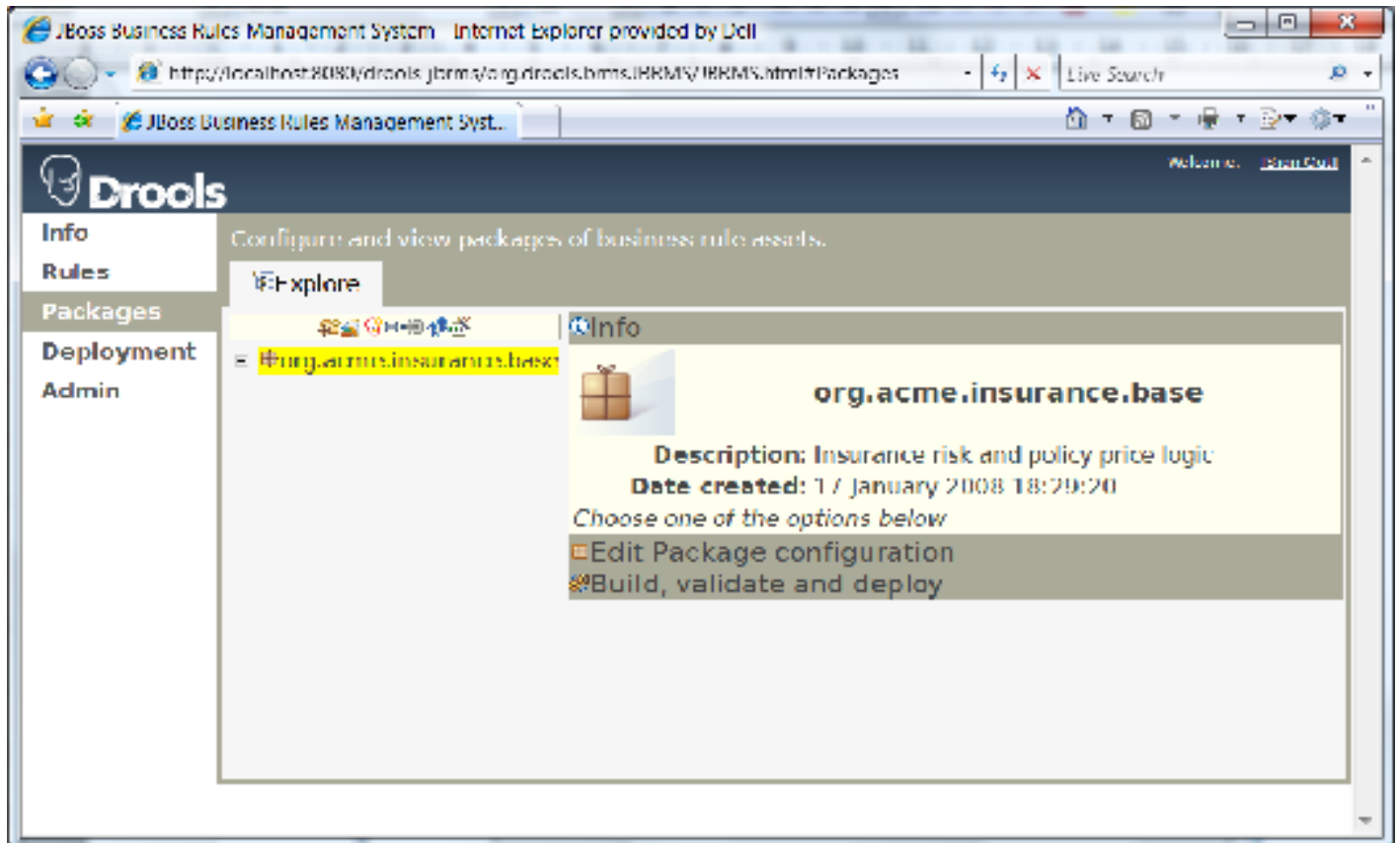
- An option to Search for rules by name

-Search works pretty much as you'd expect. The option to 'include archived items in list' is more unusual. Remember we said that the BRMS gave you version management? Nothing is ever deleted, just shuffled into an archive in case you need it again in the future – a bit like the undo-feature in word, only much more powerful. Filling in the 'archived items' check box allows you to search for older / deleted versions of the rules



3.4 Packages Page

Click on the 'Packages' tab at the top left of the screen. You'll see the package screen (like the screenshot below).



There's a lot more than Rules in a Rules Management System. There's also supporting infrastructure – functions (or calculations), the fact model (for storing data), DSLs Domain Specific Languages (an advanced feature that makes your rules language closer to English / your language of choice). This screen allows you to manage these rules (and other 'assets' that rules depend on) into packages – so that they are easier to understand and manage.

So what's the difference between a category and a package?

- Categories are only for rules, whereas packages can have rules and other assets (functions, DSL's etc).
- Categories are used only with the BRMS, whereas packages can be used in the wider system. e.g The people building your Java-Web Banking system might ask you to write your rules in two categories – Home and Business banking. That allows them (in the part of the system that they write) to apply a different set of rules depending on the customer that they are dealing

with.

Java recommends a notation for package names (that's where the `org.acme.insurance.base` comes from). While you don't have to follow it here there is no harm in doing so (especially when we start talking about the Java Based rule model later. The package name looks a little bit like an internet web address (although it doesn't actually link to anything). The format is:

`companyurl.projecturl.subproject.anyotherdivisionsrequired.`

Examples of this are:

- `org.drools.brms.client`
- `com.megacorp.insurance.cars.`
- `net.firstpartners.redpiranha.rules`
- `ie.drinks.guinness`

Most of the packages that you create will only need 3 or four levels (like above). However, there can be as many subdivisions as you need. You see more of these subdivisions when we talk about Java code (Fact models)

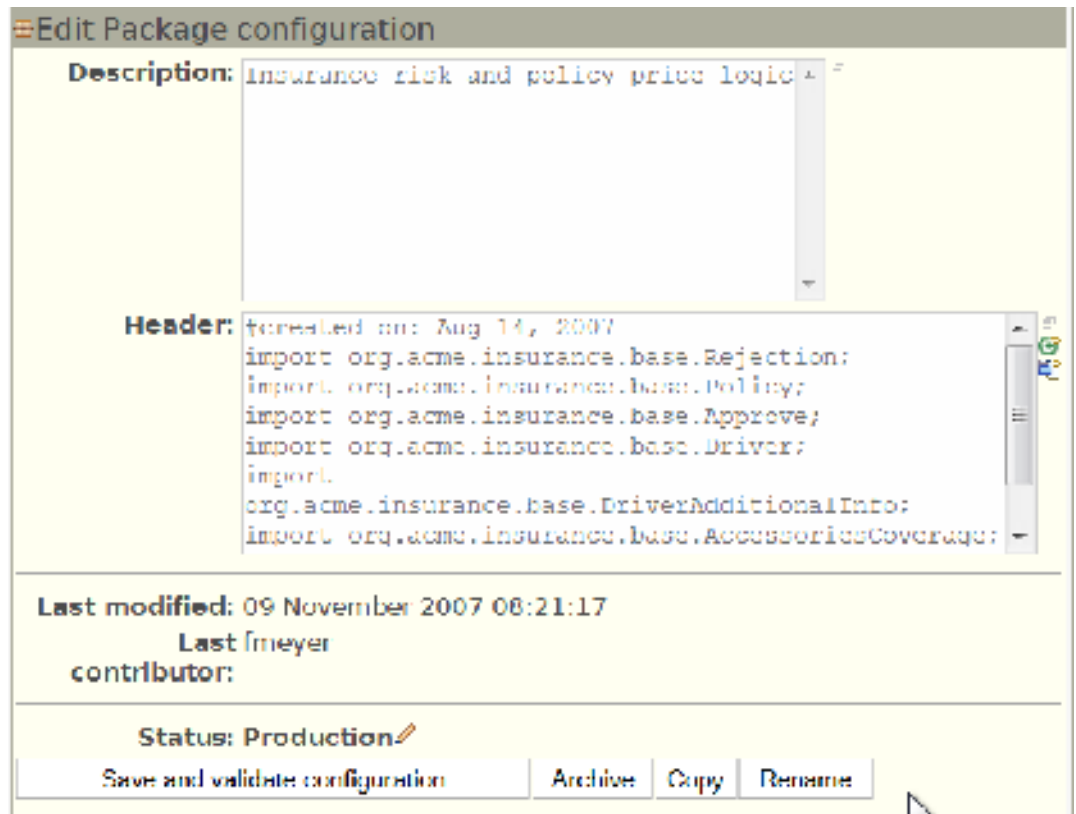
There are set (small) icons that allow you to create various assets – mouse over them to see what each one does.



The three grey bars across the right hand side of this screen allow us to carry out various package level actions. Clicking on each causes them to expand in turn.

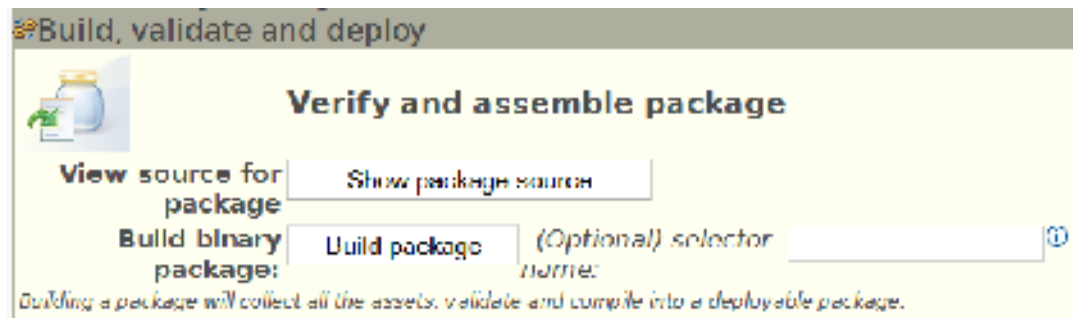
- Info** – shows useful information about when the package was created , what it does etc.





•**Edit Package Configuration** allows use to enter a description of the package is for, and state what parts of the fact model we want to use in the rules that are stored in this package.

•**Build , Validate and Deploy** composes all the assets in the package, makes sure they are consistent, and then makes them available when our target application next comes looking for an update.



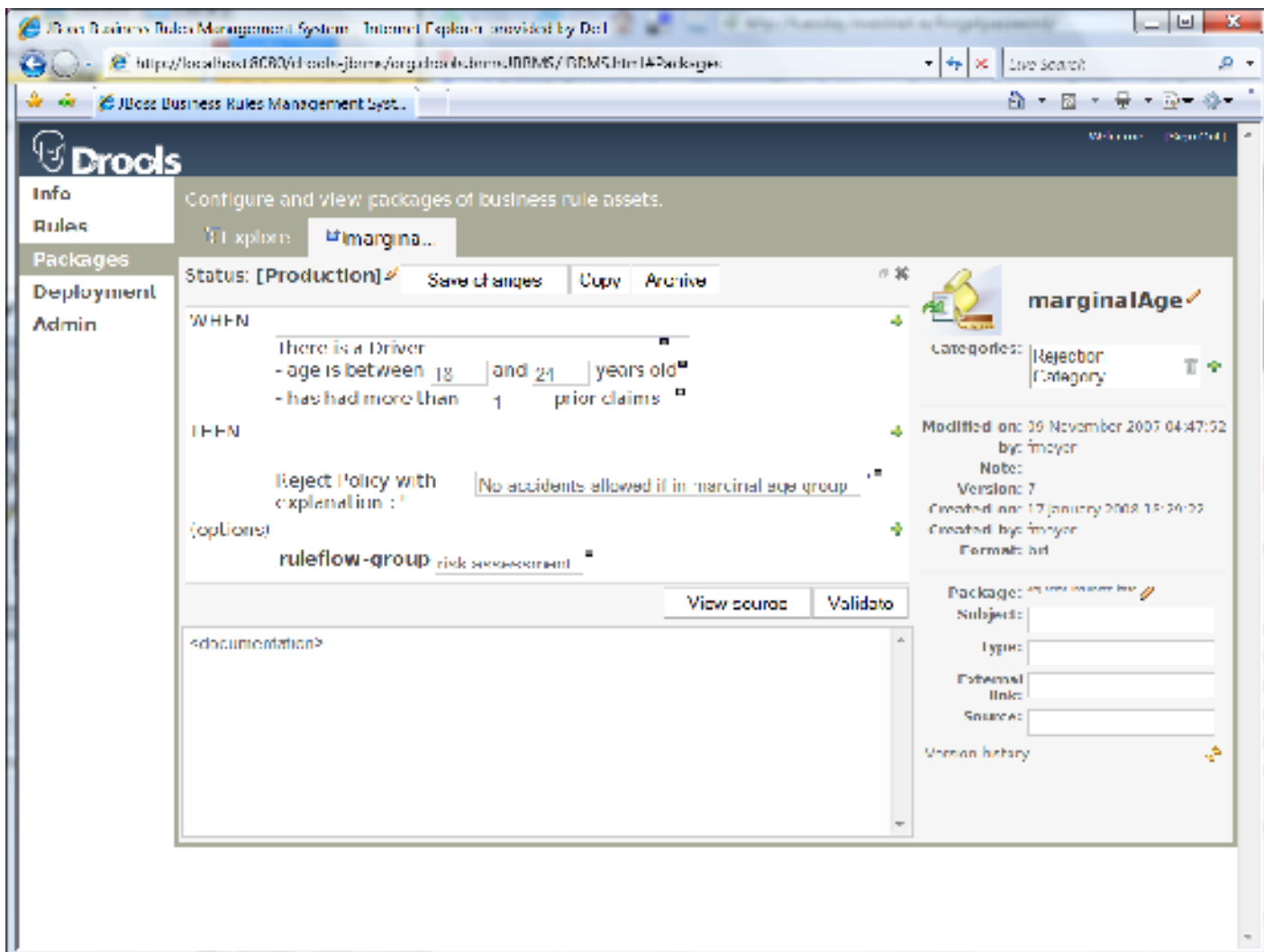
Clicking on the '+' near to the package name shows the available assets more clearly ,



If you click on one of the asset names, you see a screen like the following (we're showing Business Rule Assets, the other assets follow a similar pattern).

Name	Last modified	Status
marginalAge	09 Nov 2007	Production
Quick approval - safe driver, any policy type	09-Nov-2007	Production
Driver wants extra assistance coverage	20-Sep-2007	Production
Druck Promotion	09 Nov 2007	Draft

To edit a rule, click on a rule name (e.g. MarginalAge) then click the folder icon in the top right of this screen. You'll see the rule editing screen similar to the one below.



We'll be seeing a lot more of the rule editing and package screens when we go through the normal usage scenarios, but for now it's worth taking a quick tour of the screen:

- The Drools header, and tabs on the left hand side of the screen are as you'd expect.
- Within the [name of rule] tab (the main screen above) we have four main sections
 - A bar with the rule / asset status (in this case production , but this can be defined on the Admin Page), and buttons to Save Changes, Copy and Archive. Save and copy do what you expect. Think of the Archive as a 'delete' button , only with the option to undelete. That's undelete all the way back to when you started editing rules.
 - the main area for creating the rule (When ... Then ... Options). Remember when we said 'when 'something' is true, then do 'this'. This area allows you to enter this via drop down menus. Play around with it – it's just a web site. The options allow you to access more advanced options.

–A free text area at the bottom for adding documentation. This isn't rules specific , but is useful for cross-referencing business requirements etc

- The meta information area on the right hand side of the screen. This gives information about the rule / asset – such as who created it, the version, categories that it is tagged with.

It's probably worth playing with this screen for a while. Everything is under version control, so you can reverse the changes. Worse case scenario you can ask support to wipe the sample and start again.

3.5QA (Quality Analysis) Page.

Currently this part of the BRMS is under construction. But the functionality in this page is already available via FIT for rules, so if you need it today, have a look at the technical guide. What the BRMS will do is make this functionality available to end users.

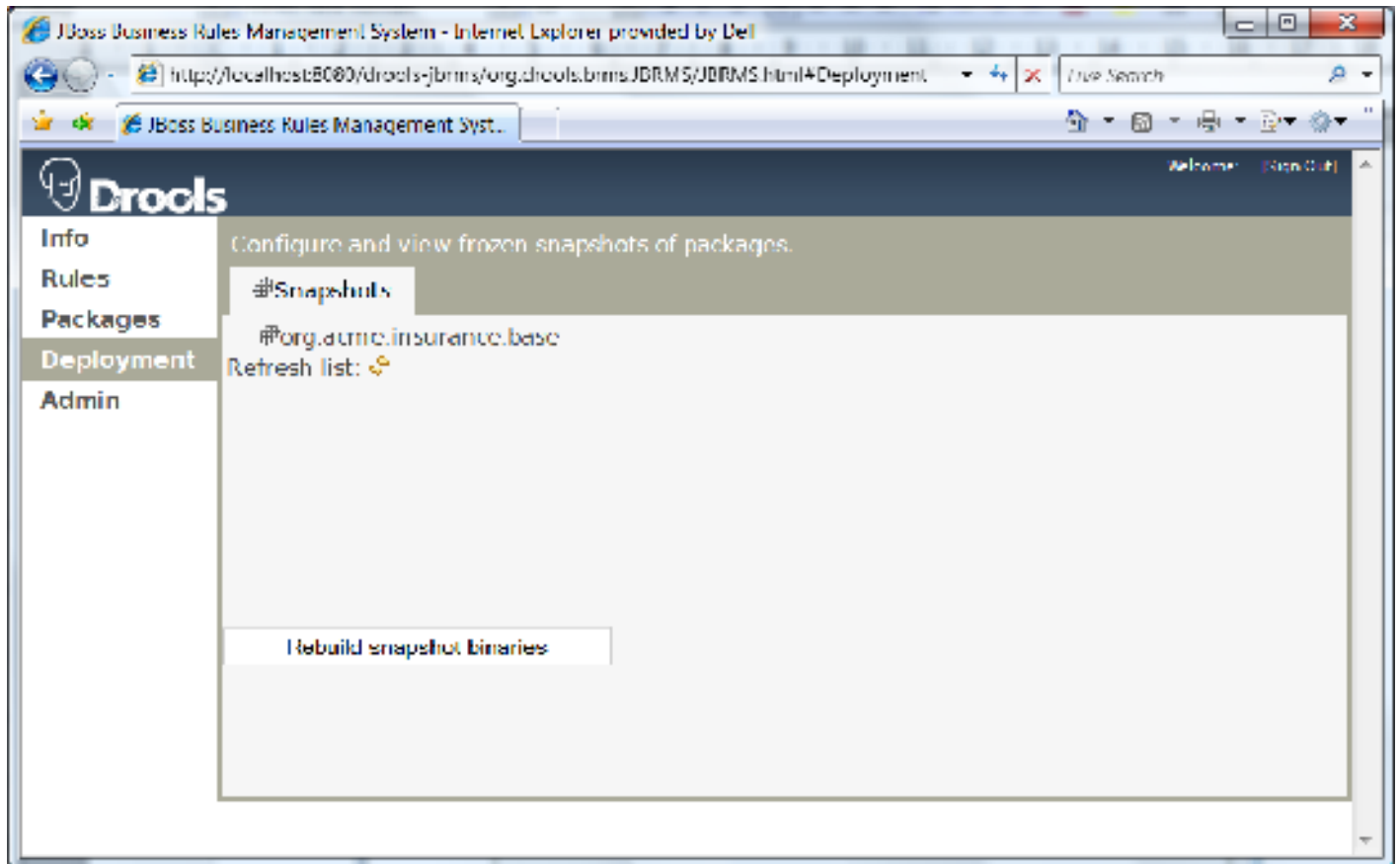
The problem: You write rules, and you test them to make sure they do what you intend them to do. The work ok. Then you change a rule. And you have to test them again. Ok-ish – this time. What if it's the 60th time you've made a tiny change – are you tempted to skip the testing yet? Or maybe you'll test, but not as well as you should. What if you've 600 rules? Do you test all of them?

The solution: You automate the testing. This is what FIT , and this page allows you to do. It's pretty simple: you know the inputs to your rules (e.g. The insurance application form for your typical first time 21-year old driver) and the outputs from the rules (the insurance premium that they should pay). You provide FIT both as Word or Excel documents. FIT inputs the form, runs the rules , then checks that the output of the rules match what you expect.

It alerts you if you the test results differ from what you expect. That way you spend less time testing and more time playing golf (or whatever it is that you do). And you end up with better quality tests.

3.6 Deployment Page

Click on the deployment tab on the very left of the screen – you'll see something like the screenshot below. While there is not much on this screen, it does play an important part. It gets your rules and assets from the BRMS editor and out into the production systems.



When you edit your rules, they don't get deployed (to the live/ real world system) right away. Can you imagine being in the middle of writing the 2nd of 3 new rules, and having the incomplete ruleset deployed? The Deployment tab allows you to control when your rules are released to the end users. It also allows you to view previews snapshots

The two main actions that you can carry out from this screen are

- Clicking the 'Rebuild snapshot binaries' – this will create a new snapshot of the rules.
- Clicking on the snapshot name (org.acme.insurance.base) will allow you to inspect previous snapshots that were built.

Note the deployment process (by default) is something similar to the following

- You write the rules, other assets, then mark them for deployment via the 'rebuild snapshot binaries'.

- When the target application is ready** it checks with the BRMS to see if it has any updated rule packages.

The architects of your target system will probably have a specific deployment plan (as it's not a good idea to deploy rules straight to production). The BRMS gives you a couple of options, but the default one will help get your system up and running quickly.

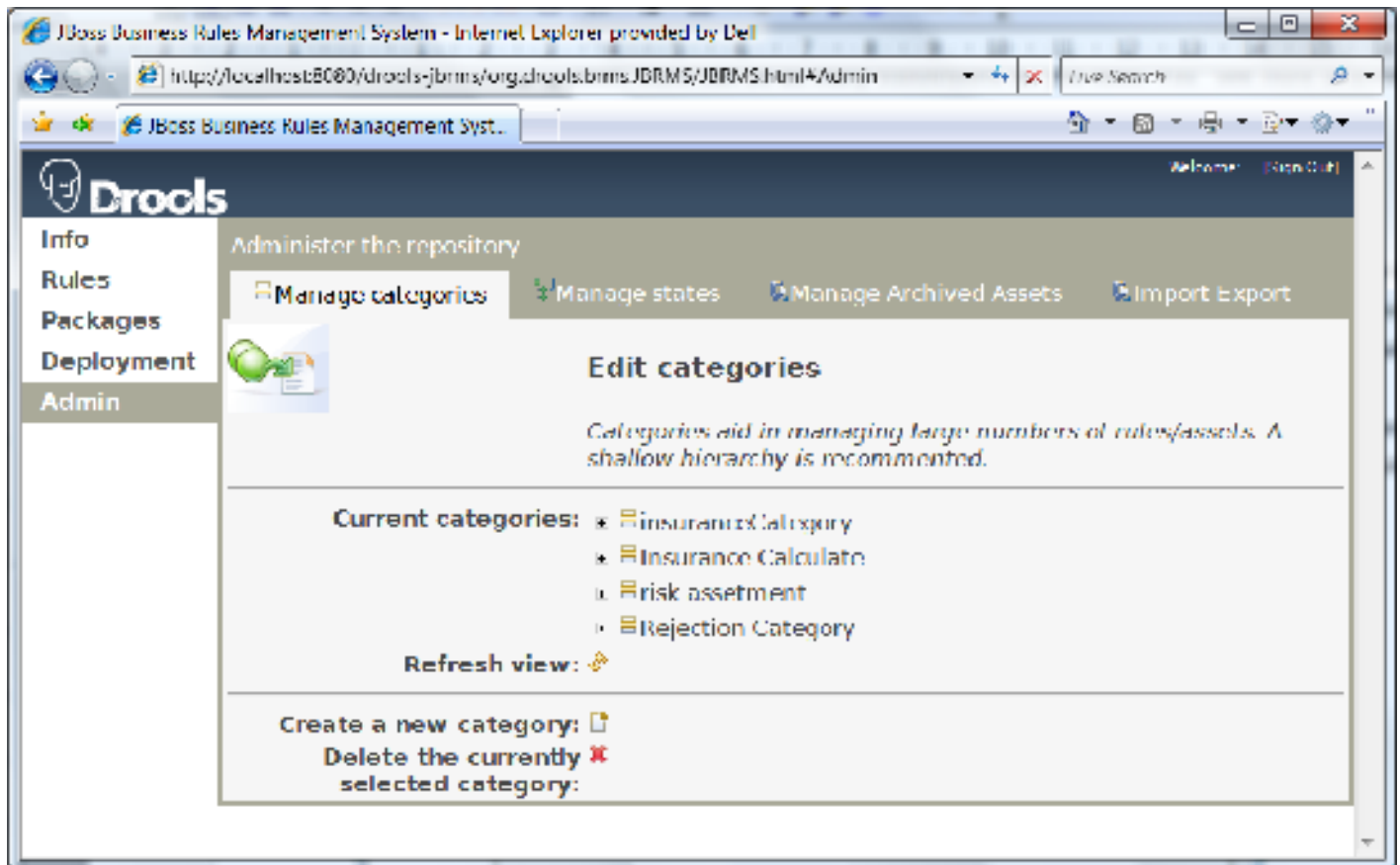
Normally you're rules will follow a cycle similar to the following: Develop – Test – Deploy – Retire.

- During the Develop and Test phases your rules are stored within the BRMS. It uses a Derby database to store these , although it can be configured to use other Enterprise Databases such as Oracle and SQL Server (or pretty much any brand name you care to mention).

- During the deployment phase a the target application grabs a copy of them (what it does depends on the application). But there is still a copy kept in the BRMS.

- When rules are retired (deleted), they live on in the version history of the BRMS. So you can bring them back if you need to.

3.7 Admin Page



The admin screen gives you functionality not directly related to rules editing, but vital for managing the system e.g. Important and exporting rules. There are four main tabs (across the top of the screen, just under the 'Administer the repository' title)

- **Manage Categories** – the ability to change the Rule Categories that we came across on the rules screens.
- **Manage States** – these are used on the Rule and Package Screen, allow you to set various asset states (the default ones being Draft and Production)
- **Manage Archived Assets** – If we archive a rule or asset (on one of the other screens) it normally 'disappears' from that screen (otherwise the screens would get cluttered with older rules). But we can see them here.
- **Import Export** – Allows you to get rules in and out of the system.

4. More Functionality on the BRMS

We looked at the initial tabs in the BRMS earlier. Now, armed with our essential rules concepts, we're going to look at these tabs (and the tabs within these tabs) in more detail.

[todo – complete when final rule editor is available]

4.1 Scenarios

Edit existing rule (simple)

Delete rules and rule bases (or archiving them)

Backing up repository

Import Jar (model) and Stored repository

Create new rule base (from scratch) and rule (guided)

Using the default editor (text)

Deployment

4.2 A Quick start guide to writing rules

Here's a quick guide to writing your first business rule.

- Start up the BRMS and login.
- To start with – prepare the packages. Click on 'Packages Tab', then the package name, the "Edit Package Configuration" in the main window. In the "Header" section in the main window tell Drools about your bean (the part of the fact model holding your information). To do so: `import com.mycompany.MyBean`. No need for a semicolon at the end of this.
- Now we're ready to create a rule within the package. Click on the 'rules' tab, then the 'create new rule' button under this tab. When the popup window appears, choose a name and category and type it as "Business rule using the guided editor". Save.
 - For info – the guided editor is the easiest one to use. Later on, check out the other options – these are more advanced but can be quicker.
- You now see the rule editor screen that we looked at earlier.
- Click on the big green plus sign to the right of "WHEN". You should see a window that says "Add a condition to the rule..." If everything was set up correctly (and this is easier if you're

using the insurance sample) then editor with make helpful suggestions. Play around with this – it's a web page, so it's fairly idiot proof.

- Similar story on the 'THEN' part – another green plus sign. Remember this is the part that happens when the conditions are met.

- Finally hit the 'Validate' button to make sure that Drools and BRMS understand what you are trying to say.