

Risk-based Testing with Jira and Jubula

Daniele Gagliardi
 @dangagliar

- ✓ The Theory
 - ✓ What is it ?
 - ✓ Why should I care ?
- ✓ The Practice
 - ✓ The ingredients and the recipe
- ✓ The Use Case
 - ✓ How can you use it (with a special quest...)

The Theory

What to test?

How many tests for each requirement ?

Mmmmhh... we can prove that it works well with good data (how many good data ?)...What about bad data ?

One ! Of course ! We need to see if it works !

Uh oh... combination for good data are a lot ! And bad data...
Uncountable !

What to test?

We have 1342 new requirements. What should we test ?

Mmmmhh... OK, I need 42^{10} good testers and 10^{42} years to test all

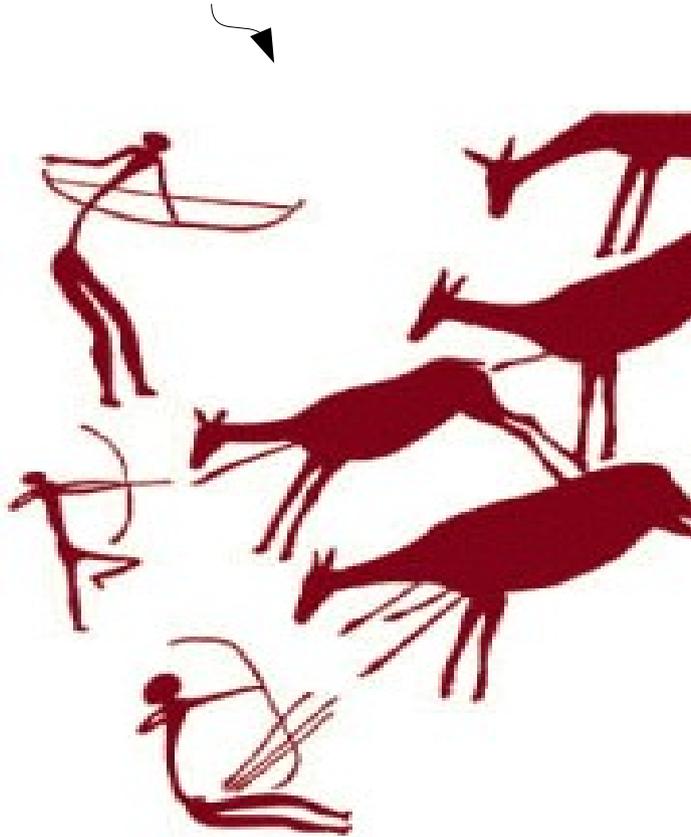
Once upon a time someone told me something about risk based testing...

Everything! Of course ! We need to be confident that it works !

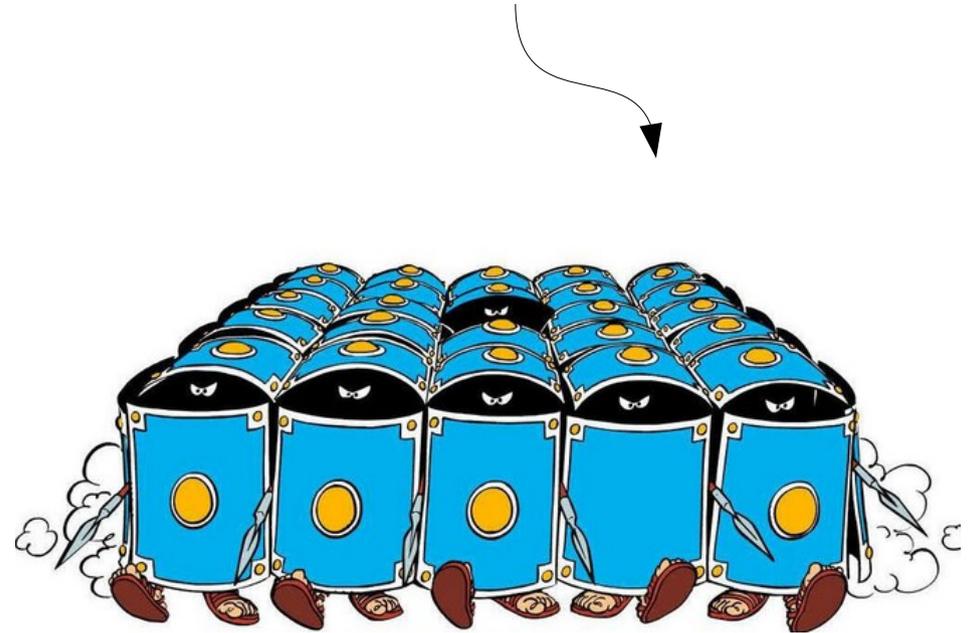
Mmmmmhhh... I'm wondering if our budget... we need to make a choice about what to test

Traditional Testing vs RBT

Traditional Testing

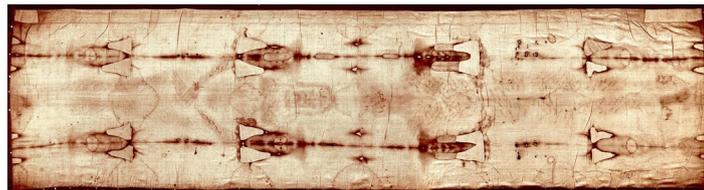


Risk Based Testing



Effectiveness

- Baroque-style Roman Catholic chapel
- Designed by architect Guarino Guarini and built in Turin at the end of 17th century, during the reign of Charles Emmanuel II, Duke of Savoy
- Constructed to house the Shroud of Turin, a religious relic believed by many to be the burial shroud of Jesus Christ
- 1997 : a fire, due to a short circuit, seriously damages the chapel
- Restoration in progress, **supported by a software project**



- Applications to manage all the phases of the restoration project
- Every single piece subject to restoration is geo-referenced within a 3D model
- Database with all the relevant information and documents collected during the investigation phase (world-wide relevance)
- Web site to publish news on the restoration progress, and to offer search functions on the single elements subject to restoration
- Cam video system management
- Technologies : open source !

(A non exhaustive list...)

- World-wide relevance of the data → Usability, Accessibility and performance tests
And also backup/recovery test !!!
- High level of innovation and required technologies not so well known to the project team (**project risk**)
- Heterogeneous technologies and components → integration tests
- Search functions on web site → functional tests
(Mitigate risks with proper testing...)

- Phase 0 : There's no difference between testing and debugging. Other than in support of debugging, testing has no purpose.
- Phase 1 : The purpose of testing is to show that the software works.
- Phase 2 : The purpose of testing is to show that the software doesn't work.
- Phase 3 : The purpose of testing is not too prove anything, but to reduce the perceived risk of not working to an acceptable value.
- Phase 4 : Testing is not an act. It is a mental discipline that results in low-risk software without much testing effort.

- ISO 9001:2015 – systematic approach to risk
- Risk based thinking
- Become proactive rather than purely reactive

Risk Based Emphasis

ISO 9001 has always advocated mitigating and avoiding risk; it has implicitly addressed the issue. The new ISO 9001:2015 standard explicitly expects organizations to identify and address risks affecting product and service compliancy; resulting in improved customer satisfaction.



Integrated-Standards.com has many tools to help you integrate ISO Standards in their...

OK, where are the really interesting things here ?
ISO stuff is boring me...

What is Risk ?

- Risk: the **possibility** of a negative or undesirable event or outcome
- Quality risk: the possibility that the product or system might fail to deliver one or more of the key quality attributes
- **Project Risks**
- **Software Risks (Risky features)**

- **Analyse** the risks – to prioritise them.

Risk Management

Managing risks is something we all do every day, mostly without even thinking about it. When the complexity increases beyond our everyday experiences, such as risks faced by a business or a big project, a more formal approach is needed. However, it really isn't difficult.

A generic risk management process has been set out in ISO standard 31000 and can be applied to any kind of risk by any kind of organisation. PMBOK and PMI both describe a similar process for managing project risk.

Different kinds of risks need different assessments in terms of the questions to ask or the exact technique you use, but the overall risk management process is the same.

Essentially, the steps are as follows:

- **Establish the context** – what activities are we talking about? What are you trying to do?
 - e.g., using a piece of machinery, making/building something, collecting measurements, importing or exporting goods, staff, data analysis and reporting.
- **Identify risks** – what *might* affect the outcome?
 - e.g., a weather event, change to regulations, injury, staffing shortages, lack of supplier, chemical exposure, theft, fraud, computer failure, human error.
- **Analyse** the risks – to prioritise them.



What is Risk ?

- **Probability : trivial**
- **Note :**
 - **0 % event : not a risk !**
 - **100 %: not a risk ! Rather issue !**
- **Impact : an evaluation of the hypothetical damage (on costs, times, ...)**
- **Exposure : $f(P,I)$**
 - $\mathcal{E} = f(P) * f(I)$

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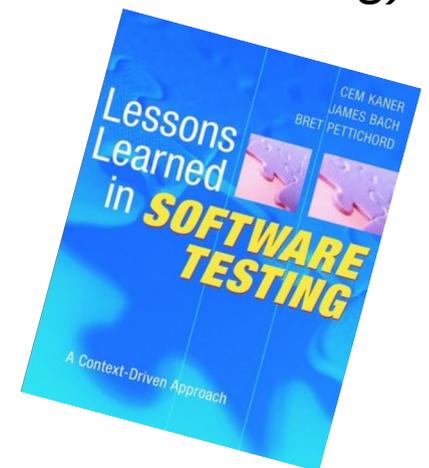
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What is Risk Based Testing ?

1. Make a prioritized list of risks
2. Perform testing that explores each risk
3. As risks evaporate and new ones emerge, adjust your test effort to stay focused on the current crop

(James Bach, Heuristic Risk-Based Testing)



Prioritize ? How can I do it ?

1. Rigorous risk analysis, applying statistical models or...
2. Heuristic Risk Analysis :
 1. Inside-Out : study (you tester with a developer) your product and ask yourself repeatedly: « What can go wrong here ? »
 2. Outside-In : start with a potential set of risks and match them to the current product – Need for a risk catalogue/lists

1. Three possible kind of risks :

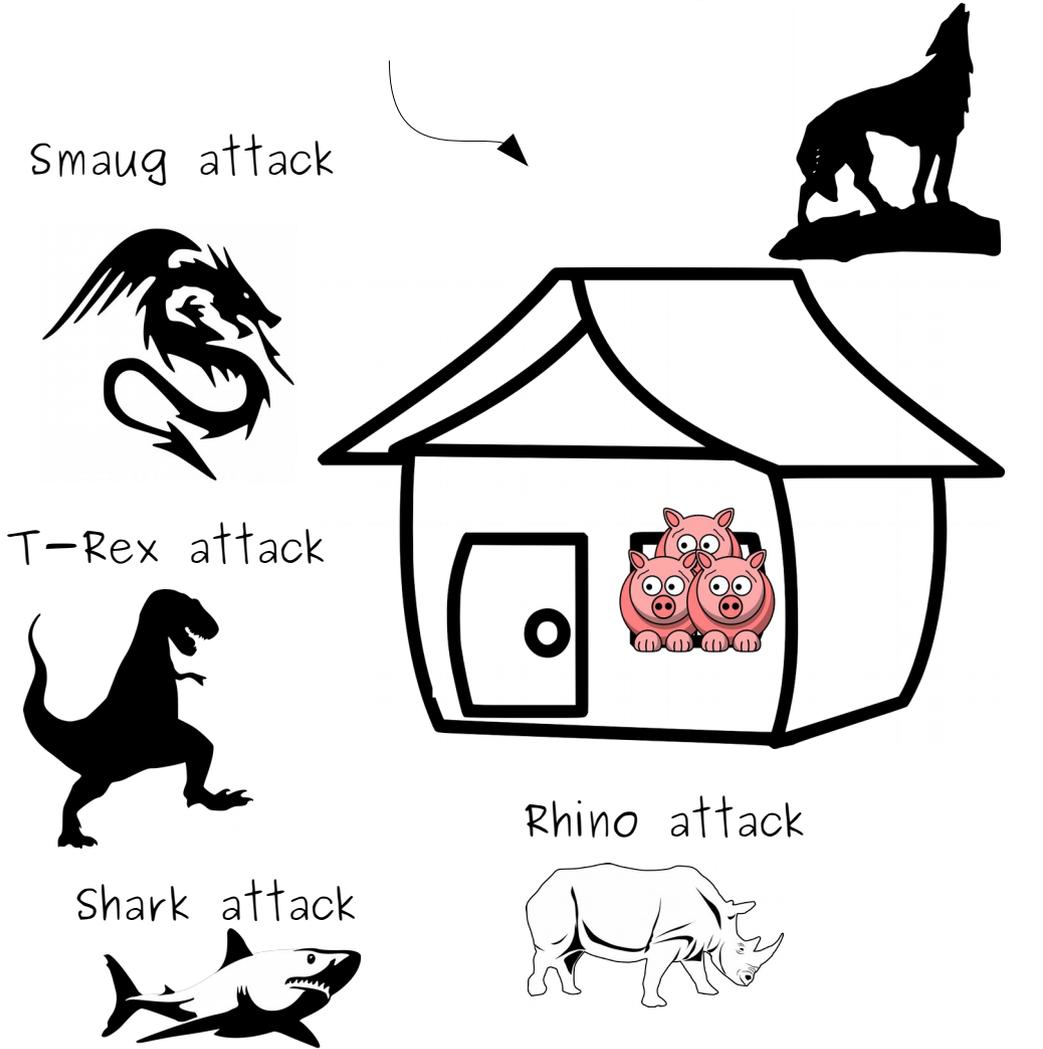
1. Quality risks (performance, usability, ...)
2. Generic risk list (complex, new, critical, third party, strategic, ...)
3. Risk catalogue (risk lists, related to specific domains)

2. Use them

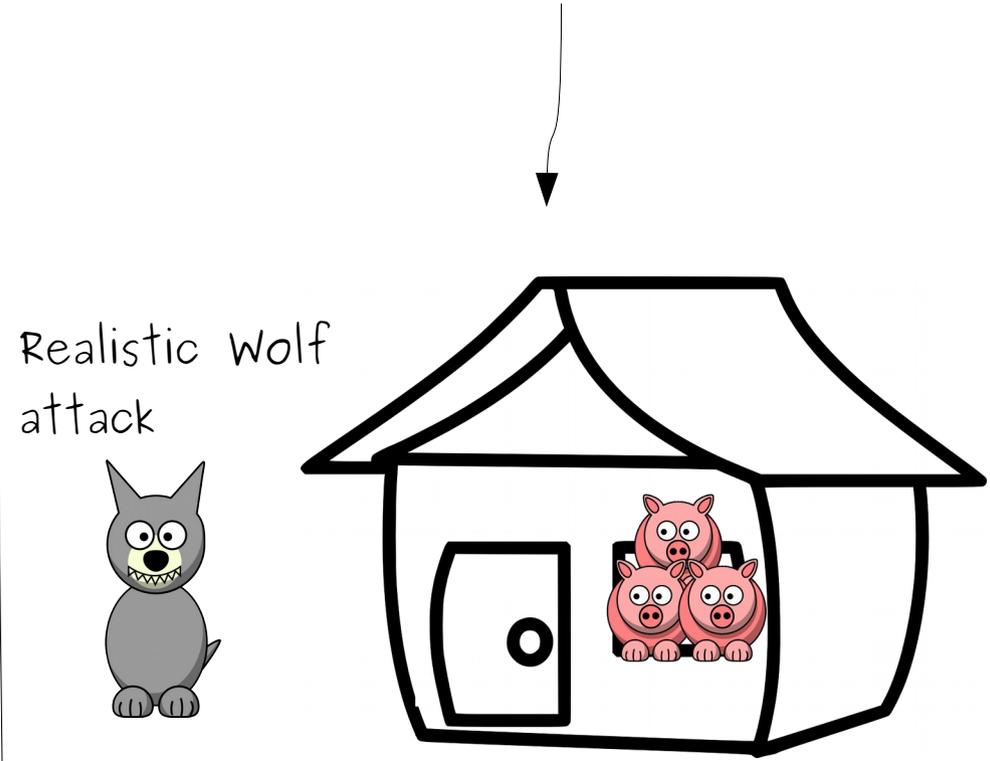
1. Choose a component/function
2. Determine scale of concern
3. Match risks

Traditional Testing vs RBT

Traditional Testing Wolf attack



Risk Based Testing



Catalogue and prioritize

Smaug attack



0,00002%

Wolf attack

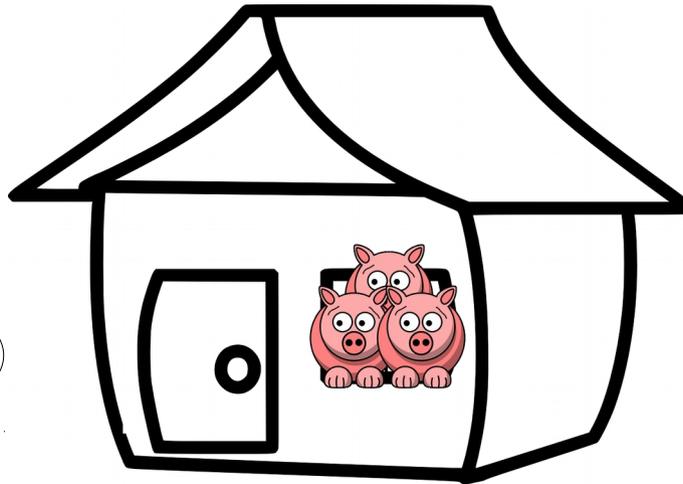


87%

T-Rex attack



0,00001%



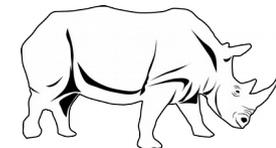
0,1%

Shark attack



0,002%

Rhino attack



Wolf attack

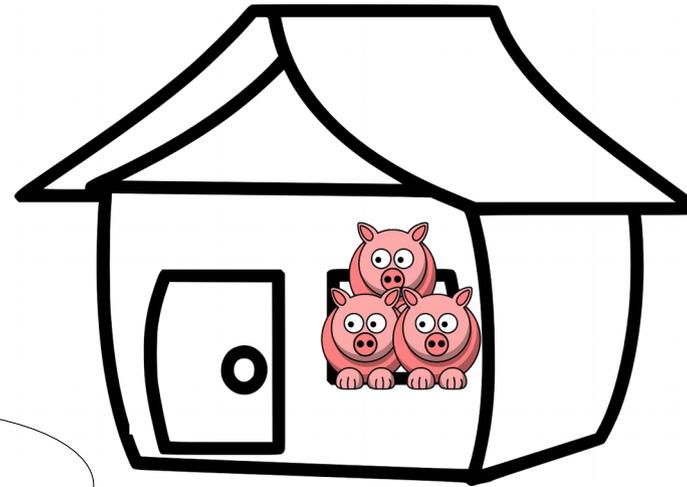


1%

Realistic Wolf attack



87%



- Your risk analysis incomplete and inaccurate to some degree ;
- At the beginning of a project rumors of risks ;
- As the project progresses, and you gain information about the product, you should adjust your test effort to match your best estimation of risk ;
- to deal with the risk of poor risk analysis, use other weapons : exploratory testing (**remember the talk of Alex last year ?**), static testing, code coverage testing, or functional coverage testing (principle of diverse half-measures: use a diversity of methods, because no single heuristic always works)
- two vital factors needed to make risk-based testing work : **experience** and **teamwork**;
 - over a period of time, any product line or technology will reveal its pattern of characteristic problems : learn from that ;
 - do whatever you can to invite different people with different points of view into the risk analysis process.

The Practice

- Use **Jira** to catalogue and prioritize risks
- Use **Jubula** to mitigate them
- Use **Mylyn** to mix everything (Risk Based Interface)

Ingredients

The Recipe

Would you really pay 36000\$ for a bug tracking system ?

- Very flexible tool to manage almost everything
- Define objects, attributes, lifecycle, actions, validators, conditions,...
- If you're missing something, develop it with Atlassian SDK! (but it isn't necessary to manage risks...)

Issue Types

ESL Agile Scrum Issue Type Scheme

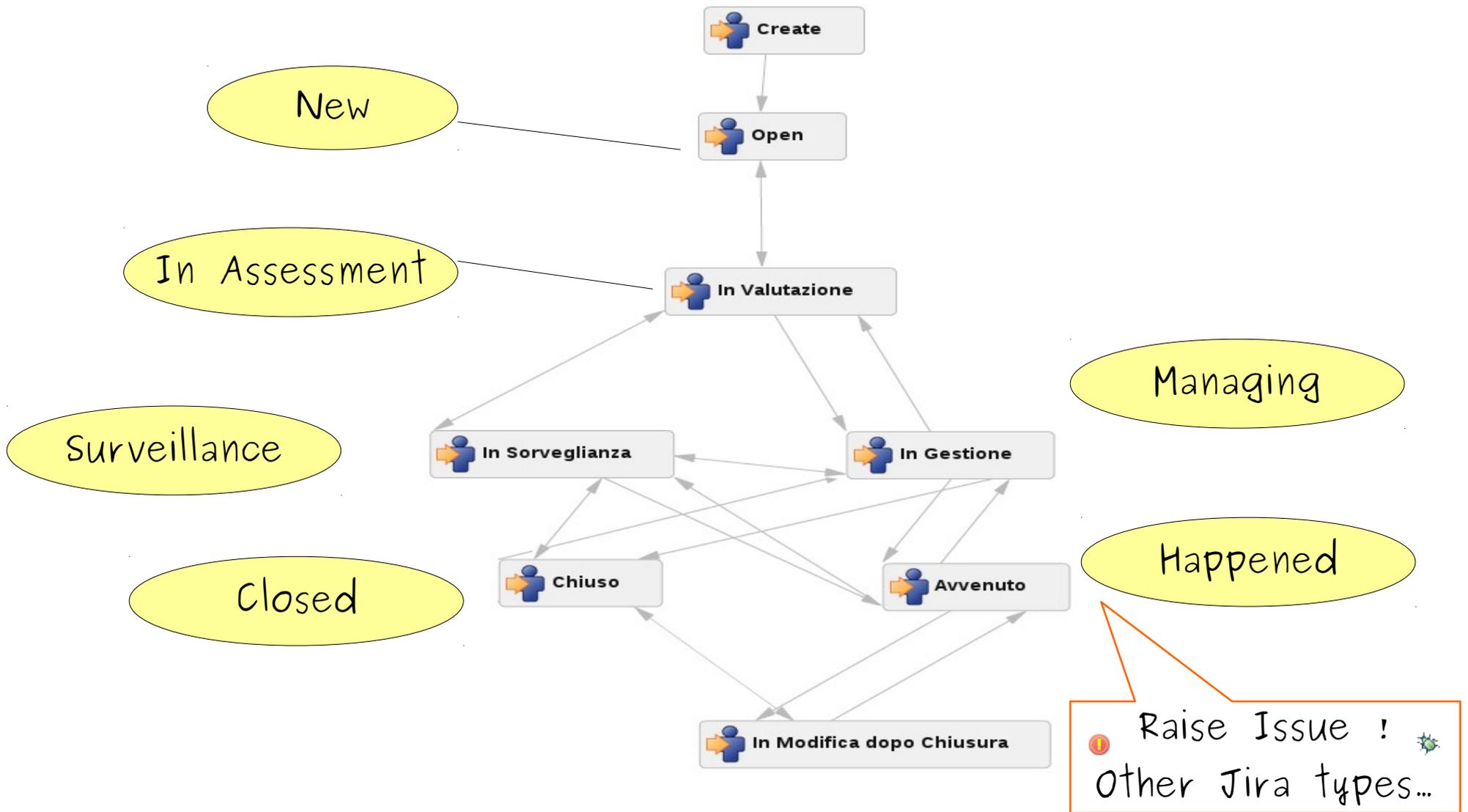
Keep track of different types of issues, such as bugs or tasks. Each issue type can be associated with a workflow. The issue type scheme defines which issue types apply to this project. To change the issue type scheme, click on the gear icon.

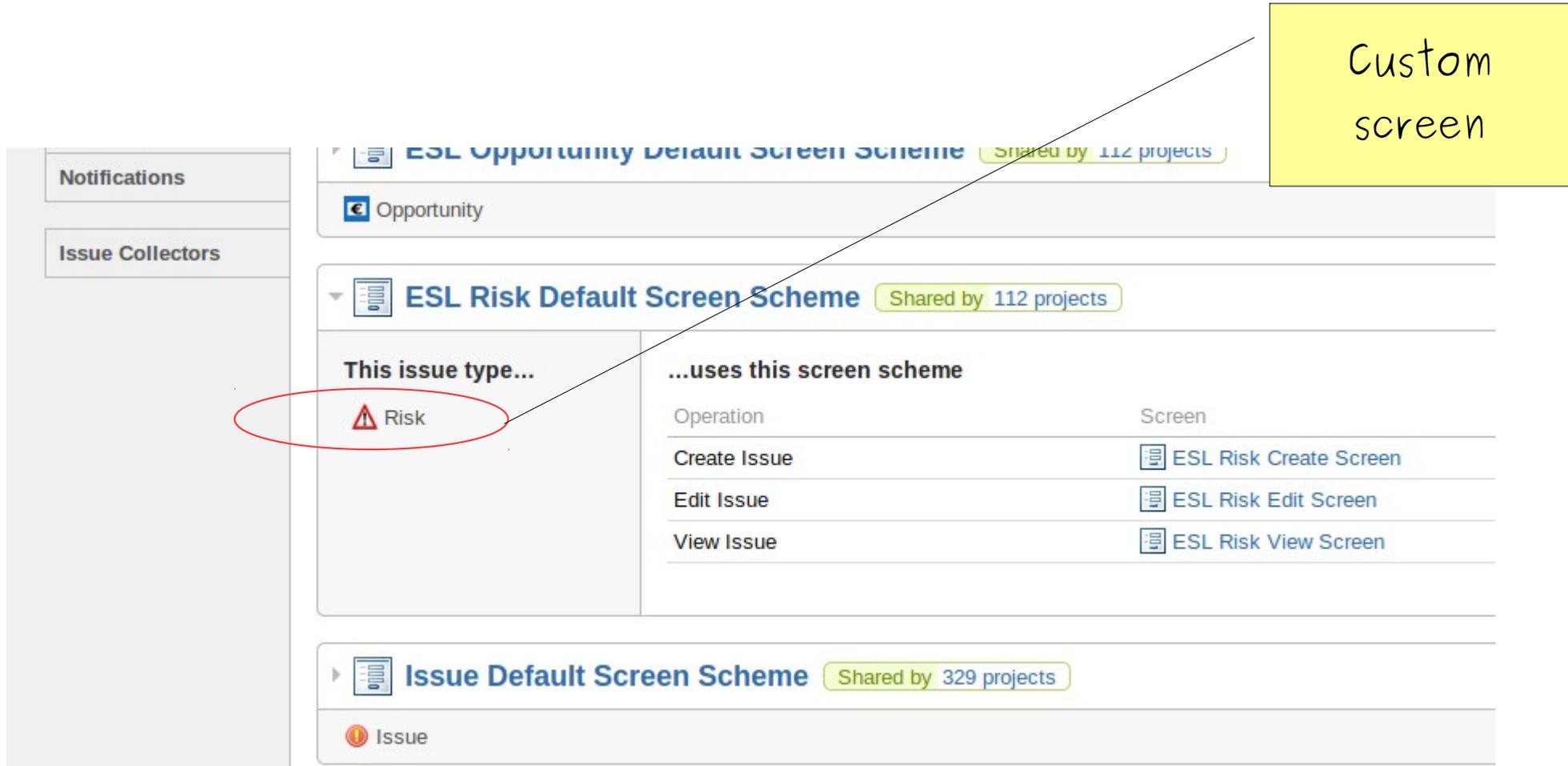
Issue Type	Description	Workflow
 Bug	A problem which impairs or prevents the functions of the product.	 Agile Simplified Workflow for Project PPSAGILE
 Epic	Created by JIRA Agile - do not edit or delete. Issue type for a big user story that needs to be broken down.	 Agile Simplified Workflow for Project PPSAGILE
 Issue	Un problema, una questione, un punto aperto, una situazione critica, ecc.	 ESL Issue Workflow
 Opportunity	A project opportunity	 ESL Opportunity Workflow
 Risk	A project risk	 ESL Risk Workflow
 Story	Created by JIRA Agile - do not edit or delete. Issue type for a user story.	 Agile Simplified Workflow for Project PPSAGILE
 Task	A task that needs to be done.	 ESL Task Workflow
 Test Case	Work item di descrizione dei test	 ESL Test Case Workflow
 Sub-task (Sub-Task)	The sub-task of the issue	 ESL Task Workflow
 Technical task (Sub-Task)	Created by JIRA Agile - do not edit or delete. Issue type for a technical task.	 Agile Simplified Workflow for Project PPSAGILE

Specific type



ESL Risk Workflow





Notifications

Issue Collectors

ESL Opportunity Default Screen Scheme Shared by 112 projects

Opportunity

ESL Risk Default Screen Scheme Shared by 112 projects

This issue type...	...uses this screen scheme								
⚠ Risk									
	<table border="1"><thead><tr><th>Operation</th><th>Screen</th></tr></thead><tbody><tr><td>Create Issue</td><td>ESL Risk Create Screen</td></tr><tr><td>Edit Issue</td><td>ESL Risk Edit Screen</td></tr><tr><td>View Issue</td><td>ESL Risk View Screen</td></tr></tbody></table>	Operation	Screen	Create Issue	ESL Risk Create Screen	Edit Issue	ESL Risk Edit Screen	View Issue	ESL Risk View Screen
Operation	Screen								
Create Issue	ESL Risk Create Screen								
Edit Issue	ESL Risk Edit Screen								
View Issue	ESL Risk View Screen								

Issue Default Screen Scheme Shared by 329 projects

Issue

Custom screen



The checkout process fails to calculate VAT

Edit Assign Comment Link To Standup More Actions Avvia valutazione Workflow

Details

Type:  Risk
Priority:  Normal
Labels: None
Status:  Nuovo
(View Workflow)
Resolution: Unresolved

Details/
Analysis

Dettaglio/Analisi Strategie e azioni Metafasi

Fonte: Gestione corrente
Causa: New European regulation since 1st, January 2015
Effetto: Wrong price calculation, and need to refund or sell to a lower price
Probabilità: 60
Impatto costi: Molto Alto
Impatto tempi: Molto Basso

Activity

Source

Cause

Effect

Probability

Costs impact

Time impact

Very High (5)
High (4)
Medium (3)
Low (2)
Very Low (1)

The checkout process fails to calculate VAT

Edit Assign Comment Link To Standup More Actions Avvia valutazione Workflow

Details

Type:  Risk
 Priority:  Normal
 Labels: None
 Status:  Nuovo
 (View Workflow)
 Resolution: Unresolved
 Dettaglio/Analisi Strategie e azioni Metafasi
 Strategia: Mitigare
 Azione di Conteni... Making tests
 Contingency Plan: Alert the administrative office to manage billing exceptions

strategy and Actions

selected strategy

Actions To mitigate risk

Contingency Plan

- Mitigate
- Transfer
- Accept
- Composite

The checkout process fails to calculate VAT

[Edit](#) [Assign](#) [Comment](#) [Link To Standup](#) [More Actions](#) [Avvia valutazione](#) [Workflow](#)

Details

Type:  Risk
Priority:  Normal
Labels: None

 Nuovo
(View Workflow)
Unresolved

Project phase

Phases

Strategie e azioni Metafasi

- 07 – Realizzazione
- 08 – Test
- 09 – Rilascio
- 10 – Collaudo
- 11 – Avvio in Esercizio

(15 Engineering Group Project phases)

Activity

[All](#) [Comments](#) [Links](#) [Work Log](#) [History](#) [Activity](#) [Linked Daily Standups](#) [Workflow Diagram](#) [Transitions Summary](#) [Questions](#)

Congratulations!

You've just finished to build your
Risk Management Tool !

Risk catalogue, prioritization, and
whatever you need to manage them
(incidentally you've just ended to be compliant with
RSKM Process Area for CMMi)

- Configure PostgreSQL
 - Centralized DB to feed a DWH, for instance...
- Configure Mylyn to build your Risk Focused Interface in your Integrated Test Environment
- Define and execute your Test cases (of course...)
 - bind them to each risk !
- Analyse results with reports and dashboards

1. Create a user and a database

```
Terminale
daniele@gagliardix ~ $ psql postgres
psql (9.4.5)
Digita "help" per avere un aiuto.

postgres=# create user jubula password 'jubula!';
```

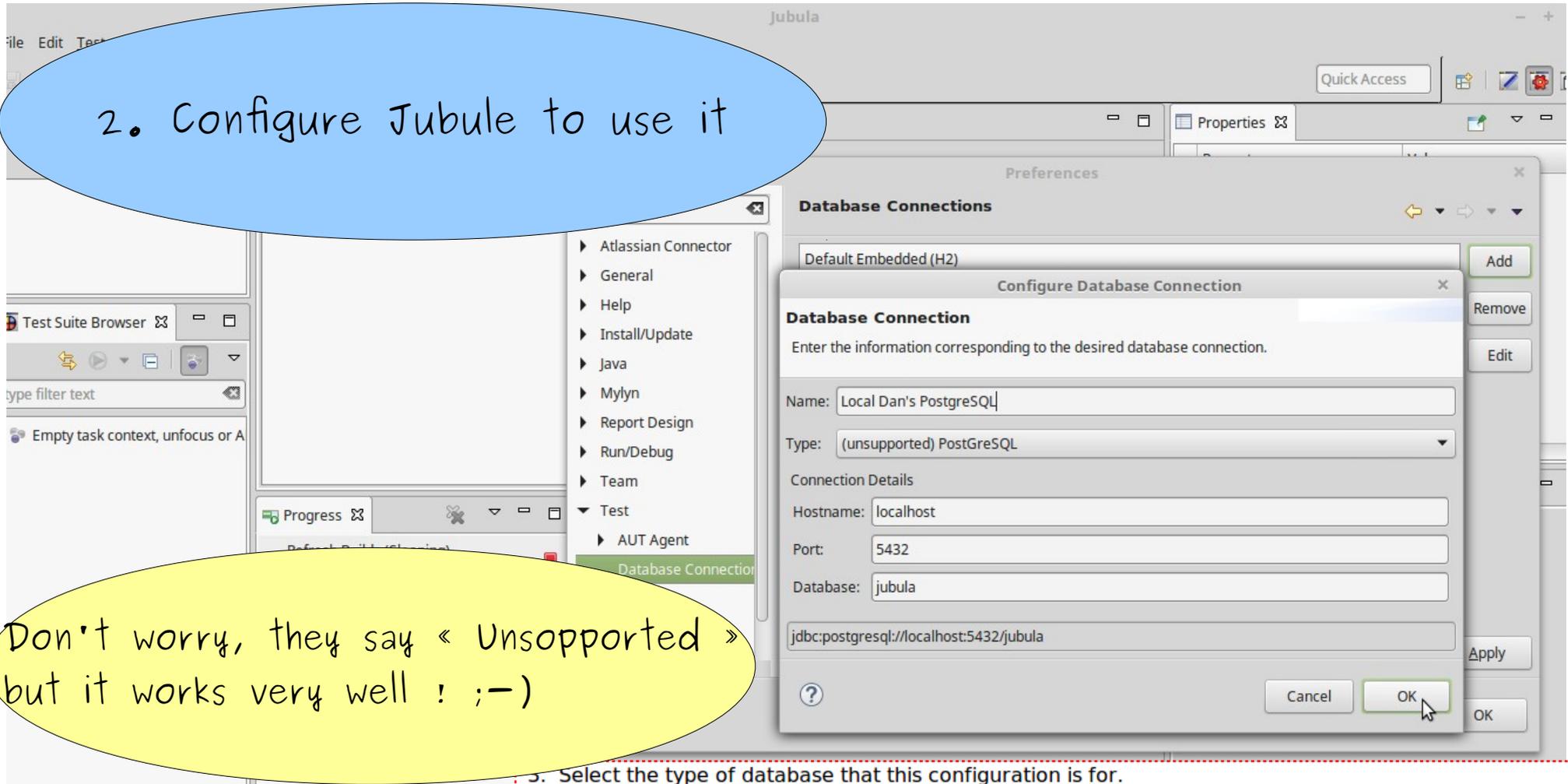
```
Terminale
daniele@gagliardix ~ $ psql postgres
psql (9.4.5)
Digita "help" per avere un aiuto.

postgres=# create database jubula with owner jubula;
```

Trivial...

2. Configure Jubula to use it

Don't worry, they say « Unsupported » but it works very well ! ;-)

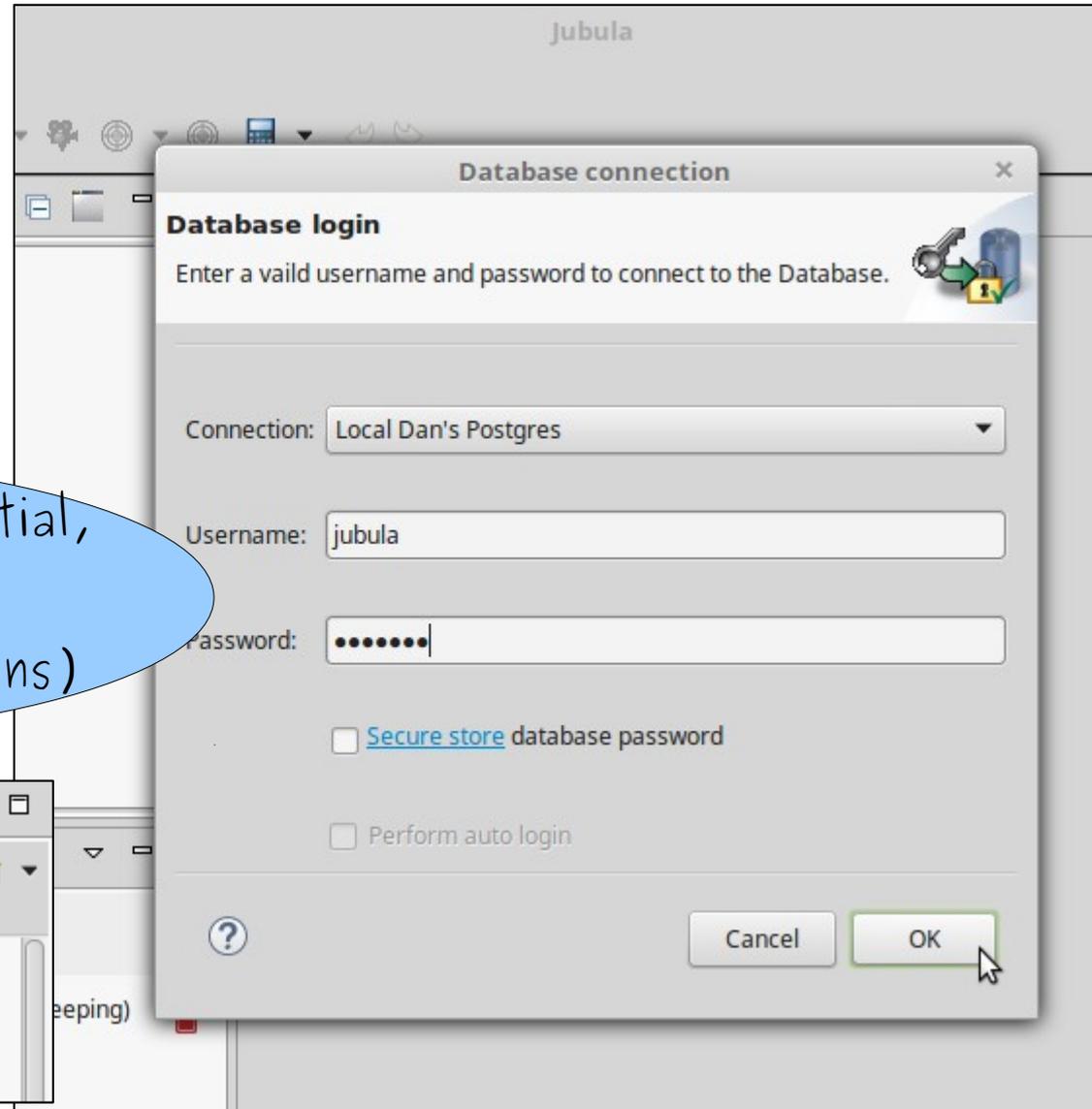
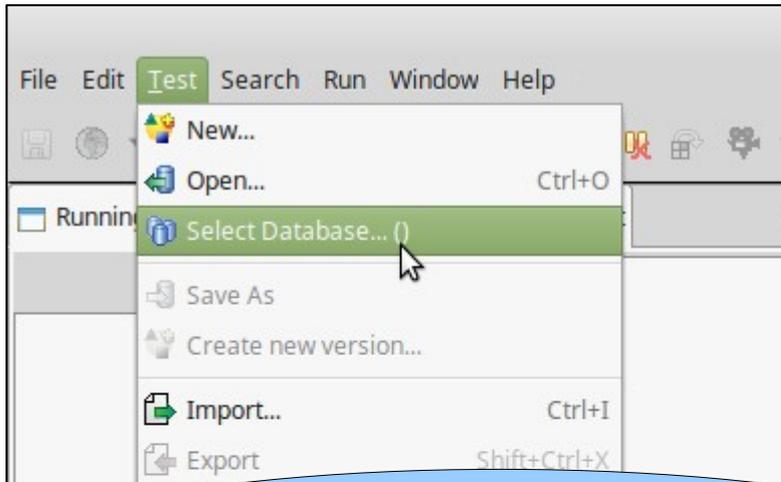


5. Select the type of database that this configuration is for.

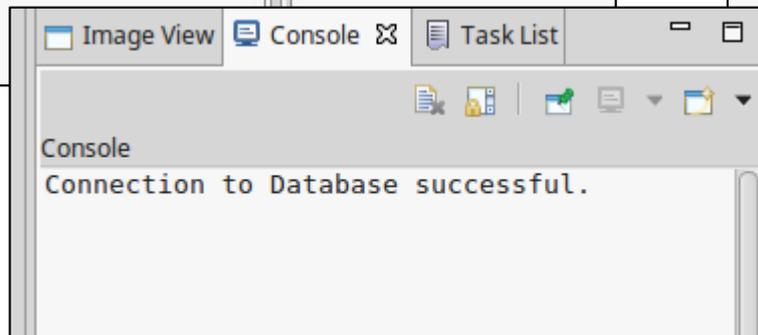


The ITE is thoroughly tested with Oracle. PostgreSQL and MySQL have been successfully tried out, but we cannot guarantee their usage in productive environments.

From the online help of Jubula

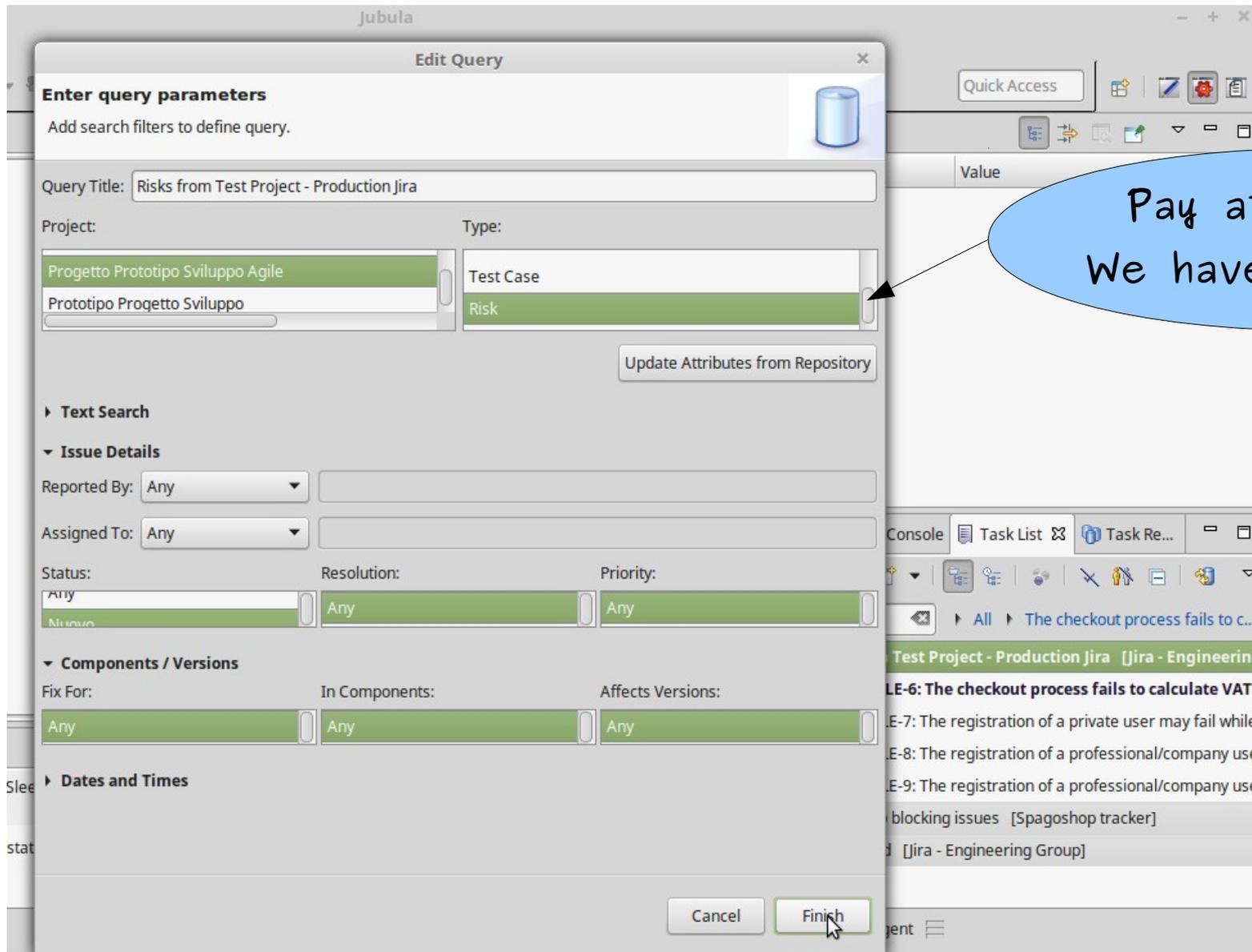


3. Use it (select, insert credential, Connect, create your projects and versions)





Mylyn
From the Task Focused Interface
To the
Risk Focused Interface



Edit Query

Enter query parameters

Add search filters to define query.

Query Title: Risks from Test Project - Production Jira

Project: Progetto Prototipo Sviluppo Agile
Type: Risk

Update Attributes from Repository

Text Search

Issue Details

Reported By: Any

Assigned To: Any

Status: Any
Resolution: Any
Priority: Any

Components / Versions

Fix For: Any
In Components: Any
Affects Versions: Any

Dates and Times

Cancel Finish

Quick Access

Value

Console

Task List Task Re...

All The checkout process fails to c...

Test Project - Production Jira [Jira - Engineering]

LE-6: The checkout process fails to calculate VAT

E-7: The registration of a private user may fail while

E-8: The registration of a professional/company user

E-9: The registration of a professional/company user

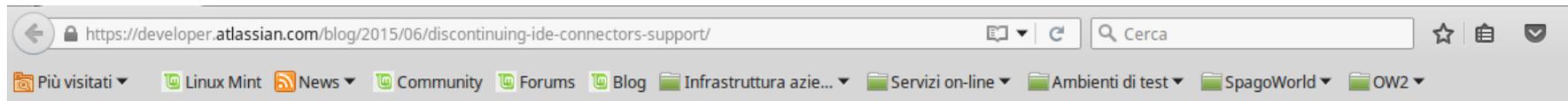
blocking issues [Spagoshop tracker]

[Jira - Engineering Group]

Pay attention !!!
We have risks here !

Congratulations!
You've just finished to setup your
Risk Mitigation Tool !

<https://developer.atlassian.com/blog/2015/06/discontinuing-ide-connectors-support/>





Search... 

 MEN

We are discontinuing the support for Atlassian IDE Connectors

June 1st 2015  Bartek Gatz in IDE Connectors

Four years ago Jens Schumacher, the Group Product Manager of Development Tools at Atlassian, [wrote a blog post](#) where he explained our motivation behind starting the open source [Atlassian IDE Connector](#) project. We had a goal of delivering a faster and more convenient way to interact with Atlassian applications.

Since we started that effort, a lot has changed. The web and our products have evolved, and as a consequence, IDE Connectors are duplicating functionality that is already available today in Atlassian products.

Over the last several years, we have performed a full redesign of all Atlassian products' UI to match the

What exactly is changing?

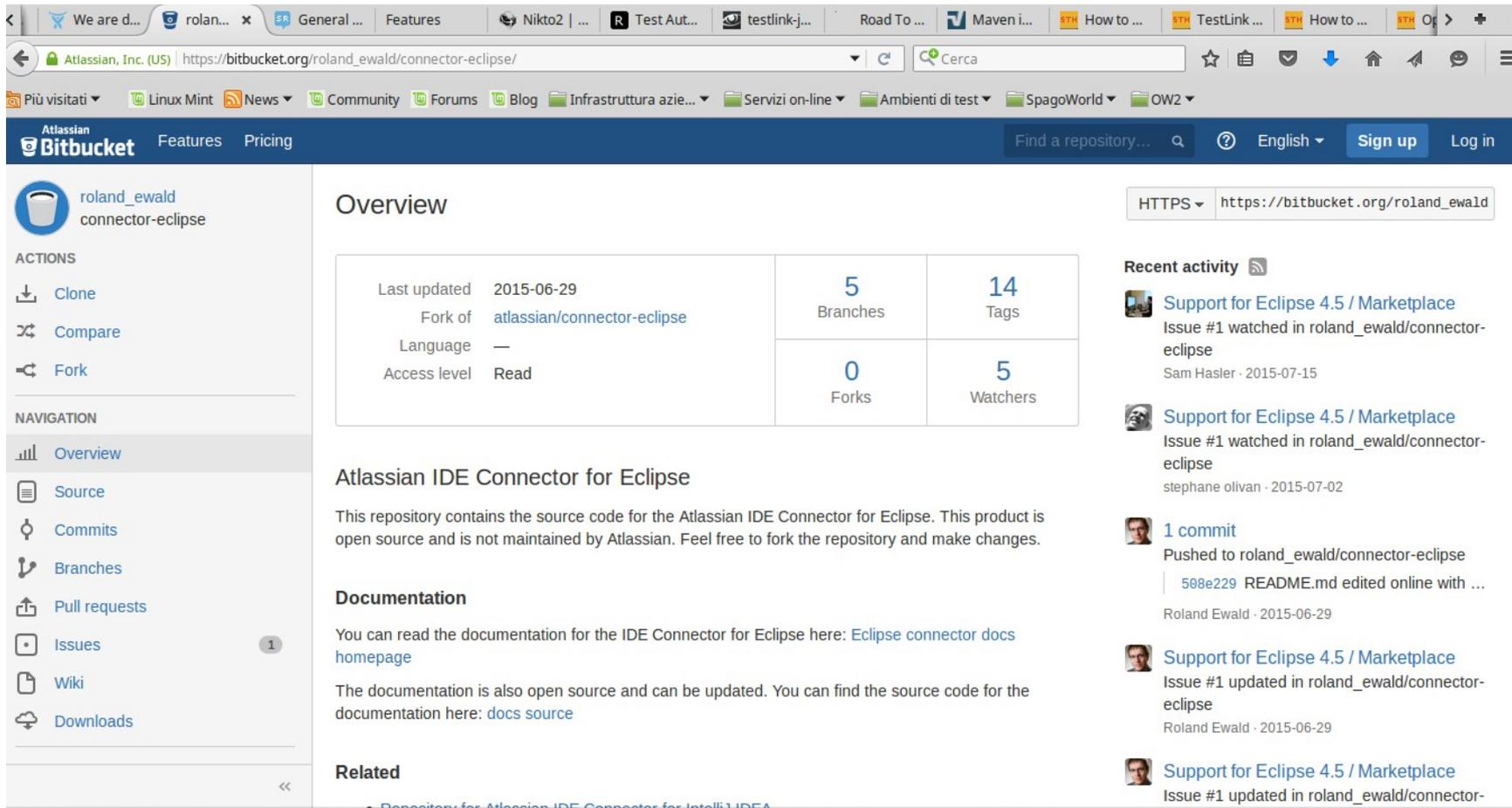
Atlassian will not release any new versions of IDE connectors, the current release is the last. We have also discontinued the customer support and Atlassian Answers effort related to IDE Connectors.

Specifically:

- **IDE Connector for Eclipse**, the last version released from Atlassian on **27 April 2015** is **3.2.5**. Its [support project on SAC](#) and the [development backlog project on EAN](#) are now closed.
- **IDE Connector for IntelliJ**, the last version released from Atlassian on **20 April 2015** is **3.0.16**. Its [support project on SAC](#) and the [development backlog project on EAN](#) are now closed.
- **IDE Connector for Visual Studio**, the last version released from Atlassian on **10 April 2015** is **1.3.12**. Its [support project on SAC](#) and the [development backlog project on EAN](#) are now closed.
- We have updated product listings on www.atlassian.com and marketplace.atlassian.com.

These changes are effective immediately.

https://bitbucket.org/roland_ewald/connector-eclipse/

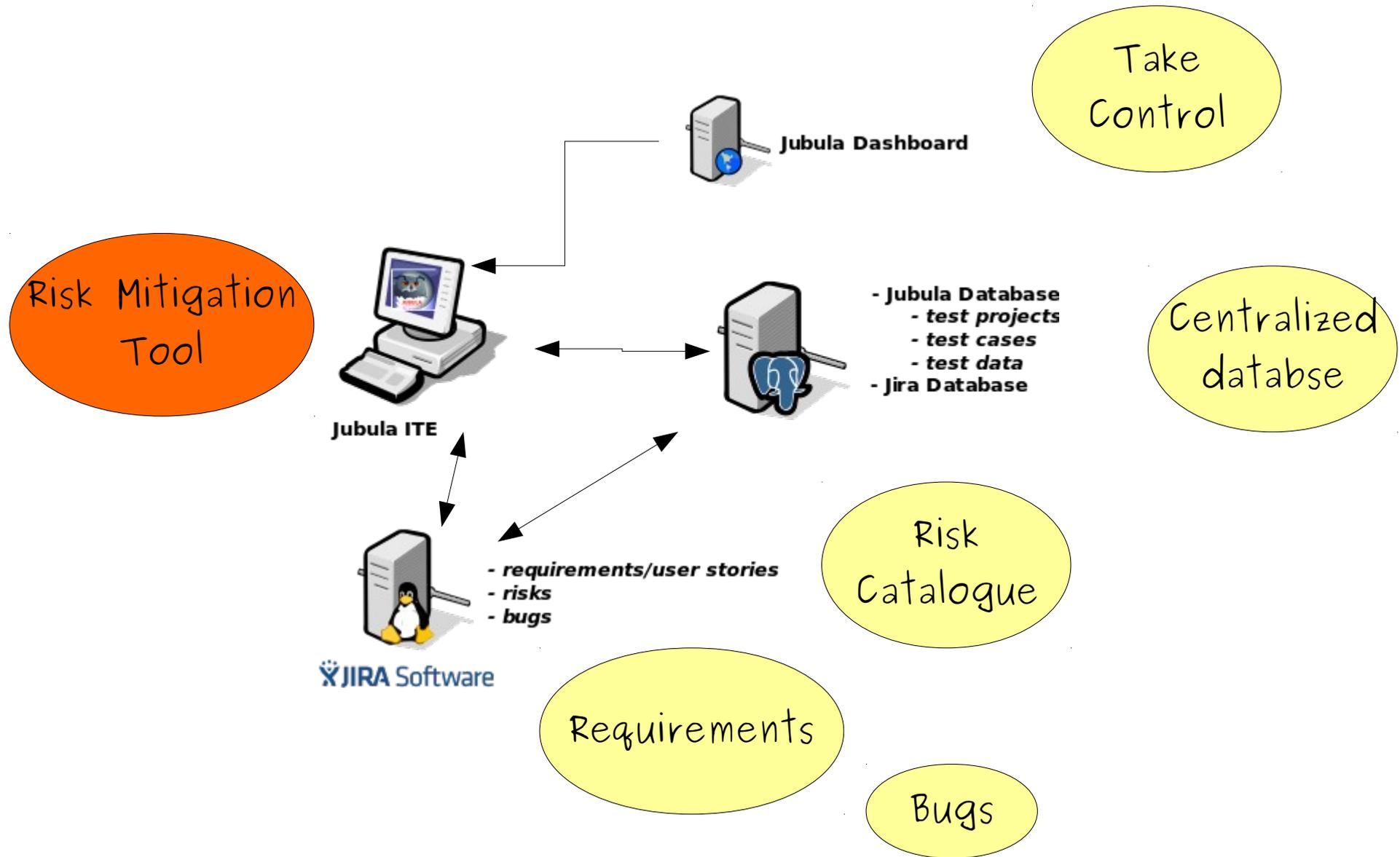


The screenshot shows the Bitbucket web interface for the repository 'roland_ewald/connector-eclipse'. The page is divided into several sections:

- Left Sidebar:** Contains the repository name, a list of actions (Clone, Compare, Fork), and a navigation menu with options like Overview, Source, Commits, Branches, Pull requests, Issues (with a '1' badge), Wiki, and Downloads.
- Overview Section:** A table showing repository statistics:

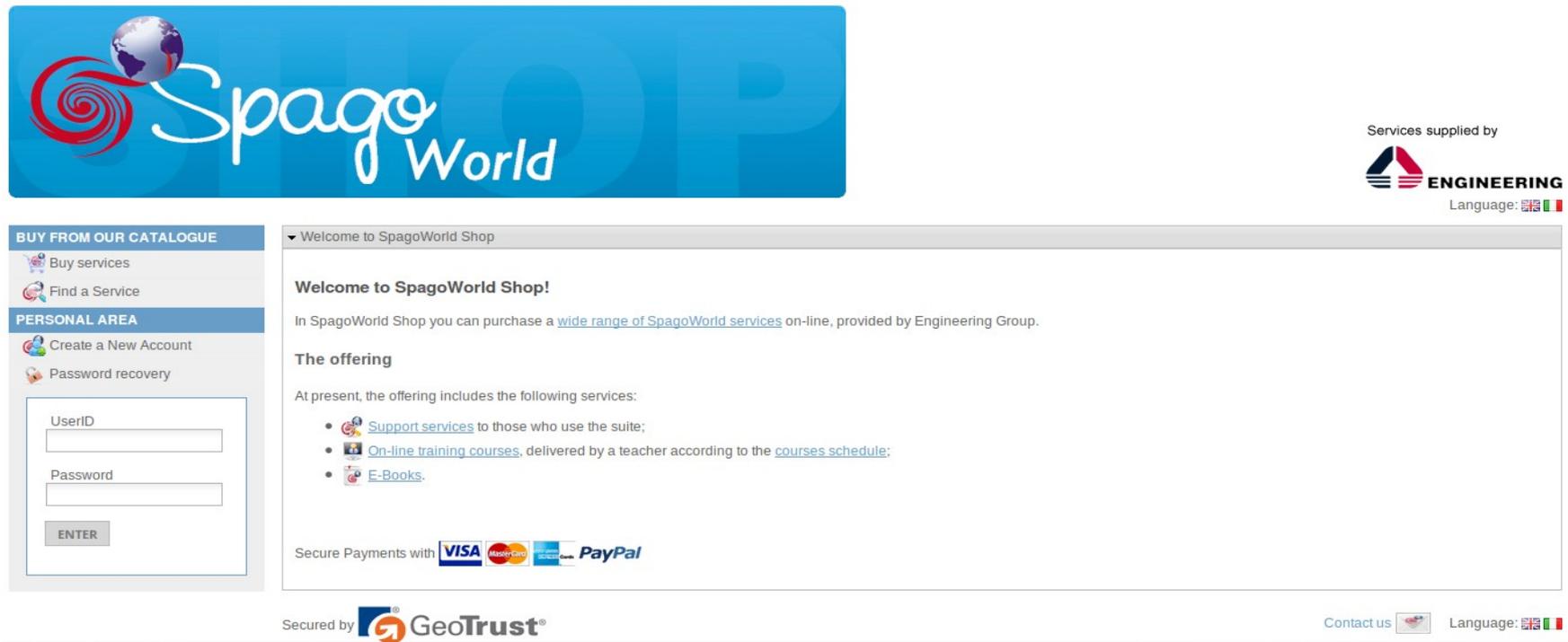
Last updated	2015-06-29	5	14
Fork of	atlassian/connector-eclipse	Branches	Tags
Language	—	0	5
Access level	Read	Forks	Watchers
- Repository Description:** Titled 'Atlassian IDE Connector for Eclipse', it states: 'This repository contains the source code for the Atlassian IDE Connector for Eclipse. This product is open source and is not maintained by Atlassian. Feel free to fork the repository and make changes.'
- Documentation:** A section with a heading 'Documentation' and text: 'You can read the documentation for the IDE Connector for Eclipse here: [Eclipse connector docs homepage](#). The documentation is also open source and can be updated. You can find the source code for the documentation here: [docs source](#)'.
- Recent activity:** A list of recent events:
 - Support for Eclipse 4.5 / Marketplace: Issue #1 watched in roland_ewald/connector-eclipse (Sam Hasler - 2015-07-15)
 - Support for Eclipse 4.5 / Marketplace: Issue #1 watched in roland_ewald/connector-eclipse (stephane olivan - 2015-07-02)
 - 1 commit: Pushed to roland_ewald/connector-eclipse (508e229 README.md edited online with ... (Roland Ewald - 2015-06-29)
 - Support for Eclipse 4.5 / Marketplace: Issue #1 updated in roland_ewald/connector-eclipse (Roland Ewald - 2015-06-29)
 - Support for Eclipse 4.5 / Marketplace: Issue #1 updated in roland_ewald/connector-eclipse

The Risk Based Testing architecture



The Use Case

- <https://spagoshop.spagoworld.org/spagoshop>
- E-commerce site to sell professional services on SpagoWorld open source products (SpagoBI, Spago4Q, Spagic, Spago framework)



The screenshot displays the SpagoWorld Shop interface. At the top left is the SpagoWorld logo, featuring a globe and a red swirl. The main content area is titled "Welcome to SpagoWorld Shop!" and includes a welcome message: "In SpagoWorld Shop you can purchase a [wide range of SpagoWorld services](#) on-line, provided by Engineering Group." Below this, a section titled "The offering" lists services: "Support services" for suite users, "On-line training courses" delivered by teachers according to a schedule, and "E-Books". A "Secure Payments with" section lists logos for VISA, MasterCard, American Express, and PayPal. On the left side, there is a "BUY FROM OUR CATALOGUE" section with links for "Buy services" and "Find a Service", and a "PERSONAL AREA" section with links for "Create a New Account" and "Password recovery". Below the personal area is a login form with fields for "UserID" and "Password", and an "ENTER" button. At the bottom, there is a "Secured by GeoTrust" logo and a "Contact us" link with a language selector for English, German, and Italian.

- JEE, Tomcat 6/7, JDK 7
- Set-up with Spring Roo (best practices – i.e. web page elements have unique identifiers)
- MySQL rDBMS
- Built with Eclipse (of course)
- It doesn't manage credit cards, it leverages an italian bank payment gateway



```
Terminal
File Edit View Terminal Help
~$roo
  Roo 1.0.2.RELEASE [rev 638]
Welcome to Spring Roo. For assistance press TAB or type 'hint' then hit ENTER.
roo> hint
Welcome to Roo! We hope you enjoy your stay!

Before you can use many features of Roo, you need to start a new project.

To do this, type 'project' (without the quotes) and then hit TAB.

Enter a --topLevelPackage like 'com.mycompany.projectname' (no quotes).
When you've finished completing your --topLevelPackage, press ENTER.
Your new project will then be created in the current working directory.

Note that Roo frequently allows the use of TAB, so press TAB regularly.
Once your project is created, type 'hint' and ENTER for the next suggestion.
You're also welcome to visit http://forum.springframework.org for Roo help.
roo>
```

An example of Risk Transfer !



As a customer
I want to
register myself
as a private user

As a end-use
I want to
Access to the shop
Using a userid
And a password
chosen by me

As a SpagoBI
Consultant
I want to sell
My professional
Services on the web

As a customer
I want to buy
Using my
credit card

As a customer
I want to buy
Using my
PayPal Account

As a customer
I want to
register myself
as a company/
professional user
In order to
Deduct VAT



As a customer
I want to
register myself
as a private user

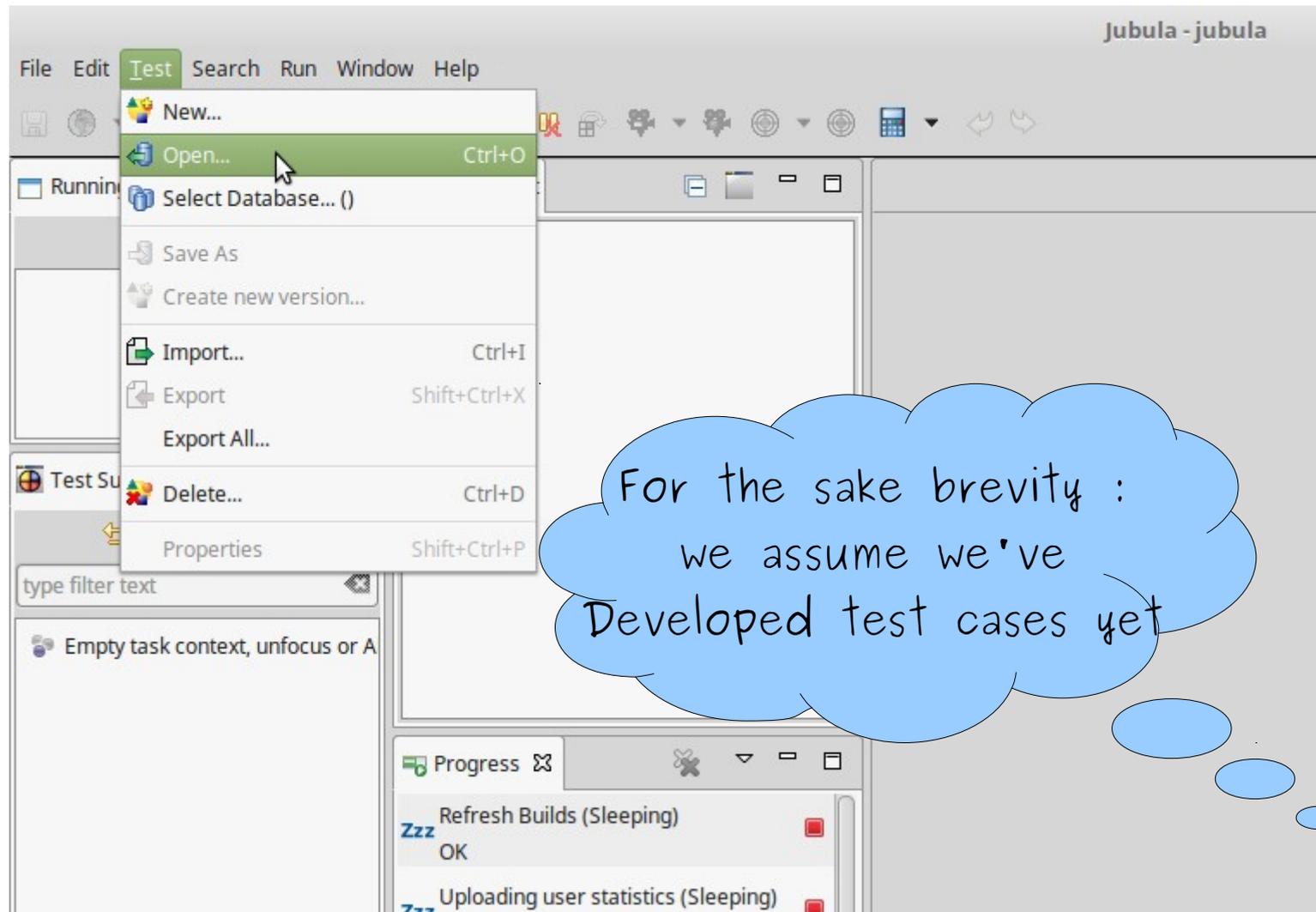
As a end
VAT calculation rules
(since 1st January 2015 you
Have to apply the customer's
EU country VAT)

As a SpagoBI
Consultant
want to sell
professional
es on the web

chosen by me

Engineering Group needs
Customer info for billing purposes :
NIN or VAT
(different patterns
from country to country)

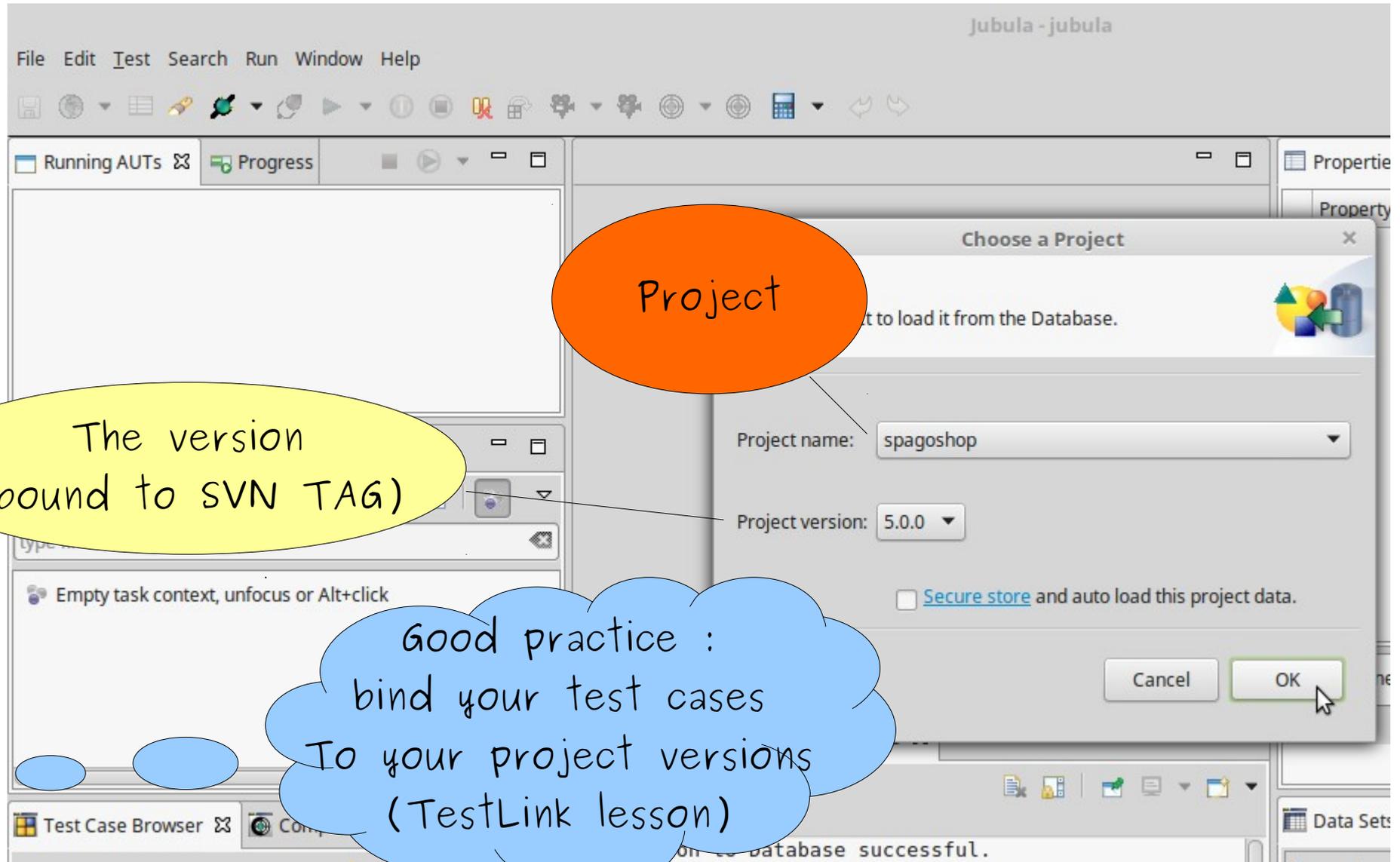
As a customer
I want to
register myself
as a company/
professional user
In order to
Deduct VAT

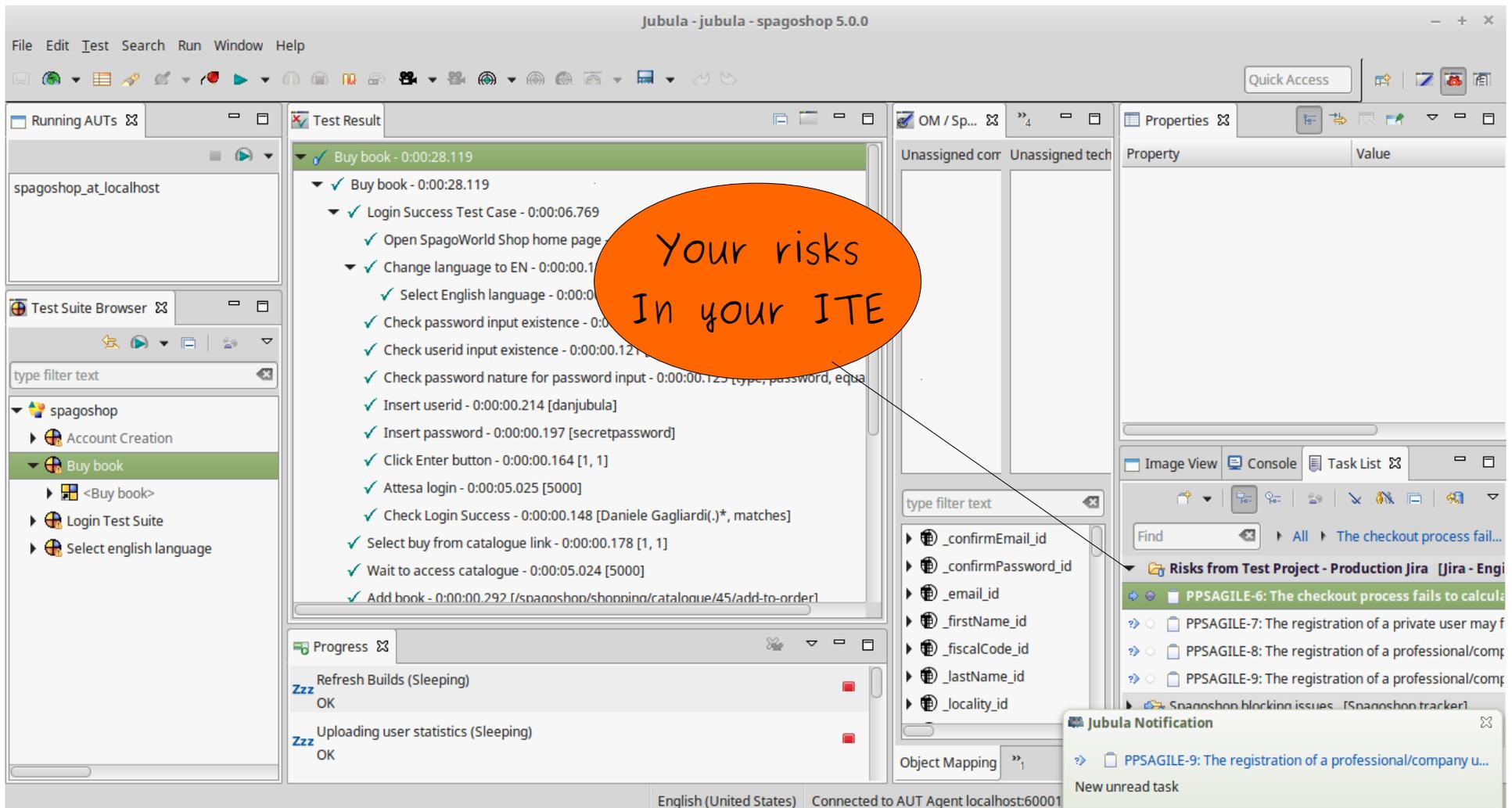


Connect
To your test
cases

For the sake brevity :
we assume we've
Developed test cases yet

Choose project and project version



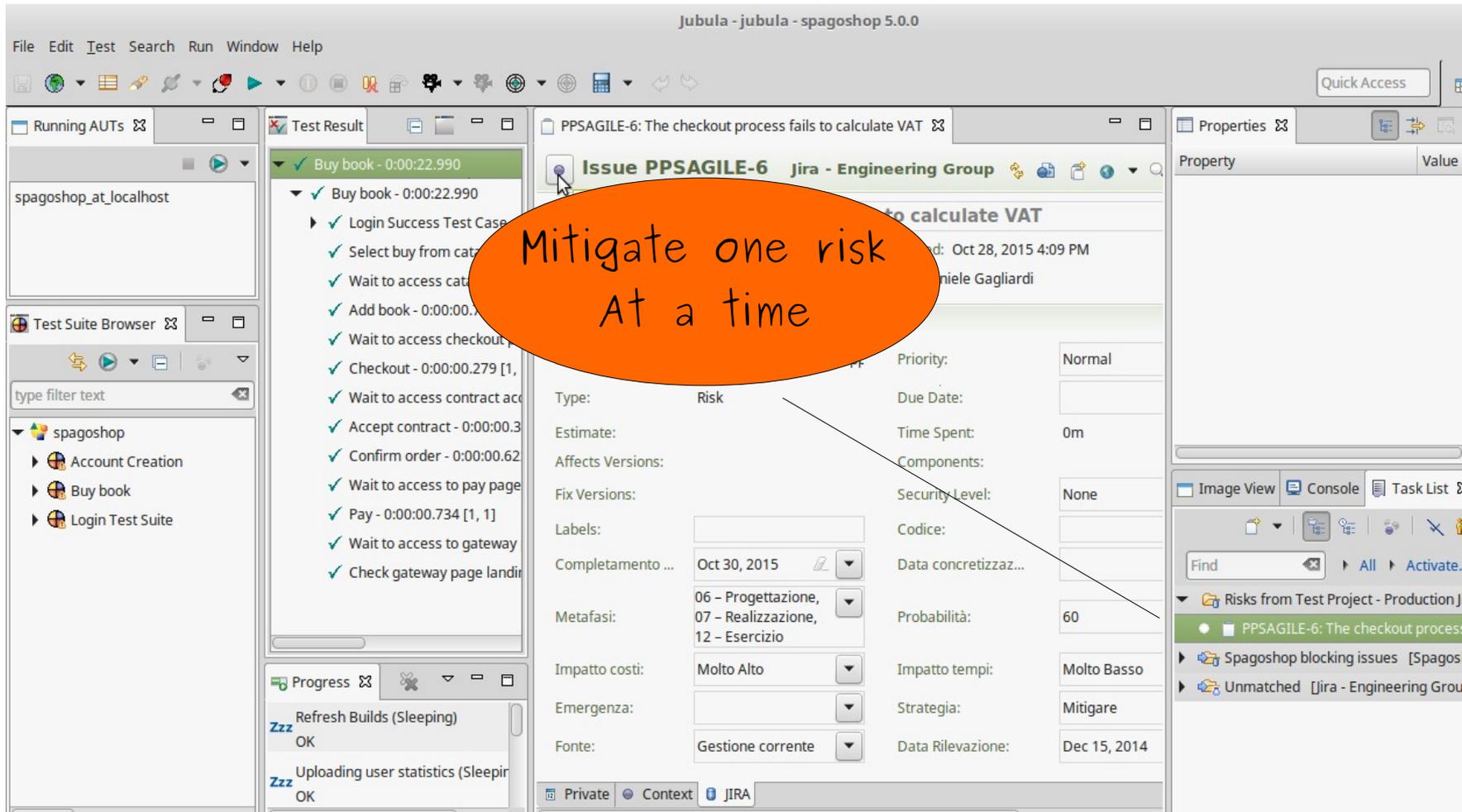


The screenshot shows the Jubula IDE interface with the following components:

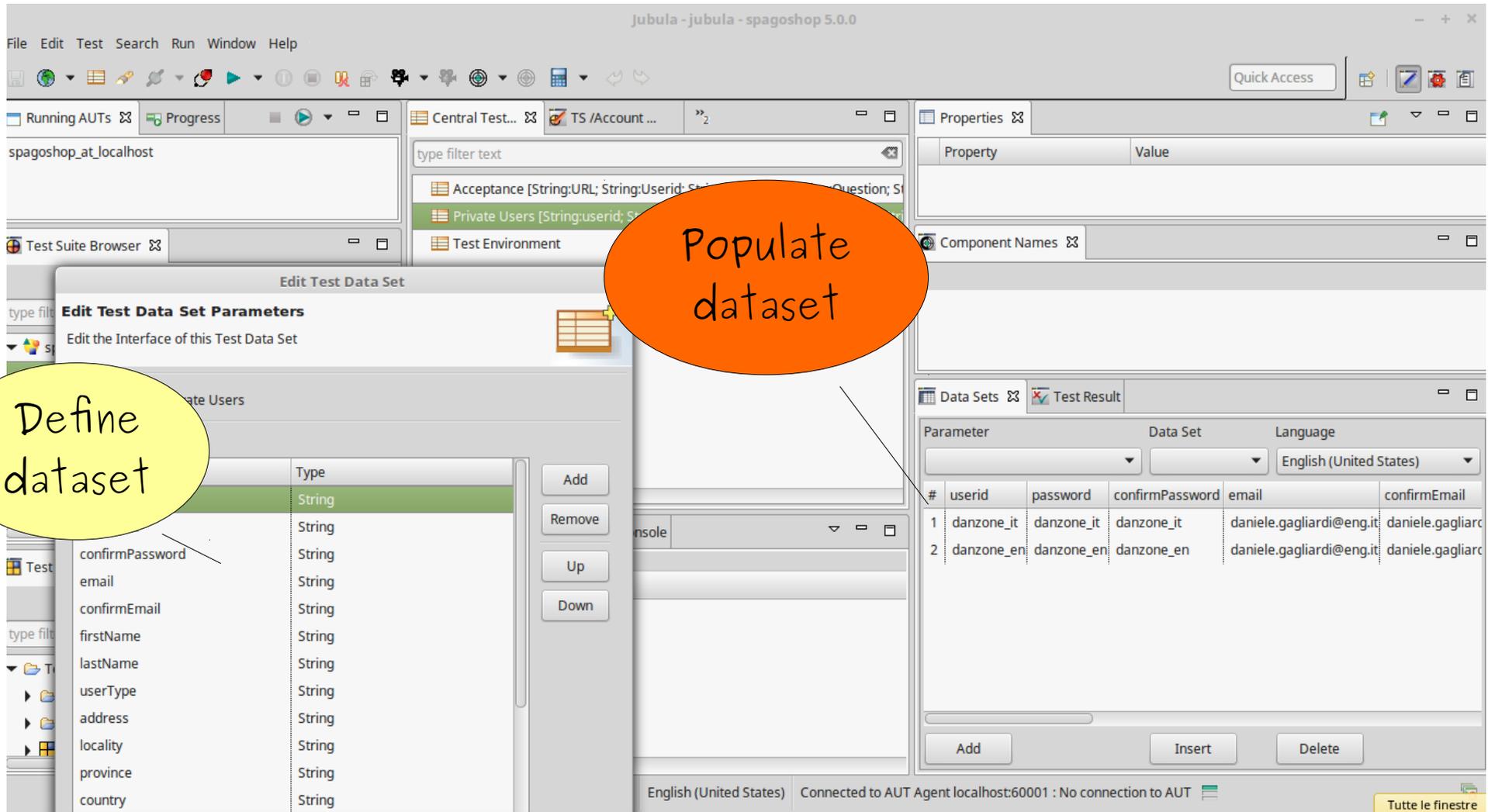
- Running AUTs:** spagoshop_at_localhost
- Test Suite Browser:** spagoshop > Buy book
- Test Result:** Buy book - 0:00:28.119
 - Buy book - 0:00:28.119
 - Login Success Test Case - 0:00:06.769
 - Open SpagoWorld Shop home page
 - Change language to EN - 0:00:00.1
 - Select English language - 0:00:00.1
 - Check password input existence - 0:00:00.1
 - Check userid input existence - 0:00:00.121
 - Check password nature for password input - 0:00:00.125 [type, password, equals]
 - Insert userid - 0:00:00.214 [danjubula]
 - Insert password - 0:00:00.197 [secretpassword]
 - Click Enter button - 0:00:00.164 [1, 1]
 - Attesa login - 0:00:05.025 [5000]
 - Check Login Success - 0:00:00.148 [Daniele Gagliardi(.)*, matches]
 - Select buy from catalogue link - 0:00:00.178 [1, 1]
 - Wait to access catalogue - 0:00:05.024 [5000]
 - Add book - 0:00:00.292 [/spagoshop/shopping/catalogue/45/add-to-order]

- Properties:** Unassigned corr, Unassigned tech
- Object Mapping:** _confirmEmail_id, _confirmPassword_id, _email_id, _firstName_id, _fiscalCode_id, _lastName_id, _locality_id
- Risks from Test Project - Production Jira:** PPSAGILE-6: The checkout process fails to calculate...
- Jubula Notification:** PPSAGILE-9: The registration of a professional/company u...

An orange oval with the text "Your risks In your ITE" is overlaid on the test results, with an arrow pointing to the risk repository list.



The screenshot shows the Jubula application interface. On the left, there are panels for 'Running AUTs' (showing 'spagoshop_at_localhost'), 'Test Suite Browser' (showing a tree view of test suites like 'Account Creation', 'Buy book', and 'Login Test Suite'), and 'Progress' (showing 'Refresh Builds (Sleeping)' and 'Uploading user statistics (Sleeping)'). The main area is split into two panes. The left pane shows a 'Test Result' window with a list of test cases, including 'Buy book - 0:00:22.990' and 'Login Success Test Case'. The right pane shows a JIRA issue titled 'Issue PPSAGILE-6' with the description 'to calculate VAT'. The issue details include 'Type: Risk', 'Priority: Normal', 'Due Date: Oct 28, 2015 4:09 PM', and 'Mitigare' as the strategy. An orange oval with the handwritten text 'Mitigate one risk At a time' is overlaid on the JIRA issue, with a line pointing to the 'Mitigare' strategy field.



The screenshot shows the Jubula software interface with several windows open. A yellow callout bubble points to the 'Edit Test Data Set Parameters' window, and an orange callout bubble points to the 'Data Sets' window.

Define dataset (yellow callout)

Populate dataset (orange callout)

Data Sets window table:

Parameter	Data Set	Language			
#	userid	password	confirmPassword	email	confirmEmail
1	danzone_it	danzone_it	danzone_it	daniele.gagliardi@eng.it	daniele.gagliardi@eng.it
2	danzone_en	danzone_en	danzone_en	daniele.gagliardi@eng.it	daniele.gagliardi@eng.it

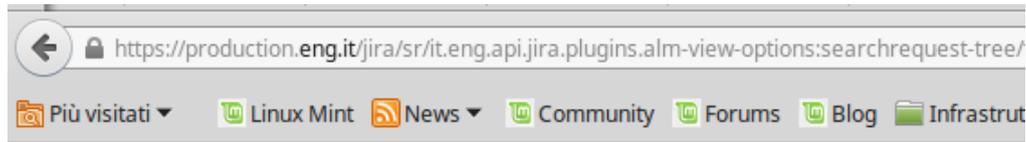
Risk to mitigate



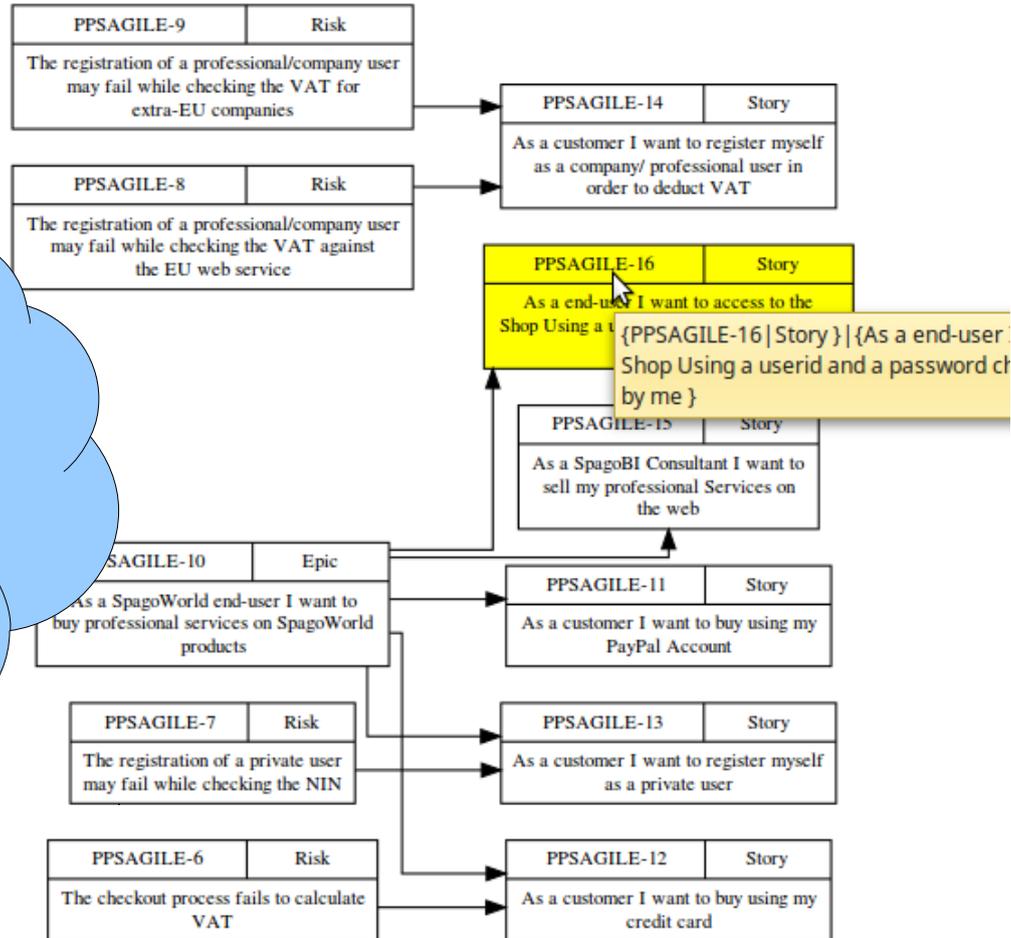
Traceability What is it ? Why should I care ?

Traceability is a keyword to take things under control : from the requirements to the risk to the test cases to mitigate them

A Jira search result view

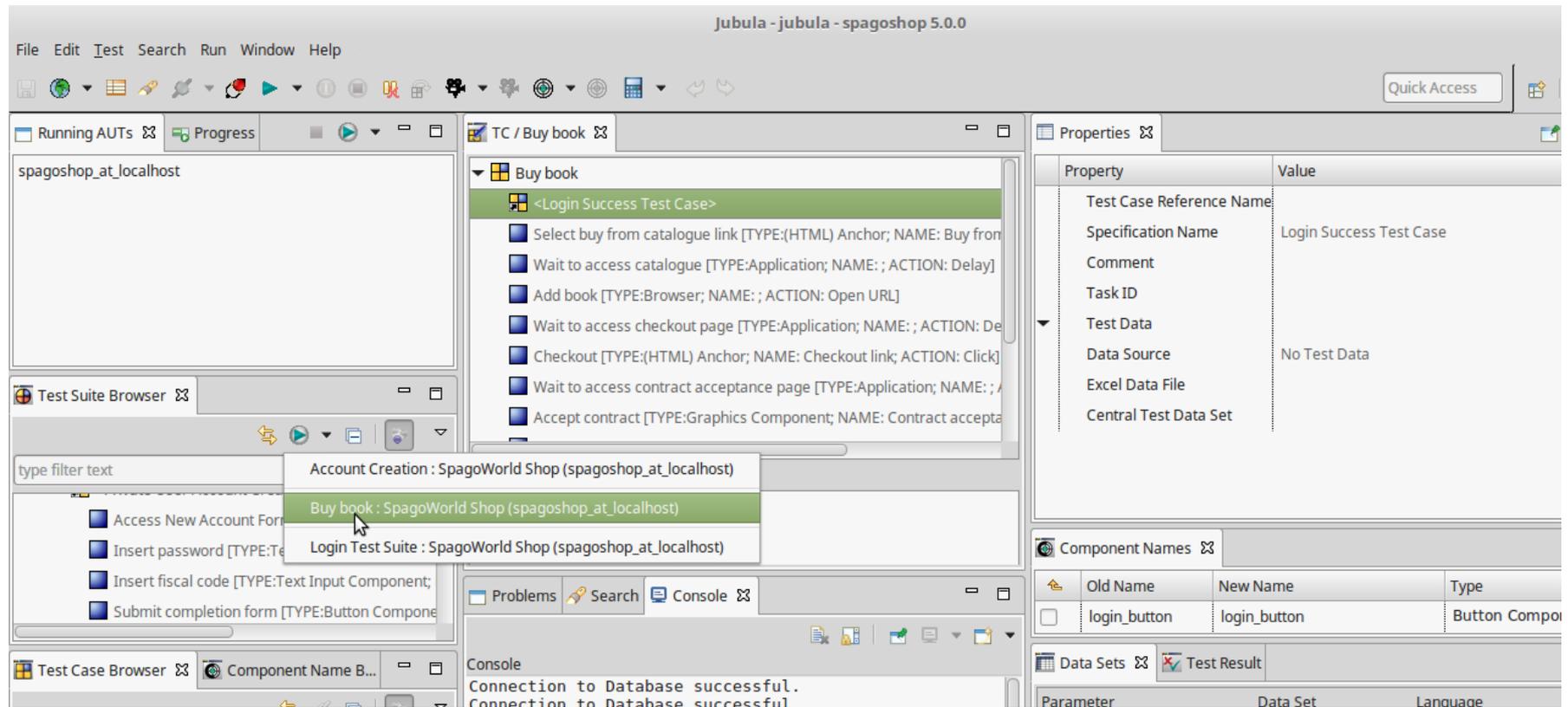


Issue tree view



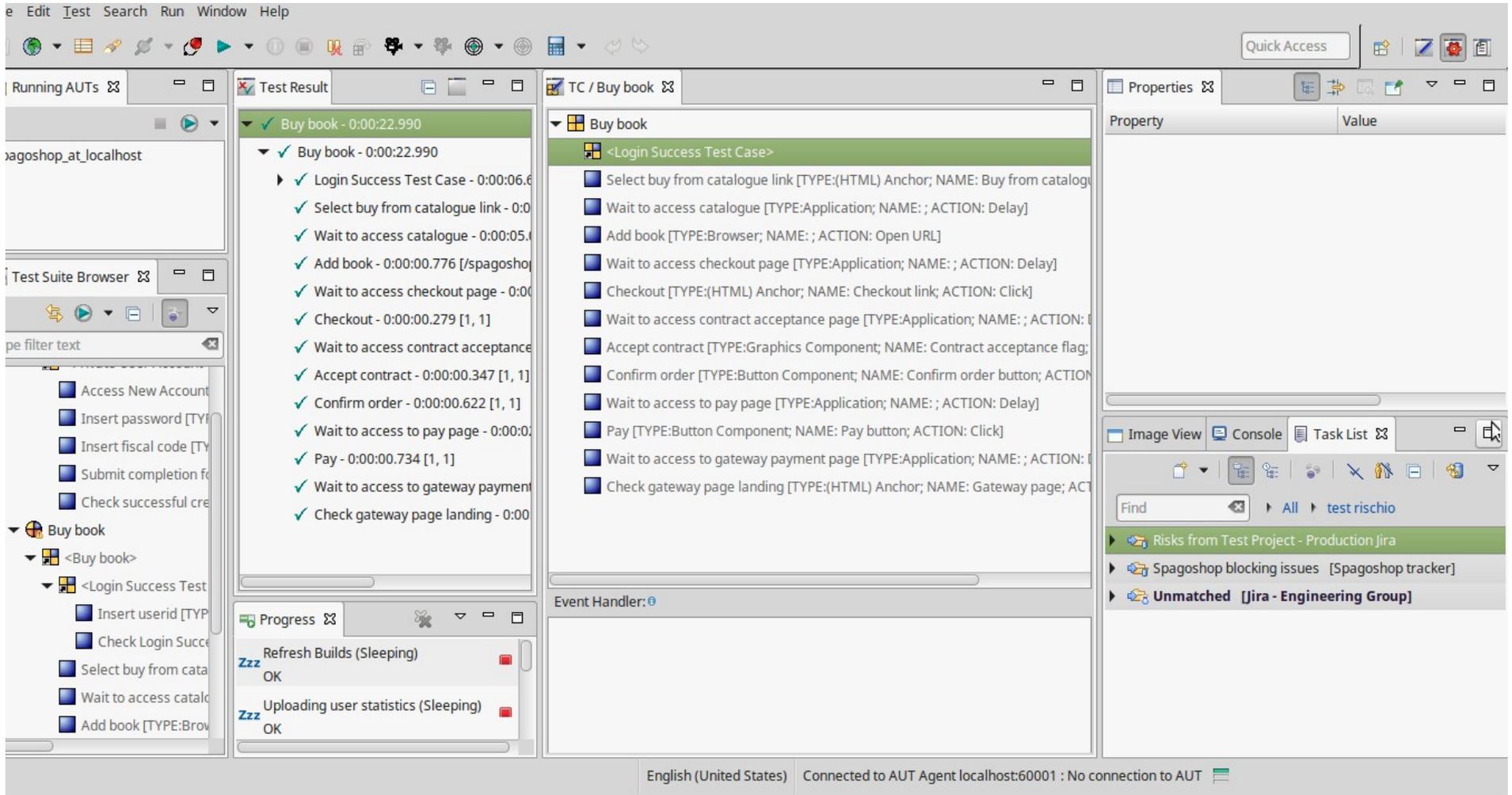
A plugin we developed
At Engineering Group
Using
Atlassian SDK

Select test case to execute



The screenshot shows the Jubula - jubula - spagoshop 5.0.0 interface. The main window displays a test suite tree under 'TC / Buy book'. A context menu is open over the 'Buy book' test case, listing several options: 'Account Creation : SpagoWorld Shop (spagoshop_at_localhost)', 'Buy book : SpagoWorld Shop (spagoshop_at_localhost)', and 'Login Test Suite : SpagoWorld Shop (spagoshop_at_localhost)'. The 'Buy book' option is highlighted. The right-hand side of the interface shows the 'Properties' panel with a table of test case details.

Property	Value
Test Case Reference Name	
Specification Name	Login Success Test Case
Comment	
Task ID	
Test Data	
Data Source	No Test Data
Excel Data File	
Central Test Data Set	

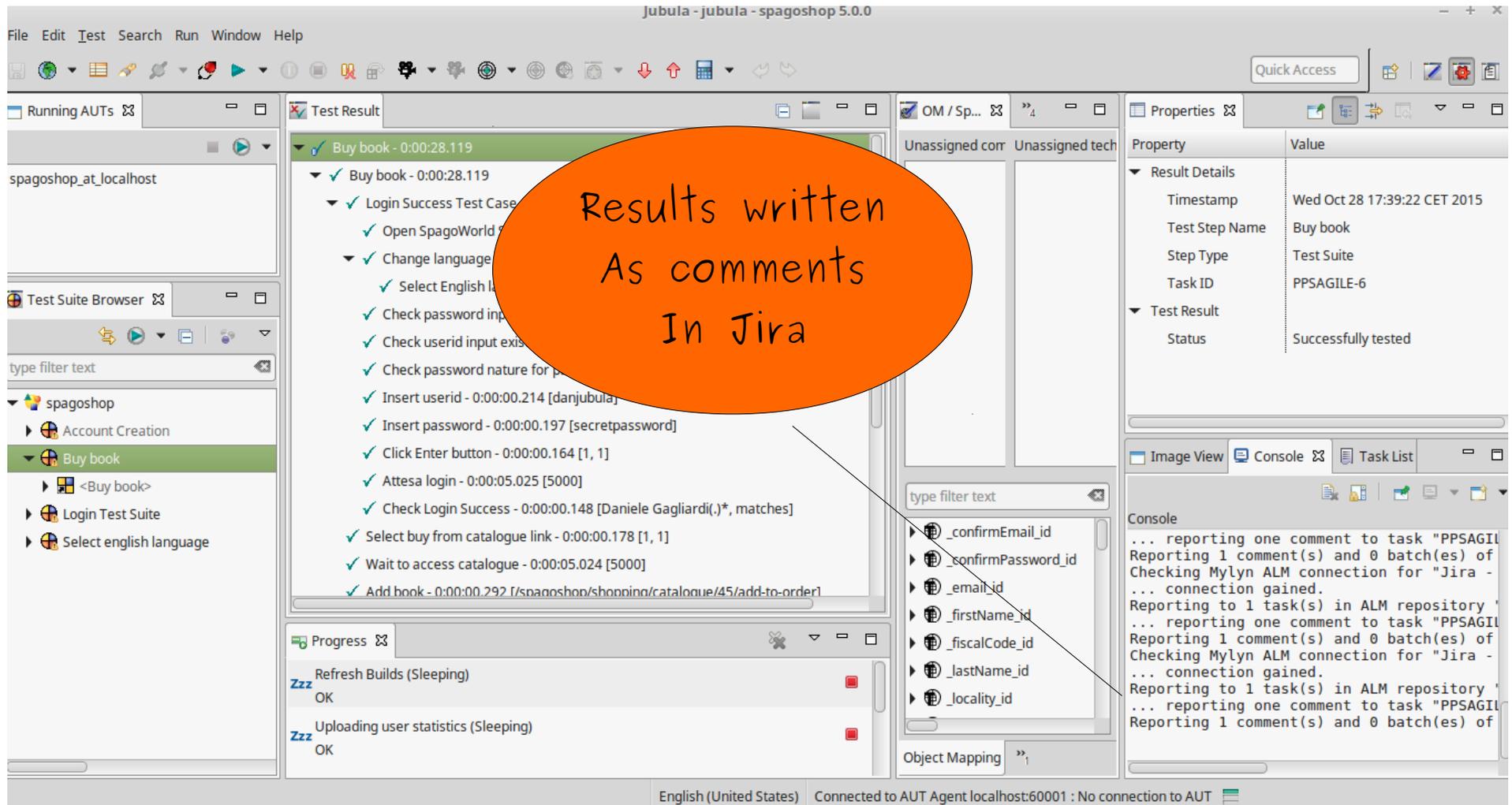


The screenshot displays the Eclipse IDE interface during a test execution. The main window shows the 'Test Result' view for a test suite named 'TC / Buy book'. The test results are as follows:

- Buy book - 0:00:22.990
 - Buy book - 0:00:22.990
 - Login Success Test Case - 0:00:06.622 [1, 1]
 - Select buy from catalogue link - 0:00:05.456 [1, 1]
 - Wait to access catalogue - 0:00:05.456 [1, 1]
 - Add book - 0:00:00.776 [spagoshop] [1, 1]
 - Wait to access checkout page - 0:00:05.456 [1, 1]
 - Checkout - 0:00:00.279 [1, 1]
 - Wait to access contract acceptance - 0:00:05.456 [1, 1]
 - Accept contract - 0:00:00.347 [1, 1]
 - Confirm order - 0:00:00.622 [1, 1]
 - Wait to access to pay page - 0:00:05.456 [1, 1]
 - Pay - 0:00:00.734 [1, 1]
 - Wait to access to gateway payment - 0:00:05.456 [1, 1]
 - Check gateway page landing - 0:00:05.456 [1, 1]

The 'Test Suite Browser' on the left shows the test suite structure, including 'Buy book' and its sub-test cases. The 'Properties' view on the right shows the details of the selected test case, listing various actions and their parameters. The 'Task List' at the bottom right shows a list of tasks, including 'Risks from Test Project - Production Jira', 'Spagoshop blocking issues [Spagoshop tracker]', and 'Unmatched [Jira - Engineering Group]'. The status bar at the bottom indicates the system language is English (United States) and the IDE is connected to the AUT Agent at localhost:60001.

Write comments/results



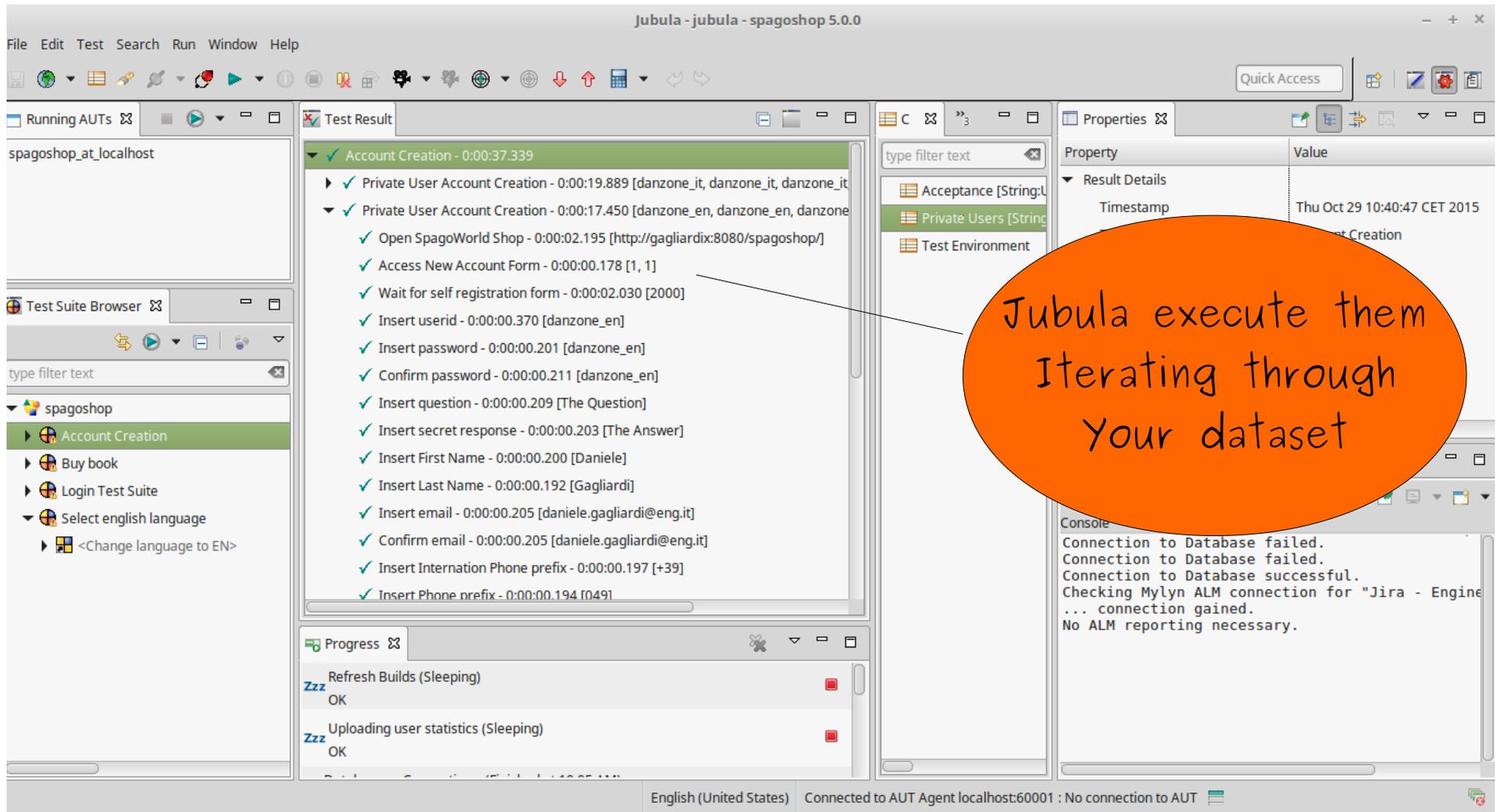
The screenshot shows the Eclipse IDE interface with the following components:

- Test Result View:** A tree view showing test results for 'Buy book - 0:00:28.119'. The results are listed as follows:
 - Buy book - 0:00:28.119
 - Login Success Test Case
 - Open SpagoWorld
 - Change language
 - Select English language
 - Check password input
 - Check userid input exists
 - Check password nature for password
 - Insert userid - 0:00:00.214 [danjubula]
 - Insert password - 0:00:00.197 [secretpassword]
 - Click Enter button - 0:00:00.164 [1, 1]
 - Attesa login - 0:00:05.025 [5000]
 - Check Login Success - 0:00:00.148 [Daniele Gagliardi(*)*, matches]
 - Select buy from catalogue link - 0:00:00.178 [1, 1]
 - Wait to access catalogue - 0:00:05.024 [5000]
 - Add book - 0:00:00.292 [spagoshop/shopping/catalogue/45/add-to-order1]

- Properties View:** Shows details for the selected test step:

Property	Value
Timestamp	Wed Oct 28 17:39:22 CET 2015
Test Step Name	Buy book
Step Type	Test Suite
Task ID	PPSAGILE-6
Test Result	
Status	Successfully tested
- Console View:** Shows log output including messages like '... reporting one comment to task "PPSAGILE-6"', 'Reporting 1 comment(s) and 0 batch(es) of Checking Mylyn ALM connection for "Jira - ... connection gained.', and 'Reporting to 1 task(s) in ALM repository ... reporting one comment to task "PPSAGILE-6"'. An arrow points from the orange callout to the console output.
- Object Mapping View:** Shows a list of object IDs: _confirmEmail_id, _confirmPassword_id, _email_id, _firstName_id, _fiscalCode_id, _lastName_id, _locality_id.

Results written
As comments
In Jira



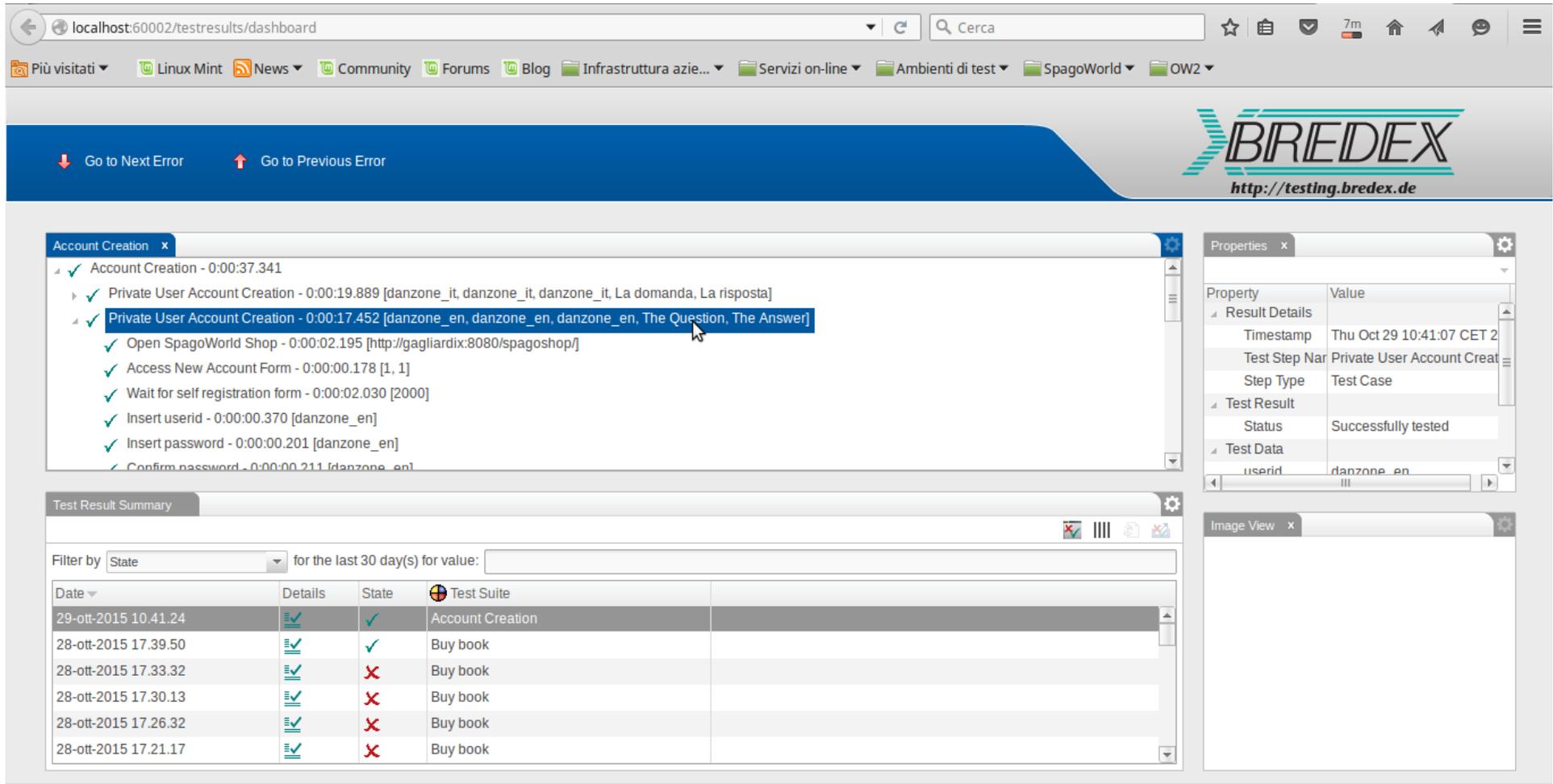
The screenshot shows the Jubula test execution interface. The main window displays a list of test steps under the 'Test Result' tab, all of which are marked as successful. The steps include account creation, user insertion, and form navigation. An orange callout bubble points to the list of steps with the text: "Jubula execute them Iterating through Your dataset". The console window at the bottom right shows the execution log, including database connection status and ALM reporting.

Test Result

- ✓ Account Creation - 0:00:37.339
 - ▶ ✓ Private User Account Creation - 0:00:19.889 [danzone_it, danzone_it, danzone_it]
 - ▶ ✓ Private User Account Creation - 0:00:17.450 [danzone_en, danzone_en, danzone_en]
 - ✓ Open SpagoWorld Shop - 0:00:02.195 [http://gagliardix:8080/spagoshop/]
 - ✓ Access New Account Form - 0:00:00.178 [1, 1]
 - ✓ Wait for self registration form - 0:00:02.030 [2000]
 - ✓ Insert userid - 0:00:00.370 [danzone_en]
 - ✓ Insert password - 0:00:00.201 [danzone_en]
 - ✓ Confirm password - 0:00:00.211 [danzone_en]
 - ✓ Insert question - 0:00:00.209 [The Question]
 - ✓ Insert secret response - 0:00:00.203 [The Answer]
 - ✓ Insert First Name - 0:00:00.200 [Daniele]
 - ✓ Insert Last Name - 0:00:00.192 [Gagliardi]
 - ✓ Insert email - 0:00:00.205 [daniele.gagliardi@eng.it]
 - ✓ Confirm email - 0:00:00.205 [daniele.gagliardi@eng.it]
 - ✓ Insert Internation Phone prefix - 0:00:00.197 [+39]
 - ✓ Insert Phone prefix - 0:00:00.194 [0491]

Console

```
Connection to Database failed.
Connection to Database failed.
Connection to Database successful.
Checking Mylyn ALM connection for "Jira - Engine
... connection gained.
No ALM reporting necessary.
```



Account Creation

- Account Creation - 0:00:37.341
 - Private User Account Creation - 0:00:19.889 [danzone_it, danzone_it, danzone_it, La domanda, La risposta]
 - Private User Account Creation - 0:00:17.452 [danzone_en, danzone_en, danzone_en, The Question, The Answer]
 - Open SpagoWorld Shop - 0:00:02.195 [http://gagliardix:8080/spagoshop/]
 - Access New Account Form - 0:00:00.178 [1, 1]
 - Wait for self registration form - 0:00:02.030 [2000]
 - Insert userid - 0:00:00.370 [danzone_en]
 - Insert password - 0:00:00.201 [danzone_en]
 - Confirm password - 0:00:00.211 [danzone_en]

Test Result Summary

Filter by State for the last 30 day(s) for value:

Date	Details	State	Test Suite
29-ott-2015 10.41.24	Account Creation	✓	Account Creation
28-ott-2015 17.39.50	Buy book	✓	Buy book
28-ott-2015 17.33.32	Buy book	✗	Buy book
28-ott-2015 17.30.13	Buy book	✗	Buy book
28-ott-2015 17.26.32	Buy book	✗	Buy book
28-ott-2015 17.21.17	Buy book	✗	Buy book

What is Risk ?

- Probability : trivial
- Note :
 - 0 % event : not a risk !
 - 100 % : not a risk ! Rather issue !
- Impact : an evaluation of the hypothetical damage (on costs, times, ...)
- Exposure : $f(P, I)$
 - $E = f(P) * f(I)$

Risk Management

Managing risks is something we all do every day, mostly without even thinking about it. When the complexity increases beyond our everyday experiences, such as risks faced by a business or a big project, a more formal approach is needed. However, it really isn't difficult.

A generic risk management process has been set out in ISO standard 31000 and can be applied to any kind of risk by any kind of organisation. PMBOK and PMI both describe a similar process for managing project risk.

Different kinds of risks need different assessments in terms of the questions to ask or the exact technique you use, but the overall risk management process is the same. Essentially, the steps are as follows:

- Analyse the risks** – to prioritise them.
- Establish the context** – what activities are we talking about? What are you trying to do?
 - e.g., using a piece of machinery, making building something, collecting measurements, importing or exporting goods, staff, data analysis and reporting.
- Identify risks** – what might affect the outcome?
 - e.g., weather event, change to regulations, injury, staffing shortages, lack of supplier, chemical exposure, theft, fraud, computer failure, hurricane
- Analyse the risks** – to prioritise them.

Do you remember the beginning ?
slide number 12

LoginPage

Agile Data Inizio: October 14, 2015
Jira Project lead: GAGLIARDI DANIELE

Execute

Progetto Jira: Progetto P

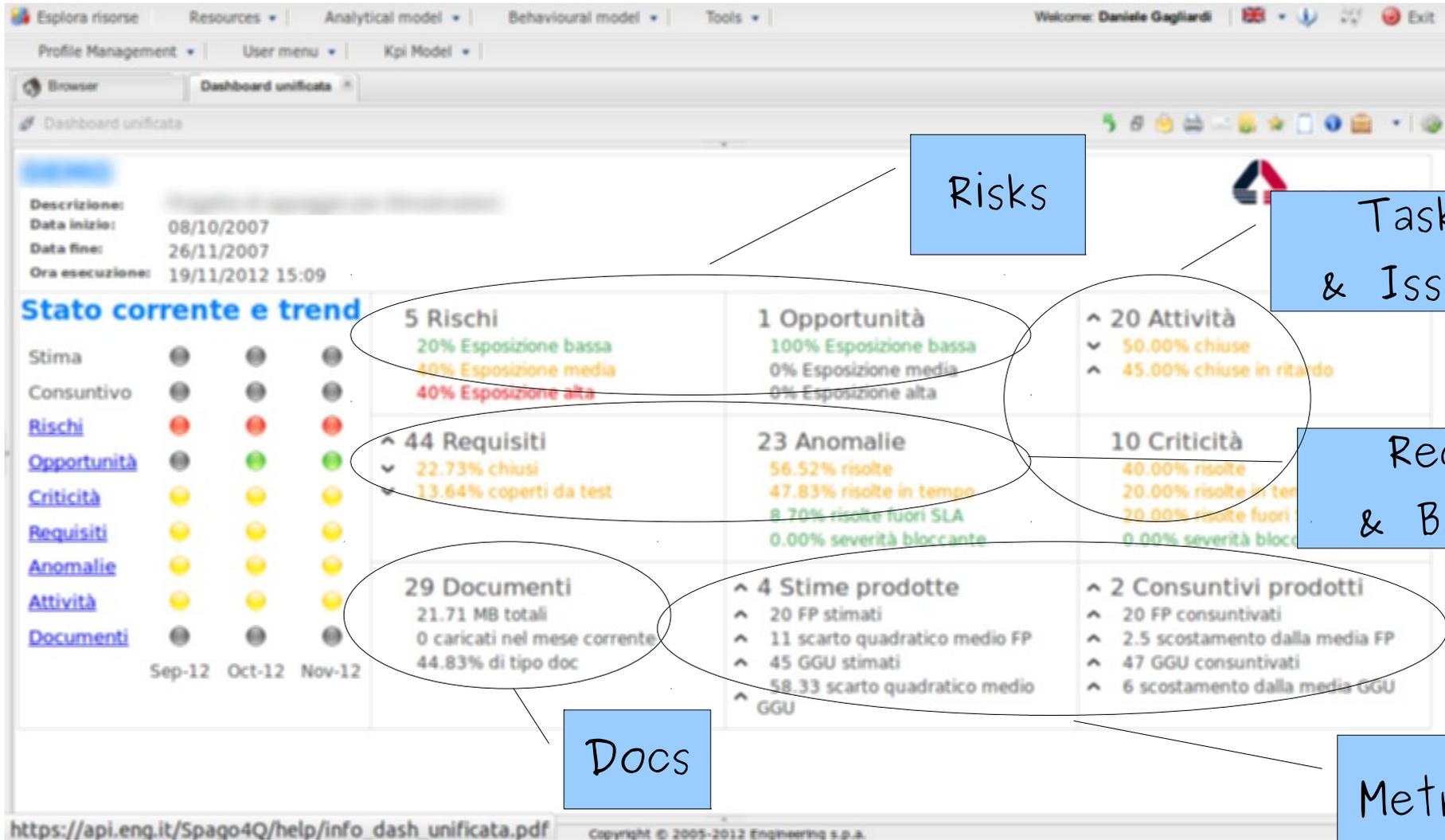
> RISCHI

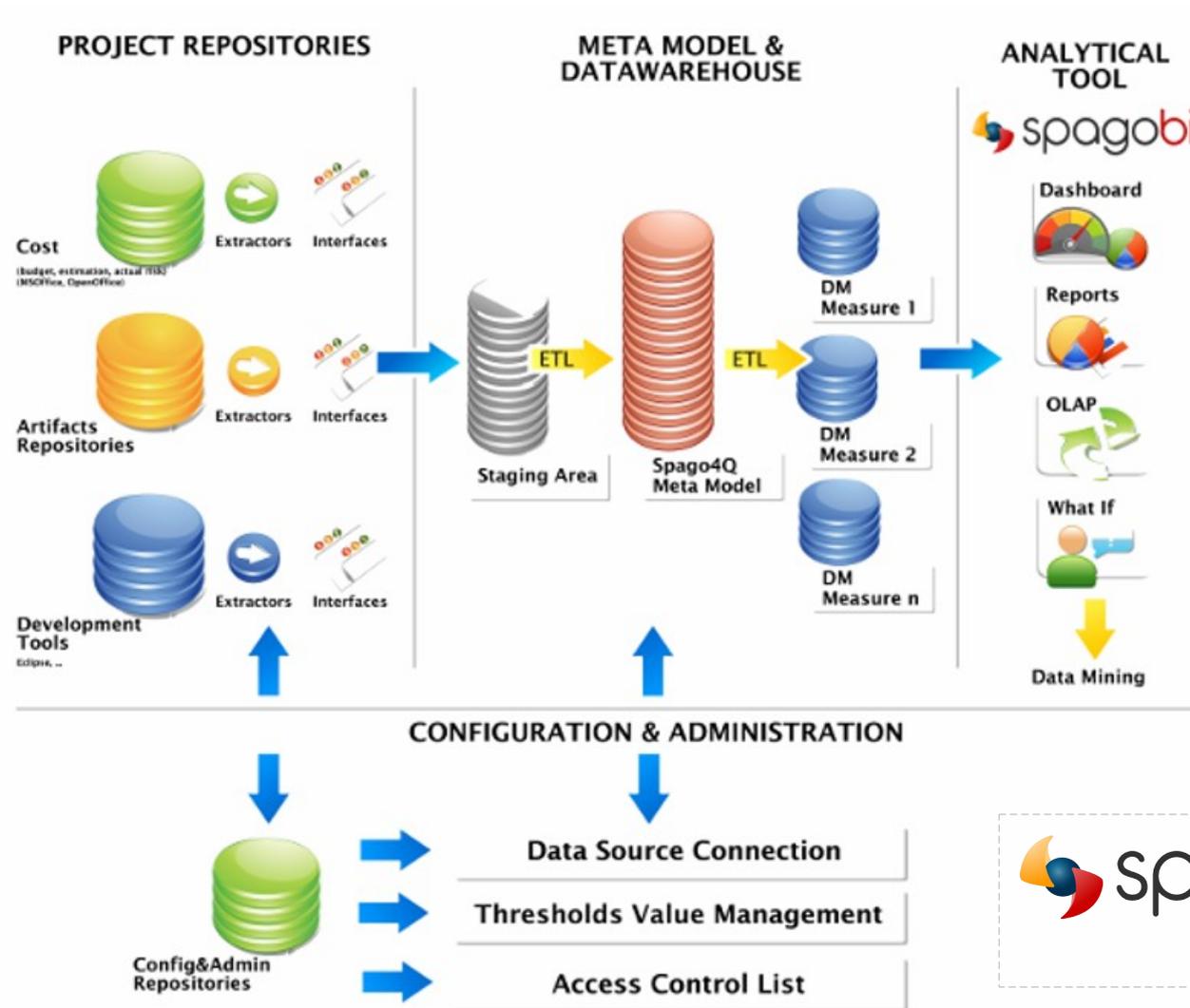
RISCHIO	STATO	ESP. COSTI	ESP. TEMPI
The checkout process fails to calculate VAT	Nuovo	300 ●	60 ●
The registration of a professional/company user may fail while checking the VAT against the EU web service	Nuovo	280 ●	70 ●
The registration of a professional/company user may fail while checking the VAT for extra-EU companies	Nuovo	120 ●	40 ●
The registration of a private user may fail while checking the NIN	Nuovo	200 ●	80 ●

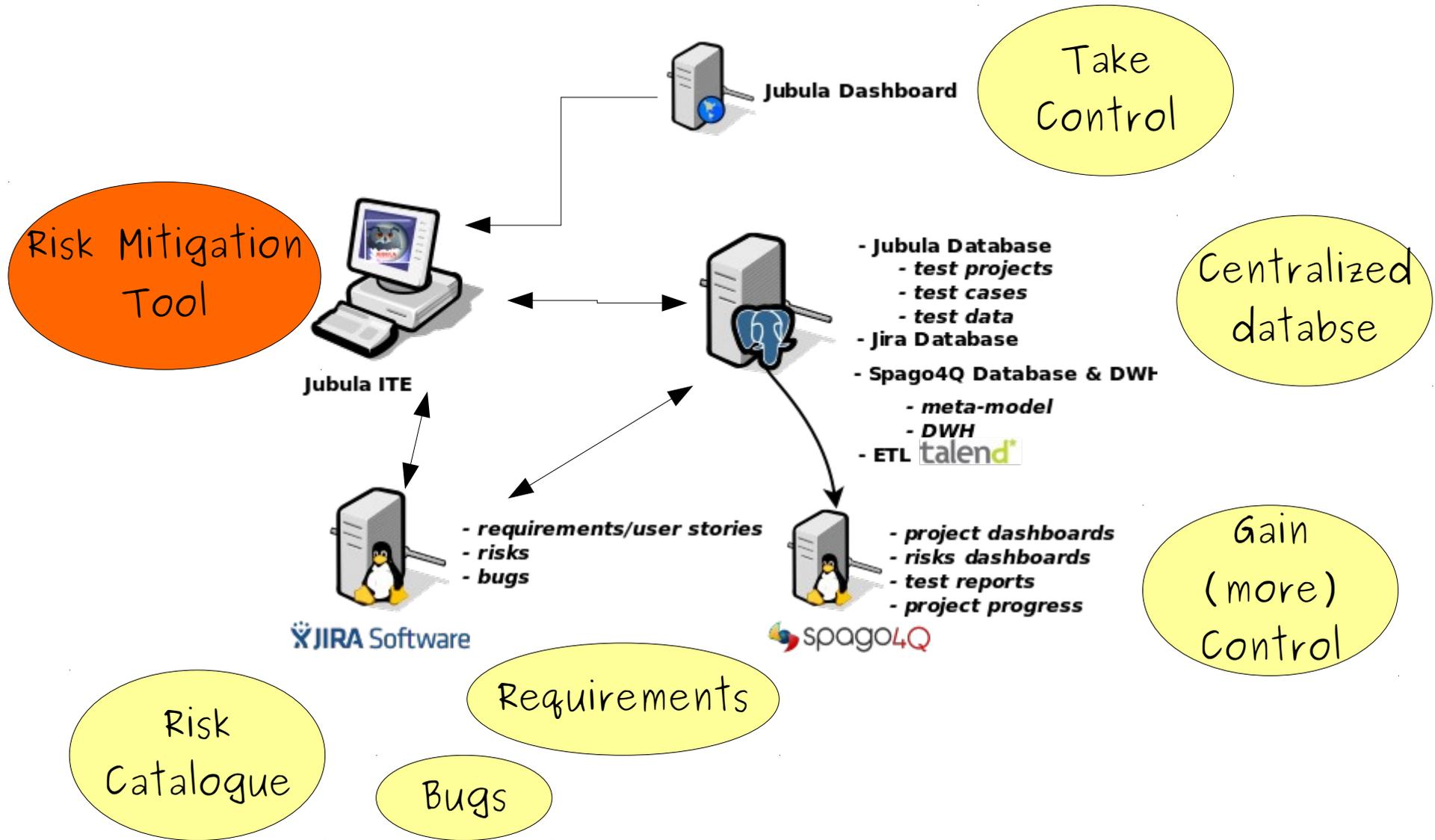
IMPATTO COSTI	PROBABILITA'							CHIUSO	TOTALE
	0-20	21-40	41-60	61-80	81-99	100			
MOLTO BASSO	0	0	0	0	0	0	0	0	0
BASSO	0	0	0	0	0	0	0	0	0
MODERATO	0	1	0	0	0	0	0	0	1
ALTO	0	0	0	1	0	0	0	0	1
MOLTO ALTO	0	1	1	0	0	0	0	0	2
TOTALE	0	2	1	1	0	0	0	0	4

IMPATTO TEMPI	PROBABILITA'							CHIUSO	TOTALE
	0-20	21-40	41-60	61-80	81-99	100			
MOLTO BASSO	0	1	1	1	0	0	0	0	3
BASSO	0	1	0	0	0	0	0	0	1
MODERATO	0	0	0	0	0	0	0	0	0
ALTO	0	0	0	0	0	0	0	0	0
MOLTO ALTO	0	0	0	0	0	0	0	0	0
TOTALE	0	2	1	1	0	0	0	0	4

https://production.eng.it/jira/browse/PPSAGILE-7







- On the theoretical side : Risk based analysis can boost the effectiveness of your test effort (concentrate on what really matters) *Your test cases are your treasssssure...*
- On the practical side : Effective risk based testing **without coding**

Take care of your test cases

They live within your application... and your risks

- Jira the only solution for the risk catalogue ? Maybe Bugzilla and oth. work equally well (this presentation showed you how to configure your favourite issue tracker) and Mylyn connector is supported yet...
- Jubula can greatly lower the burden of testing (remember VAT/NiN issues and Jubula datasets?)

OSS helped you to build quality. Once again.

- Practical Risk Based Testing – tutorial at STF Italian Software Testing Forum, Milan, June 15th, by Alon Linetzki - <http://www.swtestingforum.org/en/27-eng/tutorial/programs/58-practical-risk-based-testing>
- Pragmatic Software Testing – Rex Black – Wiley – 2007
- Heuristic Risk-Based Testing, James Marcus Bach (<http://www.satisfice.com/articles/hrbt.pdf>)
- « RISK » IN ISO 9001:2015 (http://www.orion4value.com/wp-content/uploads/ISO-TC176-SC2_N1222_N1222_-_Risk_in_ISO_9001_2014-07.pdf)
- Eclipse Jubula Project (<http://www.eclipse.org/jubula>)
- Atlassian Jira (<https://www.atlassian.com/software/jira>)
- Spago4Q (<http://www.spago4q.org>)

Grazie per la vostra
attenzione !

Dankon pro via atento!

 eclipsecon Europe

Ludwigsburg, Germany, 3 - 5 November 2015

Evaluate the sessions at www.eclipsecon.org

Merci de votre
attention!

+1 0 -1

Vielen Dank für
Ihre Aufmerksamkeit !

Thanks for
Your attention !

Any question ?