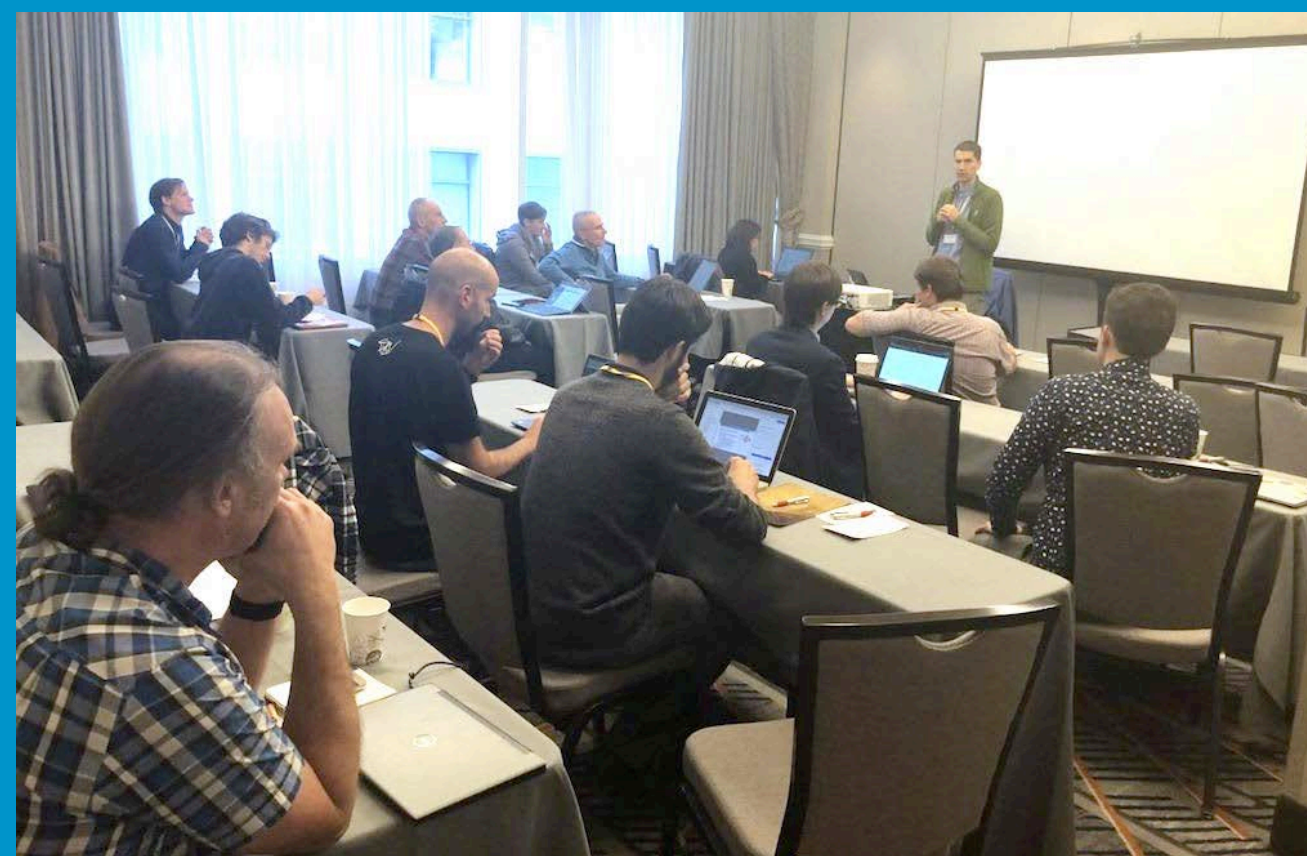




WP3 Search API Hackathon @ Elettra



Gareth Murphy



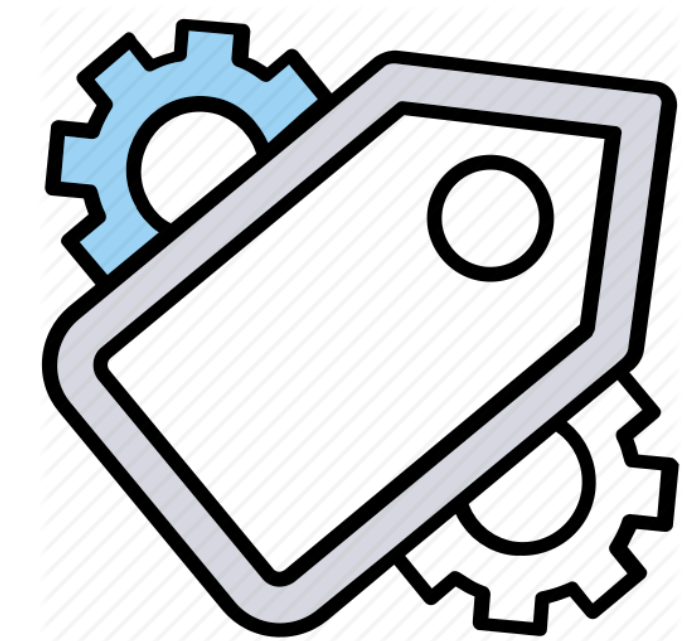
SciCat @garethcmurphy
@essneutron



Metadata in EOSC



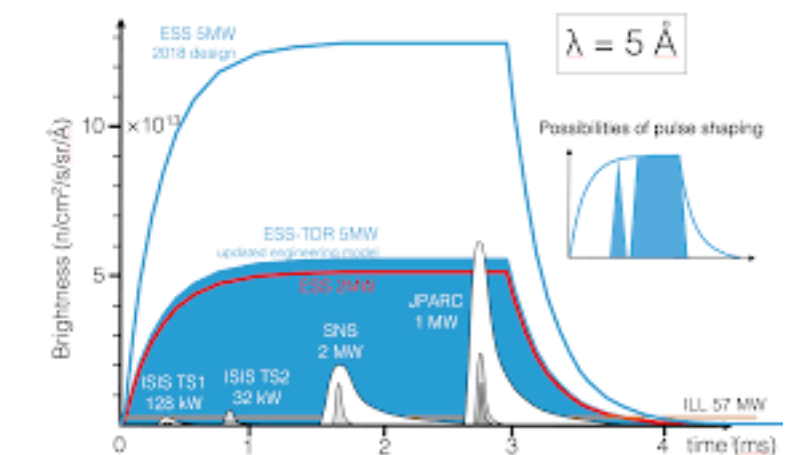
*“one of the more important steps will be the possibility to compare the data gathered in a current experiment, to those collected in previous ones, to acquire complementary information for a proper interpretation of the data. This can only be achieved by **proper metadata and properly labelled data**. It would then be possible to use the same settings in simulation, and directly compare the data collected, with those gathered before” - Aljosa Hafner, PaNOSC/CERIC*



<https://www.panosc.eu/news/interview-with-panosc-computational-physicist-aljosa-hafner-on-the-use-and-benefits-of-the-eosc/>

Hackathon Goals 🏆

- Add sample datasets for ESRF, CERIC, ILL, ESS, ELI and XFEL
- Set up test cases for common api

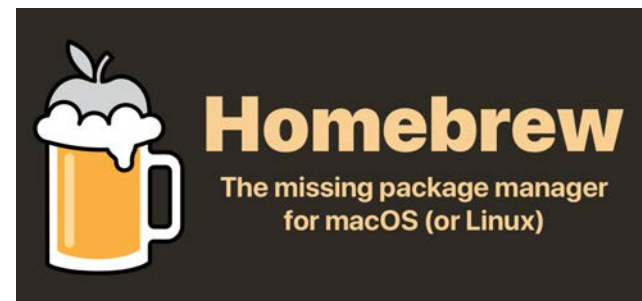


panosc
photon and neutron
open science cloud

 Wavelength	 Chemical Formula
 Start Date	 Sample Name
 Facility	 Scientific Technique
 Author	 Identifier

Install Node.js and Git

For Mac use brew, for Linux use apt or yum, for windows, can install with chocolatey



<https://brew.sh/>



<https://chocolatey.org>



```
brew install git node
```

```
choco install git.install
```

```
apt install nodejs git
```

Install search-api

```
git clone https://github.com/panosc-eu/search-api.git  
cd search-api  
npm install  
npm start
```



View explorer

- Go to
- <http://localhost:3000/explorer>
- Click DatasetController -> Get -> Try it Out
- Change limit to 10
- Click Execute



OpenAPI Explorer

LoopBack API Explorer

localhost:3000/explorer/#/DatasetController/DatasetController.find

Apps SWAP board - Agil... V20 Test Beamlin... SciCatProject/cat... Scicat @ ESS SciCat ESS develop [SciCat P... ESS Public Datas... PaNOSC WP4 Me... Other Bookmarks

LoopBack Application 1.0.0 OAS3

/openapi.json

Servers

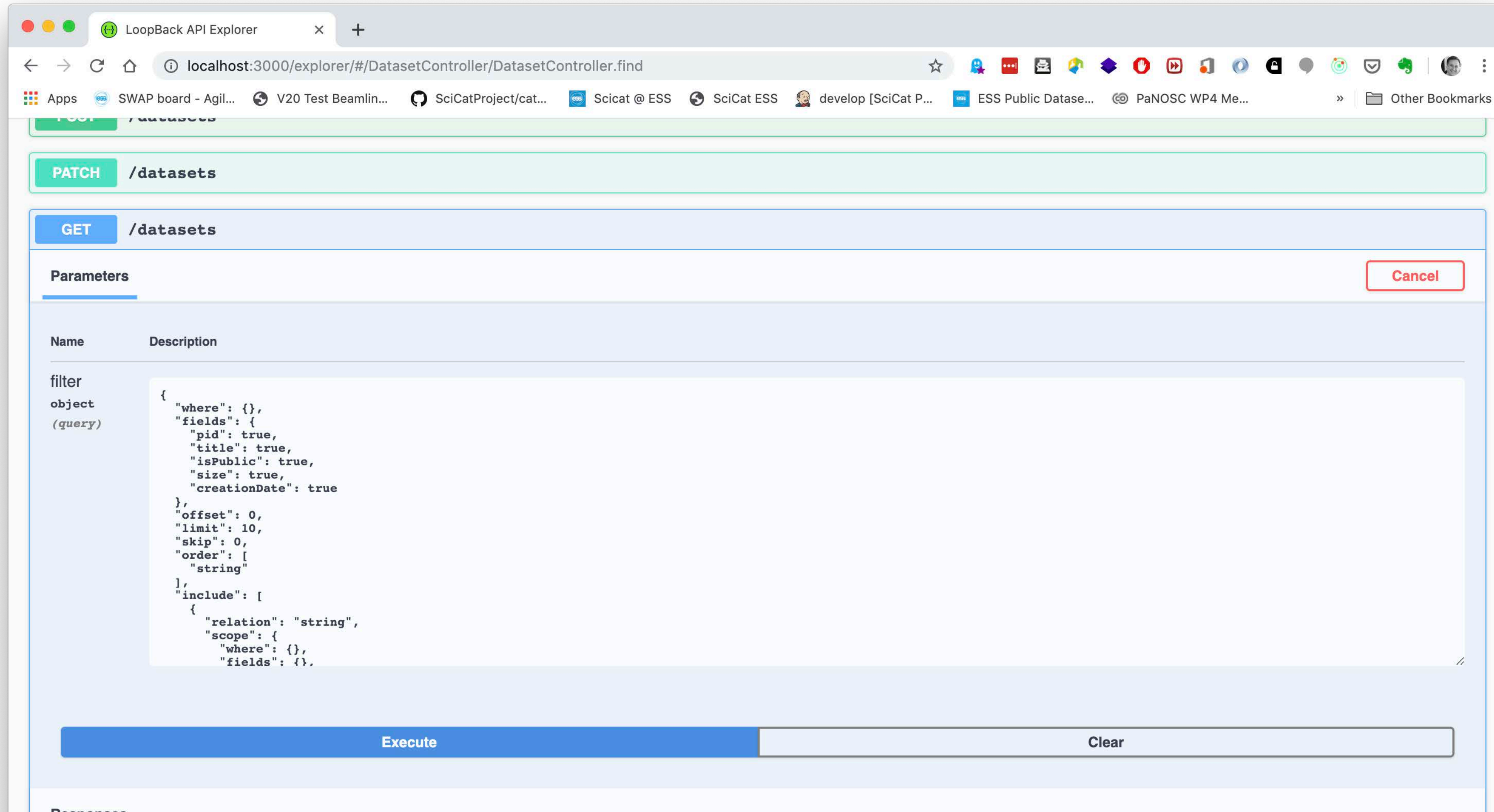
http://localhost:3000

Filter by tag

DatasetController

- GET /datasets/count
- GET /datasets/query
- PUT /datasets/{id}
- PATCH /datasets/{id}
- GET /datasets/{id}
- DELETE /datasets/{id}
- POST /datasets

Fetch the samples datasets using the GET api call

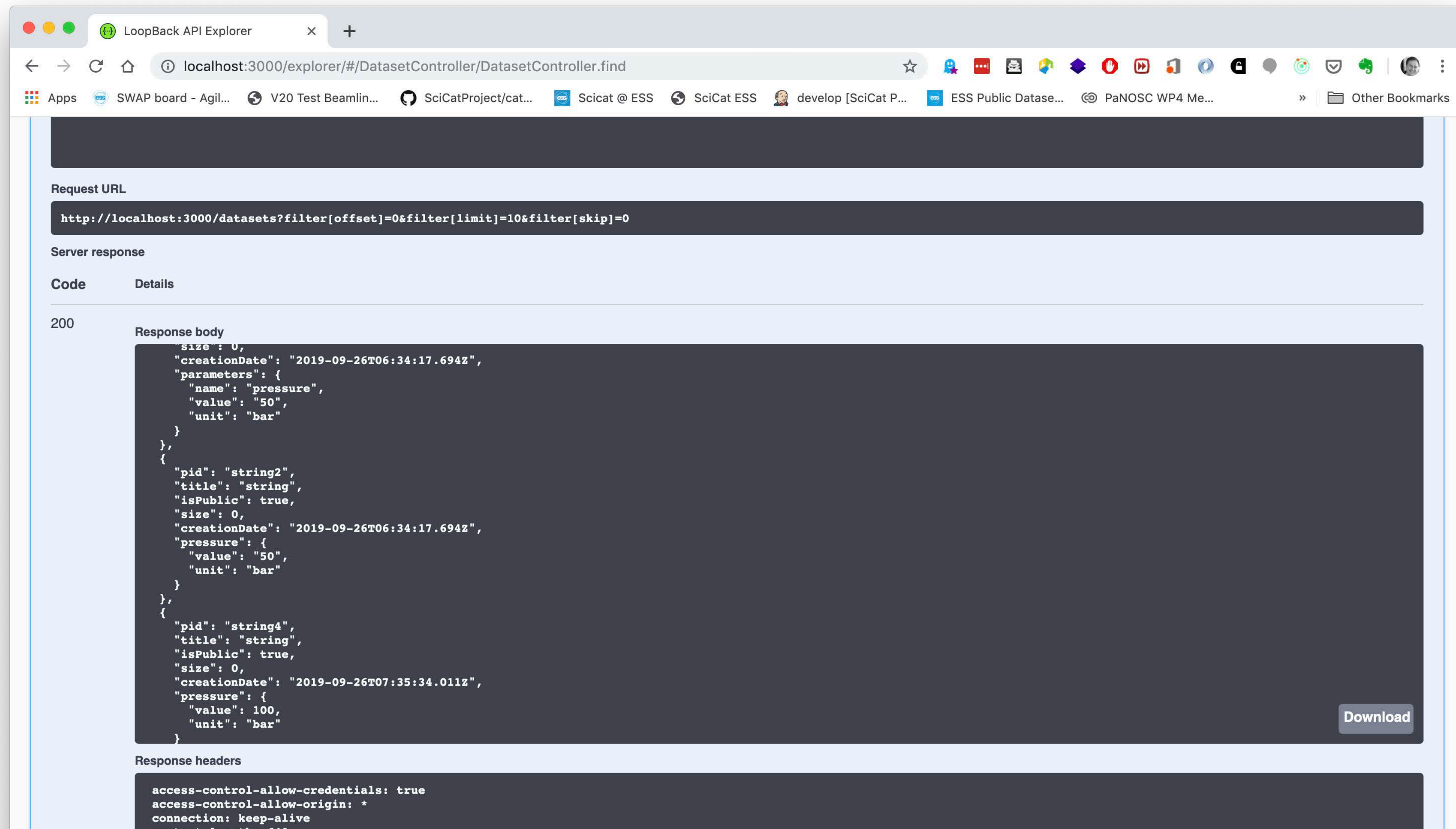


The screenshot shows the LoopBack API Explorer interface. The browser address bar displays `localhost:3000/explorer/#/DatasetController/DatasetController.find`. The interface highlights the `GET /datasets` endpoint. Under the `Parameters` tab, a filter query is defined:

Name	Description
filter object (query)	<pre>{ "where": {}, "fields": { "pid": true, "title": true, "isPublic": true, "size": true, "creationDate": true }, "offset": 0, "limit": 10, "skip": 0, "order": ["string"], "include": [{ "relation": "string", "scope": { "where": {}, "fields": {} } }]}</pre>

At the bottom of the interface, there are `Execute` and `Clear` buttons.

Change the limit from 0 to 10



LoopBack API Explorer

localhost:3000/explorer/#/DatasetController/DatasetController.find

Request URL

`http://localhost:3000/datasets?filter[offset]=0&filter[limit]=10&filter[skip]=0`

Server response

Code Details

200

Response body

```
{
  "size": 0,
  "creationDate": "2019-09-26T06:34:17.694Z",
  "parameters": {
    "name": "pressure",
    "value": "50",
    "unit": "bar"
  }
},
{
  "pid": "string2",
  "title": "string",
  "isPublic": true,
  "size": 0,
  "creationDate": "2019-09-26T06:34:17.694Z",
  "pressure": {
    "value": "50",
    "unit": "bar"
  }
},
{
  "pid": "string4",
  "title": "string",
  "isPublic": true,
  "size": 0,
  "creationDate": "2019-09-26T07:35:34.011Z",
  "pressure": {
    "value": 100,
    "unit": "bar"
  }
}
```

Download

Response headers

```
access-control-allow-credentials: true
access-control-allow-origin: *
connection: keep-alive
```

Query dataset using e.g. cURL

```
#!/usr/bin/env bash  
curl -g -X GET "http://localhost:3000/datasets?filter[where]  
[pressure.value][gt]=50&filter[limit]=10&filter[skip]=0" -H "accept:  
application/json"
```


Add a dataset with GUI

LoopBack API Explorer

localhost:3000/explorer/#/DatasetController/DatasetController.create

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PATCH /datasets/{id}

GET /datasets/{id}

DELETE /datasets/{id}

POST /datasets

Parameters Cancel

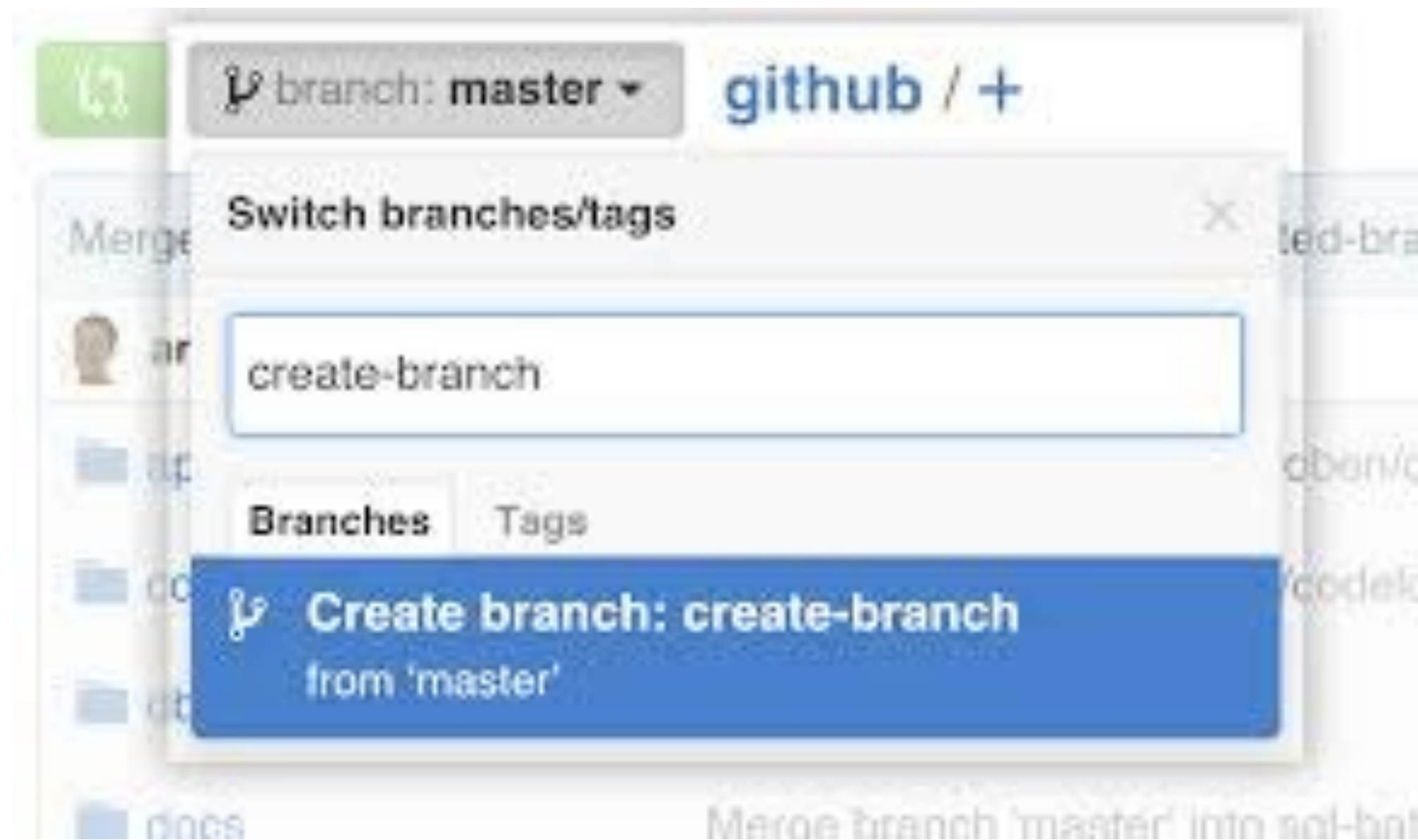
No parameters

Request body application/json

```
{  "pid": "string",  "title": "string",  "isPublic": true,  "size": 0,  "creationDate": "2019-10-27T07:44:00.605Z"}
```

Execute Clear

Make a new branch in GitHub repository



Add a unit test

```
it('retrieves datasets with water and pressure above 100', async () => {
  find.resolves(aListOfDatasets);
  const details = await controller.find({
    where:
    {and:
      [
        {'pressure.value': {gt: 100}},
        {sample: 'water'}
      ]},
    });
  console.log(details);
  expect(details).to.eql(aListOfDatasets);
  sinon.assert.called(find);
});
```

Goals:

1. Add data to PaNOSC search-api
2. Query data in search-api
3. Implement PaNOSC use cases as unit tests

