6 little-known features: How to make the most out of Launchpad

Guruprasad | Launchpad | Canonical

15 Nov 2025

UbuCon India 2025

About me

- Engineering Manager in the Launchpad team
- https://launchpad.net/~lgp171188
- Free and open source software enthusiast
- GNU/Linux user since 2007
- Passionate about self-hosting
- This is an updated version of my talk at UbuCon Asia 2024

Launchpad

What is Launchpad?

"A code hosting and collaboration platform"

"The platform for Ubuntu development"

"PPA hosting platform"

"A bug tracker"

"Hosts projects with mailing lists"

"Allows you to translate your open source projects"

Launchpad is these and much more!

A brief history of Launchpad

22 June 2004

First commit

150000+

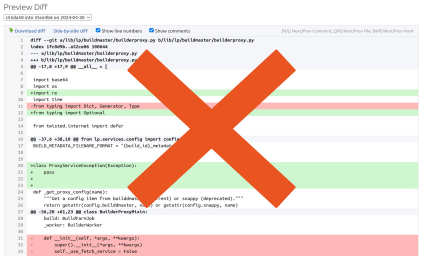
Commits

200+

Contributors

A brief history of Launchpad

Back in 2004



A brief history of Launchpad

Git hosting

PPAs

Code review

Mailing lists

Bzr hosting

Packages

Charms

Snaps

launchpadlib

Translations

Merge proposal

Community

Distributions

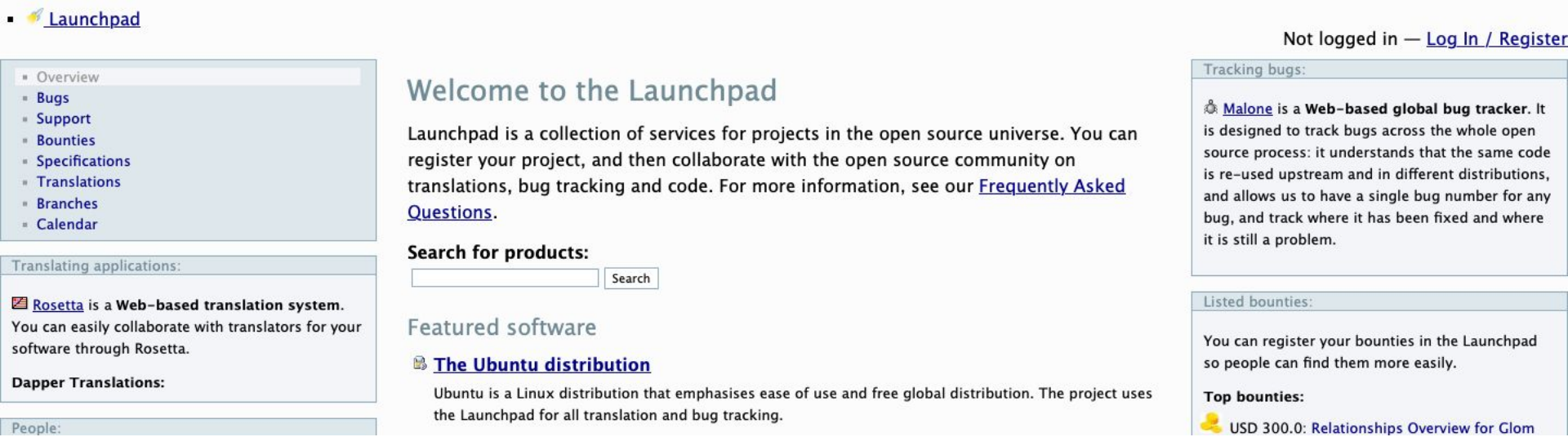
Bugs

lpci

OCI images

Answers

A brief history of Launchpad



This is how Launchpad looked like in 2006

A brief history of Launchpad

launchpad

Launchpad is a software collaboration platform that provides:

- Bug tracking
- Code hosting using Bazaar and Git
- Code reviews
- Ubuntu package building and hosting
- Translations
- Mailing lists
- Answer tracking and FAQs
- Specification tracking
- **Take the tour!**

Recent Launchpad blog posts

Bug emails now use the bug's address in the From: header – 20 May 2020
The From: addresses used by Launchpad's bug notifications have changed, to improve the chances of our messages being delivered over modern internet email. Launchpad sends a lot of email, most of which is the result of Launchpad users performing some kind of action. For example, when somebody adds a comment to a bug, Launchpad sends […]

Launchpad news, March 2019 – July 2019 – 06 Aug 2019
Here's a brief changelog of what we've been up to since our last general update. Bugs Add basic GitLab bug linking (#1603679) Expect the upstream bug ID in the "number" field of GitHub issue objects, not the "id" field (#1824728) Include metadata-only bug changes in Person:+commentedbugs Build farm Filter ASCII NUL characters out of build […]

Launchpad news, February 2019 – 07 Mar 2019
Here's a brief changelog for this month. Build farm Allow dispatching builds with base images selected based on the pocket and/or using LXD images instead of chroot tarballs where appropriate (#1811677) Code Store bzr-svn's cache in the import data store Allow project owners to use the Bazaar branch

Search Launchpad

44,896 projects, **1,904,125** bugs, **1,007,610** branches, **25,551** Git repositories, **3,045,481** translations, **697,887** answers, **75,817** blueprints, and counting...

Get started

Creating an account allows you to start working within Launchpad.
Learn more about Launchpad in the user guide or try it for yourself in our sandbox environment.

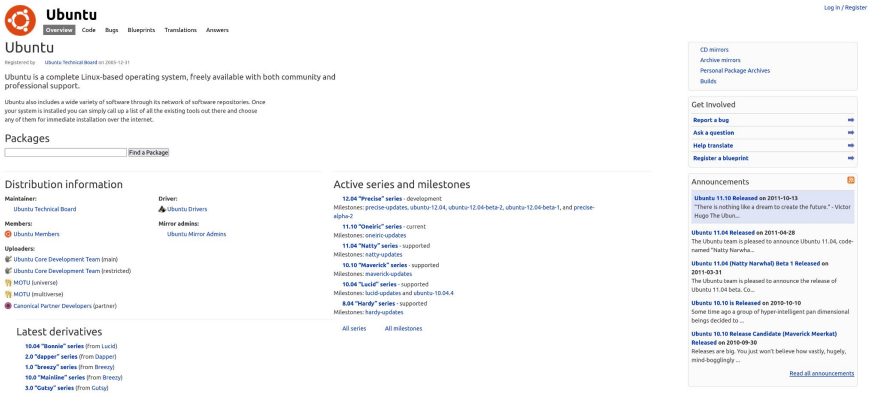
Featured projects

Landscape Server

Web-based tool for managing Ubuntu systems.

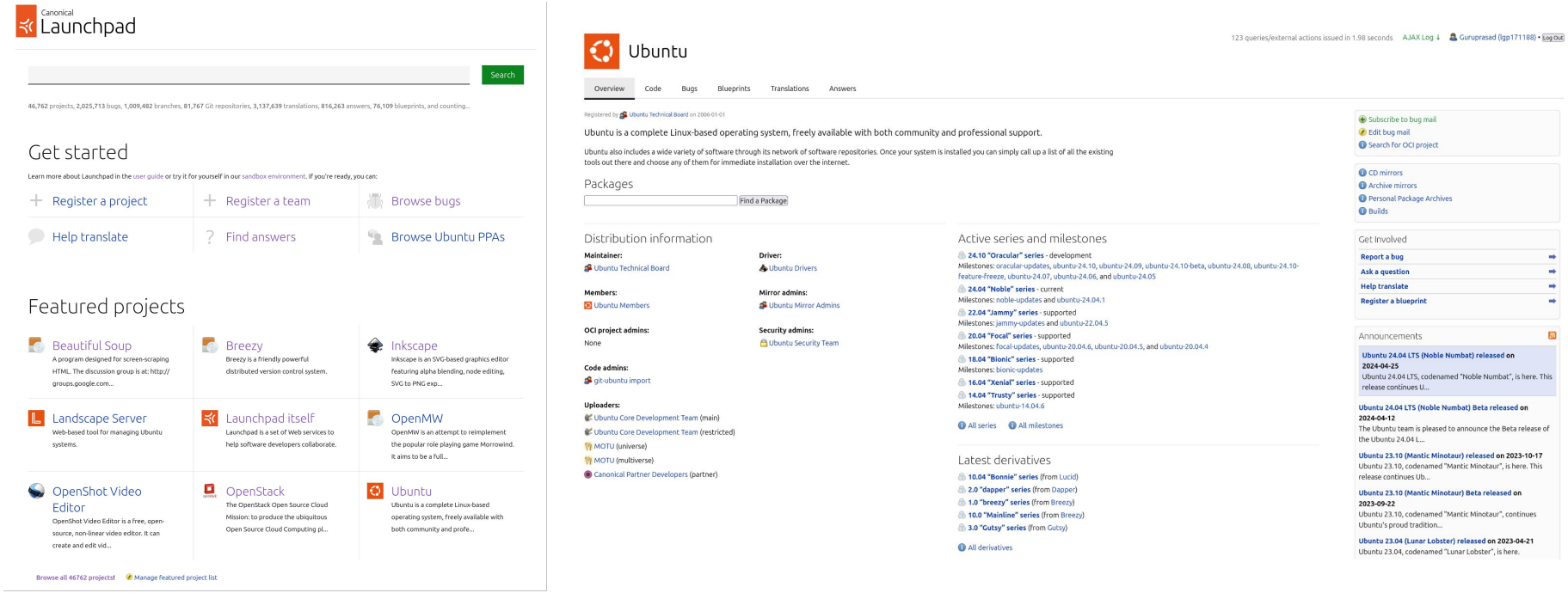
- AppArmor
- The EPICS Collaboration
- Launchpad itself
- OpenStack
- Shutter
- Ubuntu
- Yade
- Breezy
- Inkscape
- OpenShot Video Editor
- qpdfview
- Snap Store Server
- Ubuntu MATE

Browse all 44896 projects!



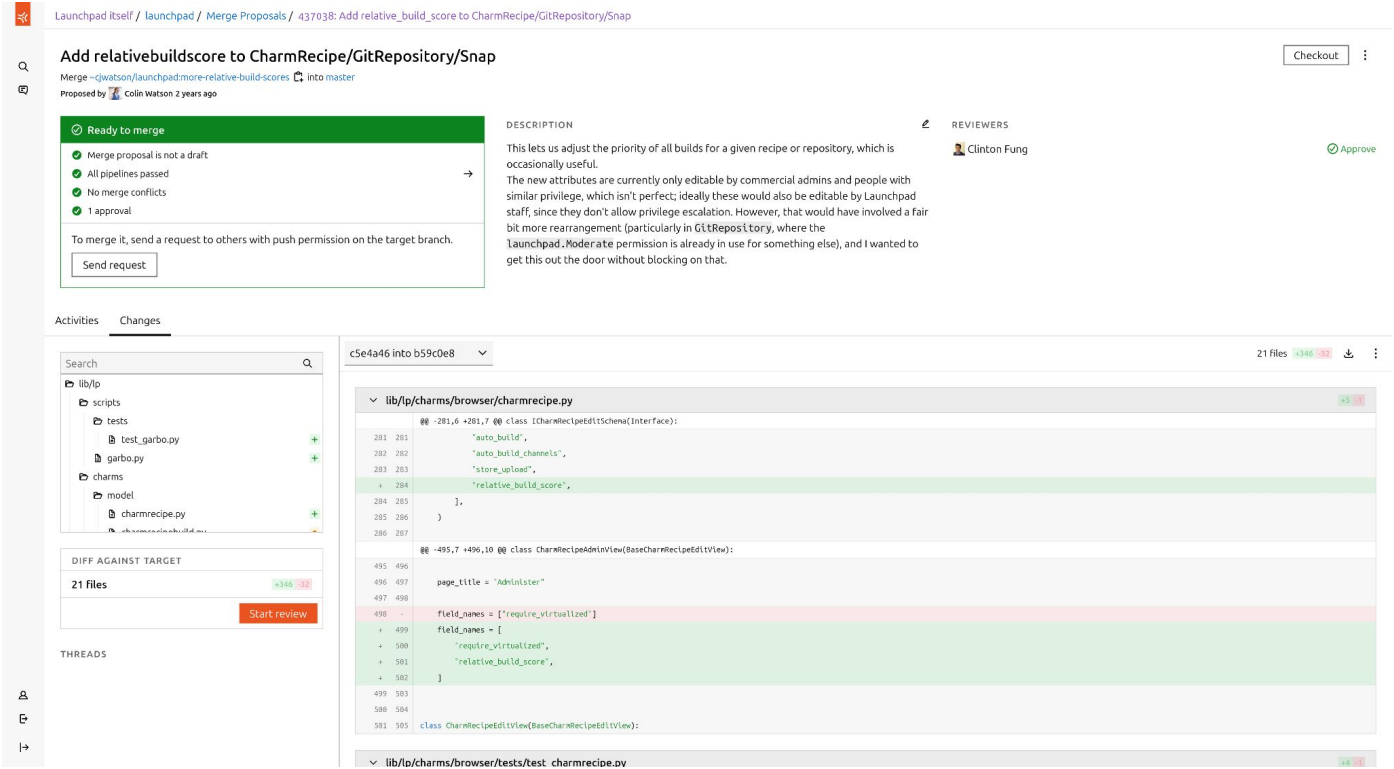
This is how Launchpad looked like in 2012

A brief history of Launchpad



This is how Launchpad looks like since 2024

New code review UI



https://edge.launchpad.net/~cjwatson/launchpad/+git/launchpad/+merge/437038

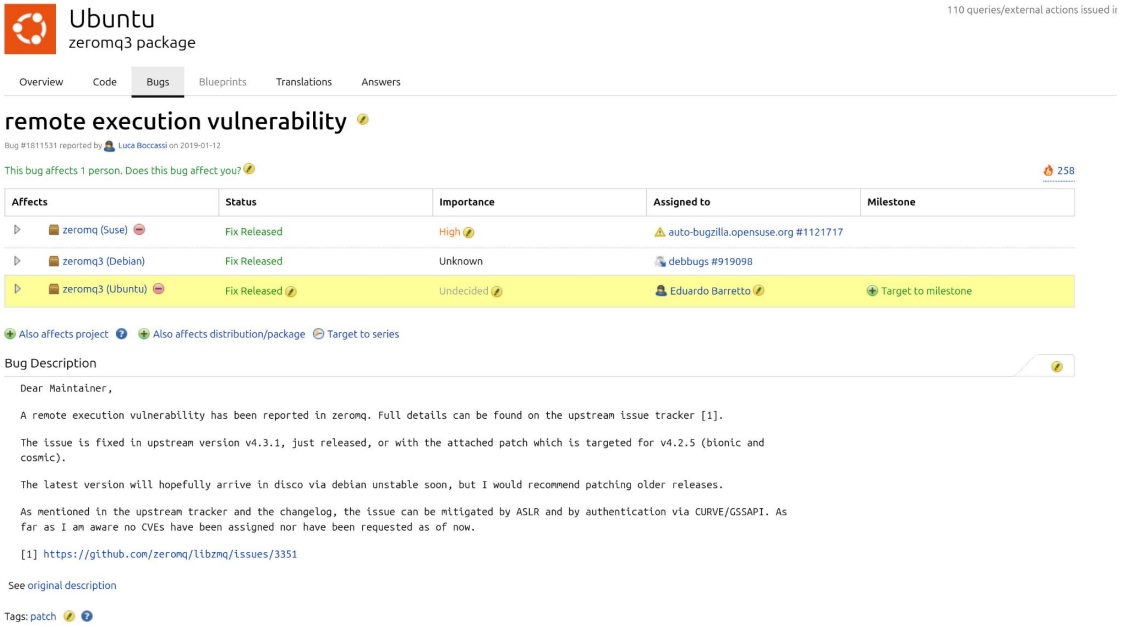
#1 Bug tracker federation

Bug tracker federation

Handling aggregate distributions of software.

Tracking & federating information with other places where similar software is maintained.

Bug tracker federation



Ubuntu
zeromq3 package

110 queries/external actions issued i

Overview | Code | Bugs | Blueprints | Translations | Answers

remote execution vulnerability

Bug #1811531 reported by Luca Boccassi on 2019-01-12

This bug affects 1 person. Does this bug affect you?

258

Affects	Status	Importance	Assigned to	Milestone
zeromq (Suse)	Fix Released	High	auto-bugzilla.opensuse.org #1121717	
zeromq3 (Debian)	Fix Released	Unknown	debbugs #919098	
zeromq3 (Ubuntu)	Fix Released	Undecided	Eduardo Barretto	Target to milestone

Also affects project | Also affects distribution/package | Target to series

Bug Description

Dear Maintainer,

A remote execution vulnerability has been reported in zeromq. Full details can be found on the upstream issue tracker [1].

The issue is fixed in upstream version v4.3.1, just released, or with the attached patch which is targeted for v4.2.5 (bionic and cosmic).

The latest version will hopefully arrive in disco via debian unstable soon, but I would recommend patching older releases.

As mentioned in the upstream tracker and the changelog, the issue can be mitigated by ASLR and by authentication via CURVE/GSSAPI. As far as I am aware no CVEs have been assigned nor have been requested as of now.

[1] https://github.com/zeromq/libzmq/issues/3351

See original description

Tags: patch

This LP bug tracks a vulnerability in Ubuntu, Debian, & Suse

Bug tracker federation

In bugzilla.opensuse.org/ #1121717, Luca Boccassi (bluca) wrote on 2019-01-12: #3

```
Created attachment 794269
patch for 4.2.2 and 4.2.3

Dear Maintainer,

A remote execution vulnerability has been reported in zeromq. Full details can be found on the upstream issue tracker [1].

The issue is fixed in upstream version v4.3.1, just released, or with the attached patch for 4.2.3 (leap 15) and 4.2.2 (leap 42)
(applies cleanly on both).
This issue has been introduced in 4.2.0 so SLES 12 is not affected.

The latest version will hopefully arrive in disco via debian unstable soon, but I would recommend patching older releases.

As mentioned in the upstream tracker and the changelog, the issue can be mitigated by ASLR and by authentication via CURVE/GSSAPI. As
far as I am aware no CVEs have been assigned nor have been requested as of now.
```

Reply on bugzilla.opensuse.org/

Hide

Bug Watch Updater (bug-watch-updater) on 2019-01-13

```
Changed in zeromq (Suse):
importance:Unknown → High
    status:Unknown → Confirmed
```

In bugzilla.opensuse.org/ #1121717, Andreas Stieger (andreasstieger) wrote on 2019-01-13: #6

```
https://github.com/zeromq/libzmq/issues/3351
https://github.com/zeromq/libzmq/pull/3353
https://github.com/zeromq/libzmq/releases/tag/v4.3.1
```

Reply on bugzilla.opensuse.org/

Hide

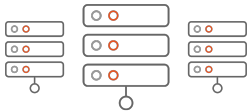
It also tracks comments from the remote Suse bug tracker

Bug tracker federation

Bug watches

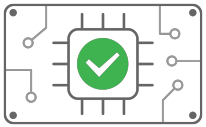
#2 Launchpad build farm

Launchpad build farm



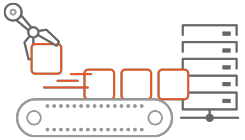
750+

Builders



9*

Architectures



1000s

Daily builds

https://launchpad.net/builders

Launchpad build farm

Available to Launchpad users, Ubuntu, and open source communities free of cost.

Build deb packages (Ubuntu/PPAs), snaps, charms, livefs, OCI images, rocks, and many more to come.

Support for more architectures in the works. amd64v3 since 25.10. riscv64 builds became self-service at the end of 2023.

Works great with source code hosted on Launchpad but also works with source hosted externally in many cases.

Launchpad build farm

Do you want to build a snap on architectures that you don’t have access to?

With the `snapcraft remote-build` command, you can build it on the Launchpad build farm and the built snap locally.

There is a similar `charmcraft remote-build` command that does the same for charms.

#3 Recipes

Recipes

“I want to automatically build and upload/publish artifacts when the underlying source code changes”

Recipes

- Source package recipes
- Snap recipes
- Charm recipes
- Rock recipes
- (more to come)

Recipes

lpci

Snap packages » **lpci**

Created by Colin Watson on 2021-12-09 and last modified on 2024-05-02

Snap package information

Owner:
Canonical Launchpad Engineering

Source:
lpci:main

Build source tarball:
No

Build schedule:
Built automatically

Source archive for automatic builds:
Primary Archive for Ubuntu

Pocket for automatic builds:
Updates

Source snap channels for automatic builds:

snapcraft	7.x/stable

Store series:
Ubuntu Core 16

Registered store package name:
lpci

Store channels:
edge

Recipes

Create a new snap package

Snaps are Linux app packages for desktop, cloud and IoT that are simple to install, secure, cross-platform, and dependency-free. Launchpad can build snap packages using snapcraft, from any Git or Bazaar branch on Launchpad that has a `snap/snapcraft.yaml`, `build-aux/snap/snapcraft.yaml`, `snapcraft.yaml`, or `.snapcraft.yaml` file at its top level.

Snap recipe name:

The name of the snap build recipe.

Owner:

Guruprasad (lgp171188)

The owner of this snap package.

Information type:

Public

The type of information contained in this Snap recipe.

Source:

- Bazaar
  - **Bazaar branch:**

    A Bazaar branch containing a snap/snapcraft.yaml, build-aux/snap/snapcraft.yaml, snapcraft.yaml, or .snapcraft.yaml recipe at the top level.
- Git
  - **Git branch:**
  - **Repository:** **Branch:**

    The Git branch containing a snap/snapcraft.yaml, build-aux/snap/snapcraft.yaml, snapcraft.yaml, or .snapcraft.yaml recipe at the top level.

Series:

- Infer from snapcraft.yaml (recommended)
- Ubuntu Bionic
- Ubuntu Artful
- Ubuntu Zesty
- Ubuntu Yakkety
- Ubuntu Xenial

Recipes

Processors: (Optional)

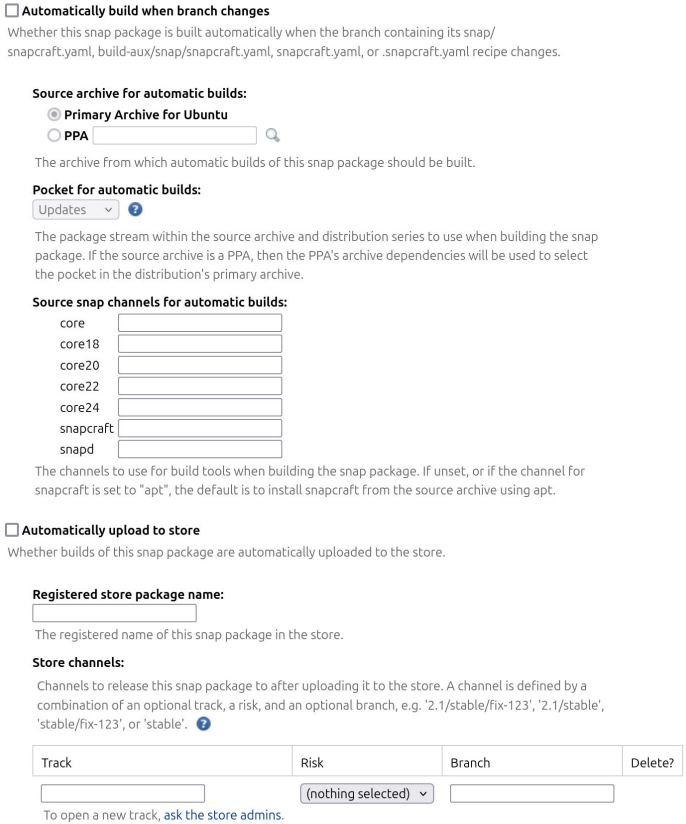
- [x] AMD x86-64 (amd64)
- [ ] ARM ARMv8 (arm64)
- [ ] ARM ARMv7 Soft Float (armel)
- [ ] ARM ARMv7 Hard Float (armhf)
- [ ] HP PA-RISC (hppa)
- [x] Intel x86 (i386)
- [ ] Intel IA64 (ia64)
- [ ] Intel x86 Low Power (lpia)
- [ ] PowerPC (powerpc)
- [ ] PowerPC64 Little-Endian (ppc64el)
- [ ] RISC-V 64-bit (riscv64)
- [ ] IBM System z (s390x)
- [ ] Sun SPARC (sparc)

The architectures that this snap package builds for. Some architectures are restricted and may only be enabled or disabled by administrators.

- [ ] **Build source tarball**

Whether builds of this snap package should also build a tarball containing all source code, including external dependencies.

Recipes


Automatically build when branch changes
Whether this snap package is built automatically when the branch containing its snap/ snapcraft.yaml, build-aux/snap/snapcraft.yaml, snapcraft.yaml, or .snapcraft.yaml recipe changes.
Source archive for automatic builds:
Primary Archive for Ubuntu
PPA
The archive from which automatic builds of this snap package should be built.
Pocket for automatic builds:
Updates
The package stream within the source archive and distribution series to use when building the snap package. If the source archive is a PPA, then the PPA's archive dependencies will be used to select the pocket in the distribution's primary archive.
Source snap channels for automatic builds:
core
core18
core20
core22
core24
snapcraft
snapd
The channels to use for build tools when building the snap package. If unset, or if the channel for snapcraft is set to "apt", the default is to install snapcraft from the source archive using apt.
Automatically upload to store
Whether builds of this snap package are automatically uploaded to the store.
Registered store package name:
The registered name of this snap package in the store.
Store channels:
Channels to release this snap package to after uploading it to the store. A channel is defined by a combination of an optional track, a risk, and an optional branch, e.g. '2.1/stable/fix-123', '2.1/stable', 'stable/fix-123', or 'stable'.
Track
Risk
Branch
Delete?
(nothing selected)
To open a new track, ask the store admins.

Recipes

Automatic recipe builds when the associated code repository (even outside of Launchpad) changes

Automatic upload/publishing of the artifacts built

Can also trigger builds manually

Recipes

Creating recipes

- Snap recipe

  https://launchpad.net/project/+new-snap

- Charm recipe

  https://launchpad.net/project/+new-charm-recipe

- deb package recipe

  https://code.launchpad.net/path/to/branch - Click on ‘Create packaging recipe’

#4 Archive snapshot service

Archive snapshot service

Provides a point-in-time snapshot of

- Ubuntu archive
- Launchpad PPAs (public and private)
- (more to come)

Archive snapshot service

Powered by Launchpad, the platform and the engine behind Ubuntu development and publishing.

Launchpad maintains a history of every change to Ubuntu and that makes this possible.

`lp-archive` is a small web service that implements this on top of Launchpad.

Archive snapshot service

Use cases

- Reproducible deployments
- Determining when a change happened
- Structured update workflow

Archive snapshot service

How do I use this?

Ubuntu - https://snapshot.ubuntu.com

PPAs - https://snapshot.ppa.launchpadcontent.net

Automatic `apt` integration

Archive snapshot service

To know more, watch this presentation from my former colleague Colin Watson at the Ubuntu Summit 2023

#5 Launchpad CI

Launchpad CI

Launchpad has built-in CI functionality that runs CI jobs on merge proposals

`lpci`, the runner tool, the makes this possible

Runs on Launchpad builders and locally. Needs a `.launchpad.yaml` configuration file

Generally available, but still in early stages of development

Launchpad CI

```
$ cat .launchpad.yaml
pipeline:
- test

jobs:
    test:
        series: focal
        architectures: amd64
        run: echo hello world >output
        output:
            paths: [output]

$ lpci run --output-directory out
Running the job
$ tree out  # Find out the location of the output file
out
└── test
    └── 0
        ├── files
        │   └── output
        └── properties

3 directories, 2 files
$ cat out/test/0/files/output
hello world
```

Launchpad CI

Unmerged commits

513b1bc... by Colin Watson on 2023-11-26

charm: Only run push-backups on primary database units

We don't want to be pushing backups from more than one unit.

- docs:0 (build)
- lint:0 (build)
- mypy:0 (build)

1 → 3 of 3 results

First • Previous • **Next** • Last

Launchpad CI

Extensible via plugins

Built-in plugins for `conda-build`, `Miniconda`, `pyproject-build`, `tox`, and `golang`.

Contributions welcome!

https://lpci.readthedocs.io

#6 Launchpad API

Launchpad API

A web service API to interact with Launchpad

Documented at https://api.launchpad.net.
`devel` version is the currently maintained one.

Allows doing almost everything that can be done with the web application, sometimes even more.

Launchpad API

`launchpadlib`

- The official Launchpad Python client library
- `apt install python3-launchpadlib` or `pip install launchpadlib`.
- `lp-shell` - (i)python-based REPL environment playground

Launchpad API

```
# lp-shell gives you the `lp` object that is an instance of the API client.
In [1]: person = lp.people["cjwatson"]

In [2]: person
Out[2]: <person at https://api.launchpad.net/devel/~cjwatson>

In [3]: person.display_name
Out[3]: 'Colin Watson'
```

Get the display name of a user

Launchpad API

```
user = lp.load("~wgrant")

for question in user.searchQuestions(participation="Owner", sort="newest first")[:3]:
    print(question.title)

# 66189 Merge william-grant into wgrant
# 63675 Debian's series to remove 'Debian ' from the front
# 62675 Debian series need updating and data needs fixing
```

Get the most recent 3 questions posted by a user

Launchpad API

```
git_repository = lp.git_repositories.new(name="launchpadlib-demo", owner=lp.me, target=lp.me)
print(git_repository.web_link)
# https://code.launchpad.net/~lgp171188/+git/launchpadlib-demo
git_repository.name = "lp-shell-demo"
git_repository.lp_save()
git_repository.lp_refresh()
print(git_repository.name)
# lp-shell-demo
git_repository.lp_delete()
```

Create a git repository, modify its name, and delete it

Launchpad API

Launchpad API documentation

Launchpad API

Examples

Extras

- Support for FIDO2 SSH keys
- Bazaar and mailing lists shutdown
- Bug templates

We are hiring!

Software Engineer

Engineering Manager

Questions?

Thank you!