Dropping Python 2

How to help downstreams with converting fully to Python 3, so we can discontinue Python 2 with clean conscience.
What is our quest?

Make sure everyone switches to Python 3?

Deprecate Python 2 and wash our hands?
Major unported open-source SW

- Mercurial/Bazaar
- Plugins: Gimp, Inkscape, QGis
- Bindings: databases, Samba
- OpenStack
  - first release tested by upstream will be Rocky later this year.
- build systems (e.g. for node.js, autotools)
- Sugar (“One laptop per child”)
- system tooling
Community distros

• Lack of interested maintainers
  – worked round by improving PyPI/pip/pipenv
  – but distro packages have their benefits
    • see missing/bad licences in pipenv

• Lack of authority to direct volunteers
  – we can't say “Fedora is dropping Python 2”
Commercial companies

• Allocating funds for reactoring is hard
  – py3 is usually pushed from “below”
  – using Python 3 works as an HR trick
Those who switched to py3

- Mostly passionate Pythonistas
- Should not be hindered
The task (in Fedora)

- Move “leaf packages” to Python 3
- Remove Python 2 support
- Help with problematic cases
- Support 2.7 as long as needed
On gradual transition paths

- Give people a deadline, and they will switch at the last possible time
  - e.g. VFX ref. platform, OpenStack

- Need to actively push for change
  - e.g. Samba, system tools
Little annoyances

- Break something that is documented as deprecated/wrong, but always worked
- Add a very easy but visible workaround
- Encourage people to get help
PEP 394 (python command)

• python should launch Python 2
  - Not guaranteed (e.g. Arch)
  - Makes it look like py2 is still default

• python for 2/3 compatible scripts
  - assumes py2 is always installed
  - will force us to ship py2 for a long time
PEP 394 (python command)

• Desired future: python == latest stable version
  - When will the world be ready?
  - How do we get there?
  - Is a py launcher the way?

• Current recommendations are for 3-10 years

• Every environment is different