DEVCONF.cz

Using Packit and Testing Farm for CI/CD and automation in an upstream project

or "Packit appreciation talk"

Vojtech Trefny
SSE @ Red Hat

Who are we

■ We are a team working on various storage libraries and tools, mostly related to the Storaged Project[1].

■ We are both upstream and downstream (Fedora and RHEL) maintainers.

■ We are using CI/CD and automation where possible.

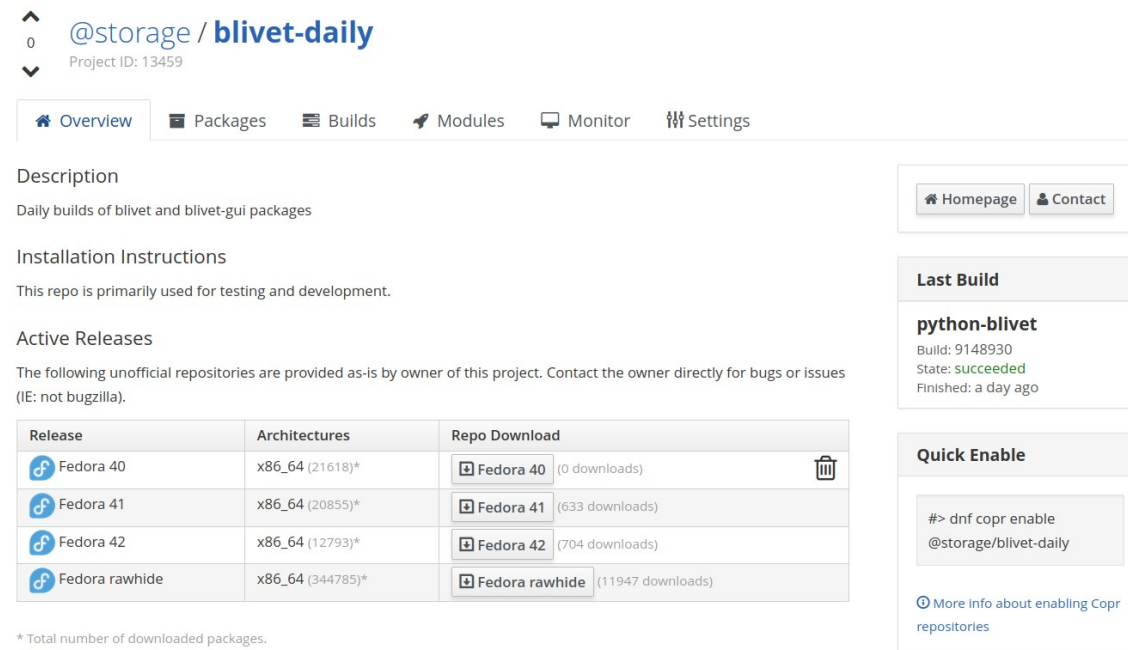■ We are not Packit developers, just very happy users.

DEV
CONF
.CZ

How we use Packit

- We are using Packit for both manual and automated testing in our upstream projects and for downstream package maintenance automation.

- This includes daily builds in Copr, various CI jobs on GitHub and downstream automation in Fedora dist-git.

- Packit greatly simplifies cross project collaboration with our users like Cockpit and Anaconda.

DEV
CONF
.cz

Daily builds in Copr

- "Daily" Copr builds triggered by commits merged in the upstream Git.
- RPM spec file available in the upstream repository.

- Used for testing and development both by us and our friends for further testing.

@storage / **blivet-daily**

0

Project ID: 13459

🏠 Overview 　 📋 Packages 　 📊 Builds 　 ✈ Modules 　 🖥 Monitor 　 ⚙ Settings

Description

Daily builds of blivet and blivet-gui packages

Installation Instructions

This repo is primarily used for testing and development.

Active Releases

The following unofficial repositories are provided as-is by owner of this project. Contact the owner directly for bugs or issues (IE: not bugzilla).

Release	Architectures	Repo Download	
Fedora 40	x86_64 (21618)*	⬇ Fedora 40 (0 downloads)	🗑
Fedora 41	x86_64 (20855)*	⬇ Fedora 41 (633 downloads)	
Fedora 42	x86_64 (12793)*	⬇ Fedora 42 (704 downloads)	
Fedora rawhide	x86_64 (344785)*	⬇ Fedora rawhide (11947 downloads)	

* Total number of downloaded packages.

🏠 Homepage 👤 Contact

Last Build

python-blivet
Build: 9148930
State: succeeded
Finished: a day ago

Quick Enable

#> dnf copr enable @storage/blivet-daily

ⓘ More info about enabling Copr repositories

```
- job: copr_build
  trigger: commit
  owner: "@storage"
  project: blivet-daily
  branch: main
  preserve_project: true
```

DEV CONF .cz

Copr builds for Pull Requests

- RPM builds triggered by pull request.

- Temporary Copr repositories are created automatically.

- Used as a simple test case and for manual testing and for related projects.

Copr Build Results

storaged-project/blivet#1394 e231d01

SRPM Build

Details

Copr build

✔ fedora-41-x86_64 (Logs)

✔ Submitted
yesterday

✔ Build successful
Took 53 seconds

Installation instructions

Please note that the RPMs should be used only in a testing environment

Repository

```
sudo dnf install -y 'dnf*-command(copr)'
```

```
sudo dnf copr enable packit/storaged-project-blivet-1394 fedora-41-x86_64
```

```yaml
- job: tests
  trigger: pull_request
  targets:
    - fedora-latest
  branch: main
```

Running tests

- Tests run on pull requests using Testing Farm[1].

- Test plans are part of the upstream GitHub repositories.

- Plans are standard Testing Farm test plans and can be also started manually with `tmt`.

▼ /plans/tests	pass
🖥 x86_64 ⚙ Fedora-42	

Go to Logs and Artifacts

▶ /script-00	took 1157 s

▶ /script-01	took 0 s

```
- job: tests
  trigger: pull_request
  targets:
    - fedora-latest
  branch: main
```

Reverse-dependency tests

■ Running test suites of users of our APIs
on pull requests.

■ Ensures we don't break projects
depending on us.

■ Our projects and Cockpit[1] are currently
covered.

```
- job: tests
  identifier: revdeps
  trigger: pull_request
  branch: main
  notifications:
    failure_comment:
      message: "Blivet-GUI tests failed for
commit {commit_sha}. @vojtechtrefny please
check."
  targets:
    - fedora-latest
tf_extra_params:
  environments:
    - artifacts:
      - type: repository-file
        id: https://copr.…
      tmt:
        context:
          revdeps: "yes"
```

Downstream builds automation

■ Triggered by upstream release (git tag).

■ Packit opens Pagure PRs against all Fedora branches.

■ Koji build is triggered after merging the PR.

■ Bodhi updates are created automatically for branched Fedora versions.


```
- job: propose_downstream
  trigger: release
  dist_git_branches:
    - fedora-all

- job: koji_build
  trigger: commit
  dist_git_branches:
    - fedora-all

- job: bodhi_update
  trigger: commit
  dist_git_branches:
    - fedora-branched
```

Not only Fedora

- ■ Other distributions supported by Copr and Testing Farm can be used as well.

- ■ We have Copr builds and tests set up to help with backporting patches for RHEL/CentOS Stream.

- ■ Support for building openSUSE packages in OBS was added recently[1].

```
- job: copr_build
  targets:
    - centos-stream-10-x86_64
  trigger: pull_request
  branch: rhel10-branch

- job: tests
  trigger: pull_request
  targets:
    - centos-stream-10-x86_64
  branch: rhel10-branch
```

…and more

- Packit CLI[1]
  - Need RPMs for manual testing? Simply run

    ```
    $ packit build locally
    ```

- OpenScan Hub[2] integration
  - Runs OSH check for every PR
  - Can be triggered manually with

    ```
    $ packit scan-in-osh
    ```

```
$ packit scan-in-osh
...
Directory with sources:
/home/vtrefny/Projekty/blivet
...
Full command passed to osh-cli -> ['osh-cli',
'mock-build',
'/home/vtrefny/Projekty/blivet/python-
blivet-3.12.1-
1.20250611131534246573.main.67.g53f74344.fc42.sr
c.rpm', '--config=fedora-rawhide-x86_64', '--
nowait', '--json', '--comment=Submitted through
Packit.']
Scan URL:
http://openscanhub.fedoraproject.org/task/59518/
```

Packit is great!

- Packit is great for both upstream and downstream and **you should use it too**.

- Copr builds, both daily and on PR, are very useful for developers working in Fedora and RHEL ecosystem.

- Integration with Testing Farm is great for CI, especially for test cases that cannot run in a container.

- Dist-git automation saves a lot of time.

DEV
CONF
.cz

Thank you for your attention

- **Packit resources**
  - https://packit.dev/
  - https://dashboard.packit.dev/

- **Storaged Project**
  - https://storaged.org/
  - https://github.com/storaged-project

- **Contact**:
  - vtrefny@redhat.com