

Optimizing your core application for integration

Learnings from integrating OpenProject with Nextcloud

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Prioritize integrations on your roadmap!

- Now is the moment to beat the "big techs"
- Every single open source app becomes more attractive when integrated
- Building integrations is unnecessarily hard
- Most of the problems are predictable
- Drink your own champagne and participate in building integrations

Integrations are magic

- Web: ``
- Browser: Extensions
- Mobile: Apps
- ...

Deep integration of OpenProject & Nextcloud

- Problem: *"Where are the files for my task?"*
- A team of about 8 people involved for 1 year
- Sponsors: University Duisburg-Essen and the City of Cologne



In OpenProject: Link a work package to file/folder

The screenshot displays the OpenProject interface for a task titled "Second fermentation dough". The task is in progress and was created by Wieland Lindenthal. The ingredients list includes 500ml tap water, 500gr Flour 00, 5gr yeast, and a note to mix and leave in the fridge for one night. A photo of a pizza is shown below the list. The right sidebar shows the "FILES (2)" tab, which lists two attachments: "Polish fermentation.md" (linked from MY NEXTCLOUD, 9 minutes ago) and "Pizza photos" (linked from MY NEXTCLOUD, 2 months ago). A pink box highlights the attachment list.

Wielands Testprojekt +

OpenProject Search ...

Set parent +

← TASK Second fermentation dough + Create

In progress #6163: Created by Wieland Lindenthal. Last updated on 03.02.2023 15:33. Set to new

ACTIVITY FILES (2) RELATIONS (1) WATCHERS (1)

ATTACHMENTS

Drop files here or click to attach files.

Attach files

MY NEXTCLOUD

- Polish fermentation.md 9 minutes ago WL
- Pizza photos 2 months ago NA

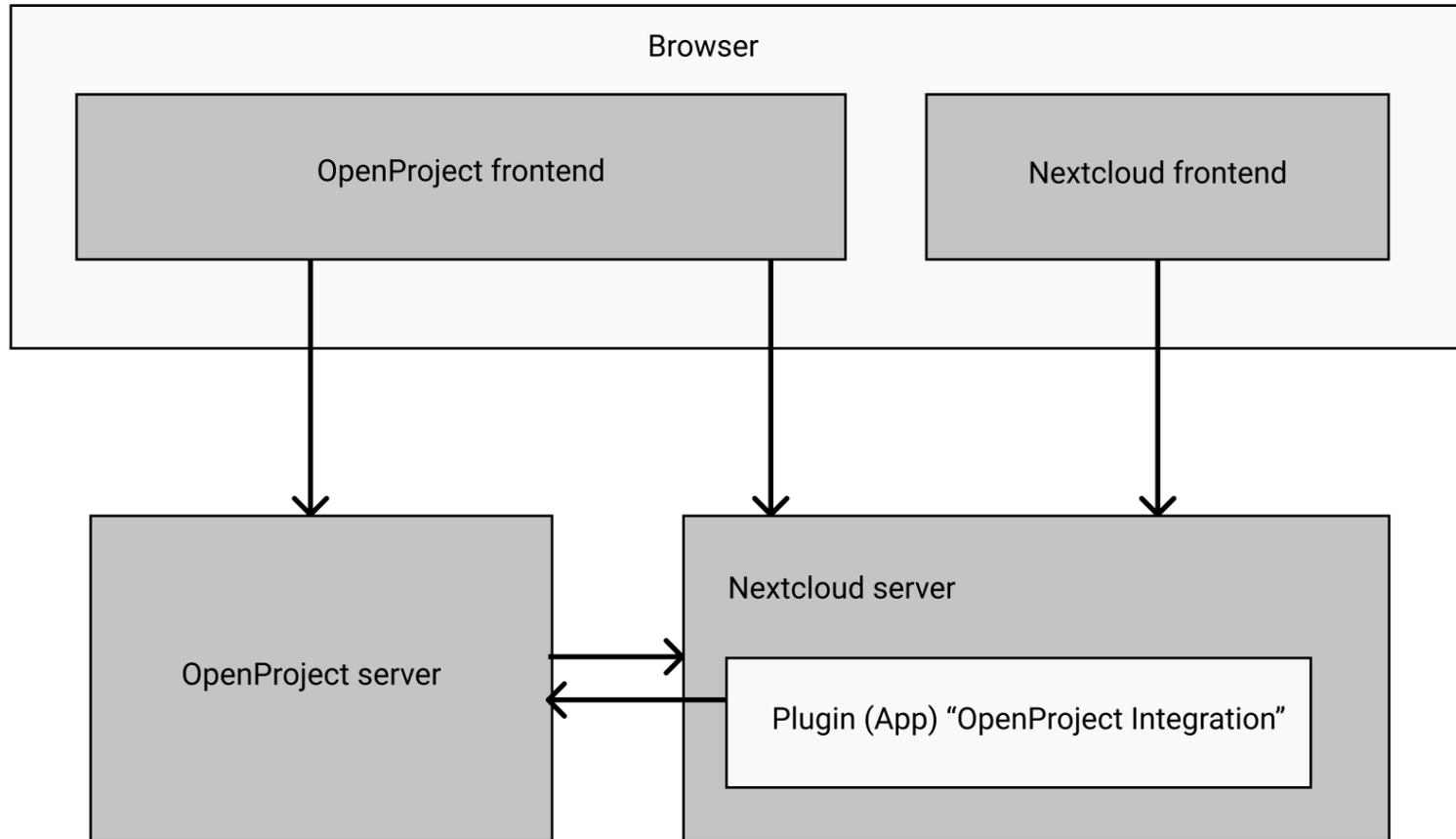
Upload files Link existing files

In Nextcloud: Link a file/folder to a work package

The screenshot shows the Nextcloud web interface. On the left is a navigation sidebar with options: All files, Recent, Favorites, Shares, and Tags. The main content area displays a folder named 'Pizza recipes' containing a file 'Polish fermen....md' (0 KB, 15 minutes ago). A context menu is open over the file, showing options: Activity, Comments, **Open...** (highlighted), Sharing, and Versions. The 'Open...' menu item is expanded, revealing a search bar 'Search for a work package to create a relation' and a list of 'Existing relations':

- In progress**
#6163 - Wielands Testprojekt
TASK Second fermentation dough
Wieland Lindenthal
- Specified**
#6161 - Wielands Testprojekt
TASK Prepare pizza dough
Ivana Šugić

Architecture



Lessons learned

Provide an API

- With docs and examples
- Test cross-site scenarios in the browser
- Watch out for CORS
- Make sure your main objects are retrievable via ID

Create a plugin interface

...and make it easy to install them

Allow extending your CSP for cross-site requests

Make host address verification easy

- Obvious:
 - Valid URL?
 - Reachable?
- Less obvious:
 - Target setup complete?
 - Target setup in the right version(s)?

Provide an API for OAuth setup management

- Hosters and testers might want to script the integration setup
- Allows to disconnect everything with one click
- Make sure it revokes all tokens

Provide scopes for OAuth tokens

- Allow limiting the access to the necessary
- Not every integration needs admin rights

Provide a design system

- Consistent UI
- Faster development

Provide containerized development environments

- For all supported versions and the current main branch
- e.g. provide docker compose files for plugin development

Provide examples for setting up a CI for plugins

**Integrated we are
stronger**

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