

Integrating eLabFTW and NOMAD

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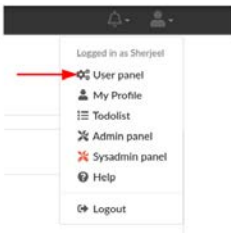
1. Transferring experiments

Some digital data is still better than no digital data

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Get experiment data from eLabFTW

- Login to eLabFTW
- Go to the user panel
- Click API keys
- Generate a read only API key



Then...

PREFERENCES ACCOUNT **TEMPLATES** **API KEYS** NOTIFICATIONS

```
In [2]: elabftw_api_key = input("Please paste your API key here: ")
Please paste your API key here: 0fe057c7f46967262456e144038ec6b0402d70360a7058edfc530a9531cf0b11044ae0c3ed9e13d8ef45

In [3]: experiment_url = input("Please enter the experiment url from the eLabFTW browser tab: ")
Please enter the experiment url from the eLabFTW browser tab: https://localhost/experiments.php?mode=view&id=1

In [4]: elabftw_url = experiment_url[0:experiment_url.index("/")]
experiment_id = experiment_url[experiment_url.find("id")+3:].strip("#")

In [6]: import requests
api_url = f"{elabftw_url}/api/v1/experiments/{experiment_id}"

import urllib3
urllib3.disable_warnings(urllib3.exceptions.InsecureRequestWarning)
resp = requests.get(api_url, headers={"Authorization":elabftw_api_key}, verify=False)
exp_data = resp.json()

Upload data to Nomad

In [7]: nomad_user = input("Please enter your Nomad username: ")
```

Live demo

2. Adding needed features to eLabFTW



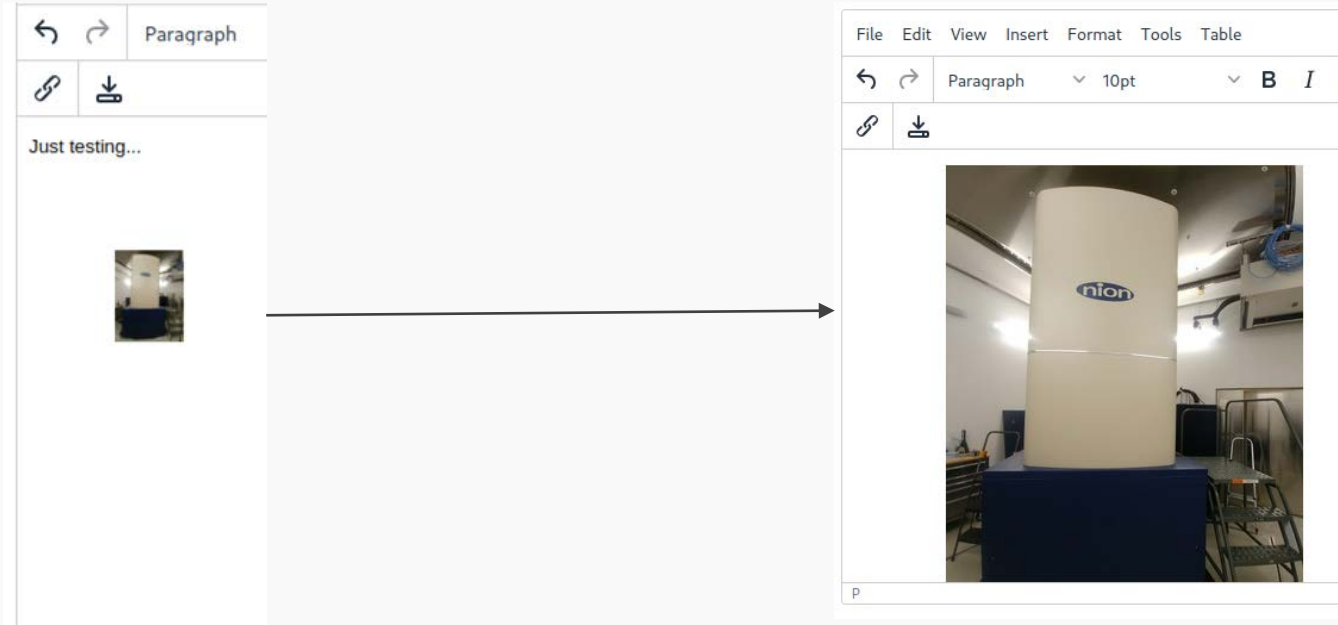
Drag and drop images
Structural data - JSON Editor
Spectra Viewer
Upload large dataset support
Launch Jupyter Notebooks/Tools

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Support in microscope acquisition software

Drag and drop images



Structural data - JSON Editor

☰ JSON Editor

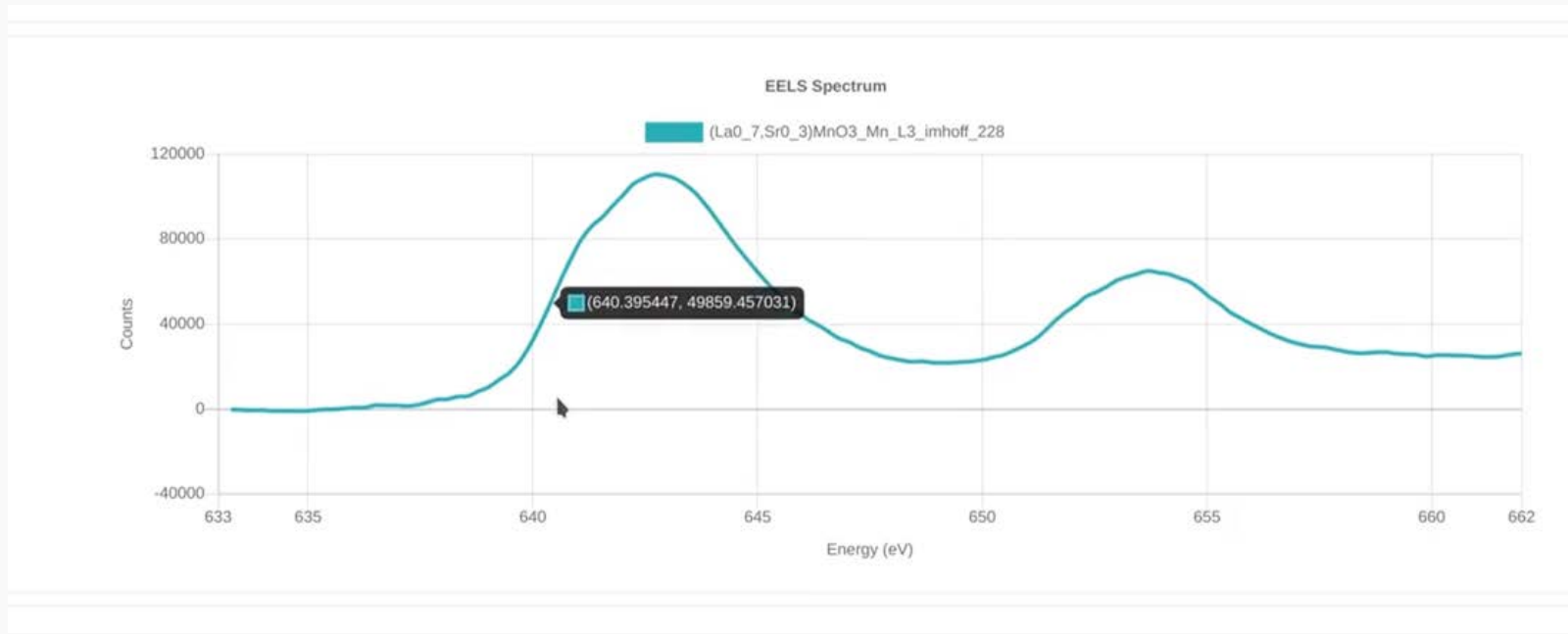
Filename: Spectrum-Image-Dectris-scan12.json

View ▾

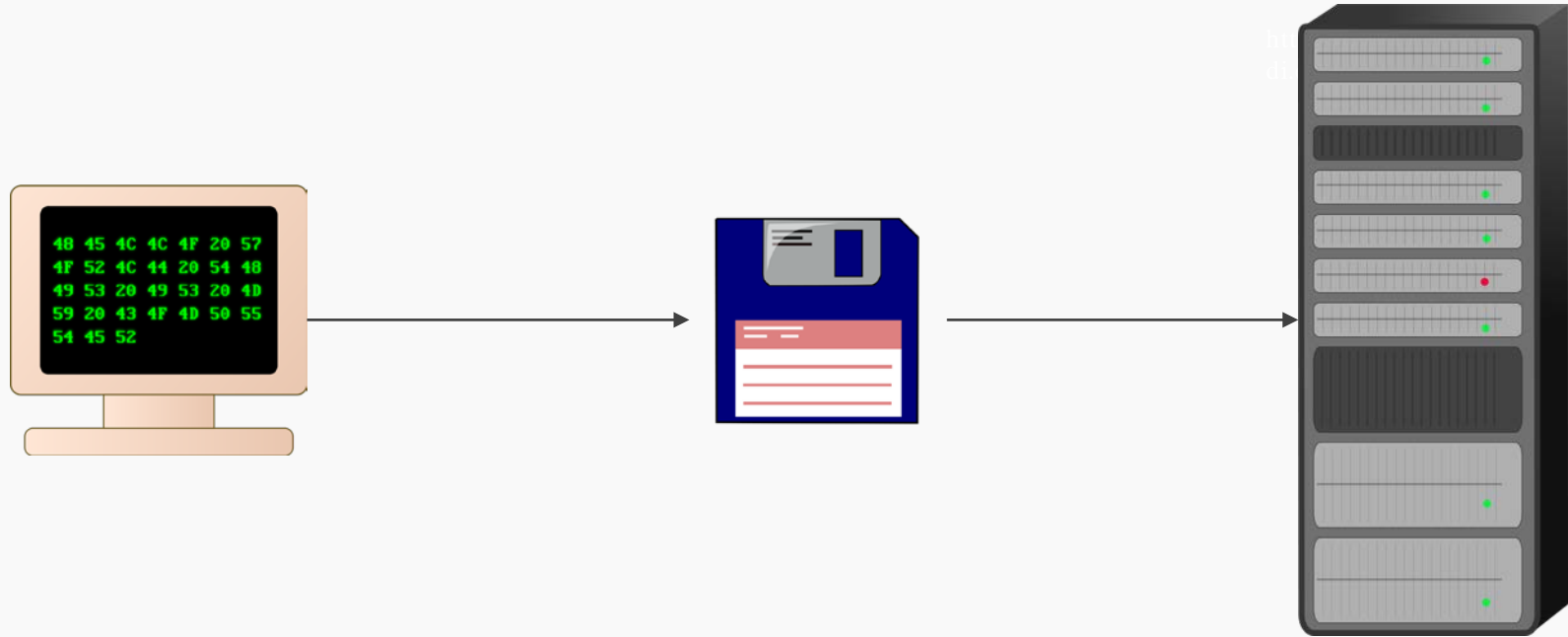
Select a node...

- ▼ object {14}
 - version : 1
 - reader_version : 1
 - large_format : true
 - ▶ spatial_calibrations [4]
 - ▶ intensity_calibration {3}
 - collection_dimension_count : 2
 - datum_dimension_count : 2
 - ▶ metadata {3}
 - ▶ properties {7}
 - title : Spectrum Image (Dectris) - scan12
 - source_file_path : null
 - ▶ datetime_modified {4}
 - ▶ datetime_original {4}
 - uuid : 5ffd79c2-0ad0-4747-8ff4-00361c7fb0a7

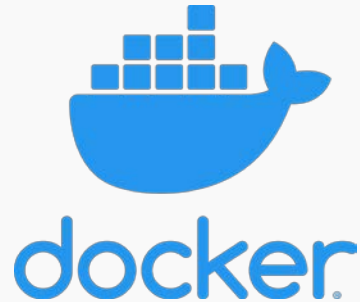
Spectra Viewer



Upload large datasets



Launch Jupyter Notebooks/Tools

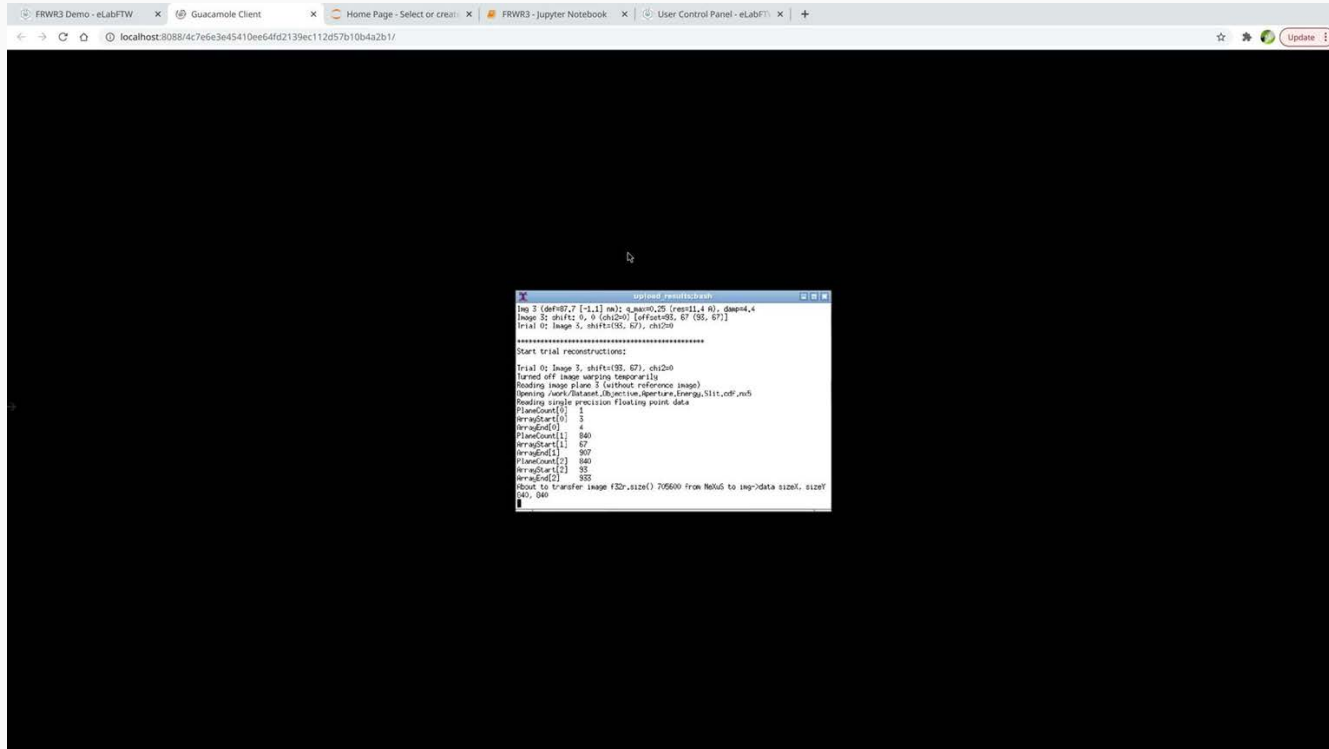


Video demo

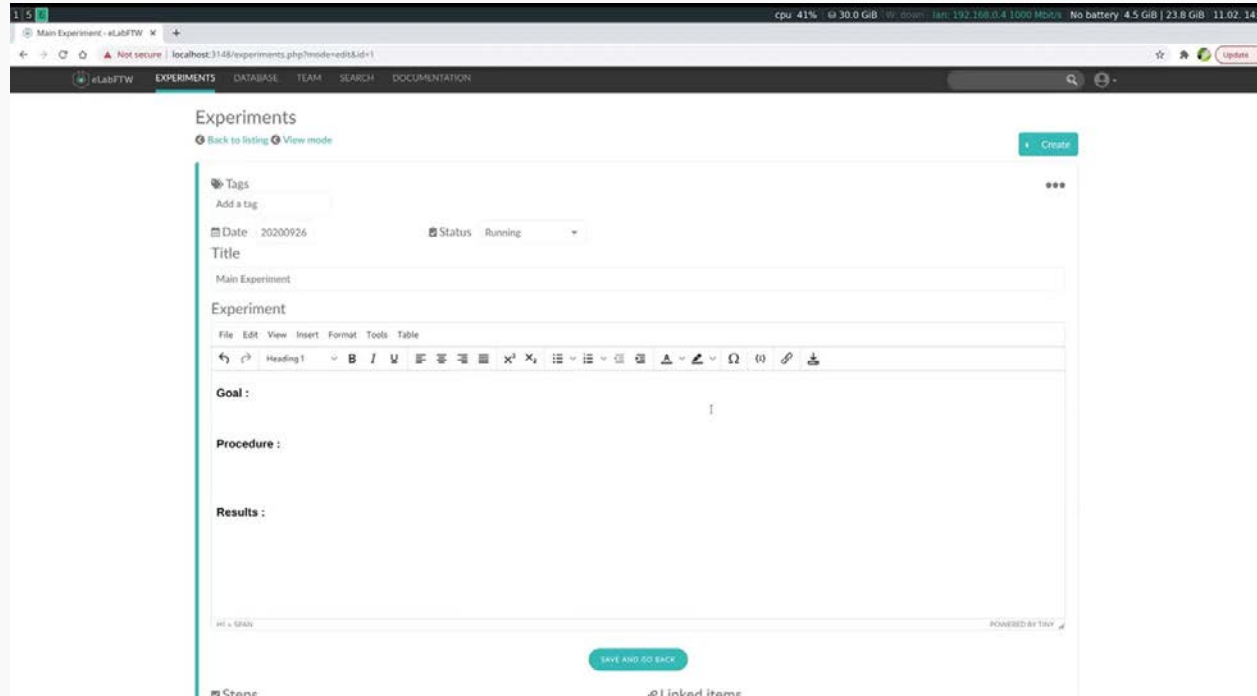


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Launch Jupyter Notebooks/Tools



Launch Jupyter Notebooks/Tools



The screenshot shows a web browser window displaying the 'Experiments' page in the eLabFTW application. The browser's address bar shows the URL 'localhost:3148/experiments.php?mode=edit&id=1'. The page has a dark navigation bar with 'eLABFTW' and 'EXPERIMENTS' highlighted. Below the navigation bar, the page title is 'Experiments' with links for 'Back to listing' and 'View mode', and a 'Create' button. The main content area includes a 'Tags' section with an 'Add a tag' input, a 'Date' field set to '20200926', and a 'Status' dropdown menu set to 'Running'. There are three text input fields for 'Title', 'Main Experiment', and 'Experiment'. Below these is a rich text editor with a menu bar (File, Edit, View, Insert, Format, Tools, Table) and a toolbar with various icons. The editor contains three sections: 'Goal:', 'Procedure:', and 'Results:'. At the bottom of the page, there is a 'SAVE AND GO BACK' button and a '1 linked items' indicator.

3. Design considerations

Flat file structure

Data is not supported by a schema

Technical Debt

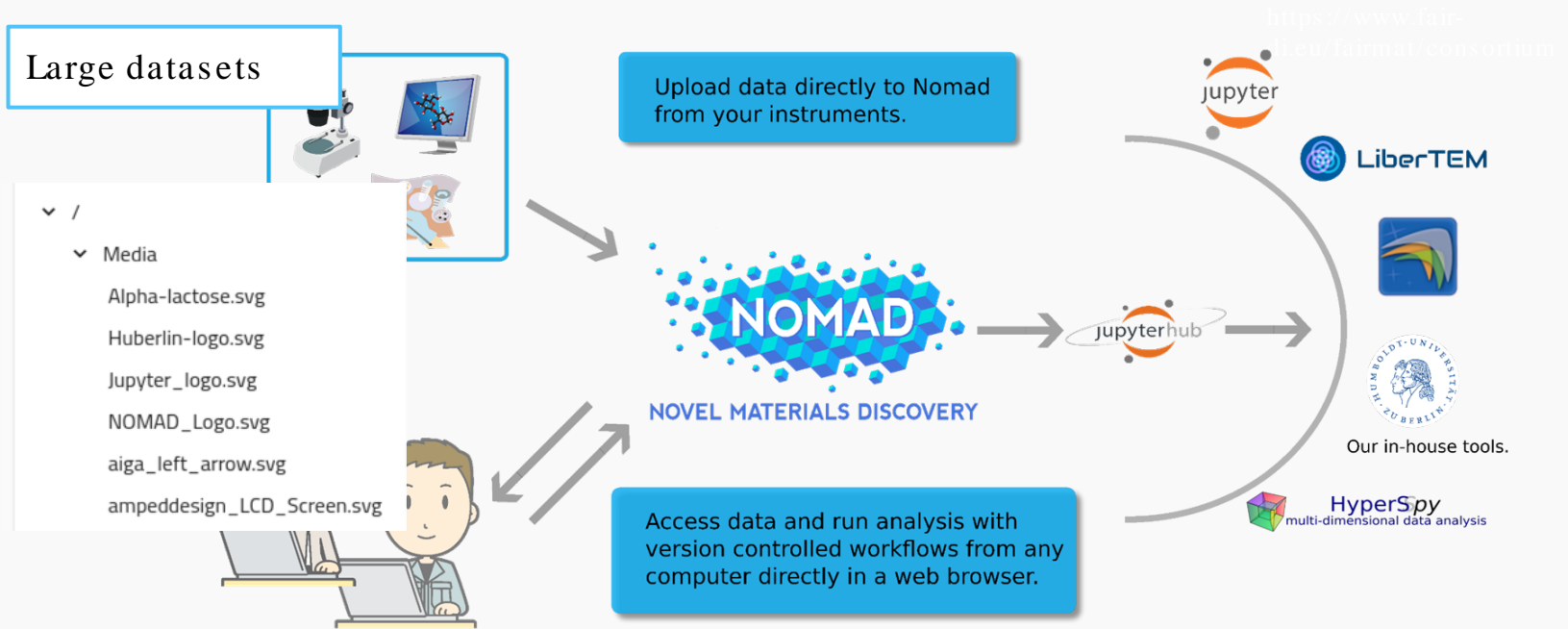
Handling large files

Team management granularity

No plugin support

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4. A workflow with Nomad



Thank you!