

[**bodhi**]



fedora^f

Luke Macken <lmacken@redhat.com>

[overview]

- History of Fedora updates
- bodhi
 - goals
 - features
 - architecture
 - using
 - testing/qa
 - hacking
 - future ideas

[history of fedora updates]

- **FC1 -> FC3**
 - Flat file in CVS to keep track of updates
 - All communication done by hand
 - Update notifications generated and sent by developer
 - Much pain an suffering ensued

[Fedora Update System]

•FC4 -> FC6

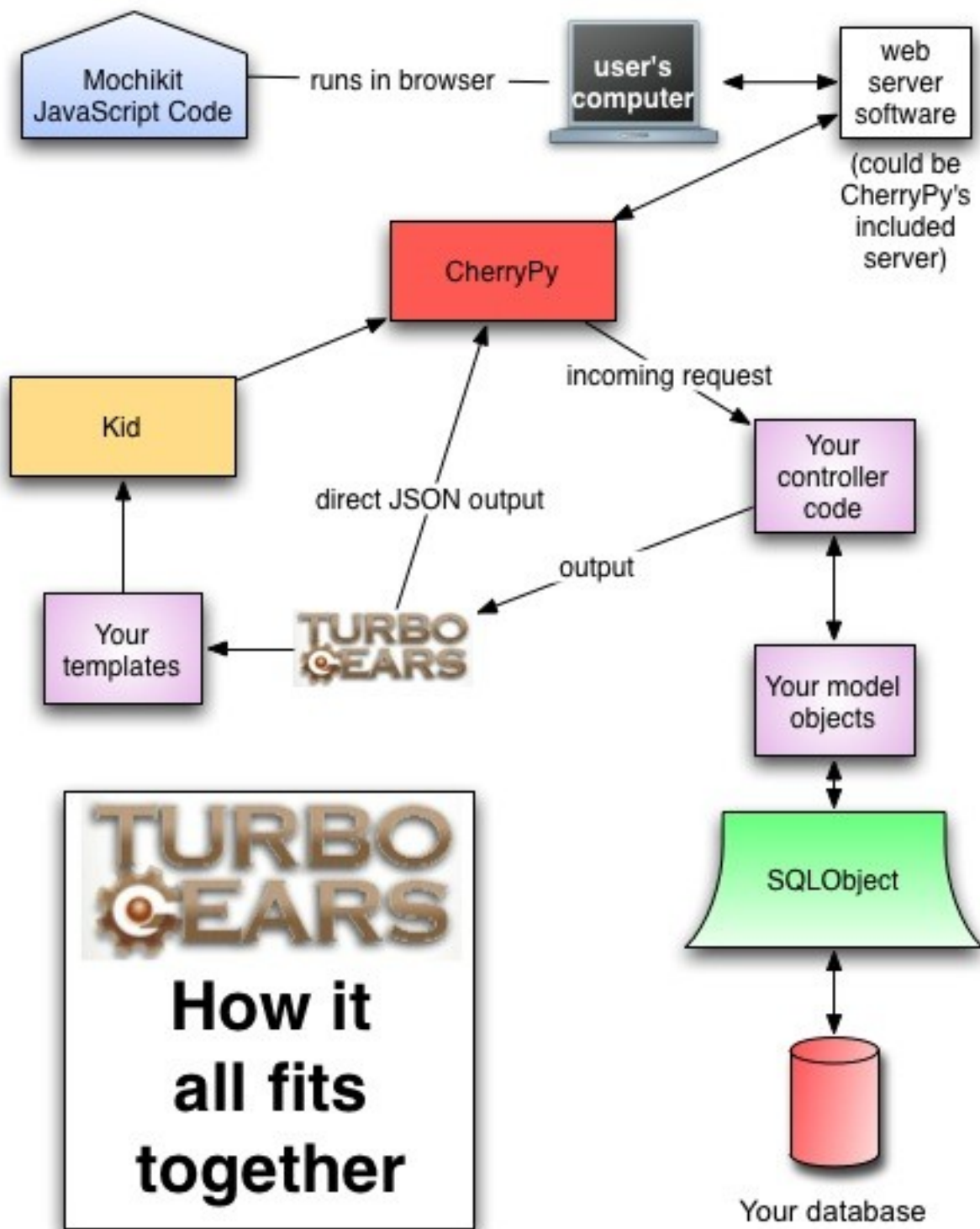
- Provided a simple web interface for submitting updates
- Internal to Red Hat
- Maintained a single stage of repositories by adding/moving/removing packages when necessary
- Streamlined many tasks, including all developer->releng->user communication, and various repository maintenance tasks
- Innovated extended update metadata, which has been adopted by yum, pup/puplet, and various other tools

[goals]

- Provide an intuitive interface for developers and release engineers to manage pushing package updates for multiple distribution releases.
- Ensure package quality and repository sustainment with automated testing
- Encourage community testing and involvement through allowing people to easily test updates and provide feedback
- Provide a modular framework that will allow future integration to various other QA and developer tools.

[architecture]

- Written using the TurboGears Python web framework
 - **Model:** SQLAlchemy [<http://sqlalchemy.org>]
 - **View:** Jinja2 [<http://jinja2.pocoo.org>]
 - **Controller:** CherryPy [<http://cherrypy.org>]
- A modular piece of the Fedora Infrastructure stack
 - Utilizes the **Koji** Buildsystem for tracking RPMs
 - Composes repositories using **Mash**
 - Integrated with the **Package Database**
 - Utilizes python-bugzilla to alter the states of bugs



TURBOGEARS

How it all fits together



[architecture]

•Masher

- Multi-threaded mash dispatcher
- TurboGears extension that runs alongside bodhi
- Takes a Koji tag (ie dist-fc7-updates), and uses mash to compose the update repositories

PackageUpdate
id
title [UnicodeCol]
builds [RelatedJoin:PackageBuild.updates]
date_submitted [DateTimeCol]
date_modified [DateTimeCol]
date_pushed [DateTimeCol]
submitter [UnicodeCol]
update_id [UnicodeCol]
type [EnumCol]
embargo [DateTimeCol]
release [ForeignKey:Release.updates]
status [EnumCol]
pushed [BoolCol]
notes [UnicodeCol]
request [EnumCol]
comments [MultipleJoin:Comment.update]
qa_approved [UnicodeCol]
qa_date_approved [DateTimeCol]
karma [IntCol]
cves [RelatedJoin:CVE.updates]
bugs [RelatedJoin:Bugzilla.updates]

CVE
id
updates [RelatedJoin:PackageUpdate.cves]
cve_id [UnicodeCol]

Bugzilla
id
title [UnicodeCol]
security [BoolCol]
bz_id [UnicodeCol]
updates [RelatedJoin:PackageUpdate.bugs]

PackageBuild
id
package [RelatedJoin:Package.builds]
nvr [UnicodeCol]
updates [RelatedJoin:PackageUpdate.builds]

Package
id
name [UnicodeCol]
builds [MultipleJoin:PackageBuild.package]
suggest_reboot [BoolCol]

Release
id
name [UnicodeCol]
long_name [UnicodeCol]
updates [MultipleJoin:PackageUpdate.release]
id_prefix [UnicodeCol]
dist_tag [UnicodeCol]

Comment
id
update [ForeignKey:PackageUpdate.comments]
timestamp [DateTimeCol]
author [UnicodeCol]
karma [IntCol]
text [UnicodeCol]

[using]

- Add update details via web-form, command-line tool, or 'update' Makefile target.
- Request that your update be pushed to the Testing or Stable repo.
- Go and do something productive.



- Fedora 7
 - Pending (79)
 - Testing (213)
 - Stable (3184)
 - Security (221)
- Fedora 8
 - Pending (143)
 - Testing (263)
 - Stable (1131)
 - Security (68)
- Comments
- Packages
- Login

Welcome to bodhi



Latest Updates

Update	Release	Status	Type	Request	Karma	Submitter	Age
php-pear-Console-Table-1.0.8-1.fc8	Fedora 8	pending				remi	1 minute
R-multtest-1.18.0-3.fc8	Fedora 8	pending				pingou	1 hour
eclipse-photran-4.0-0.b3.fc8.1	Fedora 8	pending				orion	2 hours
qlandkarte-0.6.0-1.fc7	Fedora 7	pending				silfreed	3 hours
qlandkarte-0.6.0-1.fc8	Fedora 8	pending				silfreed	3 hours

Latest Comments [\[more\]](#)

Update	Comment	From	Karma
clamav-0.92-6.fc8	Error: Missing Dependency: libclamav.so.2 is needed by package klamav Error: Missing Dependency: libclamav.so.2 is needed by package claws-mail-plugins-clamav	Anonymous Tester	
cups-1.3.5-1.fc8	Back to bugfix, as CVE-2007-5849 is more bug than security issue.	thoger	
lynx-2.8.6-4.fc7		jmoskovc	
cups-1.3.5-1.fc8	Turned to security update, as new upstream version fixes CVE-2007-5849.	thoger	
lynx-2.8.6-9.fc8		jmoskovc	





- Administration
- Imacken's Home
- My Updates (52)
- Fedora 7
 - New Update
 - Pending (80)
 - Testing (213)
 - Stable (3184)
 - Security (221)
- Fedora 8
 - New Update
 - Pending (143)
 - Testing (263)
 - Stable (1131)
 - Security (68)
- Comments
- Packages
- Logout

Package

Release

Type

Request

Bugs Close bugs when update is stable

Notes

Suggest Reboot



- Fedora 7
 - Pending (80)
 - Testing (213)
 - Stable (3184)
 - Security (221)
- Fedora 8
 - Pending (143)
 - Testing (263)
 - Stable (1131)
 - Security (68)
- Comments
- Packages
- Login

python-cherrypy-2.2.1-8.fc8

Builds: [python-cherrypy-2.2.1-8.fc8](#) [[logs](#)]

Release: [Fedora 8](#)

Update ID: FEDORA-2008-0299

Status: stable

Type: security

Bugs: [427664](#) - CherryPy security hole still unpatched: Malicious cookies may allow access to files outside the session directory

Karma: 😊 1

Pushed: True

Date Pushed: 2008-01-07 00:47:22

Submitter: toshio

Submitted: 2008-01-06 20:35:50

Close bugs: False

Notes: Security issue fixed with a backport from upstream.

Comments:

- 😊 **Imacken** - 2008-01-06 23:43:18
- 💡 **bodhi** - 2008-01-07 01:22:08
This update has been pushed to stable

Anonymous Tester

Empty text input field for comments

🔄 Untested 🔄 Works for me 🔄 Does not work





- Administration
- Imacken's Home
- My Updates (52)
- Fedora 7
 - New Update
 - Pending (80)
 - Testing (213)
 - Stable (3184)
 - Security (221)
- Fedora 8
 - New Update
 - Pending (143)
 - Testing (263)
 - Stable (1131)
 - Security (68)
- Comments
- Packages
- Logout

143 Pending Updates

1 2 3 4 5 all

Package	Release	Type	Request	Submitter	Created
php-pear-Console-Table-1.0.8-1.fc8	Fedora 8		testing	remi	2008-01-09 19:14:52
R-multtest-1.18.0-3.fc8	Fedora 8		testing	pingou	2008-01-09 17:15:57
eclipse-photran-4.0.0-b3.fc8.1	Fedora 8		testing	orion	2008-01-09 17:13:21
qlandkarte-0.6.0-1.fc8	Fedora 8		testing	silfreed	2008-01-09 15:30:26
syslog-ng-2.0.7-1.fc8	Fedora 8		testing	silfreed	2008-01-09 14:45:32
perl-Kwiki-Users-Remote-0.04-5.fc8	Fedora 8		testing	corsepiu	2008-01-09 13:29:40
lynx-2.8.6-9.fc8	Fedora 8		stable	jmoskovic	2008-01-09 12:50:27
perl-Kwiki-UserPreferences-0.13-6.fc8	Fedora 8		testing	corsepiu	2008-01-09 12:21:40
perl-Kwiki-RecentChanges-0.14-4.fc8	Fedora 8		testing	corsepiu	2008-01-09 11:54:24
openvrl-0.17.2-1.fc8	Fedora 8		testing	braden	2008-01-09 10:14:04
logrotate-3.7.6-2.1.fc8	Fedora 8		testing	tsmetana	2008-01-09 10:11:33
perl-Kwiki-NewPage-0.12-6.fc8	Fedora 8		testing	corsepiu	2008-01-09 08:47:25
qimageblitz-0.0.4-0.3.svn706674.fc8	Fedora 8		stable	kkofler	2008-01-09 06:59:39
perl-Kwiki-ModPerl-0.09-5.fc8	Fedora 8		testing	corsepiu	2008-01-09 06:37:29
pango-1.18.4-1.fc8	Fedora 8		testing	mclasen	2008-01-09 02:46:56
t1lib-5.1.1-7.fc8	Fedora 8		testing	pertusus	2008-01-08 22:37:24
setroubleshoot-plugins-2.0.0-1.fc8	Fedora 8		testing	jdennis	2008-01-08 22:15:30
httptunnel-3.3-4.fc8	Fedora 8		stable	sindrepb	2008-01-08 22:02:43

[testing / qa]

- Updates, by default, get pushed to updates-testing before being released to the stable updates tree.
- Each update has a “karma”, which is effected by how many positive/negative comments it has received.
 - 'stable_karma' configuration option to automatically mark updates as stable after it has reached a specified karma.
 - 'unstable_karma' lower threshold for automatically removing unstable updates
- `bodhi –testable` lets users see what updates-testing packages they have installed, which they could potentially be providing useful feedback for.

[hacking]

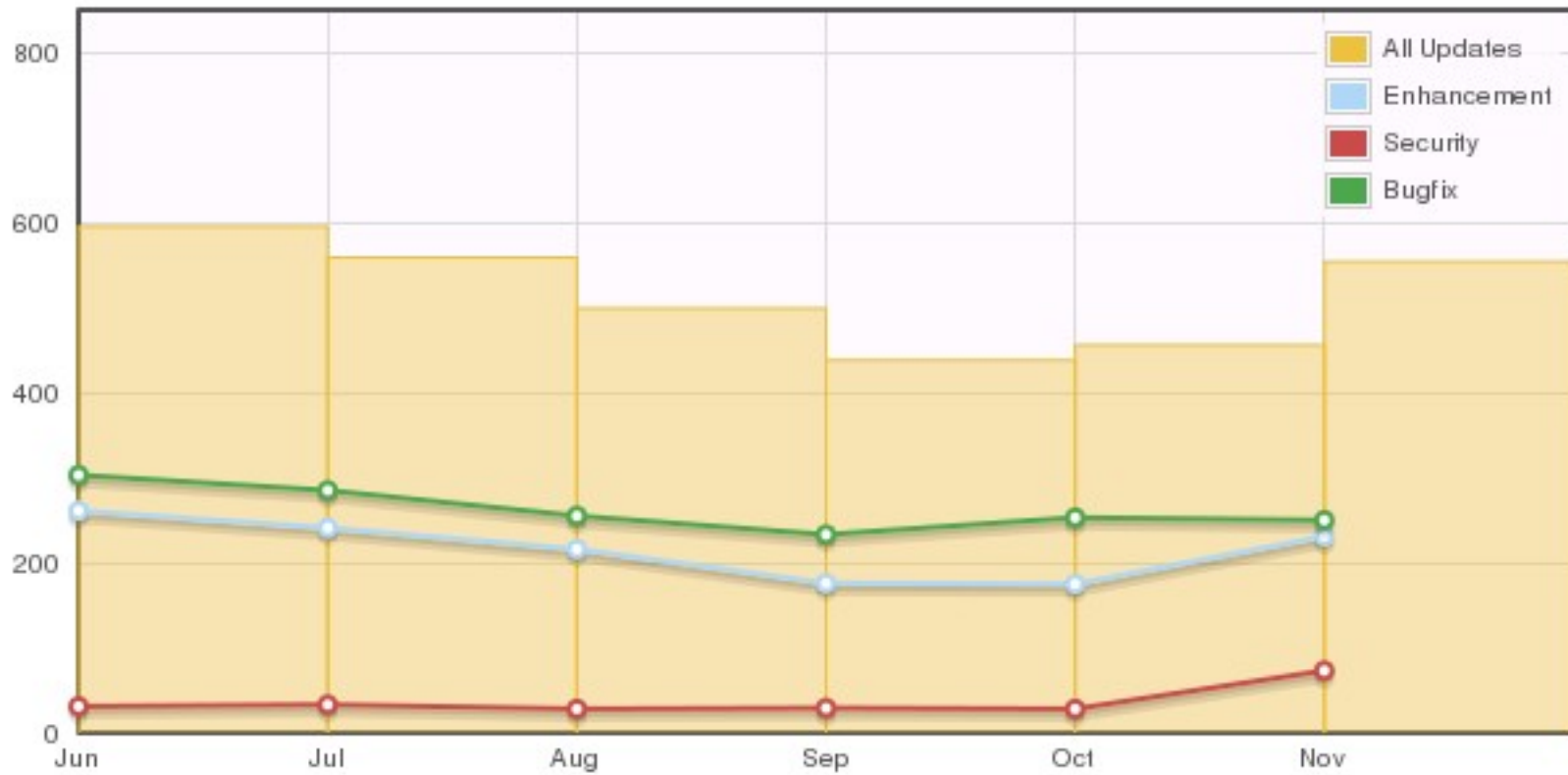
- Easily run a local bodhi instance with production data

```
# yum install TurboGears python-TurboMail koji mash yum-utils mercurial
$ hg clone http://hg.fedoraproject.org/hg/hosted/bodhi ; cd bodhi
$ tg-admin sql create && ./init.py && ./dev_init.py
$ ./pickledb.py load bodhi-pickledb-*
```

- Extensive test suite using Nose, a discovery-based unittest extension.

[metrics]

Fedora 7 Updates



[future ideas]

- **Upstream monitoring using Fever**

- “FEver (FEedora versions) aims to be a simple and easy way to track upstream changes in Fedora's repository”

- **fedora-qa integration**

- Aurelien Bompard has written a great tool that is used during initial package reviews.
- “The aim of this script is to test all the MUST items in PackageReviewGuidelines which are not covered by rpmlint”

- **Beaker integration**

- The ability to kick off regression tests to an external lab.

[references]

- Koji - <http://hosted.fedoraproject.org/projects/koji>
- Mash - <http://git.fedoraproject.org/?p=hosted/mash;a=summary>
- Packagedb - <http://hosted.fedoraproject.org/projects/packagedb>
- Nose - <http://somethingaboutorange.com/mrl/projects/nose/>
- Beaker - <http://hosted.fedoraproject.org/projects/beaker>
- FEver - <http://fedoraproject.org/wiki/PackageMaintainers/FEver>
- fedora-qa - <http://fedoraproject.org/wiki/PackageMaintainers/UsefulScripts>
- TurboGears - <http://turbogears.org>

[EOF]

- Questions/Comments?
- For more information on the Bodhi Project, see
 - <http://hosted.fedoraproject.org/projects/bodhi>



fedora^f