

Issues, Branches, Forks, Requests, CI, and Workflows

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Available at

[https://homepages.laas.fr/gsaurel/
git-forges.pdf](https://homepages.laas.fr/gsaurel/git-forges.pdf)

Under License



<https://creativecommons.org/licenses/by-sa/4.0/>

Source

[https://gitlab.laas.fr/gsaurel/talks :
git-forges.md](https://gitlab.laas.fr/gsaurel/talks : git-forges.md)

Discussions

<https://im.laas.fr/#/room/#git-forges:laas.fr>

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Introduction

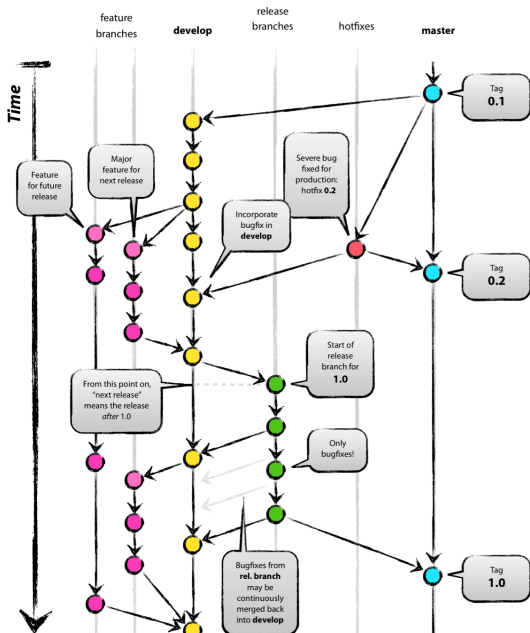
- Software management
 - git repository (web, HTTPS, SSH)
 - authorizations
 - issue tracker

- 1 domain
 - 2 username *OR* group (organization)
 - 3 project
- `https:// gitlab.laas.fr / gsaurel / talks`
 - `https:// github.com / gepetto / example-adder`

- bug fix / feature request
- Github / Gitlab: #4
- referencable from git:
 - `git commit -m "add test for user input, ref #4"`
 - `git commit -m "sanitize user input, fix #4"`

Branches

Goal



- default: master or main
- devel, stable
- issue/5
- topic/something

Forks

- scission (software development)
 - document motivations
 - rename
 - change logo / website etc.
 - ensure compatibility
- collaboration (git forges)
 - try to keep synchronized

- scission (software development)
 - document motivations
 - rename
 - change logo / website etc.
 - ensure compatibility
- **collaboration (git forges)**
 - try to keep synchronized

```
git clone --recursive \  
    git@gitlab.laas.fr:gsaurel/example-  
adder.git  
cd example-adder  
git remote add gepetto \  
    git@gitlab.laas.fr:gepetto/example-  
adder.git
```

```
git clone --recursive \  
    git@gitlab.laas.fr:gsaurel/example-  
adder.git  
cd example-adder  
git remote add gepetto \  
    git@gitlab.laas.fr:gepetto/example-  
adder.git  
  
git pull gepetto master  
git push origin master
```

```
# ~/.ssh/config
Host gl
    HostName gitlab.laas.fr
    User git

git clone --recursive gl:gsaurel/example-adder
```

Requests

The screenshot displays the GitLab web interface for a project named 'example-adder'. At the top, a green notification banner states: 'You pushed to devel at Guilhem Saurel / example-adder 7 minutes ago' with a 'Create merge request' button. Below this, the project header shows 'example-adder' with a globe icon, 'Project ID: 165', and icons for sharing, notifications, stars (0), and forks (0). Project statistics include '14 Commits', '4 Branches', '10 Tags', '1.5 MB Files', and '13 MB Storage'. A description reads: 'This is an example project, to show how to use Gepetto's tools' and 'Forked from Gepetto / example-adder'. A navigation bar shows 'master' selected, 'example-adder / +', and buttons for 'History', 'Find file', 'Web IDE', 'Download', and 'Clone'. A commit entry is visible: 'release: Update package.xml version to 4.0.2' by Guilhem Saurel, authored 1 month ago, with commit hash '70b0d164'. Below the commit, there are buttons for 'Upload File', 'README', 'BSD 2-Clause "Simplified" License', 'CI/CD configuration', 'Add CHANGELOG', 'Add CONTRIBUTING', 'Add Kubernetes cluster', and 'Configure Integrations'. At the bottom, a table header is partially visible with columns for 'Name', 'Last commit', and 'Last update'.

Figure 2: Merge Request

```
git push -o merge_request.create \  
        -o merge_request.target=devel \  
        origin topic/something
```

The screenshot shows a GitHub pull request page for the repository `nim65s/example-adder`. The page is dark-themed and includes a search bar at the top, navigation links for Pull requests, Issues, Marketplace, and Explore, and user avatars. The repository name is `nim65s/example-adder` (Public), forked from `Gepetto/example-adder`. The main branch is `devel`, which had recent pushes 2 minutes ago. A green button labeled "Compare & pull request" is visible. Below this, there are buttons for "Go to file", "Add file", and "Code". A message states "This branch is up to date with Gepetto:master." and provides options to "Contribute" or "Fetch upstream". The pull request itself is titled "nim65s release: Update package.xml version to 4.0.2" and was created by user `79b0d16` on 8 Dec 2021, with 14 commits. A table of files added is shown below:

File	Description	Time
<code>cmake @ 84f1ae1</code>	[Cmake] Add Submodule	2 months ago
<code>include/example-adder</code>	[Bindings] Add Python bindings	2 months ago
<code>python</code>	[Bindings] Add Python bindings	2 months ago
<code>src</code>	[bin] Add gepetto-example-adder executable	2 months ago
<code>tests</code>	[Tests] Check main executable	2 months ago
<code>.gitlab-ci.yml</code>	[CI] Add gitlab-ci.yml	2 months ago

On the right side, the "About" section contains a description: "This is an example project, to show how to use Gepetto's tools". It also lists "Readme", "BSD-2-Clause License", "0 stars", "2 watching", and "4 forks". The "Releases" section shows "10 tags" and a "Create a new release" button. The "Packages" section is also visible.

Figure 3: Pull Request

Required: <https://cli.github.com/>
gh pr create

CI

```
# .gitlab-ci.yml
image: gitlab.laas.fr:4567/gsaurel/talks

build:
  script:
    - make

test:
  script:
    - make test
```

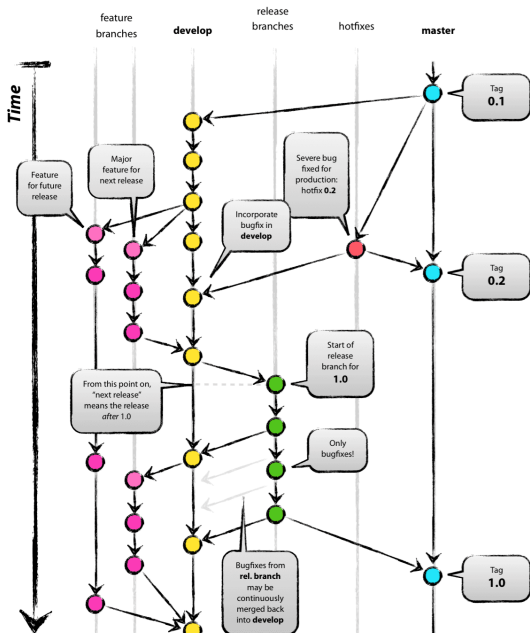
```
git config --global alias.mwps "push \  
    -o merge_request.create \  
    -o merge_request.target=devel \  
    -o merge_request.merge_when_pipeline_succeeds \  
    -o merge_request.remove_source_branch"  
  
git mwps origin topic/something
```

```
# .github/workflows/build.yml
name: Build
on: [push,pull_request]

jobs:
  build:
    name: Transpile markdown sources into PDF
    runs-on: nim65s/talks
    steps:
      - uses: actions/checkout@v2
      - run: make
```

Workflows

Example



End notes

<https://learngitbranching.js.org/>

<https://nvie.com/posts/a-successful-git-branching-model/>

<https://docs.github.com/en/get-started/quickstart/github-flow>

Thanks for your time :)