OpenWIS v4

Development approach based on overlays

Met Office

Toulouse, 20-23 March 2017

GitHub developer's workflow

Find the project you want to contribute to

Fork it in your private repo

Make changes, push changes to private repo, Pull-Request

When PR is accepted, delete your local fork/branch

Develop a new feature

GitHub developer's workflow

Works well for "small" features

Assumes a good PR-acceptance turnaround time

Assumes upstream project is interested for all types of contributions

"Bound" to the technical choices of the upstream project

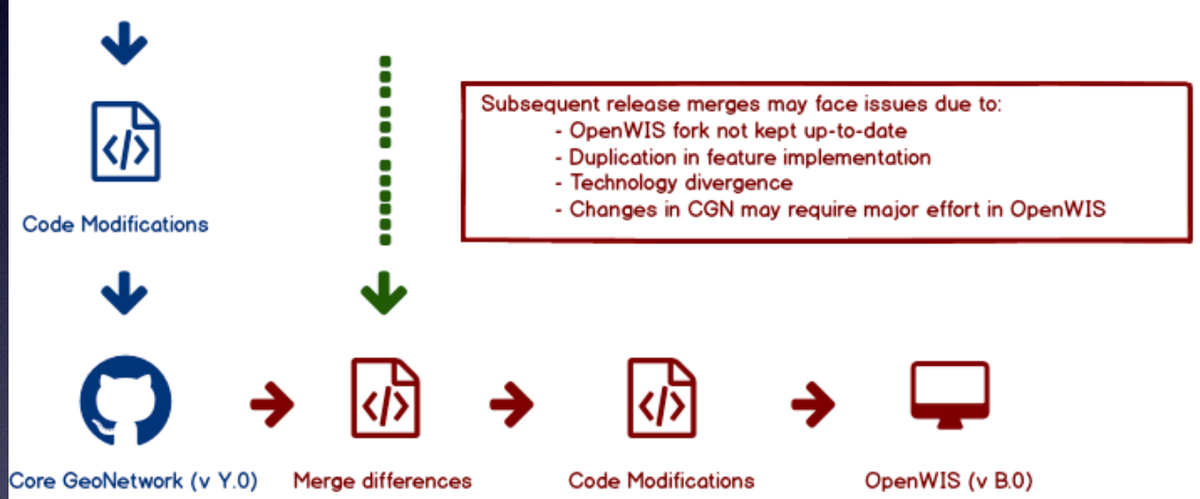
Difficult for derivate, independent work

Fork-based approach

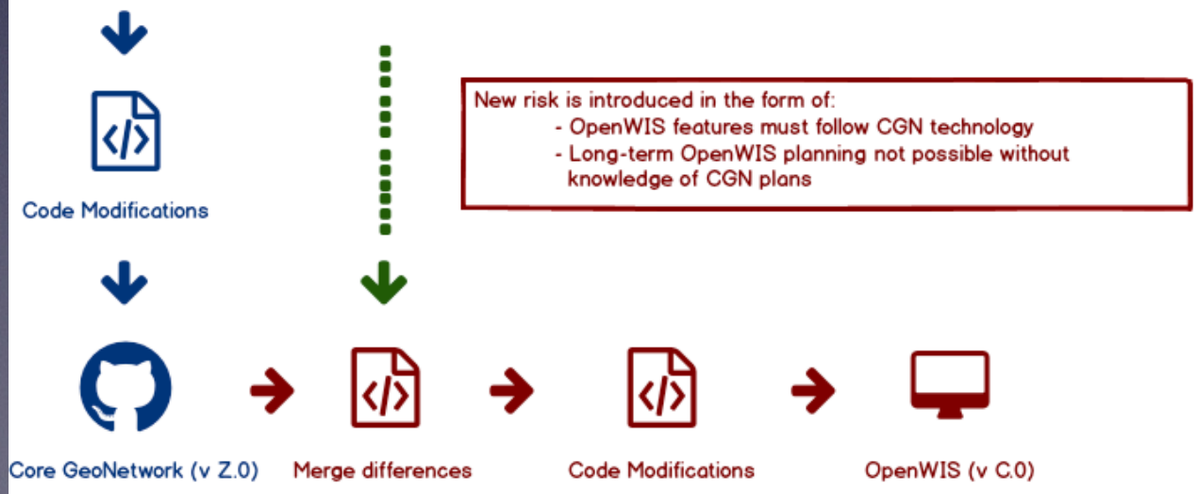
Fork-based development process

Initial release process works smoothly as it only contains modifications to an existing version/tag

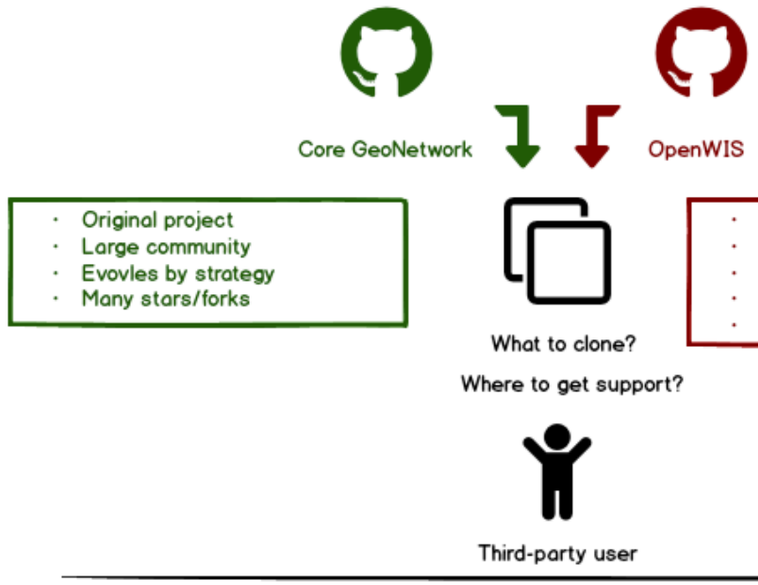
Subsequent release merges may face issues due to:
- OpenWIS fork not kept up-to-date
- Duplication in feature implementation
- Technology divergence
- Changes in CGN may require major effort in OpenWIS



New risk is introduced in the form of:
- OpenWIS features must follow CGN technology
- Long-term OpenWIS planning not possible without knowledge of CGN plans



Third-party usage



- Original project
- Large community
- Evovles by strategy
- Many stars/forks

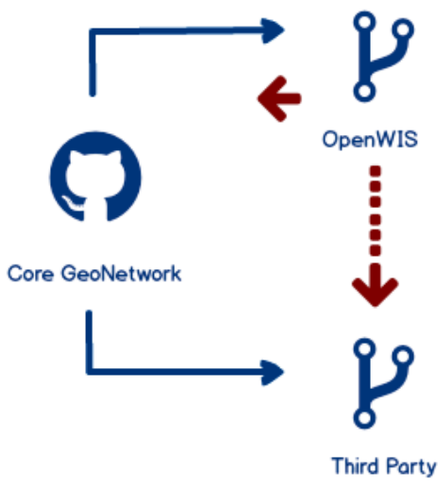
What to clone?

- Forked project
- Small community
- Evovles also by reaction to CGN
- Few stars/forks
- Becomes owner of CGN code

Where to get support?

Third-party user

Contributing to the community



CGN more difficult to accept PRs due to:
- OpenWIS may not be up-to-date at the PR point
- Conflict in feature implementation
- Technology divergence

Third parties not likely to adopt fetures due to:
- Forks gone separate ways
- Lack of "feature adoption" mechanism

Fork-based problems in practice

Let the facts talk....

Core Geonetwork

OpenWIS-CGN

20-10-2006: Fork created.
Zero differences with CGN.

02-04-2008: version 2.2.0
Commit difference: 116

OpenWIS-CGN 2.2.0

Now: Develop branch
Commit difference: 1392
Source file conflicts: 73

OpenWIS-CGN current

Core Geonetwork

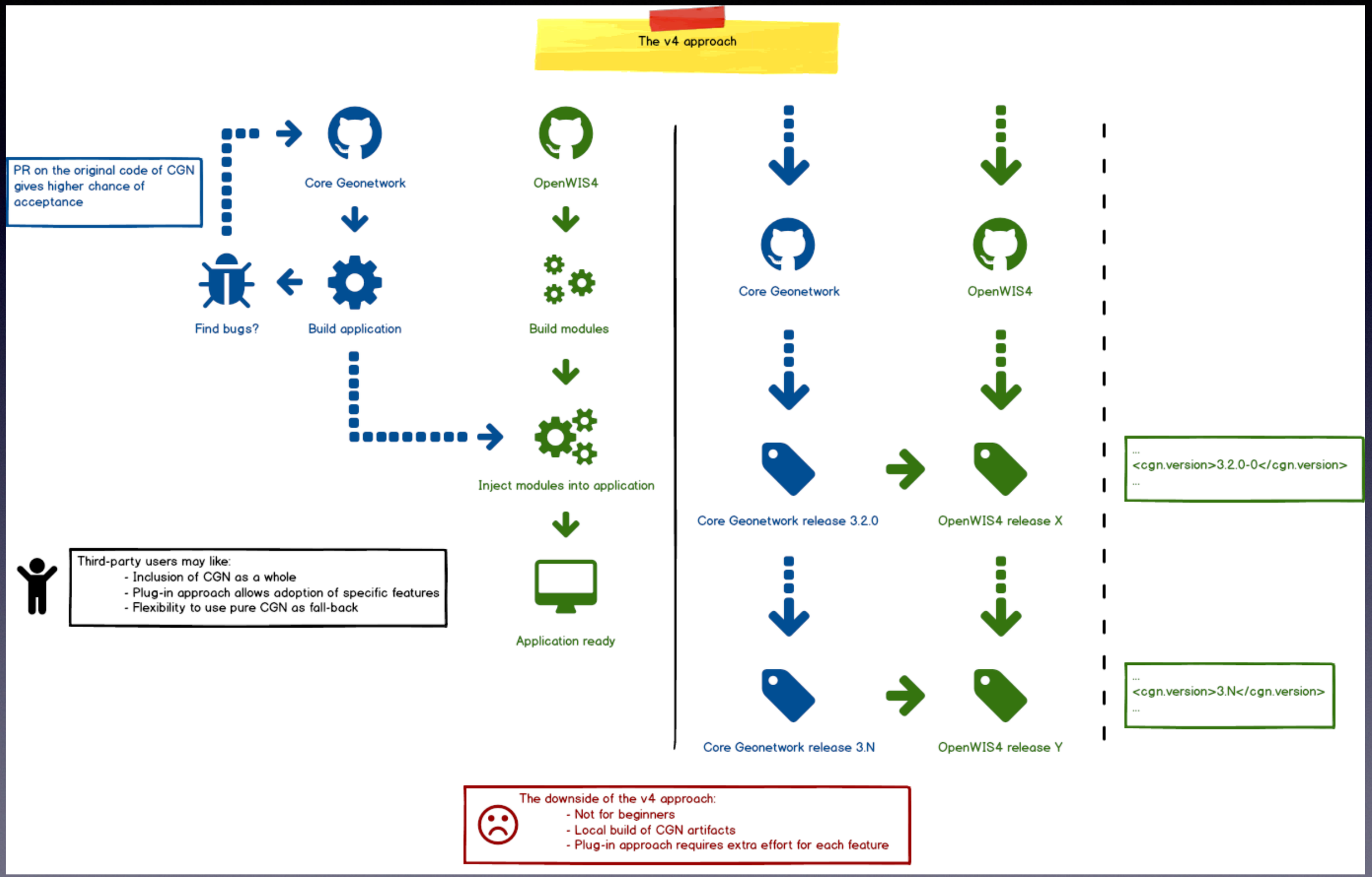
OpenWIS

Functionality duplication:
User group categories / Default category.
Same idea, same logic, differences in implementation.

Search result metadata download:
The file uploaded with the metadata is offerred for download.

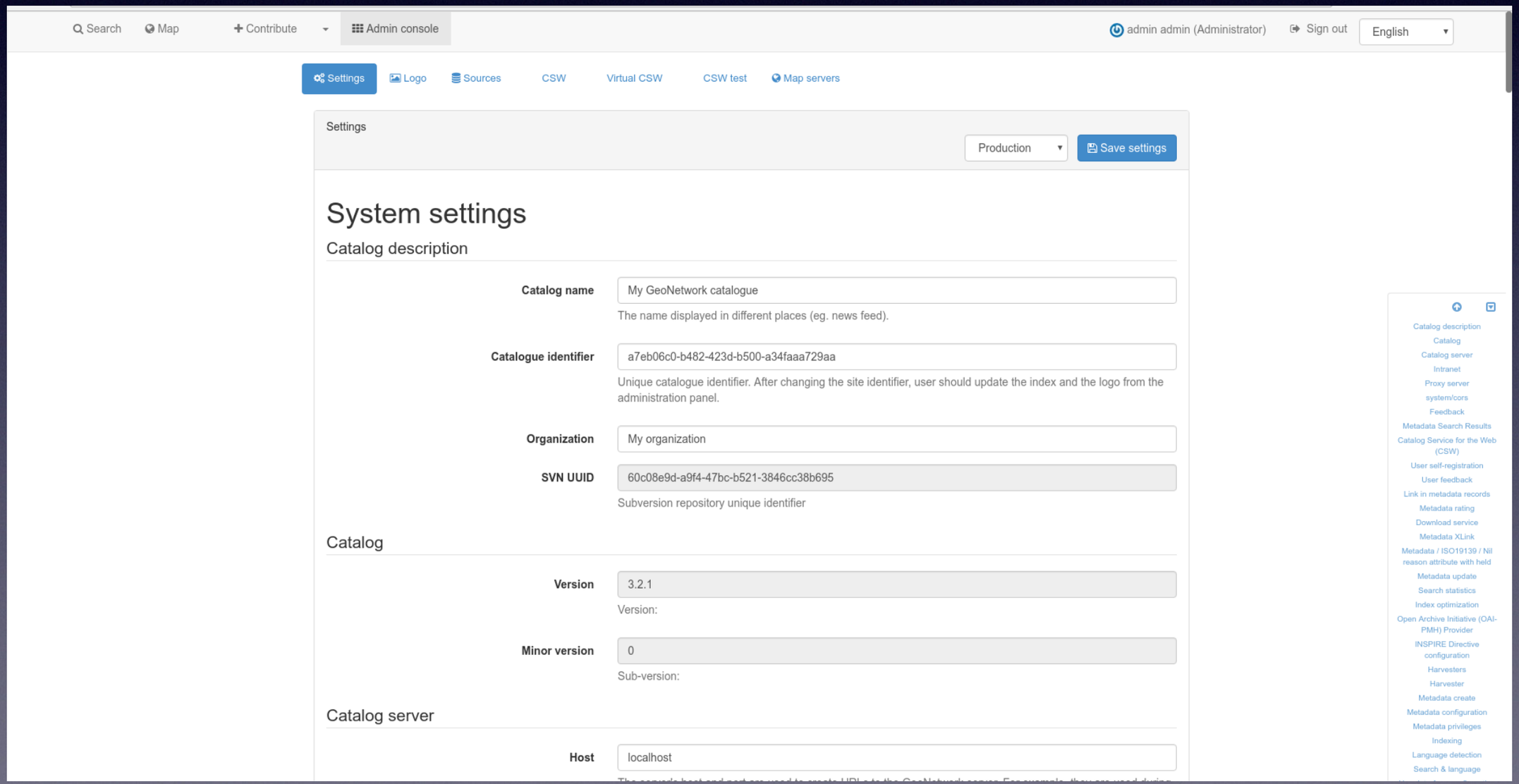
Search result metadata download:
Subscription-based mechanism.

An overlay-based approach



So, does it work?

Initial integration was with CGN 3.2.0
At 10-Feb 2017, CGN 3.2.1 was released



So, does it work?

Maven changes

```
<openwis.cgn.version>3.2.0-0</openwis.cgn.version>
```

=>

```
<openwis.cgn.version>3.2.1-0</openwis.cgn.version>
```

Additional changes

```
selectNoXLinkResolver(String, boolean)
```

=>

```
selectNoXLinkResolver(String, boolean, boolean)
```

Having OpenWIS based on CGN 3.2.1 actually took us...

...20 mins!