RED HAT :: BOSTON :: 2008
SUMMIT

JUNE 18–20, 2008

Karsten Wade
Sr. Developer Community Mgr, Red Hat

Fedora Packages for Red Hat Enterprise Linux

What am I here to talk about?

- RPM Packages
  - ... that are community-set best practices
  - ... that are across Fedora and RHEL
  - ... that are the way to get "in" to Fedora and EPEL
  - ... may be the way to get "in" to RHEL
- RPM is the center of an ecosystem
  - History == important
  - Future == crucial
  - ... requirement to be in Fedora
    - ... built from source

This talk is about EPEL

- Extra Packages for Enterprise Linux
  - Started at FUDCon Boston 2007
- More than just another maintenance branch
  - Best way to get software ready for RHEL
    - Six to thirty six month lead time

Covering EPEL ground today

- What is EPEL?
- How do you get a package in to EPEL?
- What does the lifecycle look like?
- Why is it worth the effort?

Fedora wants to work with open source businesses

- It's in our blood :)

- Connect with the full lifecycle – devel, qa, releng, end-user testers, etc.

- Some knowledgeable folks here at the presentation

- This is a discussion that I'm leading, so ask away

What is EPEL?

- Common ground
- Set of packages with maintainers specifically interested in supporting a package for RHEL and friends
- Follow a RHEL-like philosophy – EPEL maintainers must agree to this
  - Longer testing cycle
  - Focus on security and bugfixes over enhancements
  - Don't drag in upstream code just because it is the "latest"

What does it mean to "be in Fedora/EPEL"?

- Your goal is 'yum install foo', where foo is your app
b) Pristine source tarball/zipfile from an upstream project
c) Minimal, separated patches (best practice = fix the upstream)
d) Spec file
e) All of that is in cvs.fedoraproject.org
f) FAS knows you own the package and the traffic it generates
g) The package can then be:
    - Built from source
    - Signed
    - Made available for testing
    - Included in the main repository

Result:

yum install foo

http://koji.fedoraproject.org - view it in the build system

http://bodhi.fedoraproject.org - dev/user social package network

koji

| Summary | Packages | Builds | Tasks | Tags | Build Targets | Users | Hosts | Reports | Search |

Welcome to Koji Web

Recent Builds

Build 1 through 10 of 47980 >>>   Page: [1 ▼]

NVR	Finished ▼	State
kbibtex-0.2.1-18.fc9		🛠️
scons-0.98.3-1.fc9	2008-05-04 14:47:43	▭
scons-0.98.3-1.fc10	2008-05-04 14:46:21	▭
kbibtex-0.2.1-15.fc8	2008-05-04 14:39:26	▭
kdelibs-4.0.72-2.fc10	2008-05-04 13:39:45	✔
bugzilla-3.0.3-0.fc10	2008-05-04 13:03:34	✔
uniconvertor-1.1.2-2.fc10	2008-05-04 12:51:25	✔
uniconvertor-1.1.2-1.fc7	2008-05-04 12:04:15	✔
uniconvertor-1.1.2-1.fc8	2008-05-04 11:54:57	✔
uniconvertor-1.1.2-1.fc9	2008-05-04 11:43:15	✔

Recent Tasks

Tasks 1 through 10 of 184788 >>>   Page: [1 ▼]

ID	Type	Arch	Finished ▼	State
594683	build (dist-f9-updates-candidate, F-9:kbibtex-0_2_1-18_fc9)	noarch		🔄
594660	build (dist-f8, spicebird-0.4-1.fc8.src.rpm)	noarch		🔄

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Welcome to bodhi.

Latest Updates

Update	Release	Status	Type	Request	Karma	Submitter	Age
tesseract-2.03-1.fc8	Fedora 8	pending				karlik	1 hour
uniconvertor-1.1.2-1.fc7	Fedora 7	pending				andriy	2 hours
uniconvertor-1.1.2-1.fc8	Fedora 8	pending				andriy	2 hours
uniconvertor-1.1.2-1.fc9	Fedora 9	pending				andriy	3 hours
python-alsa-1.0.16-1.fc9	Fedora 9	pending				andriy	3 hours

Latest Comments [more]

Update	Comment	From	Karma
iproute-2.6.25-1.fc9	It did in fact fix bug 444520 for me. I did see some odd things with connection tracking until I restarted iptables which reloaded a connection tracking module. So if you install this you may need to do that if you don't reboot. Since I restarted iptables everything seems to be fine.	bruno	
netembryo-0.0.4-1.fc7	erer	Anonymous Tester	
	Lately F7 updates have been appearing in repos many days		

All dependencies must be in EPEL

- Be a co-maintainer, or
- Convince someone else to do it, or
- Best – create a community around the packages
- Non-dependency add-on packages can be external to EPEL
  - For example, a game engine with proprietary game levels in an outside repo

EPEL packages do not conflict with RHEL

- Some packages are taken up into RHEL updates
- Natural evolution

Do packages need to be in Fedora to be in EPEL?

- No, although highly recommended
- Just specify EPEL as the sole build repo

EPEL is downstream agnostic

- RHEL, CentOS, others are downstream
- Similar faces

Fedorans are not assigned to work with ISVs

- Community project, people work on what they are passionate about
- Right now you can get attention from those of us who care about your problems (Spot, Greg, Paul, Stephen, Karsten, etc.):
  - Mentor
  - Enable
  - Knock down walls
  - Advocate

How does software make it in to EPEL?

- Tools and community knowledge to make you successful
- Not specialized knowledge, just a reworking of what you learn in other FLOSS projects
- For example: libwidget
  - Begin with the Packaging guidelines:
  - http://fedoraproject.org/wiki/Packaging/Guidelines

How does software make it in to EPEL? (2)

0. You need to be a user in the Fedora account system (FAS), which includes tracking that you have agreed to the Contributor License Agreement (CLA). You also need a bugzilla account for bugzilla.redhat.com

How does software make it in to EPEL? (3)

1. Read the guidelines. They are very thorough. Also understand that you are not likely to get everything correct from the very start. Some of the complexity of turning an interworking set of RPMs in to a distro cannot be conveyed easily in a wiki page.

How does software make it in to EPEL? (4)

2. Put together the first version of your package. Make sure that it builds from source, with all dependencies in Fedora and/or EPEL.

How does software make it in to EPEL? (5)

3. Submit the package for review, as per the process covered in [[Packaging/Guidelines]]. This is a good place where the SIG you are working with can help find other community members to review the package(s). Or you can offer to trade reviews with another SIG member. A newly started SIG that might be perfect for you is the ISV SIG.

http://fedoraproject.org/wiki/SIGs/ISV

Another helpful URL:

http://fedoraproject.org/wiki/PackageMaintainers

How does software make it in to EPEL? (6)

4. Iterate through the package review process until complete.

What is going to catch you?

- Spot's talk from yesterday plus video are coming to the Fedora wiki + a link from the ISV SIG page

- Specific examples to discuss here

  - Bundled binaries of other open source packages

  - Compatibility packages for older versions of software you require

Bundled binaries of other open source software

- Not sustainable over the medium or long term
- You have to keep track of N binaries
  - In Fedora, packages get a wider audience of contributors, testers, and users
- You have to make sure those binaries work with your application ... and the underlying OS
  - In Fedora, you gain the collective testing systems of the Fedora community; what you add to the pool is returned many-fold
- You have to maintain a derived package in your codebase, where no one else can benefit ... or help
  - In Fedora, the burden is shared wider as the community grows

Compat packages

- Compat packages, such as to get older versions of a language (Perl, Python, PHP) are acceptible

- Not encouraged

- You likely have to maintain the package yourself

Why do all this work?

- Initial work == front load effort that pays off many times over the years

Questions, references

- Questions?

- Upstairs in 302 for FUDCon

- fedoraproject.org/wiki/SIGs/ISV

- quaid.fedorapeople.org/presentations/Red-Hat-Summit-2008

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fedora

Package | Bug # | CVE

Fedora 7
Pending (53)
Testing (218)
Stable (4231)
Security (329)

Fedora 8
Pending (69)
Testing (298)
Stable (2762)
Security (186)

Fedora 9
Pending (101)
Testing (0)
Stable (0)
Security (0)

Comments

Login

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