Automating JIRA

by Michael Friedman
SVPerl Lightning Talks, August 2013

About Me

- Perl developer for 15 years.

- This module was developed at Polyvore, but will be released as open source.

- This is my first CPAN module. (That's another presentation.)

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What's this all about?

- What is JIRA?

- Why automate?

- How to automate?

- Existing solutions
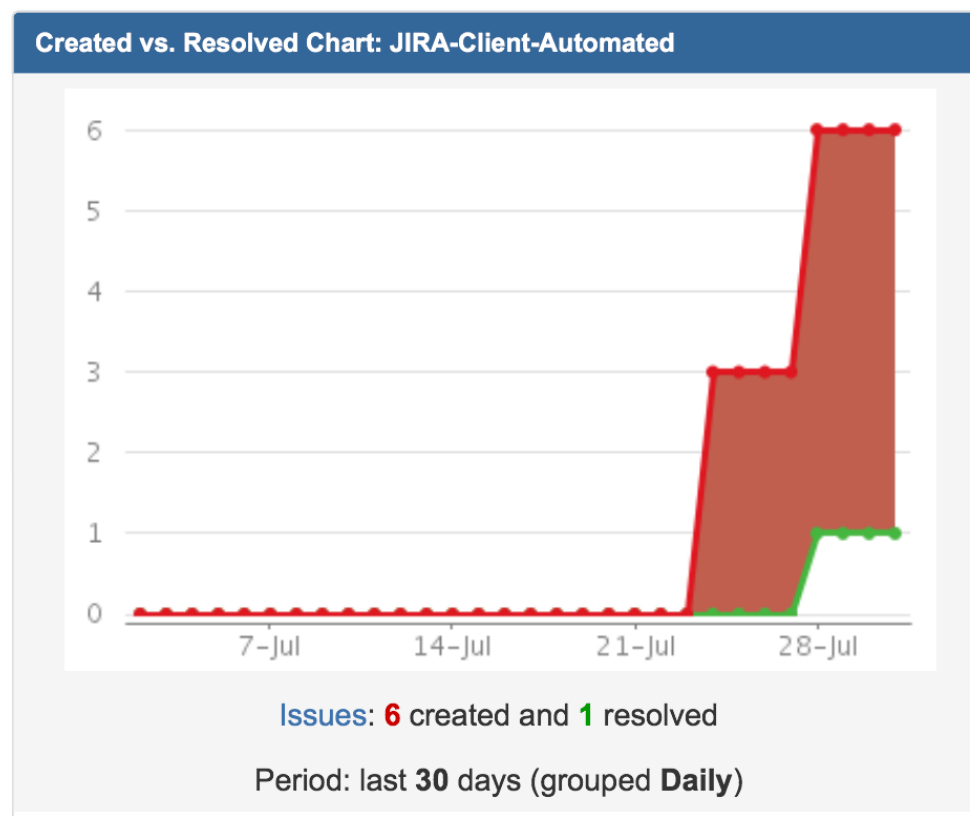
- My solution!

What is JIRA?

JIRA is...

- An issue/bug tracker

- A project management tool

- A shared communication tool

- The repository of project history

- A web app

- Downloadable or Cloud-hosted

frimicc.atlassian.net/secure/Dashboard.jspa

Search

× Tickets Dashboard - JIRA 🔒 +

🐿 JIRA | Dashboards ⌄ | Projects ⌄ | Issues ⌄ | **Create issue** | 🔍 Quick Search | ❓⌄ | ⚙⌄ | 👤⌄

Tickets Dashboard

➕ Add Gadget | ✏ Edit Layout | ⚙ Tools ⌄

Created vs. Resolved Chart: JIRA-Client-Automated

Issues: **6** created and **1** resolved

Period: last **30** days (grouped **Daily**)
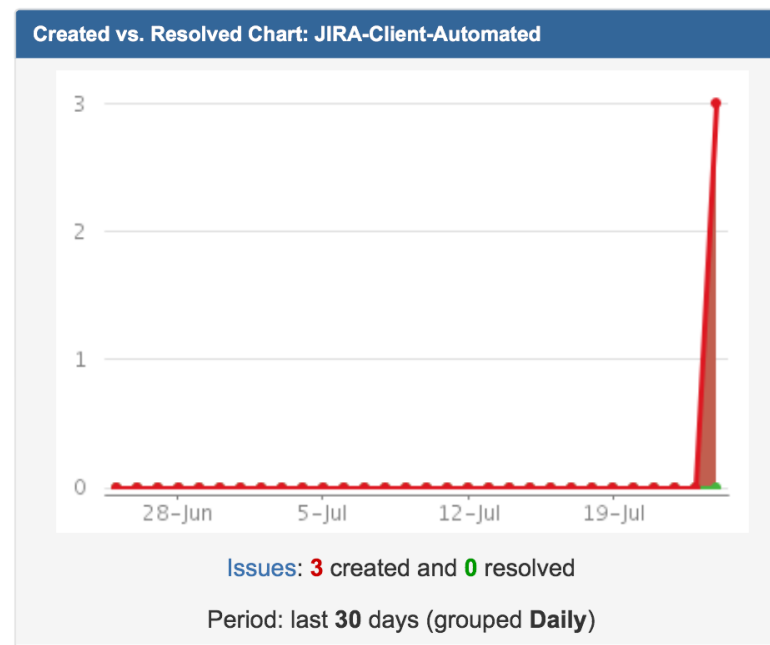
Assigned to Me

T	Key	P ⬇	Summary
⦿	JCA-1	⬆	First bug
☑	JCA-2	⬆	First Task
⦿	JCA-8	⬆	JIRA::Client::Automated updated

1–3 of 3

frimicc.atlassian.net/browse/JCA#selectedTab=com.atlassian.jira Reader ↻

Search

JIRA-Client-Automated - JIRA   🔒 +

JIRA Dashboards ▾ Projects ▾ Issues ▾ **Create issue**   🔍 Quick Search   ❓▾ ⚙▾ 👤▾

JIRA-Client-Automated

Key: JCA · Lead: 👤 Michael Friedman [Administrator]   URL: https://github.com/frimicc/jira-client-automated

Overview   Administration

Summary

Issues

Popular Issues

Calendar

Labels

Issues

All issues	Added recently	Assigned to me	Unscheduled
Unresolved	Resolved recently	Reported by me	Outstanding
	Updated recently		

Unresolved: By Priority

Priority	Issues	Percentage	
↑ Major	5	▬▬▬▬▬▬▬▬▬▬▬	100%

View Issues

Unresolved: By Assignee

Assignee	Issues	Percentage	
Michael Friedman [Administrator]	3	▬▬▬▬▬▬	60%
Unassigned	2	▬▬▬▬	40%

frimicc.atlassian.net/browse/JCA-2   ⟳   Search

[JCA-2] First Task - JIRA

JIRA   Dashboards ▾   Projects ▾   Issues ▾   **Create issue**   🔍 Quick Search   ? ▾   ⚙ ▾   👤 ▾

JIRA-Client-Automated / JCA-2

First Task

🖉 Edit   💬 Comment | Assign   More ▾ | Start Progress   Resolve Issue   Workflow ▾   ↗   🖨 Export ▾

Details

Type:	☑ Task	Status:	✈ Open
Priority:	↑ Major		(View Workflow)
		Resolution:	Unresolved
Labels:	None		

Description

I also have tasks to work on.

Activity

| All | **Comments** | Work Log | History | Activity | Source | Reviews | Commits |

There are no comments yet on this issue.

💬 Comment

People

Assignee:

👤 Michael Friedman [Administrator]

Reporter:

👤 Michael Friedman [Administrator]

Votes:

0   Vote for this issue

Watchers:

1   Stop watching this issue

Dates

Created:

24/Jul/13 6:38 PM

Updated:

24/Jul/13 6:38 PM

Why automate?

Think of the possibilities!

- Automatically create bug reports

- Attach log files to bugs

- Use code to implement complex workflows

- Rule-based triage of the incoming stream

- Automatically close bugs

How to automate?

JIRA's Options

- REST API (JIRA version 5.0+)

- SOAP XML API (JIRA version 5.0-)

- Java Plugins

https://developer.atlassian.com/display/JIRADEV/JIRA+REST+APIs

Existing solutions

To the CPAN!

- <u>JIRA::Client</u> (SOAP API only)

- <u>JIRA::Client::REST</u> (REST API, read-only)

- <u>JIRA::REST</u> (REST API, no transitions)

- Lots of Java Plugins

None of them work well for non-interactive applications

My solution

JIRA::Client::Automated

- Object-oriented

- Can work with multiple JIRA instances at once

- Entirely automated, no user interaction required

- Can read and write and transition issues

- Compact data format (hashes instead of JSON)

- Create issues

- Attach files to issues

- Comment on issues

- Search for issues

- Transition issues

- Close issues

https://github.com/frimicc/jira-client-automated

Example uses

- Web crawler errors   (site is down?)

- Nightly batch errors   (bad UTF-8 username?)

- Compute statistics   (1000 fewer pages today)

- System monitoring   (Nagios can run scripts as alerts)

- Close tickets script   (My favorite)

- Rules-based triage   (This goes to Joe, unless it's Tuesday...)

- Updates with further information   (Here's the log file for you)

- etc. etc. etc.

Live Code Explanation!

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(We're hiring.)