Deploying the AMI[1] ecosystem in a docker environment

CNRS IN2P3 Les deux infinis
CERN

LPSC GRENOBLE | MODANE

ATLAS Metadata Interface (AMI) is a generic ecosystem for metadata aggregation, transformation and cataloging, benefiting from more than 20 years of feedback in the LHC context. AMI provides to ATLAS physicists the official tool to select datasets by criteria.

AMI stack with docker

More info...

- AMI Web Framework — End-user Web interfaces
- AMI lightweight clients — Python, JS, Java, C++
- AMI Web services — Core lib. + REST & proprietary APIs
- AMI task server — Metadata aggregation
- AMI exclusion server — Task synchronisation
- AMI pipeline — Task pipeline graphical design — Node-RED
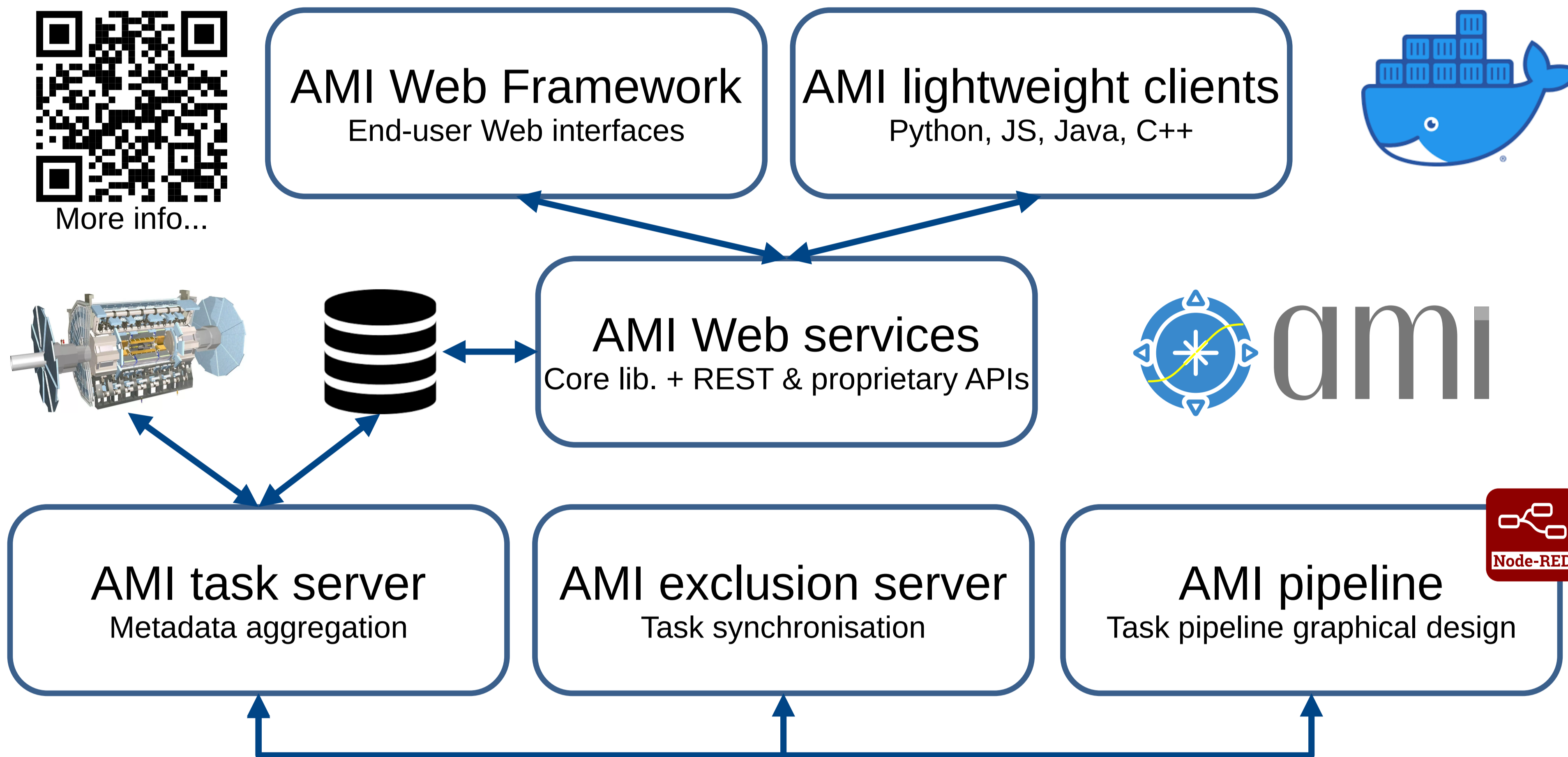
AMI features

→ **Powerful selection of scientific data by metadata criteria**:
  - ✓ Ready-to-use Web applications
  - ✓ Pluggable to any existing datasources
  - ✓ Distributed task servers to populate metadata catalogs

→ **Designed for Big Data context**:
  - ✓ Easy deployment and scaling with Docker / Kubernetes

→ **Easy administration / configuration**:
  - ✓ Dedicated Web interfaces

Running a demo

```
$ docker compose version
$ git clone https://github.com/ami-team/AMIDemo.git
$ cd AMIDemo
$ docker compose up
```
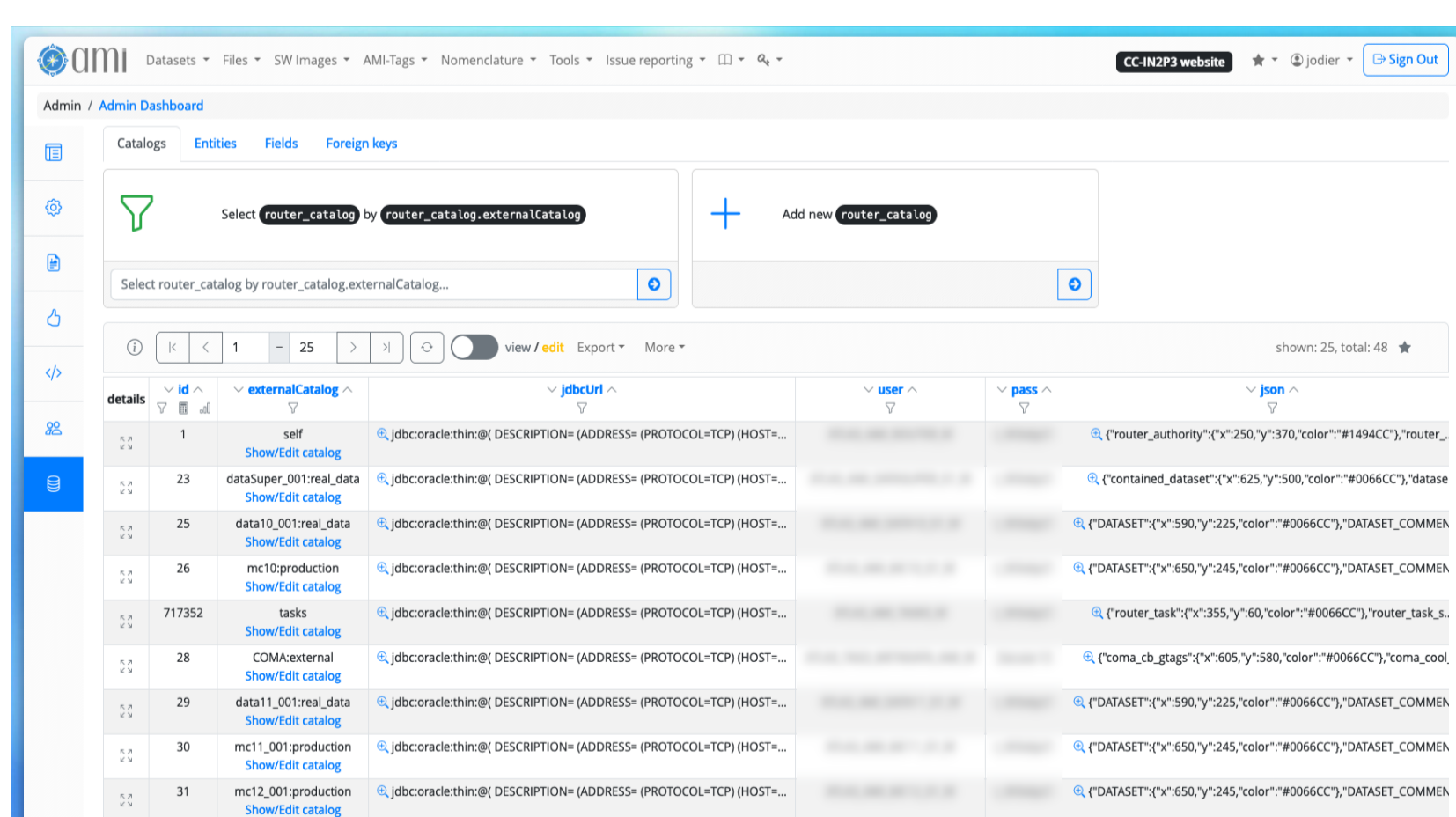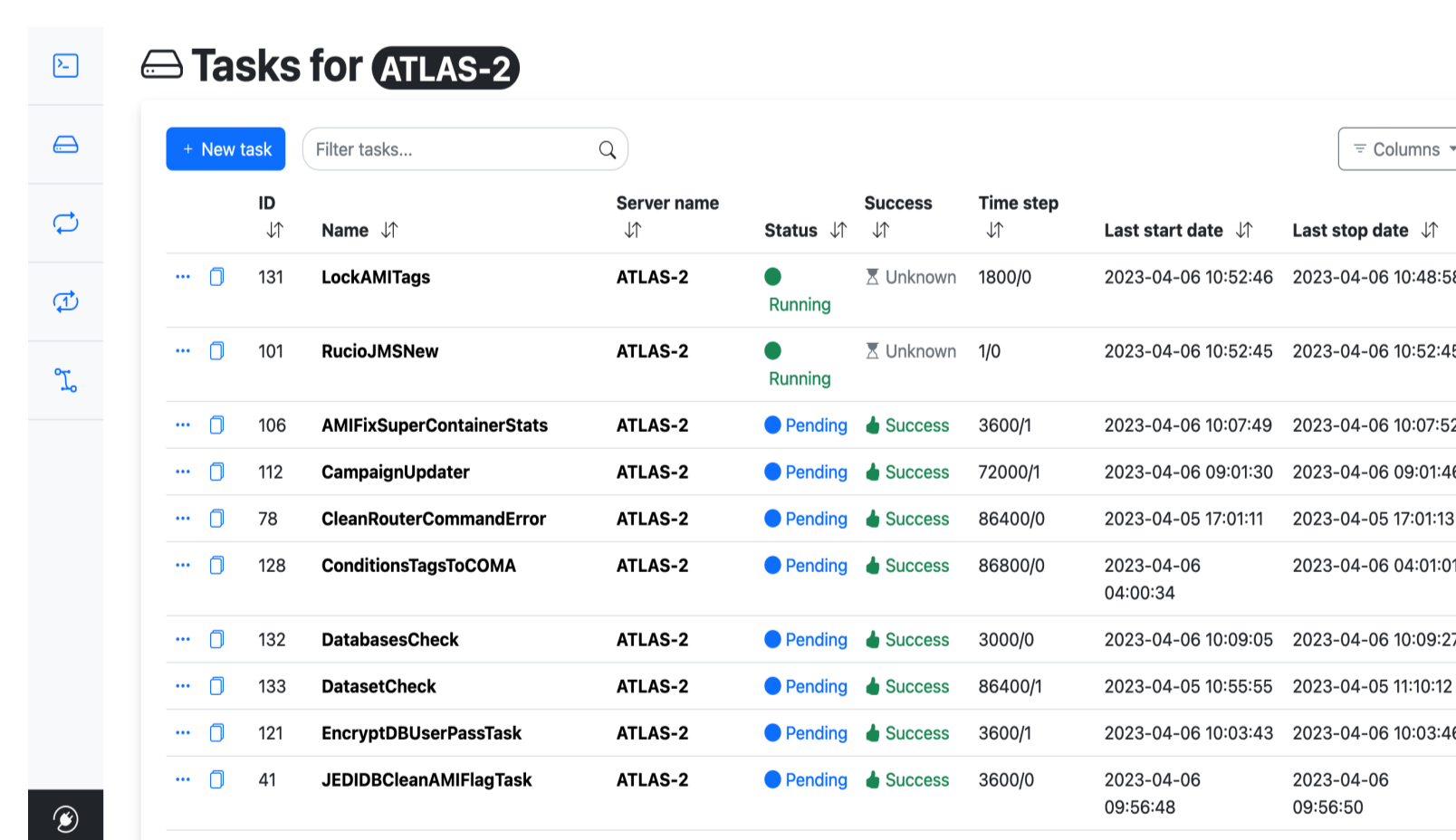
Try it, it's easy!

Endpoints

→ Metadata interfaces: http://localhost:667/
  (username: admin, password demo)

→ Pipeline interfaces: http://localhost:664/

→ phpMyAdmin interfaces: http://localhost:661/
  (username: root, password root)
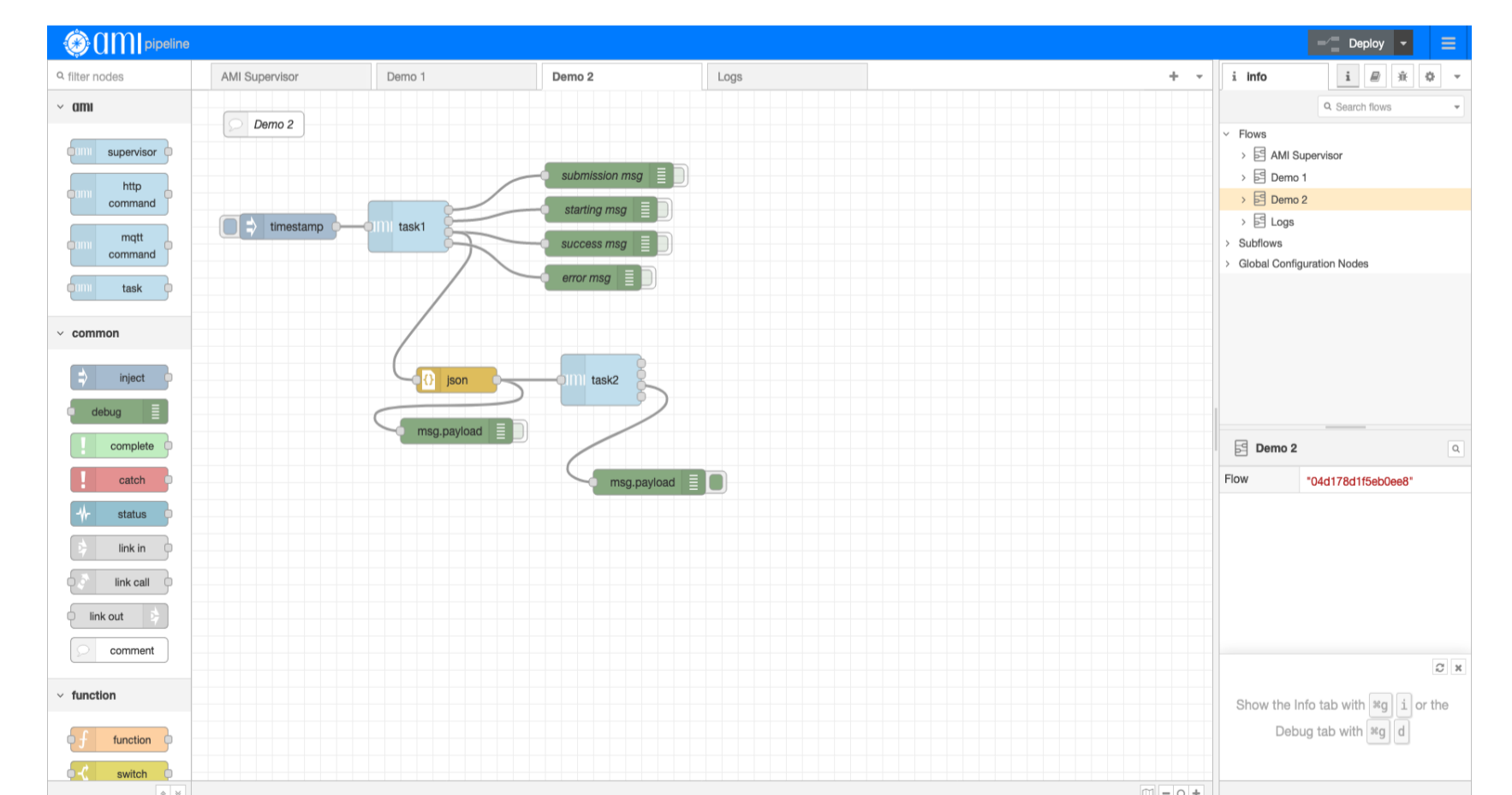
Get started: aggregating

Registering a catalog

Defining aggregation tasks

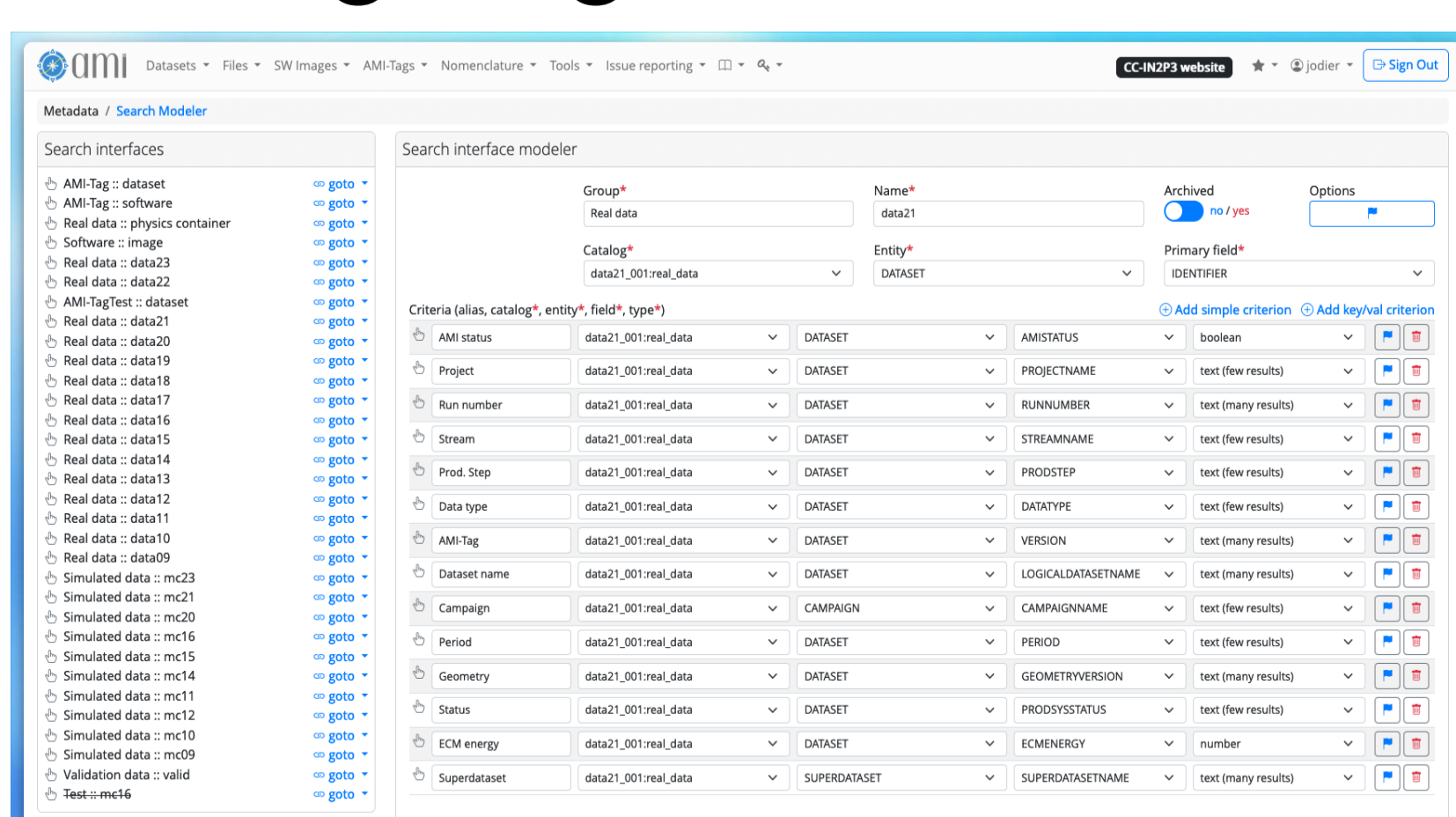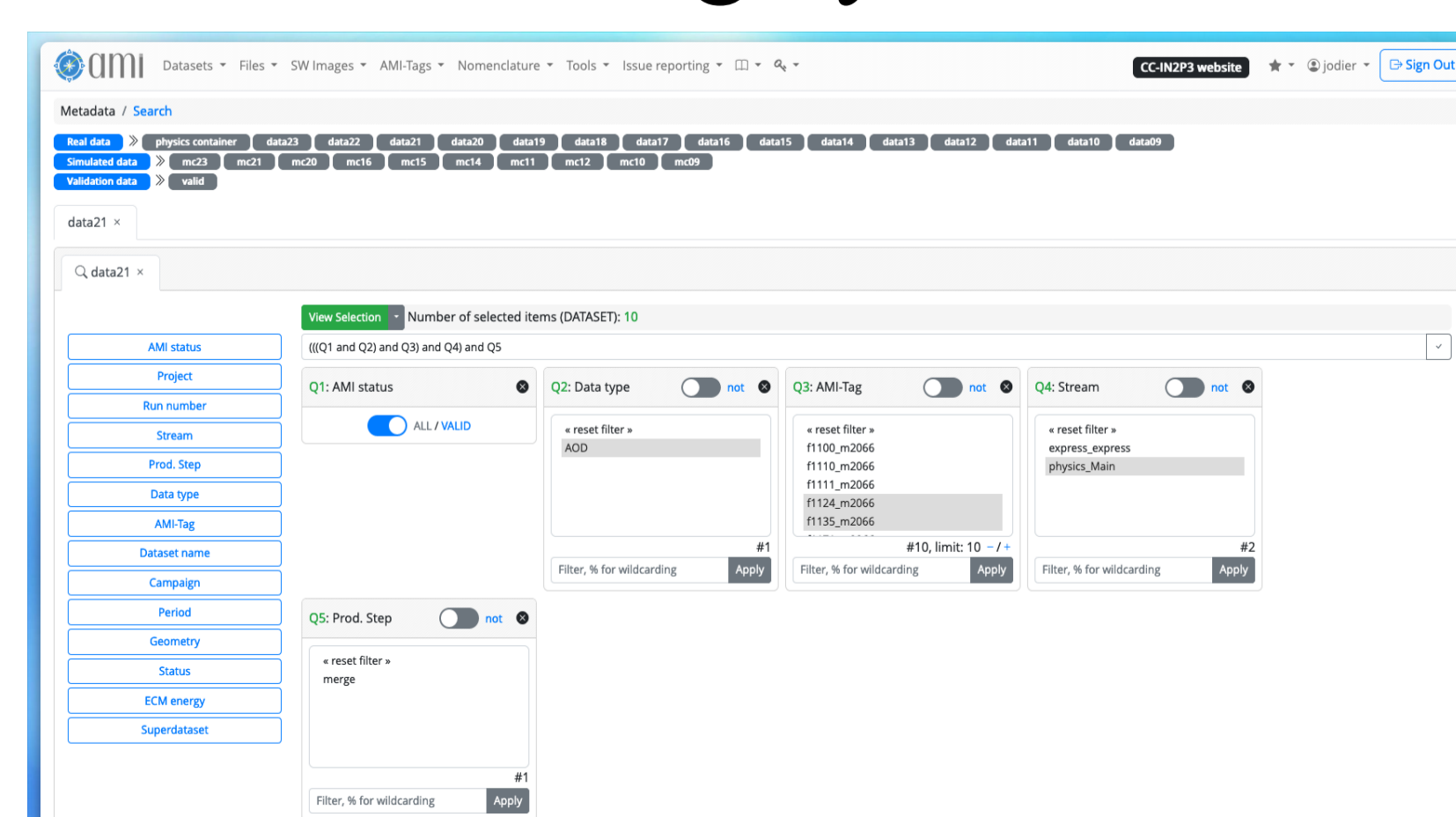

Defining task pipelines

Get started: visualizing

Configuring search interfaces

Searching by criteria

Viewing the result

F Lambert, J Odier, J Fulachier, P-A Delsart (LPSC – Grenoble), on behalf of the ATLAS Computing Activity.
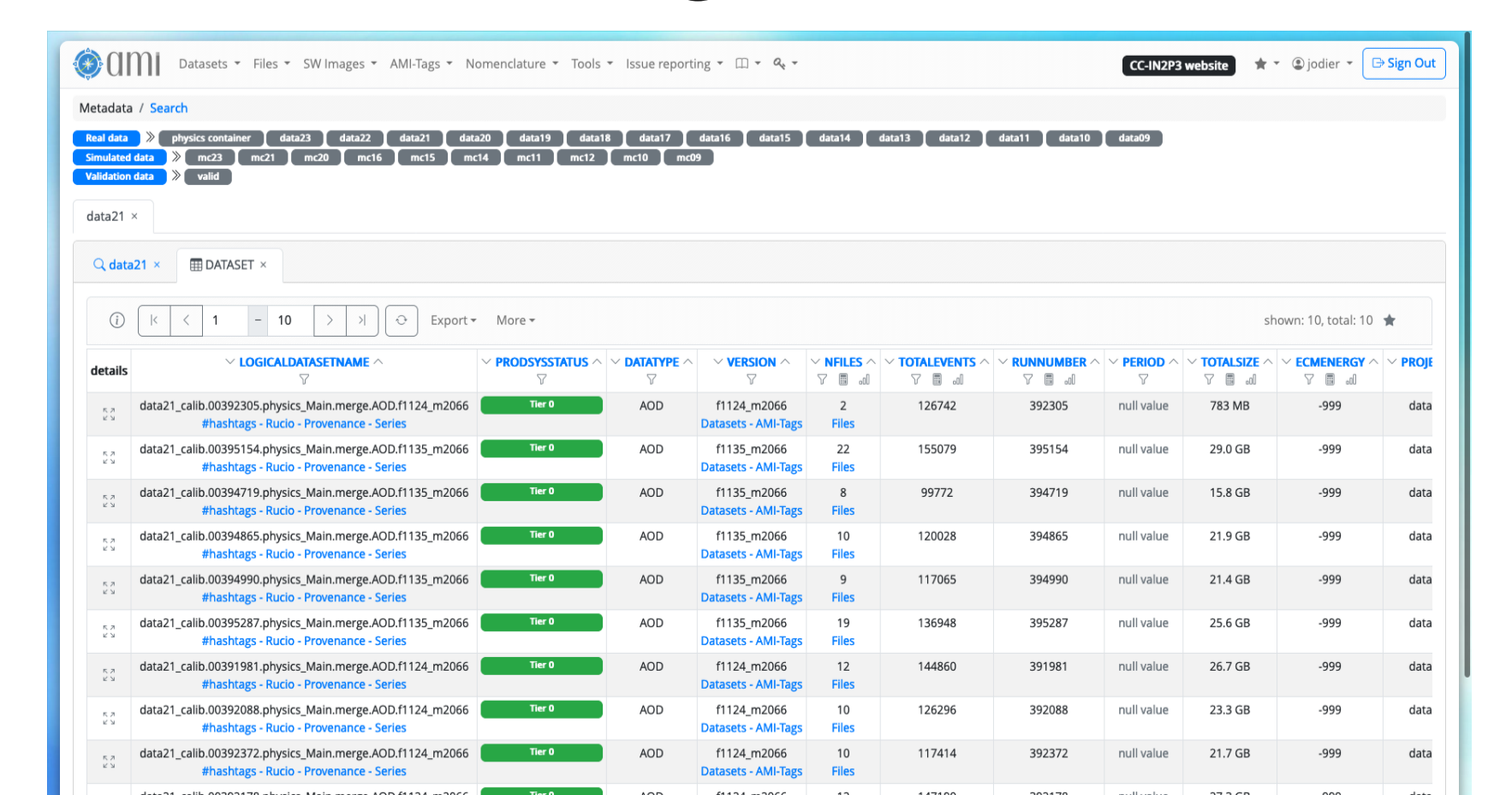
Refs.: [1] Jérôme Odier, Fabian Lambert and Jérôme Fulachier. The ATLAS Metadata Interface (AMI) 2.0 metadata ecosystem: new design principles and features. J. Phys.: Conf. Ser., vol. 214, year 2019. https://doi.org/10.1051/epjconf/201921405046

ATLAS EXPERIMENT