



Automation in the Fedora Land

Tools and technologies to automate our work
(Today and tomorrow)

Presented by

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Fedora packager and infrastructure

About me

- Fedora contributor since 2007
- Ambassador
- Packager
- Fedora infrastructure team



Set-up your project

- Dev Assistant (Slavek Kabrda)
 - Multiples programming languages
 - Basic project set-up
 - Customizable
- Directory structure
- Basic dependencies

Host your project

- Hosting platform
 - Github
 - Gitorious
 - Bitbucket
 - Fedoraproject.org
- Find web-spaces
- Get domain name
- Admin server

Host your project (2)

- Offers
 - Bug tracker
 - Wiki
 - Version control system
 - Mailing lists
 - Hyperkitty !! (Aurélien Bompard)
 - Hooks
 - Fedmsg
- Services integration
- Services administration

Hyperkitty



LISTS

All

Most active

Most popular

Newest

Available lists

Hide inactive Hide private

Filter list names

LIST	DESCRIPTION	ACTIVITY IN THE PAST 30 DAYS
389-commits 389-commits@lists.fedoraproject.org	List of git/CVS commits to the 389 Directory server project	 5 participants 61 discussions
389-devel 389-devel@lists.fedoraproject.org	389 Directory server developer discussion.	 10 participants 41 discussions
389-users 389-users@lists.fedoraproject.org	General discussion list for the 389 Directory server project.	 30 participants 20 discussions
Ada ada@lists.fedoraproject.org	Fedora Ada SIG	 2 participants 3 discussions
advisory-board advisory-board@lists.fedoraproject.org	Fedora community advisory board	 33 participants 10 discussions
ambassadors-it <i>private</i>		

- ↓
- 3
- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L
- M

Hyperkitty (2)



devel

Development discussions related to Fedora



Post volume over the past 30 days.

+ Start a new thread

ACTIVITY SUMMARY

The following statistics are from the past 30 days:

254 participants
197 discussions

MOST ACTIVE POSTERS

#1  Adam Williamson
121 posts

RECENTLY ACTIVE DISCUSSIONS

libxvctrl status?	2	2	+0/-0
Issue with koji?	5	5	+0/-0
New UEFI guide on the wiki	3	4	+0/-0
Pidgin rebuild	2	6	+0/-0
Packaging question about -Wformat-security on Rawhide	3	5	+0/-0

MOST POPULAR DISCUSSIONS

No vote has been cast this month (yet).

MOST ACTIVE DISCUSSIONS

#1 dnf versus yum	49	168	+0/-0
#2 Drawing lessons from fatal SELinux bug #1054350	28	151	+0/-0
#3 Fedora NEXT: Products and the fate of Spins	20	105	+0/-0

2014

February
January

2013

2012

2011



Write your code

Unit-testing

- Jenkins (*)
- Travis-CI
- Buildbot
- CruiseControl

- Faitout <http://209.132.184.152/faitout/>

- Early errors detection
- Automated

faitout <http://209.132.184.152/faitout/>



faitout is a Free and Open-Source alternative to <http://www.postgression.com/>

Its goal is to provide access to temporary postgresql databases which can be used for unit-test thus reducing the differences between testing and production environment

How to use faitout?

=====

Create a new connection

The usage is simple:

```
curl http://209.132.184.152/faitout/new
postgres://user:password@host/db
```

Retrieve the same information as json:

```
curl -H 'Accept: application/json' http://209.132.184.152/faitout/new
{
  "dbname": "dbname",
  "username": "username",
  "password": "password",
  "port": 123,
  "host": "host.com"
}
```

Accepts also the 'Content-Type' header.

Release your project

- Package repositories
 - Pypi
 - Rubygems.org
 - CPAN
 - CRAN
 - ...
- Find the project
- Central to the community

Announce new release


- Cnucnu-web
 - <http://209.132.184.188/cnucnu/>
- Automated announcement
- Project <-> distro packages integration
- Crowd-sourced
- Cross-distro



Cnucnu Web about projects distros ▼ login

Monitor the release of your favorite projects

We all have our favorite projects and we all like to use their latest versions with their latest features. However, it is hard to keep in touch with all of them and be informed when they release of new version. Cnucnu can help!

 **Cnucnu Web**

Monitor upstream releases and broadcast them on [fedmsg](#), the FEDerated MeSsaGe bus.

Use [fedmsg notifications \(FMN\)](#), to set up your own, *personalized*, notifications of these releases.

Search monitored project

Currently 3975 projects are being monitored by Cnucnu Web. Your project of interest might be there, or not. To check it [browse the list of all projects](#) or simply search for them!

You may use * to search for pattern (ie: py*).

Cnucnu Web (0.1.0): [sources](#) and [issue tracker](#) are available on github. ©2013-2014 Red Hat, Inc., [Pierre-Yves Chibon](#).

Cnucnu (2)

Cnucnu Web about projects distros ▼ login

Project: Flask

Flask	
Homepage	https://pypi.python.org/pypi/Flask
Version URL	PYPI-DEFAULT:Flask
Regex	DEFAULT:Flask
Fedora name	python-flask

Latest version: 0.10.1

Logs	
None	

Monitor new release

- FMN – FedMsg Notifications (Ralph Bean)
 - <https://apps.fedoraproject.org/notifications/>
- Customized notifications
 - Notifications
 - Delivery system



Fedora Notifications [about](#) [profile](#) [irc](#) [email](#) [android](#) [logout](#)

irc preferences Internet Relay Chat

We have a bot...

...on the [freenode](#) network that can direct messages to you with notifications you care about. Simply login, confirm your IRC nick, set up some filters, and wait for the magic.

You have 1 rule filters defined for the irc messaging context. You can add new ones and delete existing ones here.

If a message on the [fedmsg bus](#) matches any one of these criteria, then a notification will be sent your way. We also need to know where you want your irc messages delivered (a *irc nick*); you can set that up here.

Koji successful builds

All messages concerning... This rule includes messages that relate to packages where the specified user has **commit** ACLs.

fasnick pingou

Koji: build completed This rule lets through messages from the koji build system that get published anytime **a build completes**.

[✕ Delete this filter](#)

[+ Create a new filter](#)

Active?

This message delivery mechanism is currently **active**. [🔌 Disable](#)

Where should we send your messages?

accepted Your confirmation for pingou is accepted

confirmed irc nick

add a new irc nick

[👤 Save](#)


How often should we send you messages?

If you leave these **<disabled>** then we'll just forward you your notifications in real time.

Wait **or for**

..whichever comes first.

[👤 Save](#)



Summary

- Set-up project
- Hosted project
- Wrote code
- Tests
- Release project on a package repo
- Announce new release
- Notify user of new release

RPM your project

- *2spec
 - R2spec
 - Pypi2spec / pypi2rpm
 - Gem2spec
 - Pom2spec
- No more spec hand-written
- Automated up to the actual RPM

Check your RPM

- Rpmlint
- Mock build
- **Fedora-review** (Stanislav Ochotnicky – Alec Leamas)
 - Follows the Fedora guidelines
 - Builds in a clean environment
 - BR set up right

Distribute the RPM

- Koji
- COPR (Miroslav Suchy)
- Reliable/reproducible builds
- Package repository
- -> not signed

Integrate your project

- Package for distros
 - Deb
 - RPM
 - ...
- In Fedora
 - http://fedoraproject.org/wiki/Join_the_package_collection_maintainers
- Integration in the systems
- Dependency management
- Updates
- Collaboration with the packager



Crazy ideas

Help new contributors

- Ansible
- Docker
- ...

Auto rebuild

- Old packages
 - Package did not build for X months => Rebuild
- Soname bump (shared object)
 - Dependencies rebuilt

Review server

- Off bugzilla
- Dist-git integrated
- Comments on the spec
- Scratch builds
- Fedora-review

- Pull-requests from new-comers

Automatic packaging tool

- *2spec
- Recursion
- COPR build
- ... tadam! ...

Auto-updates

- Cnucnu-web
- Version bump – Release drop
- Scratch build

summershum



summershum

- Store the sha1sum of every files in every packages
- How many copies of the GPL?
- How many copies of the GPL with the old FSF address ?
- How many bundling of md5.c?
- How many files changed since the last version?

Conclusions

- Numerous tools already present
- Crazy ideas
- Future is bright!

Questions?

<http://devconf.cz/f/66>



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