Status of the NOVA portal

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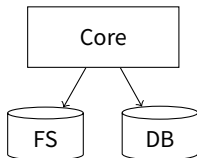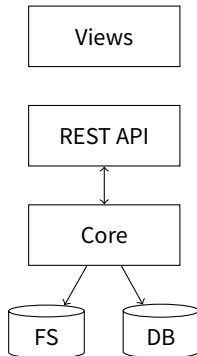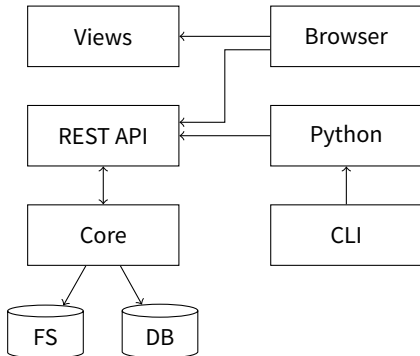
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Goals

From the proposal section 2.3

- Creating a data portal to find existing data sets and corresponding analyes
- Use interactive 3D previews from a visualization server built in WP 3
- Archiving of finished data sets
- Management of analysis systems
- Useful mapping of the full value chain[1]
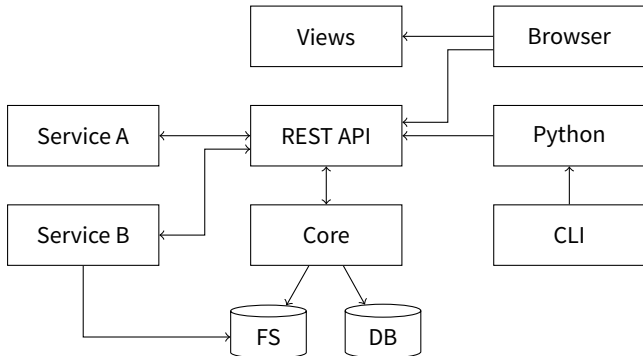- Definition of arbitrary metadata for different applications

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[1]Proposal, sample characterization, scan, reconstruction, segmentation, analysis and publication

Architecture

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Core

- Models datasets and stores metadata in a database
- Manages users, sessions, authentication and authorization
- If enabled manages file system access
- Kept minimal, domain-specific functionality is moved into services

REST API

Purpose

- Exposes functionality of the core as a well-defined interface
- Authenticates through revokable user tokens
- RESTful models, i.e. proper use of HTTP verbs

Examples

- `GET /api/datasets` lists datasets
- `POST /api/user/<name>/bookmarks` creates a new bookmark

HTML views

Purpose

- Is the main frontend to the site
- Uses speaking URLs, i.e. `/user/<name>` shows the user profile
- Uses VueJs and the REST API for dynamic aspects

Services

Purpose

- Provide additional functionality through different server instances
- Talk to the main core through the common REST API
- Act on behalf of the user through authorization token

Examples

- Prepare data for WAVE
- Additional reconstruction methods

Python and command line interface

Purpose

- Programmatic access to the portal
- Python module wraps calls to the REST API
- Command line tool uses Python module

Examples

- Automatic insertion of new dataset after scan
- External import scripts that used to be integrated directly

Status

Requirements

- ⊘ Creating a data portal to find existing data sets and corresponding analyes
- ○ Use interactive 3D previews from a visualization server built in WP 3
- ○ Archiving of finished data sets
- ⊘ Management of analysis systems
- ⊘ Useful mapping of the full value chain
- ○ Definition of arbitrary metadata for different applications

Next steps

- Integrate both simple and complex previews of 3D data sets
- Remove the old categorization scheme and replace with flexible tags
- Break up the collection scheme
- Set up a test case to record the scanning process with Concert
- Release a limited demo version to the public