MERCURIAL

CONFERENCE - PARIS

mercurial

April 05-07, 2023

SORBONNE UNIVERSITÉ

How Mercurial is used to develop Tryton

Cédric Krier @ B2CK
Tryton Project Leader

Modularity, scalability and security for business

https://www.tryton.org/

April 6th 2023   **Mercurial @ Tryton**

Tryton

- OSS (GPL-3) Business Software (ERP)
- Python (+ JavaScript)
- 200+ modules (25 languages)
- Started in 2008
  (fork TinyERP aka OpenERP aka Odoo)
- 100+ contributors

Why mercurial?

- Command line
  - Easy
  - Consistent
- In Python
- Extensions

Old Code Organization

Mercurial @ Tryton

Old code organization

1 package = 1 repository

```
tryton-env ☿

    trytond ☿

    tryton ☿

    modules

        account ☿

        stock ☿
```

Old code organization

Forest Extension
(no more maintained)

https://www.mercurial-scm.org/wiki/ForestExtension

Old code organization

Subrepository

https://www.mercurial-scm.org/wiki/Subrepository

Old Workflow

Mercurial @ Tryton

Roundup

- Bug-tracker
- Extensions
  - Changeset link
  - Codereview link
  - Gravatar

Rietveld

- Pre-commit review
- Reviewbot (email)
  - flake8
  - isort
- Manual patch application

Drone

- Custom remote
  - Trypod
    - Authentication with roundup
    - Repository
    - Activation via hooks
  - Trydevpi (PyPI-like)
    - Publish development packages

Move to Heptapod

Move to Heptapod

Before	After
Pre-commit review	Post-commit review
Script to upload	hg push
Reviewbot	Checks in CI
No CI on patch	CI before merge
Single commit	Many small commits

Move to Heptapod

Plan

- Work with Octobus (sponsored by Foundation)
- Hosted on https://foss.heptapod.net/
- Migrate bug reports (keep same ID)
- Merge to mono-repository
- Write new .gitlab-ci.yaml

Mono-repository

Mono-repository

200+ repositories to merge

- Preparation
  - hg move files into new folder
  - Rename tags (add prefix)
- hg pull into mono-repo
- Merge all heads (≃20)
  - --config merge-patterns..hgtags=:union
  - Commit (and keep closed branch)

Mono-repository

Some mercurial hooks

- `.hooks/link_modules`
- `.hooks/update_requirements`

Gitlab CI

Mercurial @ Tryton

Goals

- Test only modified (full run takes hours)
- Test different databases (SQLite and PG)
- Test different versions of Python
- Install internal dependencies

4 stages

- Preparation
- Check
- Test
- Build

Gitlab CI - Preparation

- Build all packages
  into one directory

- Build all sphinx documentations
  into one directory

Gitlab CI - Check

Checks documentation and code
for each package
only if changed using rules

Gitlab CI - Test

- Run for each package if changed
- Generate using script .gitlab-ci-modules.yml which is included in .gitlab-ci.yml (test ensure new modules are added)

Gitlab CI - Test

- Matrix for Python version
- Services (PostgreSQL, Postgis, SQLite)
- Tox
  - PIP_FIND_LINKS for generated packages
  - Coverage
  - Junit

Trigger readthedoc using secret config file (only if changed)

Maintenance and release

Maintenance and release

- Backport fixes
  - hg graft using backport topic per branch
  - Merge at fixed date
- Releases using script
  - Tag using package name and version
- Scheduled pipeline (weekly)

Results after 4 months

25+ developers

400+ merge requests

2000+ pipelines

Questions?