How does the Fedora Infrastructure use Python

PRESENTED BY:

Clément Verna
Fedora Infrastructure
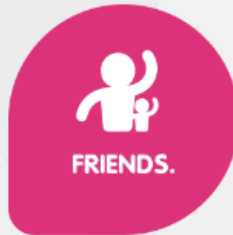
What is Fedora ?

The Fedora Project is not

The Fedora Project is …

FREEDOM.

FRIENDS.

FEATURES.

FIRST.

Fedora is always free for anyone to use, modify, and distribute. It is built and used by people across the globe who work together as a community: the Fedora Project.

Fedora Loves Python   https://fedoralovespython.org/

Fedora is welcoming

- Ambassadors
- Community Operations
- Design
- Documentation
- EPEL
- Infrastructure
- Internationalization

- Mindshare
- Marketing
- Magazine
- Package Maintainers
- Quality Assurance
- Websites

Let's talk about

- Ambassadors
- Community Operations
- Design
- Documentation
- EPEL
- **Infrastructure**
- Internationalization

- Mindshare
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Fedora's Infrastructure

Fedora's Infrastructure

- About 72 virtual hosts

- About 390 virtual guests

- Over 30 services running and monitored with on call system administrator

- OpenStack cloud available for the community members (fedorainfracloud.org)

- Staging and Production environment

- Community Platform Engineering Team

  - 4 system administrator

  - 5 application developers

  - 3 Design and UX engineers

  - 3 Kernel Engineers

What we do

Applications

- Anitya
- Bodhi
- Møte
- Tahrir
- Hyperkitty
- Pagure
- Nuancier
- The-new-hotness

- fedmsg
- fedimg
- elections
- mirrormanager2
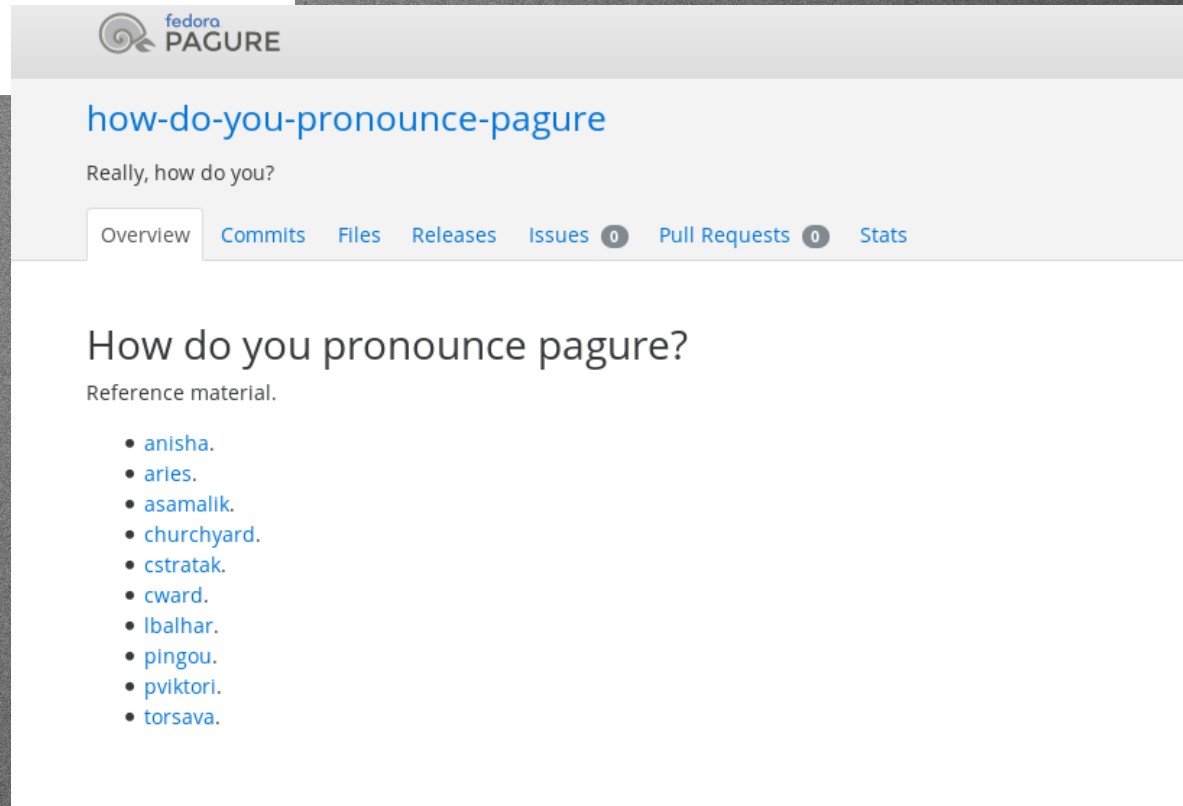- fedora-packages
- datagrepper
- Fmn

and the list goes on …

Naming things is hard

Tahrir

Tahrir is Arabic for Liberation.

Tahrir is also a Pyramid app for issuing your own Open Badges.

The name is total overkill.

fedora PAGURE

how-do-you-pronounce-pagure

Really, how do you?

Overview   Commits   Files   Releases   Issues 0   Pull Requests 0   Stats

How do you pronounce pagure?
Reference material.

- anisha.
- aries.
- asamalik.
- churchyard.
- cstratak.
- cward.
- lbalhar.
- pingou.
- pviktori.
- torsava.

https://pagure.io/how-do-you-pronounce-pagure.git

Tahrir

- Web Applications that allow a community to issue Open Badges
- Badges ?

- Built using Pyramid, SQLAlchemy, Mako
- https://badges.fedoraproject.org
- https://github.com/fedora-infra/tahrir
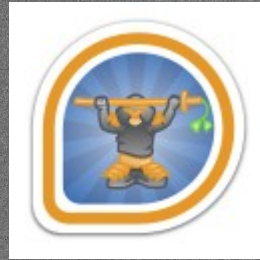
Fedocal

- Web based Calendar application to help Fedora groups to coordinate

- Built using Flask, SQLAlchemy, python-vobject (iCal Feed)

- https://apps.fedoraproject.org/calendar/

- https://pagure.io/fedocal

Pagure

- git-centered source forge (Fedora's github).

- Code, Tickets, Pull-Requests and Documentation are available as git repo

- Built using Flask, SQLAlchemy, pygit2, Celery, Redis

- https://pagure.io/ or http://src.fedoraproject.org/

- https://pagure.io/pagure/

Bodhi

- Bodhi is a web-system that facilitates the process of publishing updates for a Fedora-based software distribution

- Built using Pyramid, SQLAlchemy

- https://bodhi.fedoraproject.org/

- https://github.com/fedora-infra/bodhi

# Anitya

- scan for new releases of projects

- user-friendly interface to add, edit, or browse projects

- Built using Flask, SQLAlchemy

- https://release-monitoring.org/

- https://github.com/release-monitoring/anitya

fedmsg

- Federated Message Bus

- Messaging bus used around Fedora Infrastructure to send and receive messages

- Built on top of ØMQ

- http://www.fedmsg.com/

- https://github.com/fedora-infra/fedmsg

How does it hold together ?
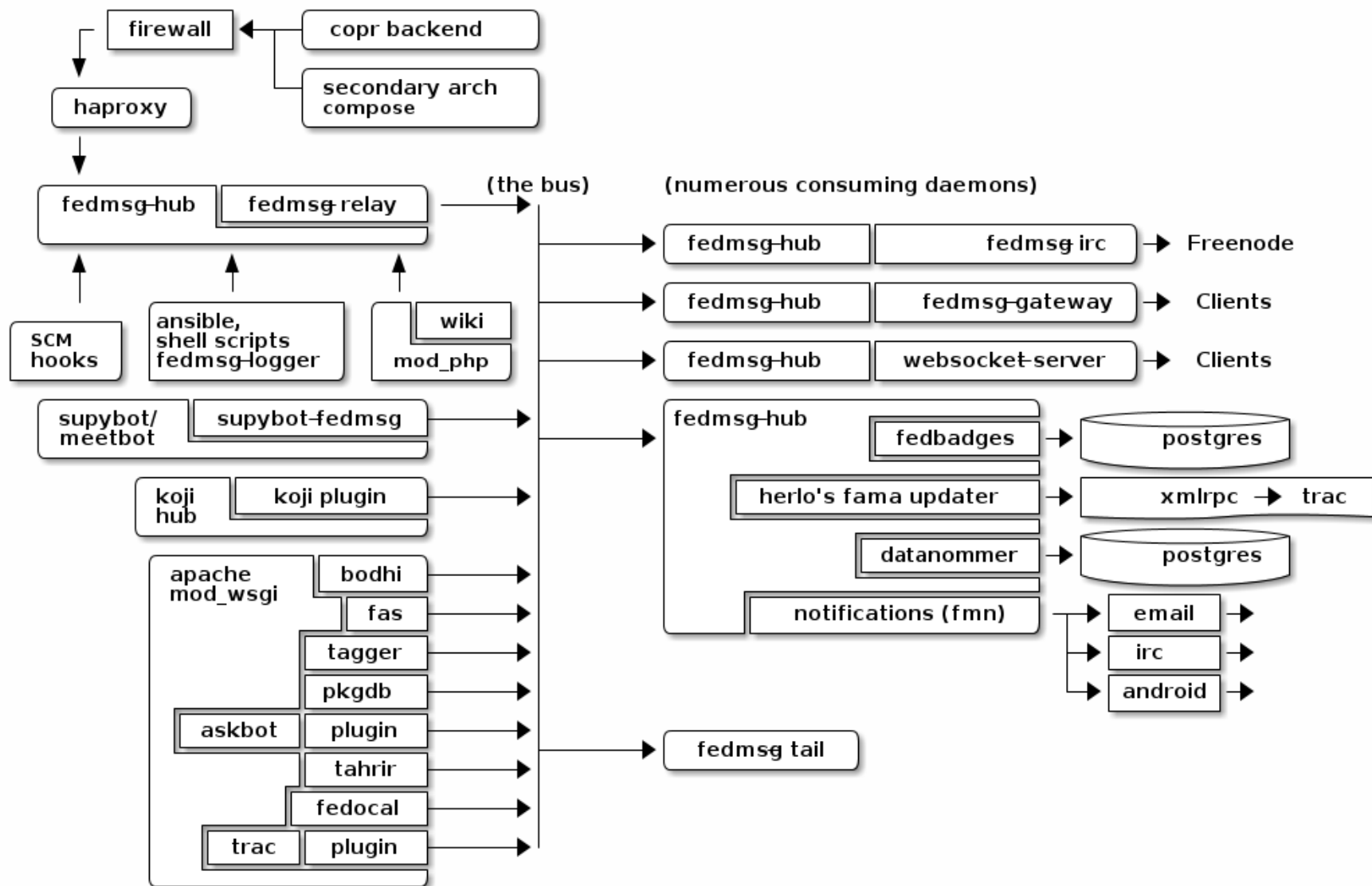
How do we manage it ?

- Python application are packaged using RPM.

- Deployed on RHEL 7 or Fedora 27, 28

- Using Ansible to manage the deployment and configuration management

- Web Application served by Apache HTTP Server using Mod wsgi module

- Starting to use containers and Openshift as runtime platform

Ansible

- Our repository is Public, go check it out
- https://infrastructure.fedoraproject.org/cgit/ansible.git/tree/
- Basic concept
  - Inventory : Define and group the hosts where services are running
  - Playbooks : A way to run commands on hosts
  - Roles : Predefined commands for a known type of service

Python 3

~ 35 maintained applications

- · 16 supports Python 2 and Python 3
- · 2 are Python 3 only
- · 17 are Python 2 only

Planning on dropping some of the Python 2 only apps.

Effort of moving more application to Openshift

Want to Help ?

- Anyone can join Fedora Infra as an Apprentice.

- Introduce yourself over the mailing list.

- Join us in our weekly IRC Meetings.

- Look for issues with 'Easyfix' label in the Pagure/Github project issues.

- Drop in to our IRC channels to ask for help, discuss about projects/features/ideas or just to say us 'hi'.

- Start getting active on Mailing List.

Contact

- Mailing List:

  https://lists.fedoraproject.org/admin/lists/
  infrastructure.lists.fedoraproject.org/

- IRC Channels on Freenode:

  #fedora-apps | #fedora-admin

- Developers documentation:

  https://fedora-infra-docs.readthedocs.io/en/latest/dev-guide/index.html

  @clemsverna   https://github.com/cverna/pyconcz