



A bus-based infrastructure

Presented by

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Fedora infrastructure



Why a bus?



Why a bus?

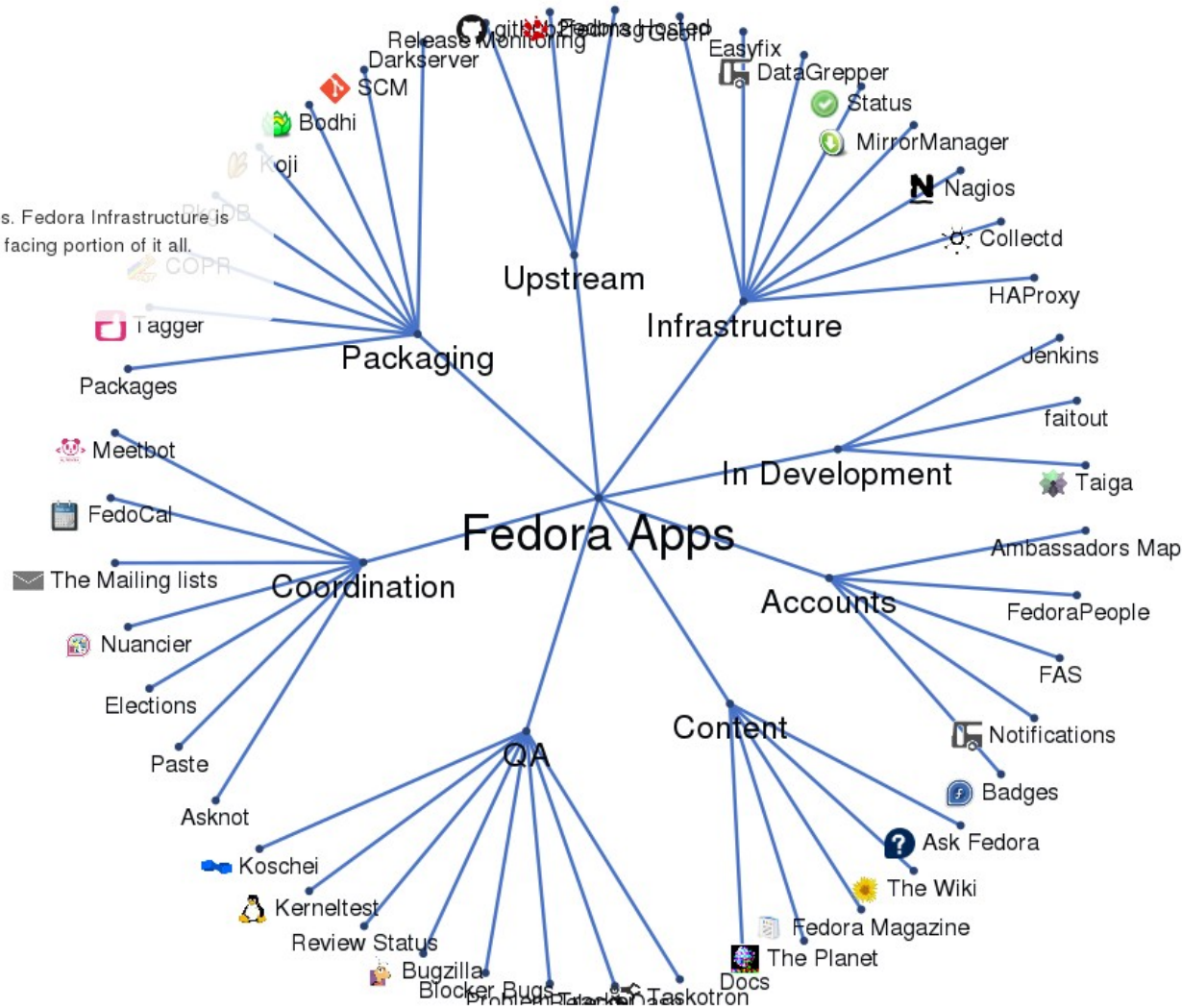
Make communication between your
Applications easier

Fedora Infrastructure



Fedora Apps

This is a landing page for Fedora Apps. Fedora Infrastructure is huge; this page details only the public facing portion of it all. Explore!



©2012 - 2015 Red Hat, Inc., [Ralph Bean](#). You can get the source [from the github repo](#).

<https://apps.fedoraproject.org>



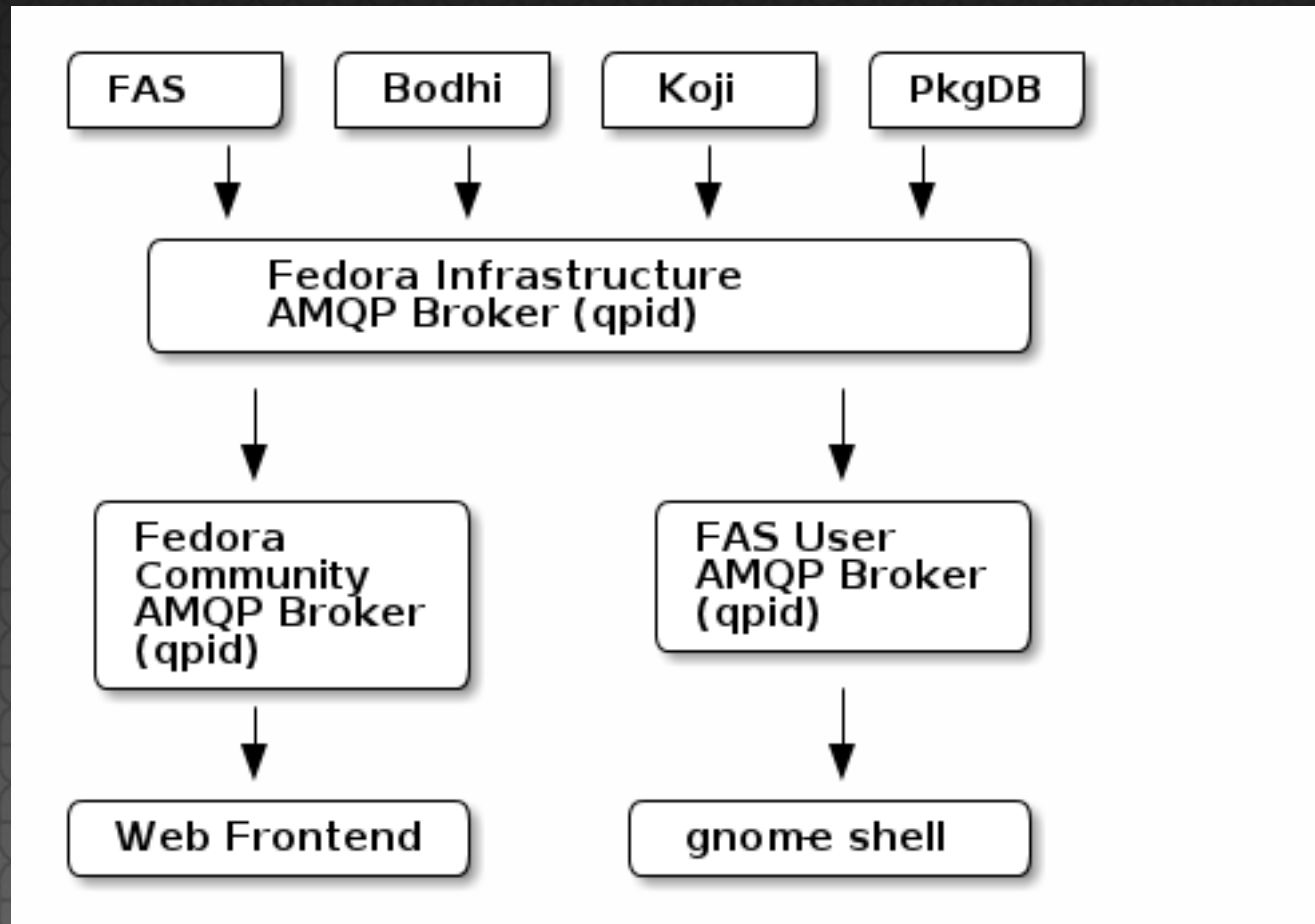
No bus

- Communication:
 - Cron
 - Web-hooks
 - Callbacks
 - Shared DB
- Specific

With a bus

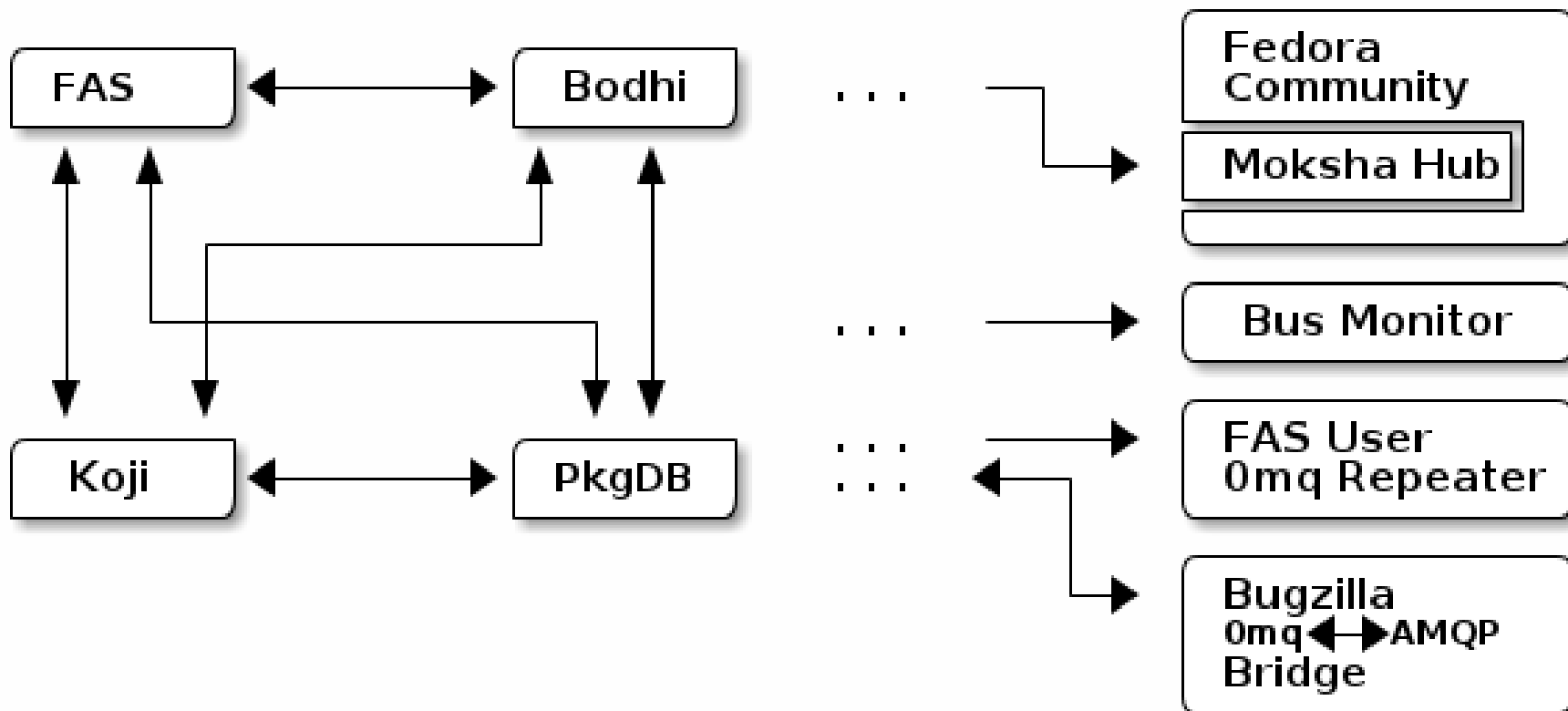
- Communication:
 - Push vs Pull
 - Ad-hoc action
 - Action → reaction
- General

Architecture v1



Architecture v2

Overview



fedmsg

- Work of Ralph Bean
- Based on Omq
 - Fire and forget
- python
- Decentralized
- Text or DNS based discovery
- GPG or x509 signatures



Using fedmsg



- Receiving:

```
import fedmsg

# Yield messages as they're available from a generator
for name, endpoint, topic, msg in fedmsg.tail_messages():
    print topic, msg
```

- Sending:

```
import fedmsg
fedmsg.publish(topic='testing', modname='test', msg={
    'test': "Hello World",
})
```

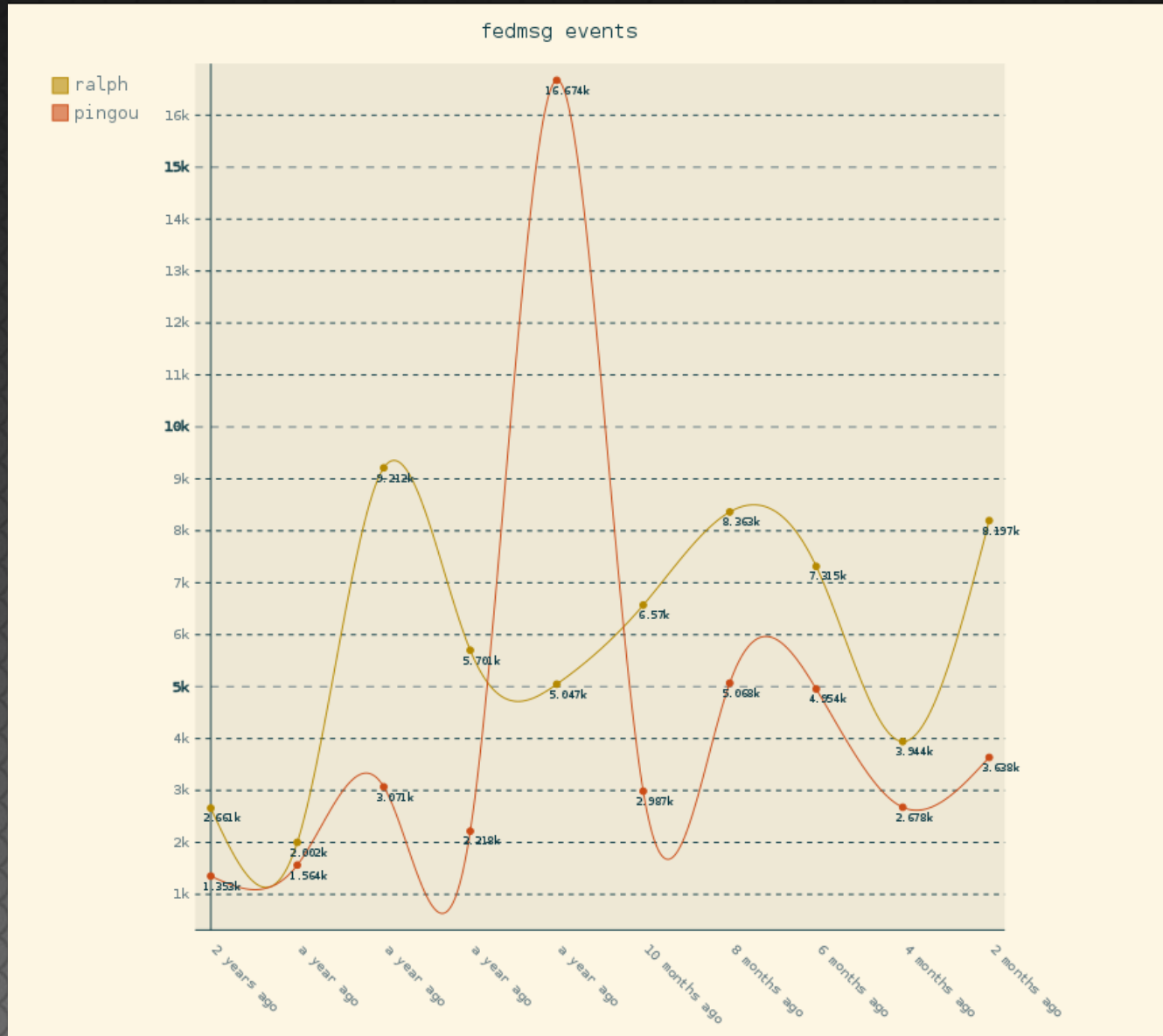
Using fedmsg in our infra

- Action → Reaction
 - Change your SSH key in the account system?
 - → Update hosts to get the new key
 - Change group?
 - Give/Remove your access to some host
 - Get/Lose access to a git/package
 - Update gitolite to grant/remove permissions
 - New updates on the master mirror
 - Update the mirror database for that part of the tree

Using fedmsg in our infra

- History of our actions
 - Datanommer / Datagrepper
 - Per project / package
 - Per user

Datagrepper



Using fedmsg in our infra

- Personalized notifications
 - One central notification mechanism
 - Create filter
 - Add rules to your filter
 - Choose you notification system
 - Email – IRC

Github Stuff Edit

sent to irc

Rules defined for this filter:

(all these rules must be satisfied for the notification to be sent)

- !** Continuous integration status (github.com)

Adding this rule to your filters will let through messages from [Github](#) when continuous integration service updates the status of a new commit.

Include Delete
- ✓** All Fedora-related GitHub activity

Adding this rule will indiscriminately match notifications of all types from [github](#) (but only the repositories that are mapped to Fedora via the [github2fedmsg service](#)).

Negate Delete
- !** Deleted tags and branches (github.com)

Adding this rule to your filters will let through messages from [Github](#) when someone deletes a tag or branch.

Include Delete
- ✓** All messages matching a regular expression

Use this rule to include messages that bear a certain pattern. This can be anything that appears anywhere in the message (for instance, you could combine this with rules for wiki updates or Ask Fedora changes to alert yourself of activity in your area of expertise).

(i. e., (beefy miracle)).

pattern (fedora-infra|pyringou) Edit

Negate Delete
- !** A particular user

Use this rule to include messages that are associated with a specific user.

fasnick pingou Edit

Include Delete

- Export
- Enable one-shot
- Disable
- Delete

Possible rules:

You can add a new rule to this filter by selecting one from this pre-defined list. Click on any rule to check it out.

Generic Rules

- A particular package
- A particular user
- A particular user's packages (any acl)
- A particular user's packages (commit acl)
- A particular user's packages (watchcommits flag)
- All messages matching a regular expression
- All packages matching a regular expression
- Everything except a particular user
- Messages regarding any member of a FAS group
- Particular fedorahosted projects

Anitya Rules

- All release-monitoring.org events
- Anitya distributions updated
- Attempts to add new projects to release-monitoring.org
- Distro-specific release-monitoring.org events
- New distributions added to release-monitoring.org
- New projects added to release-monitoring.org



Pros and Cons

- Pros :-)

- Less crons
- More flexibility
 - What/When
- Central
- Easy
- Extensible

- Cons :-)

- Fire and forget
 - Kind of a myth for us
 - Necessary?
 - Fedora-infra/gilmsg
- Require a change in your apps

Fedmsg outside Fedora

- Debian
 - <https://wiki.debian.org/FedMsg>
- Data.gouv.fr (?)

Questions?

<http://www.fedmsg.com>



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