



Data Analysis, Reprocessing and Storage Status

Jérémie Dudouet

on behalf of the **AGATA Data processing working group**

Institut de Physique des deux infinis de Lyon (**IP2I**)

26th AGATA Week, HIL Warsaw

Team goals

- Support on data processing:
 - ➡ Organization of workshops dedicated to data analysis
 - The last one at Lyon in January 2025
 - No new workshop planned, should we organize one ?
 - ➡ Software updates and support
 - ➡ Providing documentation
- Support on data transfer management:
 - ➡ tools and documentation to manage data transfers on the grid

Software

- Migration from **IPNL_GAMMA** to **IP2IGAMMA**:
 - ➡ Since 2017, the default GitLab repository for AGATA software was on IPNL_GAMMA
 - ➡ Since 2021, the new GitLab repository for AGATA V2 software has been on IP2IGAMMA
 - ➡ **Since last week, IP2IGAMMA is the default repository, IPNL_GAMMA is deprecated**
- **IP2IGAMMA** integrates all new developments
 - ➡ Actors dedicated to v2 electronics (REDIS integration)
 - ➡ ADF v2
 - ➡ DAEMule emulator
 - ➡ AGASpy v2
 - ➡ STDPro (Scanning Table Data Processing)
- Available in the AGATA handbook: <https://agata.pages.in2p3.fr/handbook>

AGATA data storage on the grid

It all started with an email from CNAF support in March 2026

Dear all,

we are contacting you because we have found a **million folders being created on AGATA tape storage at CNAF**, in a **very complicated and nested structure**, in the sense that the **number of files is comparable with the number of folders**.

This structure creates **huge inefficiencies in tape management** and already forced us to stop their automatic processing.

For instance, in `/storage/gpfs_archive/agata/agata-cnaf/AGATAD_P2_EXP_007` are **31650 files and 23937 folders**.

Could you please review this structure and re-organize the files removing as many folders as possible?

Kind regards,

Carmelo

At the time, I had no idea what I was getting myself into...

AGATA data storage on the grid

Storage had grown organically, without a common AGATA policy

Campaign-by-campaign practices

- Each experiment kept its original directory structure
- Naming conventions varied between campaigns and facilities
- CNAF and CCIN2P3 transfers were managed independently
- Metadata remained mostly in filenames, folders and logbooks

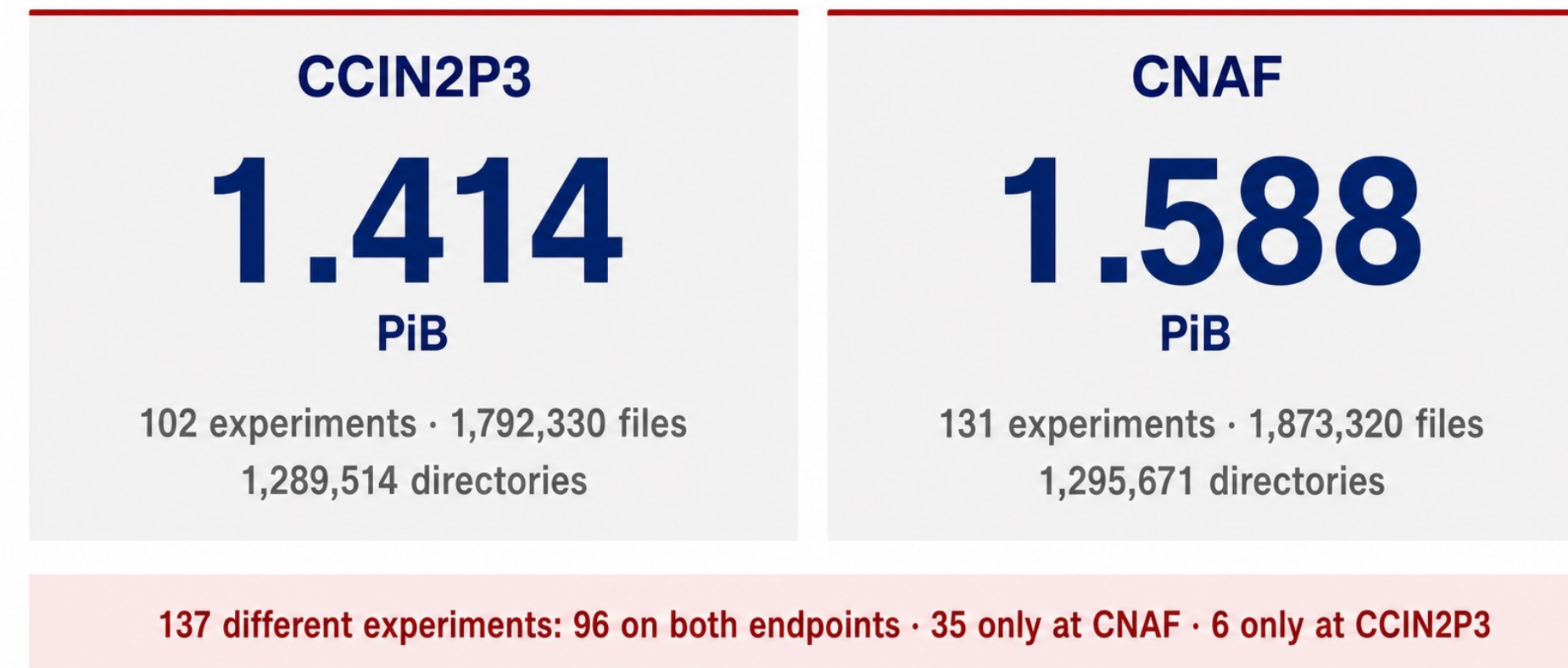
A fragmented archive

- Deep directory trees and very large numbers of small files
- Experiments stored on only one endpoint
- Different content for the same experiment across endpoints
- No continuously maintained global inventory
- No verification of replication or completeness

The two endpoints looked like complete replicas — but they were not.

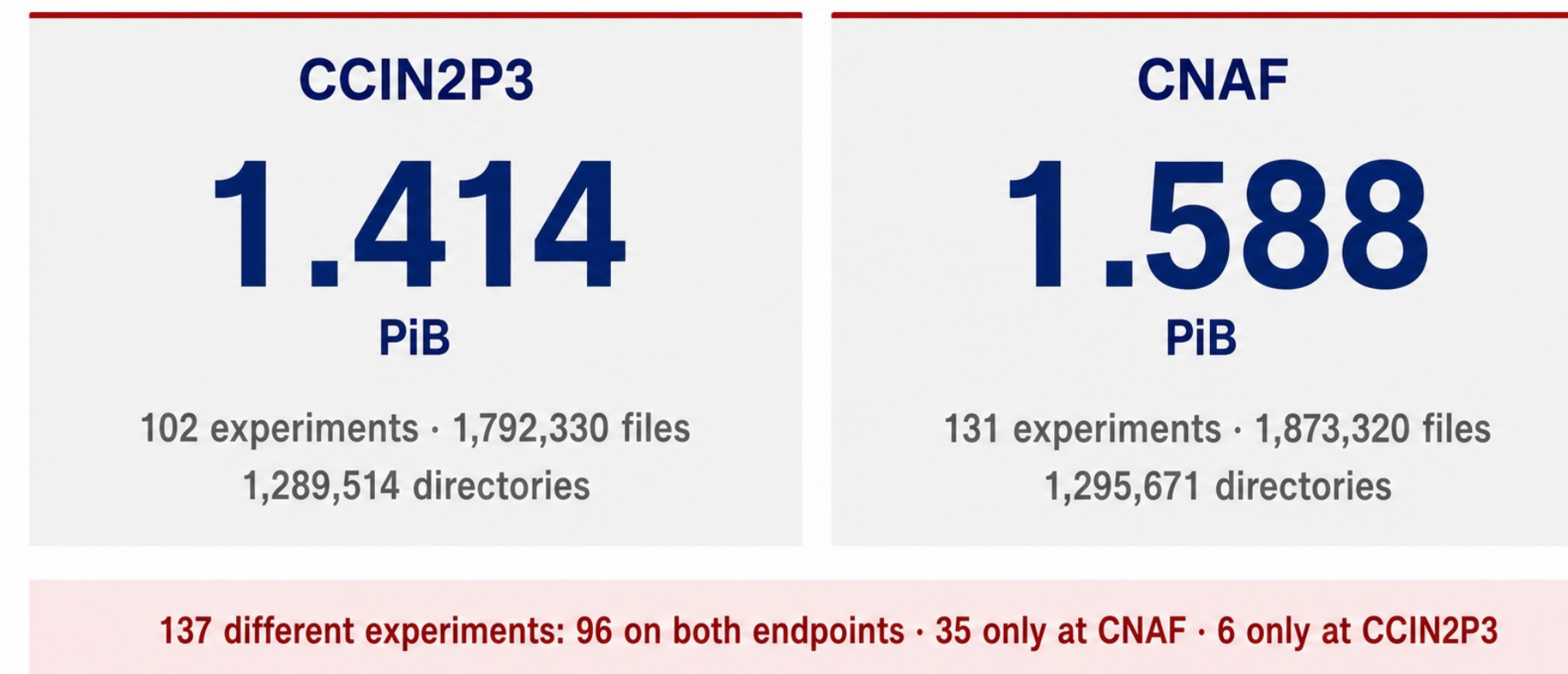
AGATA data storage on the grid

Initial inventory of the two storage endpoints

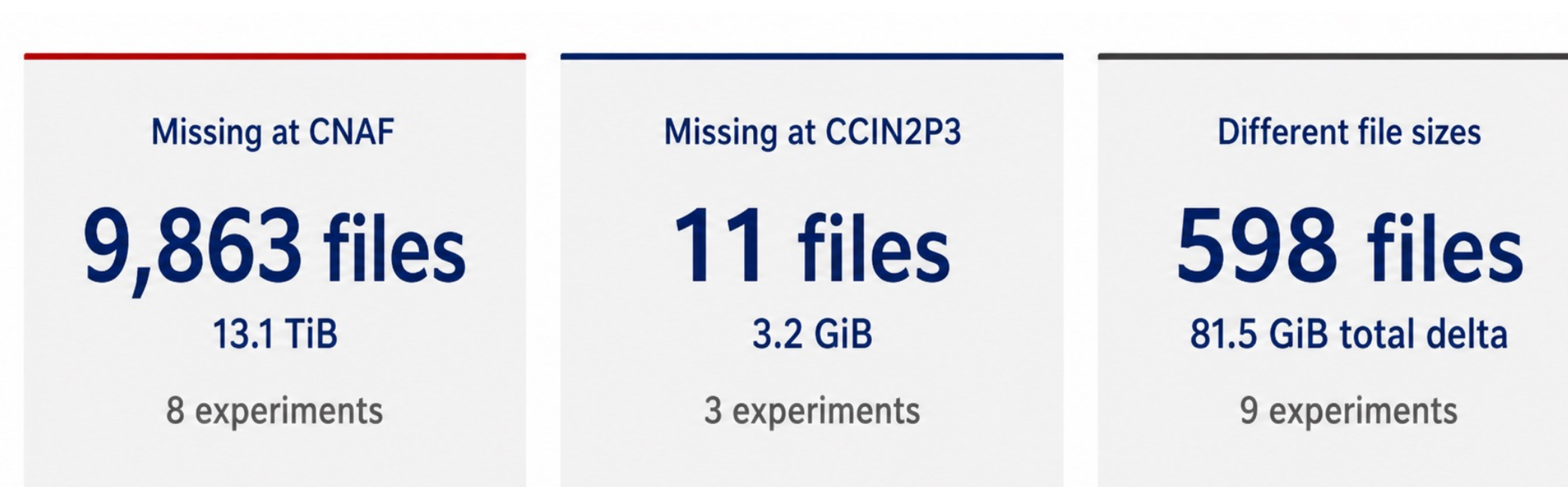


AGATA data storage on the grid

Initial inventory of the two storage endpoints

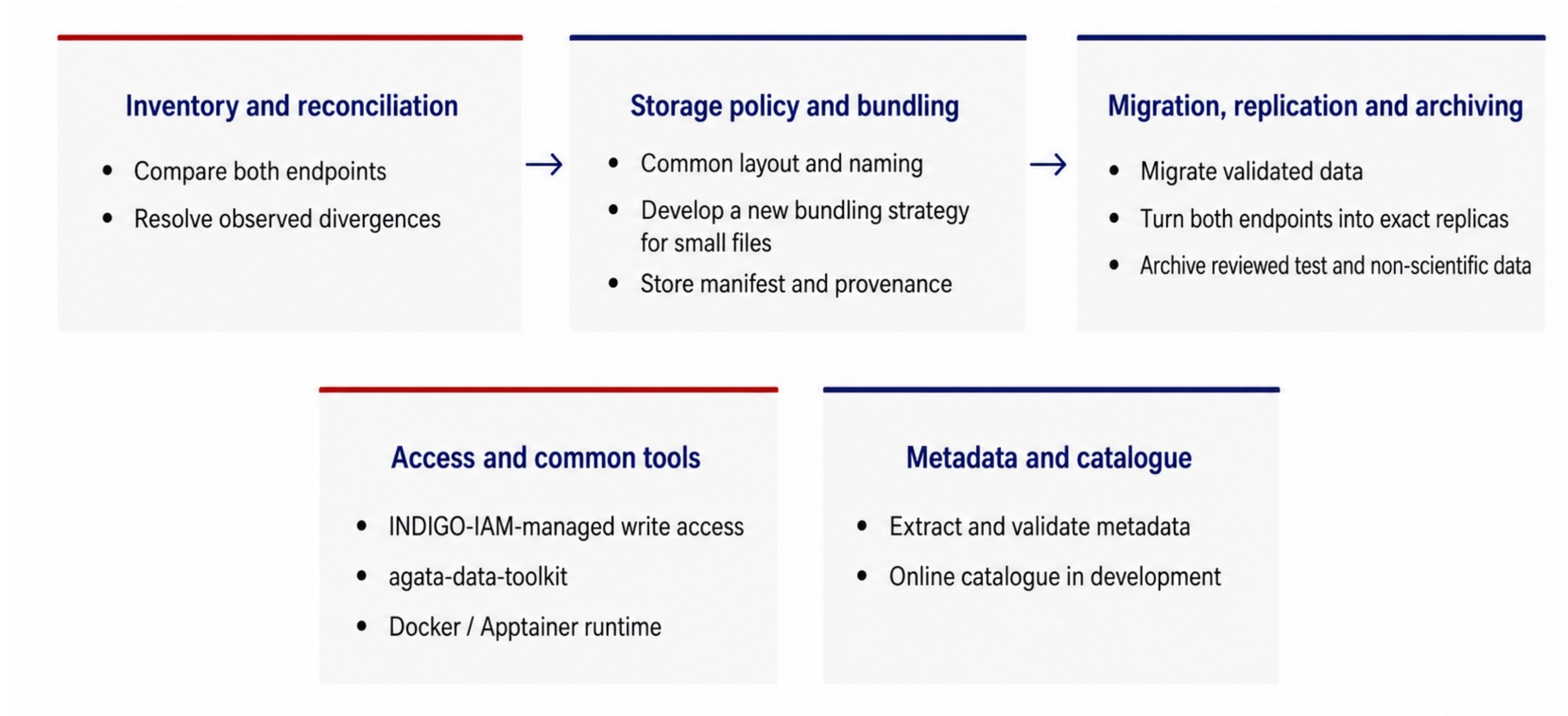


But two endpoints do not guarantee identical copies.



AGATA data storage on the grid

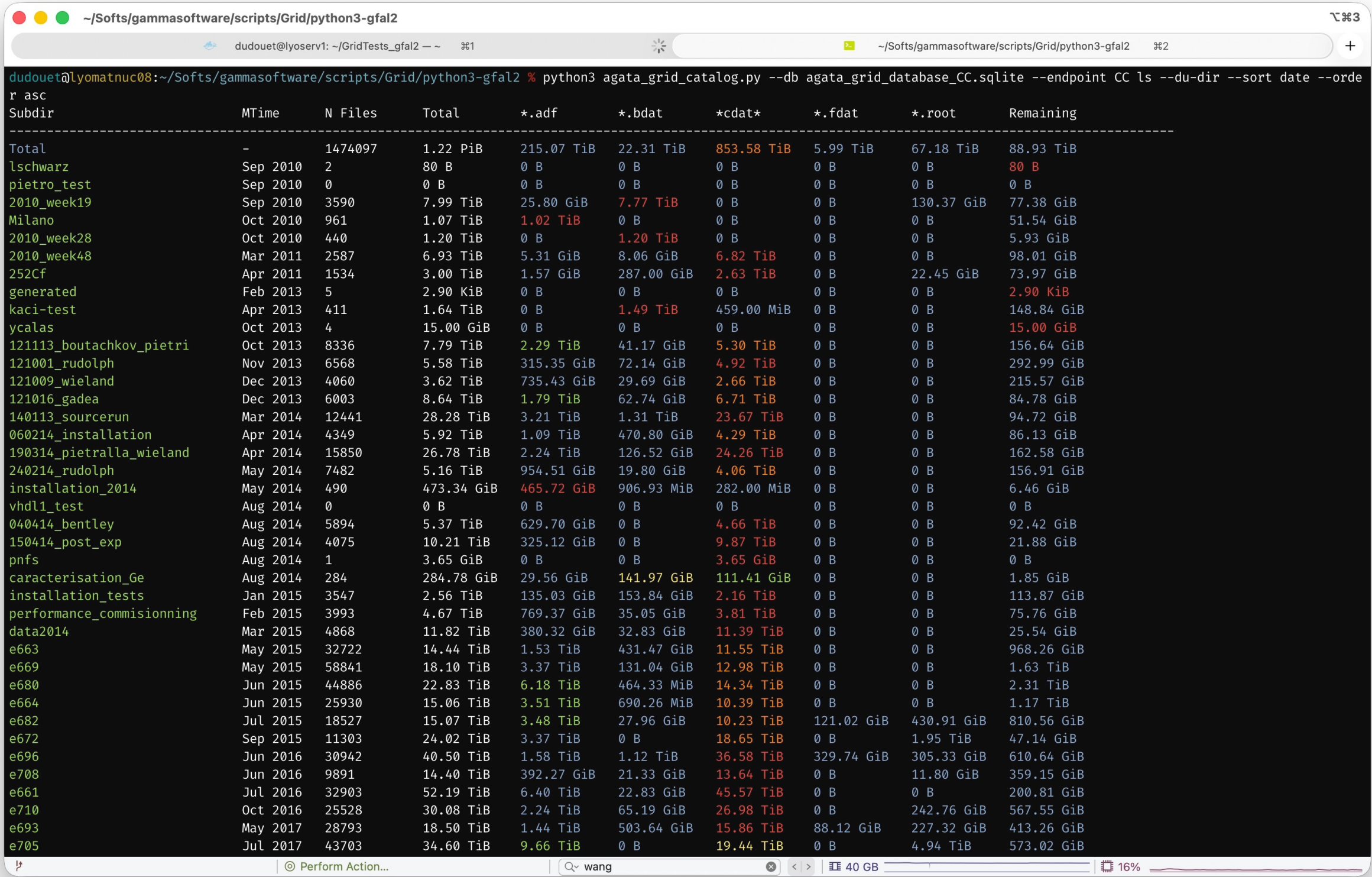
Main components of the project



AGATA data storage on the grid

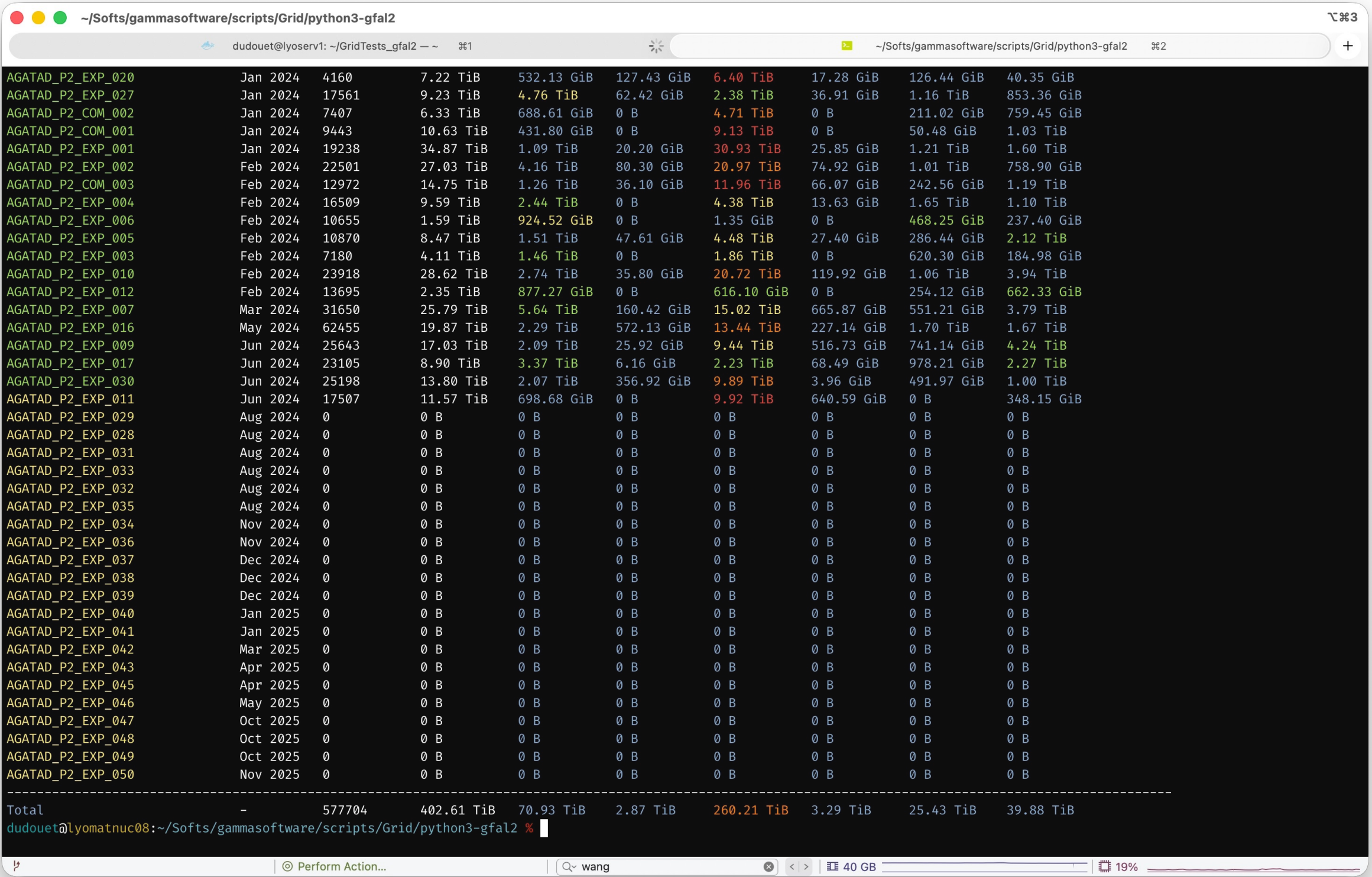
Snapshot of the legacy storage layout

Earlier campaigns



Subdir	MTime	N Files	Total	*.adf	*.bdat	*cdat*	*.fdat	*.root	Remaining
Total	-	1474097	1.22 PiB	215.07 TiB	22.31 TiB	853.58 TiB	5.99 TiB	67.18 TiB	88.93 TiB
lschwarz	Sep 2010	2	80 B	0 B	0 B	0 B	0 B	0 B	80 B
pietro_test	Sep 2010	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
2010_week19	Sep 2010	3590	7.99 TiB	25.80 GiB	7.77 TiB	0 B	0 B	130.37 GiB	77.38 GiB
Milano	Oct 2010	961	1.07 TiB	1.02 TiB	0 B	0 B	0 B	51.54 GiB	0 B
2010_week28	Oct 2010	440	1.20 TiB	0 B	1.20 TiB	0 B	0 B	5.93 GiB	0 B
2010_week48	Mar 2011	2587	6.93 TiB	5.31 GiB	8.06 GiB	6.82 TiB	0 B	0 B	98.01 GiB
252Cf	Apr 2011	1534	3.00 TiB	1.57 GiB	287.00 GiB	2.63 TiB	0 B	22.45 GiB	73.97 GiB
generated	Feb 2013	5	2.90 KiB	0 B	0 B	0 B	0 B	0 B	2.90 KiB
kaci-test	Apr 2013	411	1.64 TiB	0 B	1.49 TiB	459.00 MiB	0 B	0 B	148.84 GiB
ycalas	Oct 2013	4	15.00 GiB	0 B	0 B	0 B	0 B	0 B	15.00 GiB
121113_boutachkov_pietri	Oct 2013	8336	7.79 TiB	2.29 TiB	41.17 GiB	5.30 TiB	0 B	0 B	156.64 GiB
121001_rudolph	Nov 2013	6568	5.58 TiB	315.35 GiB	72.14 GiB	4.92 TiB	0 B	0 B	292.99 GiB
121009_wieland	Dec 2013	4060	3.62 TiB	735.43 GiB	29.69 GiB	2.66 TiB	0 B	0 B	215.57 GiB
121016_gadea	Dec 2013	6003	8.64 TiB	1.79 TiB	62.74 GiB	6.71 TiB	0 B	0 B	84.78 GiB
140113_sourcerun	Mar 2014	12441	28.28 TiB	3.21 TiB	1.31 TiB	23.67 TiB	0 B	0 B	94.72 GiB
060214_installation	Apr 2014	4349	5.92 TiB	1.09 TiB	470.80 GiB	4.29 TiB	0 B	0 B	86.13 GiB
190314_pietralla_wieland	Apr 2014	15850	26.78 TiB	2.24 TiB	126.52 GiB	24.26 TiB	0 B	0 B	162.58 GiB
240214_rudolph	May 2014	7482	5.16 TiB	954.51 GiB	19.80 GiB	4.06 TiB	0 B	0 B	156.91 GiB
installation_2014	May 2014	490	473.34 GiB	465.72 GiB	906.93 MiB	282.00 MiB	0 B	0 B	6.46 GiB
vhd11_test	Aug 2014	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
040414_bentley	Aug 2014	5894	5.37 TiB	629.70 GiB	0 B	4.66 TiB	0 B	0 B	92.42 GiB
150414_post_exp	Aug 2014	4075	10.21 TiB	325.12 GiB	0 B	9.87 TiB	0 B	0 B	21.88 GiB
pnfs	Aug 2014	1	3.65 GiB	0 B	0 B	3.65 GiB	0 B	0 B	0 B
characterisation_Ge	Aug 2014	284	284.78 GiB	29.56 GiB	141.97 GiB	111.41 GiB	0 B	0 B	1.85 GiB
installation_tests	Jan 2015	3547	2.56 TiB	135.03 GiB	153.84 GiB	2.16 TiB	0 B	0 B	113.87 GiB
performance_commissioning	Feb 2015	3993	4.67 TiB	769.37 GiB	35.05 GiB	3.81 TiB	0 B	0 B	75.76 GiB
data2014	Mar 2015	4868	11.82 TiB	380.32 GiB	32.83 GiB	11.39 TiB	0 B	0 B	25.54 GiB
e663	May 2015	32722	14.44 TiB	1.53 TiB	431.47 GiB	11.55 TiB	0 B	0 B	968.26 GiB
e669	May 2015	58841	18.10 TiB	3.37 TiB	131.04 GiB	12.98 TiB	0 B	0 B	1.63 TiB
e680	Jun 2015	44886	22.83 TiB	6.18 TiB	464.33 MiB	14.34 TiB	0 B	0 B	2.31 TiB
e664	Jun 2015	25930	15.06 TiB	3.51 TiB	690.26 MiB	10.39 TiB	0 B	0 B	1.17 TiB
e682	Jul 2015	18527	15.07 TiB	3.48 TiB	27.96 GiB	10.23 TiB	121.02 GiB	430.91 GiB	810.56 GiB
e672	Sep 2015	11303	24.02 TiB	3.37 TiB	0 B	18.65 TiB	0 B	1.95 TiB	47.14 GiB
e696	Jun 2016	30942	40.50 TiB	1.58 TiB	1.12 TiB	36.58 TiB	329.74 GiB	305.33 GiB	610.64 GiB
e708	Jun 2016	9891	14.40 TiB	392.27 GiB	21.33 GiB	13.64 TiB	0 B	11.80 GiB	359.15 GiB
e661	Jul 2016	32903	52.19 TiB	6.40 TiB	22.83 GiB	45.57 TiB	0 B	0 B	200.81 GiB
e710	Oct 2016	25528	30.08 TiB	2.24 TiB	65.19 GiB	26.98 TiB	0 B	242.76 GiB	567.55 GiB
e693	May 2017	28793	18.50 TiB	1.44 TiB	503.64 GiB	15.86 TiB	88.12 GiB	227.32 GiB	413.26 GiB
e705	Jul 2017	43703	34.60 TiB	9.66 TiB	0 B	19.44 TiB	0 B	4.94 TiB	573.02 GiB

LNL_P2 campaign



AGATAD_P2_EXP_020	Jan 2024	4160	7.22 TiB	532.13 GiB	127.43 GiB	6.40 TiB	17.28 GiB	126.44 GiB	40.35 GiB
AGATAD_P2_EXP_027	Jan 2024	17561	9.23 TiB	4.76 TiB	62.42 GiB	2.38 TiB	36.91 GiB	1.16 TiB	853.36 GiB
AGATAD_P2_COM_002	Jan 2024	7407	6.33 TiB	688.61 GiB	0 B	4.71 TiB	0 B	211.02 GiB	759.45 GiB
AGATAD_P2_COM_001	Jan 2024	9443	10.63 TiB	431.80 GiB	0 B	9.13 TiB	0 B	50.48 GiB	1.03 TiB
AGATAD_P2_EXP_001	Jan 2024	19238	34.87 TiB	1.09 TiB	20.20 GiB	30.93 TiB	25.85 GiB	1.21 TiB	1.60 TiB
AGATAD_P2_EXP_002	Feb 2024	22501	27.03 TiB	4.16 TiB	80.30 GiB	20.97 TiB	74.92 GiB	1.01 TiB	758.90 GiB
AGATAD_P2_COM_003	Feb 2024	12972	14.75 TiB	1.26 TiB	36.10 GiB	11.96 TiB	66.07 GiB	242.56 GiB	1.19 TiB
AGATAD_P2_EXP_004	Feb 2024	16509	9.59 TiB	2.44 TiB	0 B	4.38 TiB	13.63 GiB	1.65 TiB	1.10 TiB
AGATAD_P2_EXP_006	Feb 2024	10655	1.59 TiB	924.52 GiB	0 B	1.35 GiB	0 B	468.25 GiB	237.40 GiB
AGATAD_P2_EXP_005	Feb 2024	10870	8.47 TiB	1.51 TiB	47.61 GiB	4.48 TiB	27.40 GiB	286.44 GiB	2.12 TiB
AGATAD_P2_EXP_003	Feb 2024	7180	4.11 TiB	1.46 TiB	0 B	1.86 TiB	0 B	620.30 GiB	184.98 GiB
AGATAD_P2_EXP_010	Feb 2024	23918	28.62 TiB	2.74 TiB	35.80 GiB	20.72 TiB	119.92 GiB	1.06 TiB	3.94 TiB
AGATAD_P2_EXP_012	Feb 2024	13695	2.35 TiB	877.27 GiB	0 B	616.10 GiB	0 B	254.12 GiB	662.33 GiB
AGATAD_P2_EXP_007	Mar 2024	31650	25.79 TiB	5.64 TiB	160.42 GiB	15.02 TiB	665.87 GiB	551.21 GiB	3.79 TiB
AGATAD_P2_EXP_016	May 2024	62455	19.87 TiB	2.29 TiB	572.13 GiB	13.44 TiB	227.14 GiB	1.70 TiB	1.67 TiB
AGATAD_P2_EXP_009	Jun 2024	25643	17.03 TiB	2.09 TiB	25.92 GiB	9.44 TiB	516.73 GiB	741.14 GiB	4.24 TiB
AGATAD_P2_EXP_017	Jun 2024	23105	8.90 TiB	3.37 TiB	6.16 GiB	2.23 TiB	68.49 GiB	978.21 GiB	2.27 TiB
AGATAD_P2_EXP_030	Jun 2024	25198	13.80 TiB	2.07 TiB	356.92 GiB	9.89 TiB	3.96 GiB	491.97 GiB	1.00 TiB
AGATAD_P2_EXP_011	Jun 2024	17507	11.57 TiB	698.68 GiB	0 B	9.92 TiB	640.59 GiB	0 B	348.15 GiB
AGATAD_P2_EXP_029	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_028	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_031	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_033	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_032	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_035	Aug 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_034	Nov 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_036	Nov 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_037	Dec 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_038	Dec 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_039	Dec 2024	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_040	Jan 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_041	Jan 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_042	Mar 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_043	Apr 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_045	Apr 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_046	May 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_047	Oct 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_048	Oct 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_049	Oct 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
AGATAD_P2_EXP_050	Nov 2025	0	0 B	0 B	0 B	0 B	0 B	0 B	0 B
Total	-	577704	402.61 TiB	70.93 TiB	2.87 TiB	260.21 TiB	3.29 TiB	25.43 TiB	39.88 TiB

- No consistent experiment naming before the LNL_P2 campaign
- No common storage layout
- Test and non-scientific material mixed with experiment data

AGATA data storage on the grid

The new storage standard

/agata/<campaign>/<AGATA_ID>/

campaign: LNL_2010, GSI_2012, GANIL_2015, LNL_2022

AGATA_ID: AGATAD_P{1|2}_{EXP|COM|SRC}_{NNN}

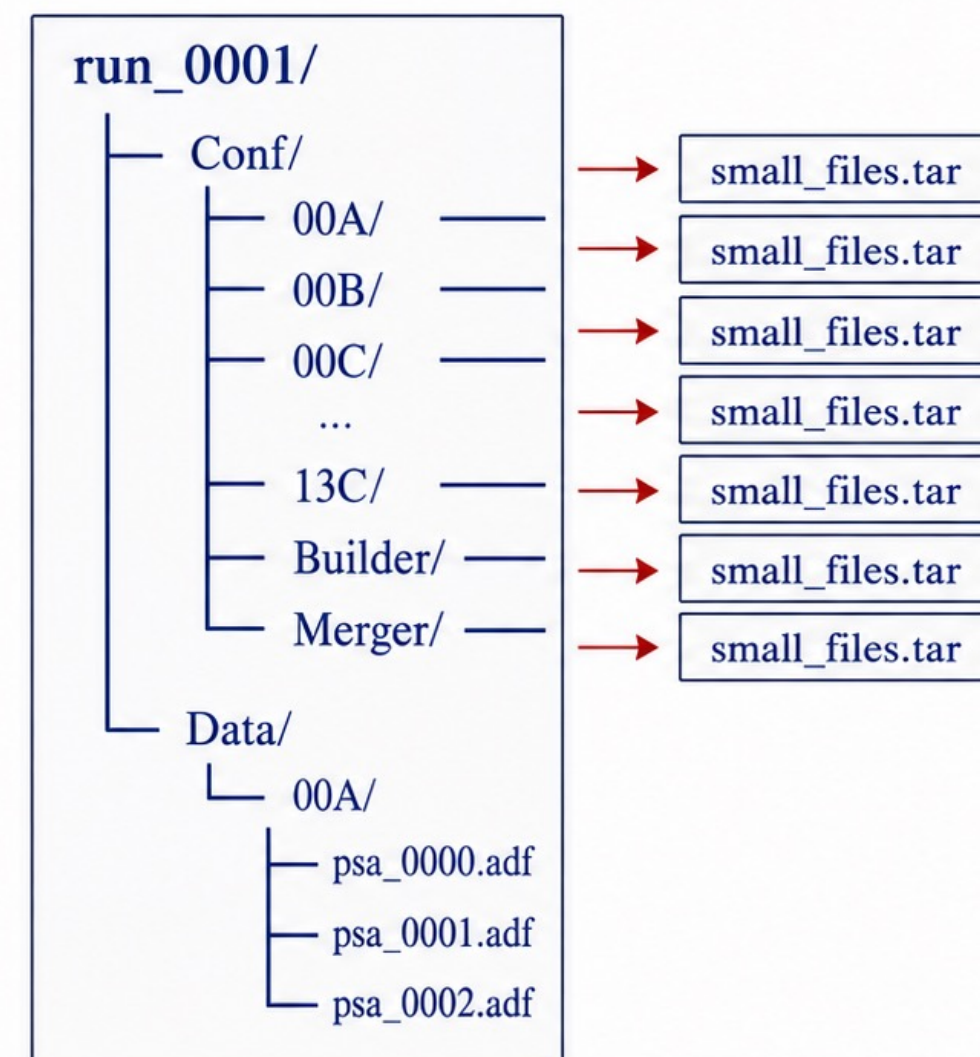
```
agata-container:/workdir/agata-data-toolkit$ agata-data storage ls --grid-path /agata/LNL_2022/AGATAD_P2_EXP_052
Folder      18 Aug 2026  AGATA
5.88 GB     19 Aug 2026  AGATAD_P2_EXP_052_small_files.tar
Folder      19 Aug 2026  Ancillaries
Folder      19 Aug 2026  Nearline
29.92 MB    31 Aug 2026  push_manifest.yaml
128.00 KB   31 Aug 2026  storage_provenance.yaml
```

- **Facility names** such as 2009_week27, e663, and exp_23.11 are retained as **metadata**.
The **AGATA ID** becomes the **stable storage identity**.
 ➡ Earlier experiments are being renamed accordingly.
- Small files are bundled to reduce the number of grid objects and directories.
- Every new experiment uses the same top-level data layout: AGATA/, Ancillaries/, and Nearline/.
- Experiment metadata are versioned in the Git repository; manifests and provenance are stored alongside the data.

AGATA data storage on the grid

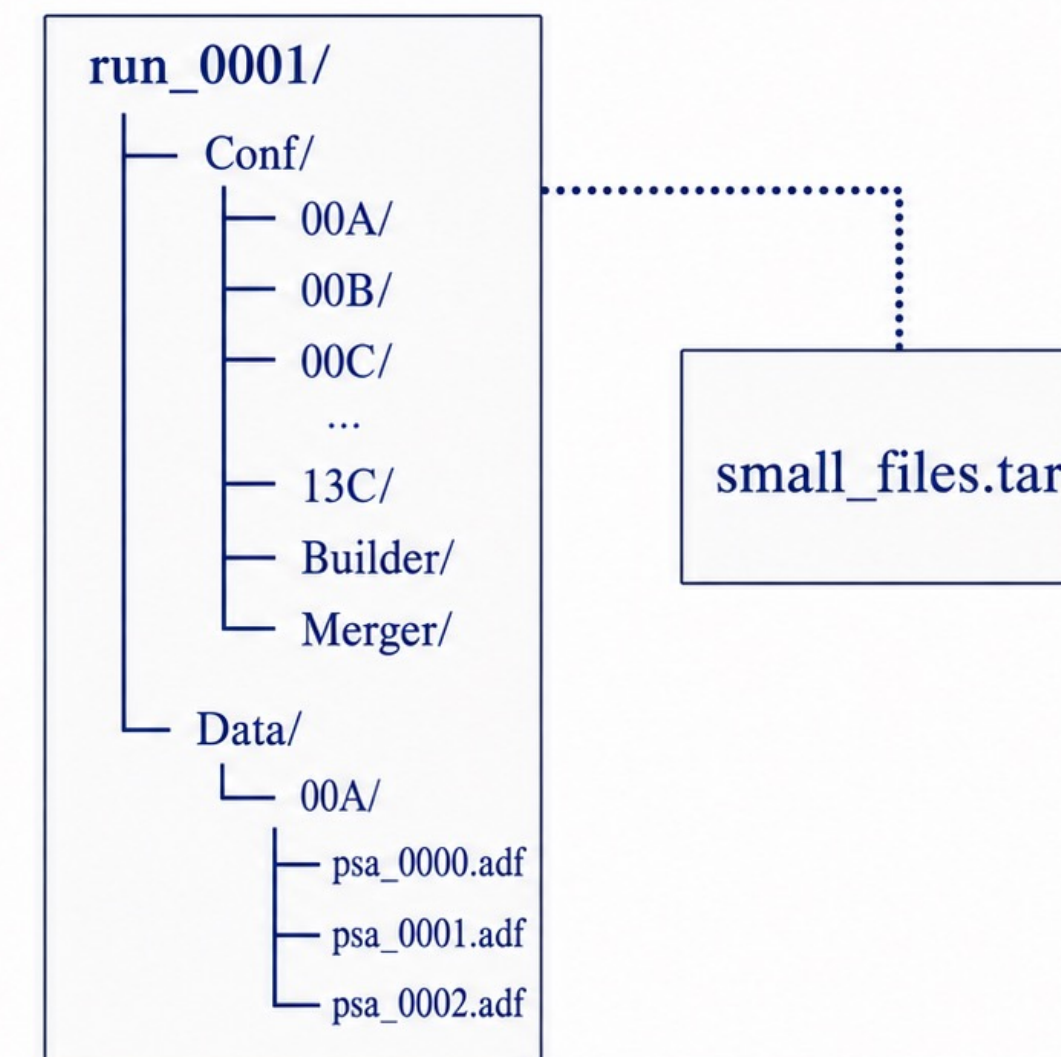
The new bundling strategy: from many tarballs to one tarball per target directory

Legacy bundling
one tarball per non-empty subdirectory



26 tarballs

New bundling
one tarball at the target root



1 tarball

➤ Bundling rules are provided by the local person in charge of grid data transfer

AGATA data storage on the grid

The new bundling strategy:

Example of a bundling configuration

```
</> YAML
version: 1

small_file_threshold_mb: 50
tarball_split_gb: 10
tarball_name_suffix: small_files

rules:
- pattern: "^run_(\\d+)(?:$|[_-].*)"
  scope: "./"
  recursive: true

- pattern: "^Analysis$"
  scope: "Nearline_Analysis"
  recursive: false

- pattern: "^compass_calib"
  scope: "AncillaryDisk"
  recursive: false

bundle_remaining: true
```

- **small_file_threshold_mb:** files below this size are bundled
- **rules:** locally selected target directories
- **bundle_remaining:** one catch-all tarball for the remaining small files

- Bundling rules are provided by the local person in charge of grid data transfer

AGATA data storage on the grid

Metadata associated with every experiment

Example of an experiment metadata file

```
</> YAML
global:
  campaign: LNL_2022
  experiment_name_host: Exp_25.24
  experiment_name_AGATA: AGATAD_P2_EXP_058
  experiment_type: DSAM
  experiment_title: >-
    Lifetime measurements in Ne and F nuclei toward the N = 20
    Island of Inversion

spokespersons:
  - D. Genna
  - K. Wimmer
  - S. Bottoni
  - G. Benzoni
  - P. Aguilera
  - F. Recchia

spokesperson_institution_country:
  - ITA
  - GER
  - CHI

agata_N_crystals: 36
ancillaries:
  - PRISMA
```

```
beam: "22Ne, 1.2 pA, 160 MeV, continuous"
target: "238U, 1 mg/cm2, 5 mg/cm2 backing"
start_date: "2026-05-01"
duration_ut: 7

contact_persons:
  - D. Genna

doi_list: []
comments: ""

repositories:
  - pattern: "^run_.*"
    scope: "."
    repository_type: L0

  - pattern: "^run_.*"
    scope: "AncillaryDisk"
    repository_type: L0

  - pattern: "^run_.*"
    scope: "Nearline_Analysis/Replay"
    repository_type: L2
```

What the file describes

- Experiment identity and context
- Experiment properties
- Link between legacy and AGATA names
- Processing level associated with each repository

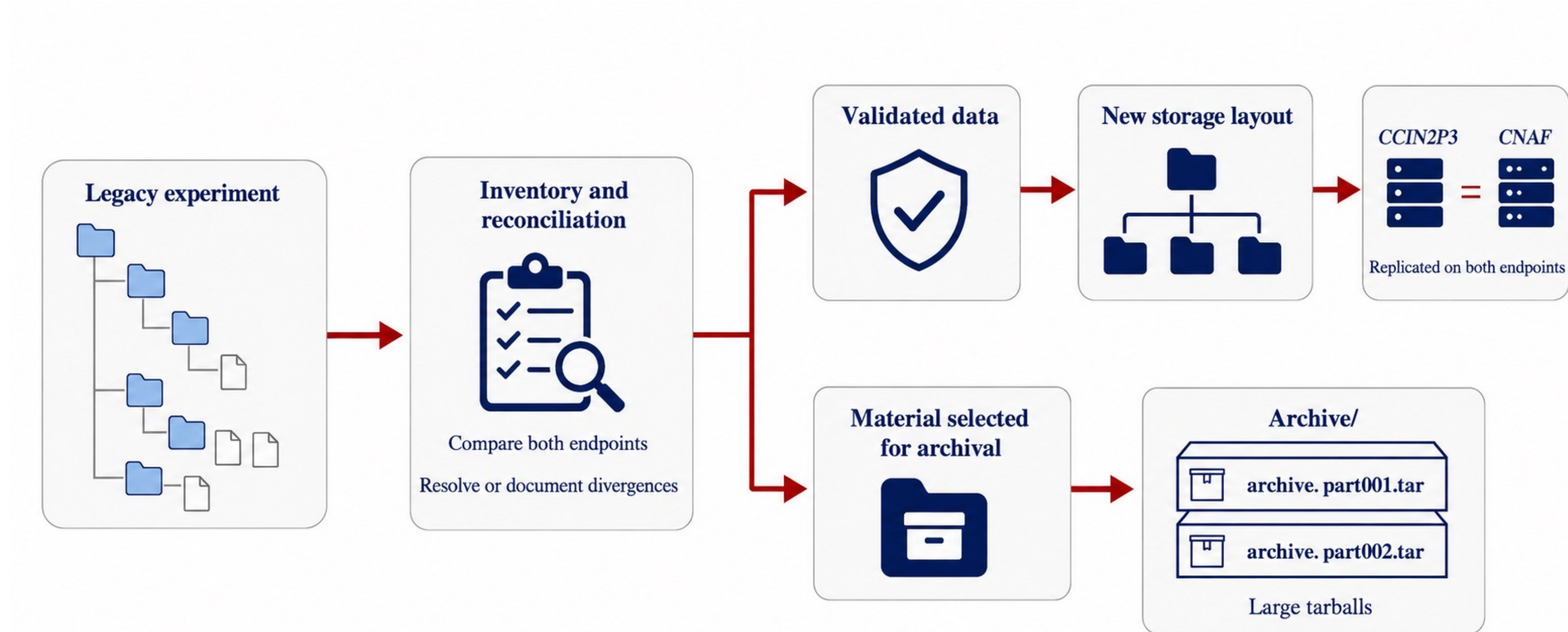
How metadata are managed

- Versioned in the Git repository, not stored on the grid
- Used to populate the future web catalogue
- Editable and extensible as collaboration needs evolve

- Metadata have been recovered and validated for the past GANIL_2015 and LNL_2022 campaigns.
- For future experiments, the local person responsible for grid data transfer completes the metadata file.

AGATA data storage on the grid

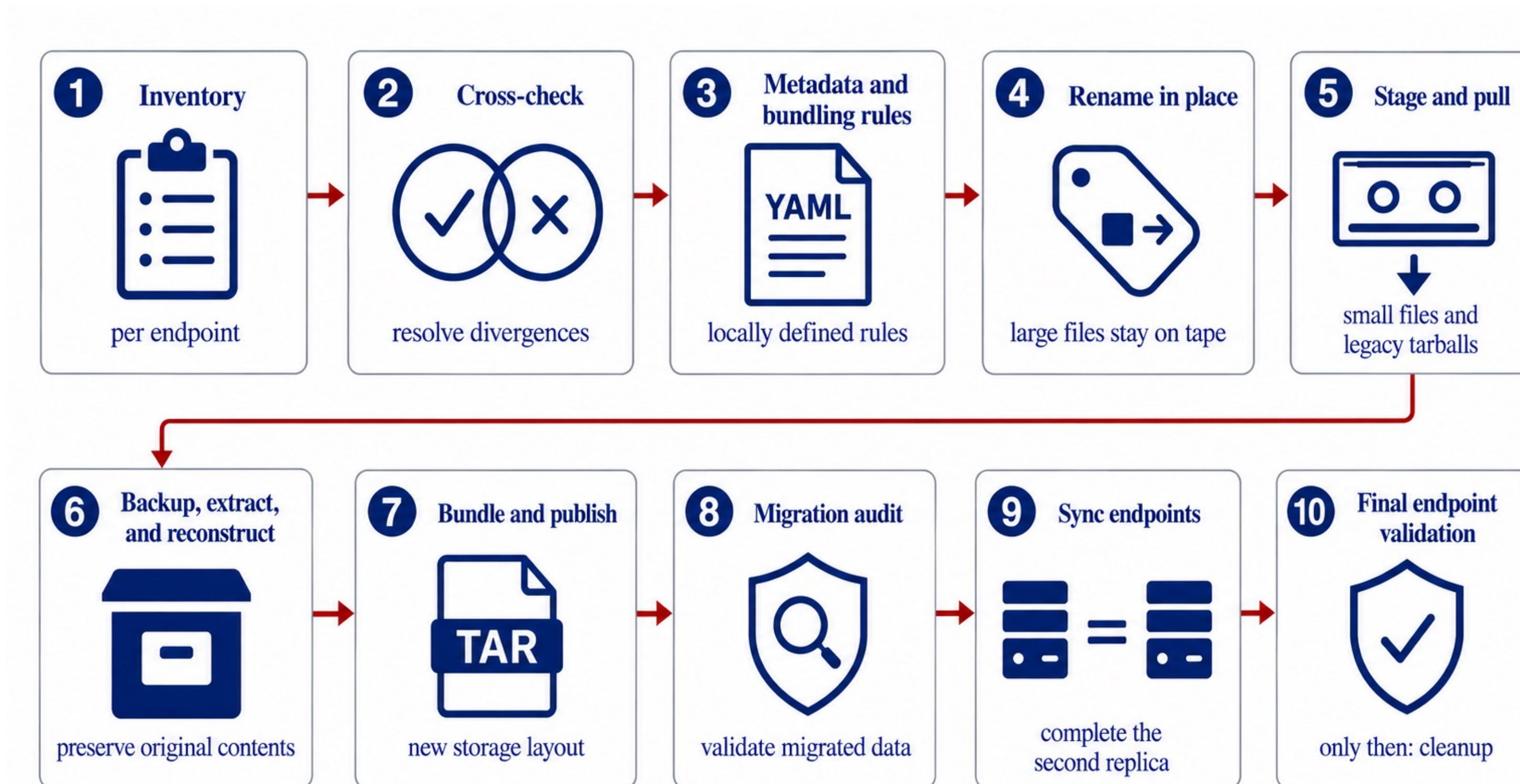
Migration and archiving workflow



➤ Archived data are preserved, not deleted (for the moment...)

AGATA data storage on the grid

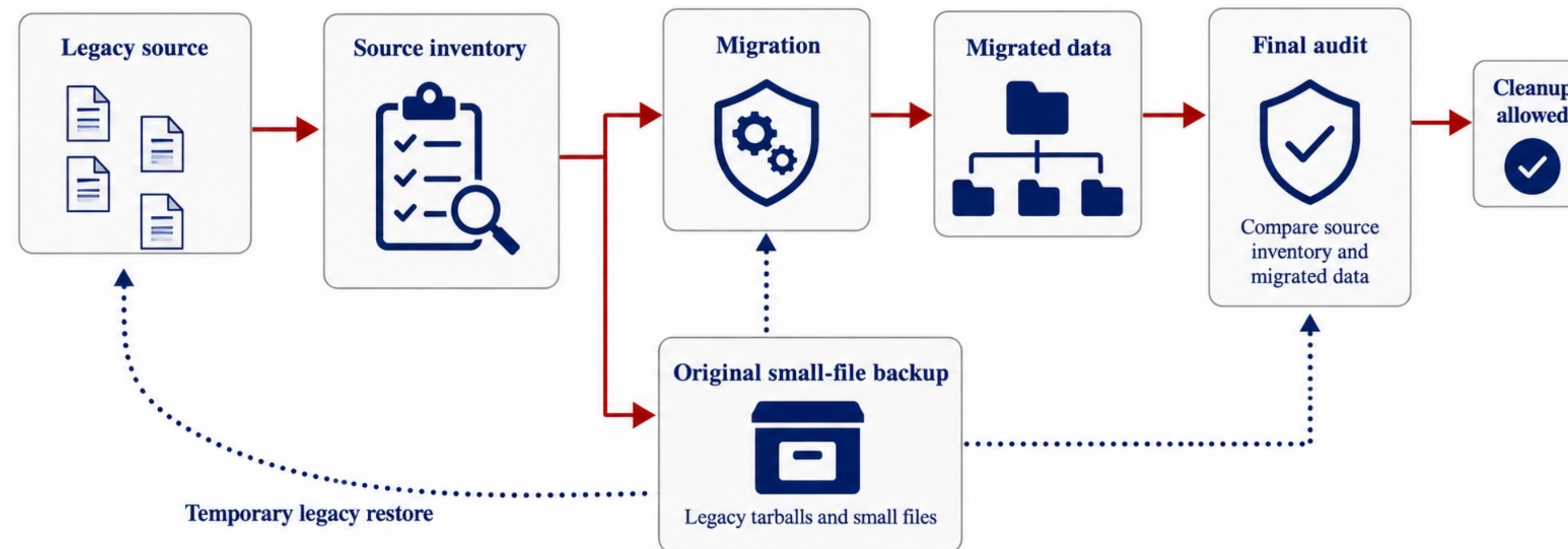
Migration pipeline



➤ Developed in continuous discussion with the IT teams responsible for grid storage at CNAF and CCIN2P3.

AGATA data storage on the grid

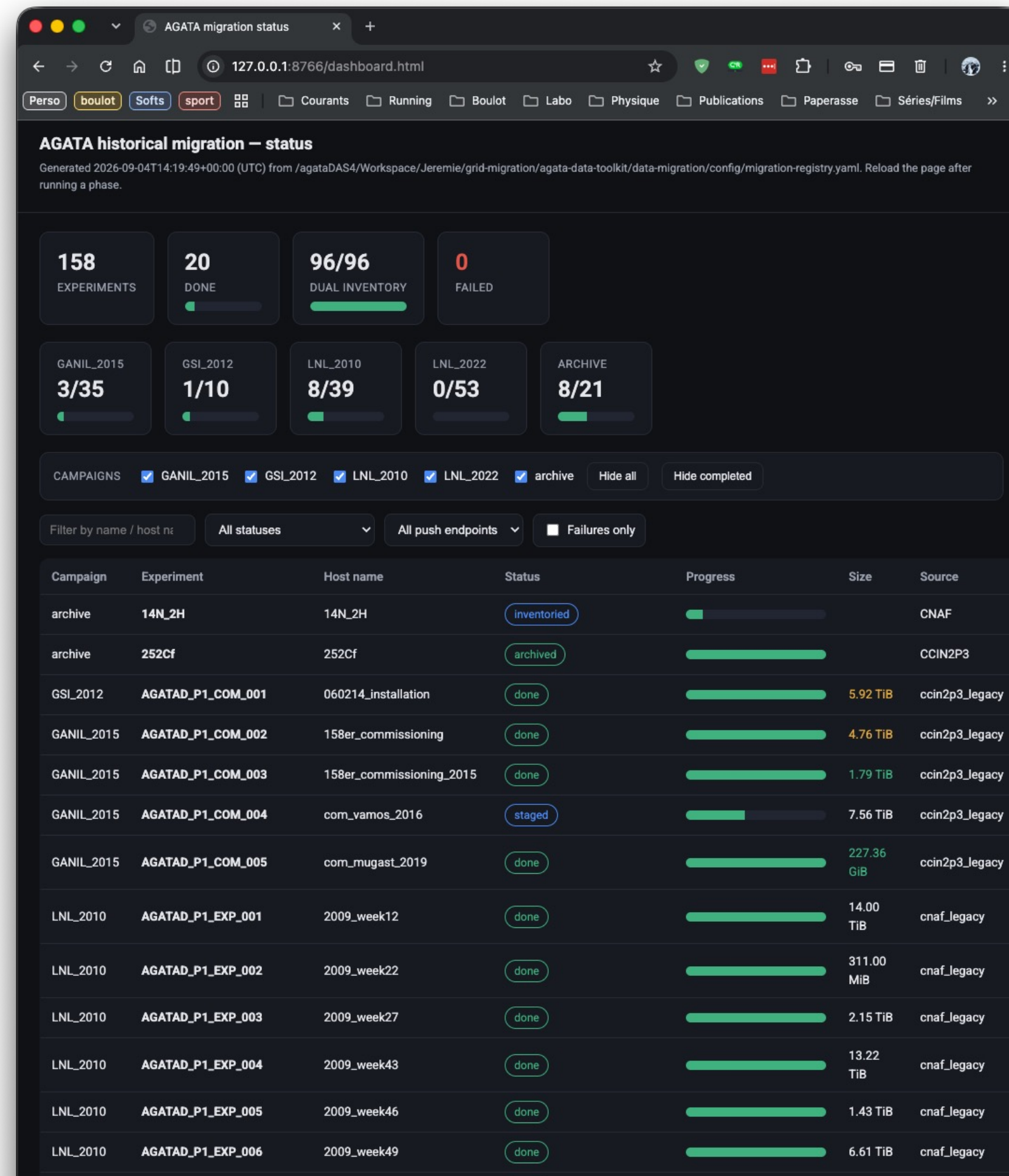
Data safety throughout the migration



No source cleanup before a successful audit

AGATA data storage on the grid

Migration and archiving status

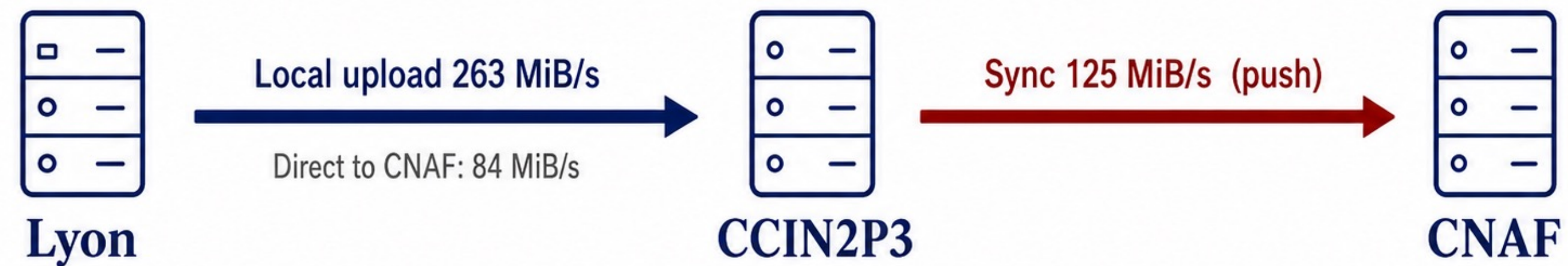


- 158 registry entries:
 - ➡ 137 experiments
 - ➡ 21 archive entries

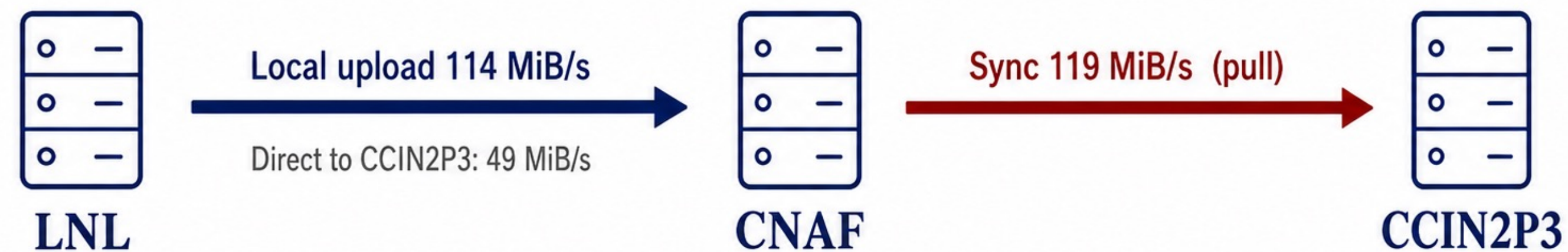
AGATA data storage on the grid

Upload and replication strategy

The first endpoint depends on the upload site



One local upload; the second copy is endpoint-to-endpoint



CCIN2P3 → CNAF: use push mode

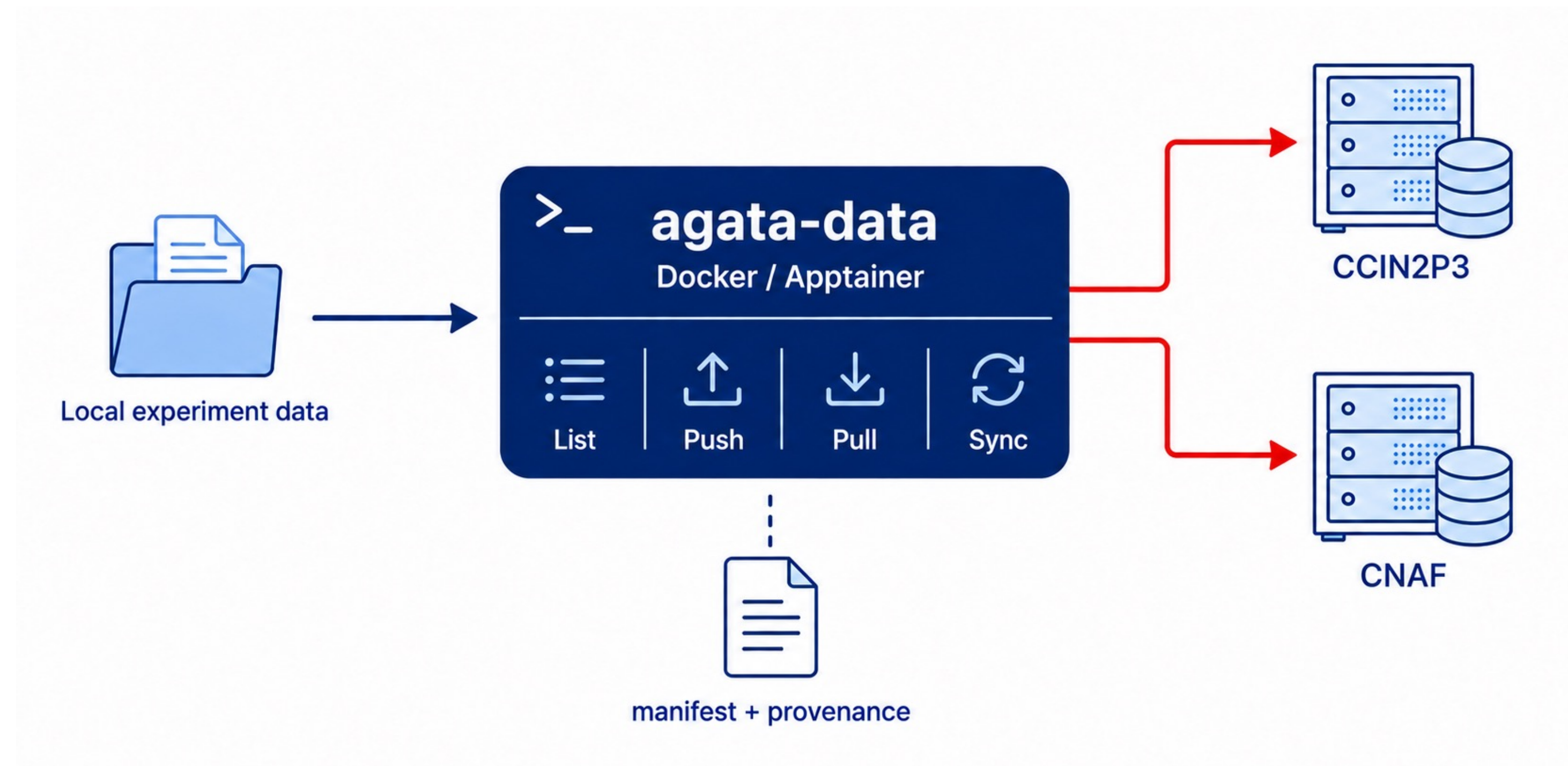
CNAF → CCIN2P3: use pull mode

TEST_EXP benchmark, 46.38 GiB, June 2026

AGATA data storage on the grid

agata-data-toolkit: one common interface

A containerized environment for AGATA grid data transfers

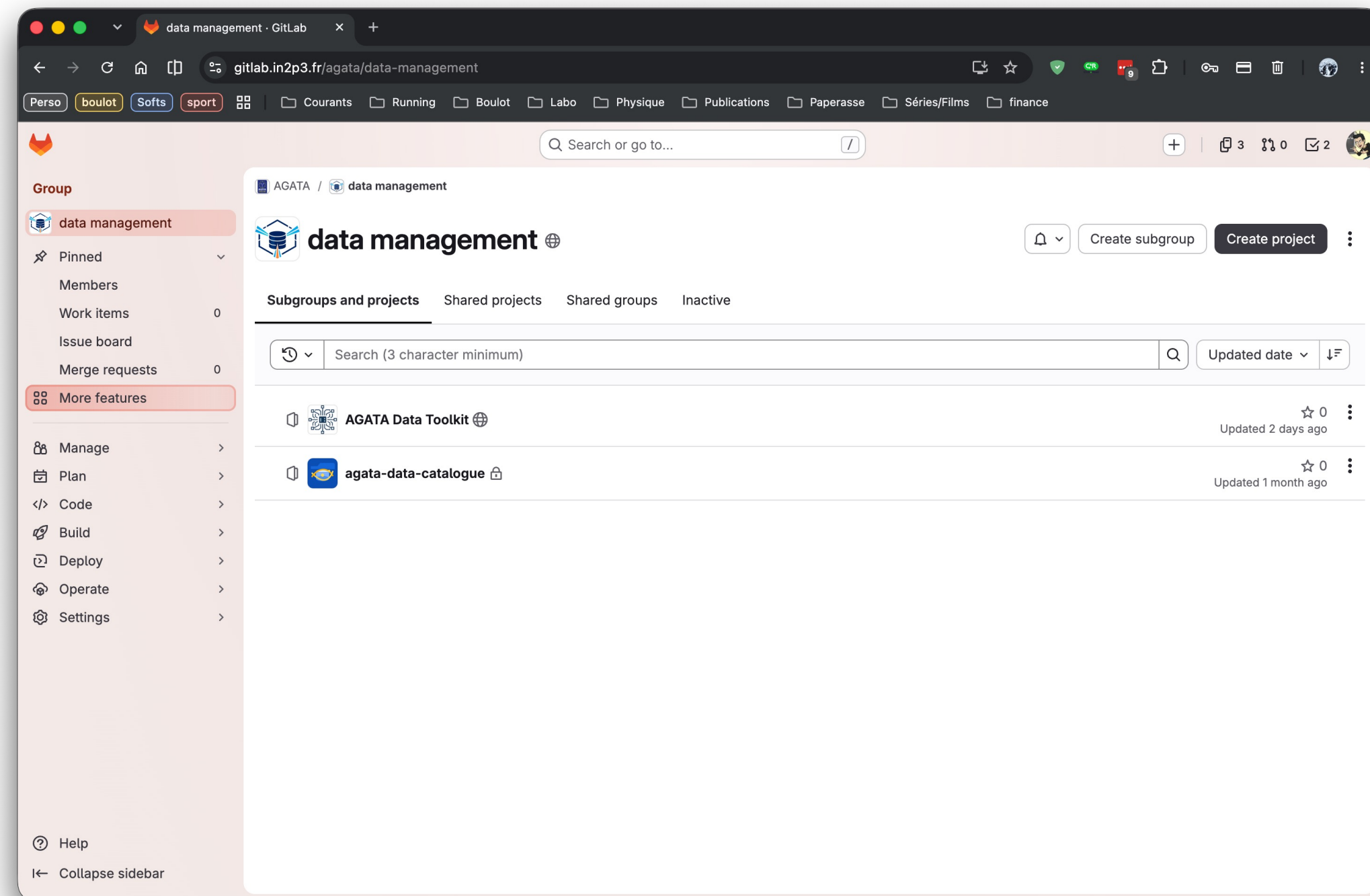


- One interface to list, push, pull and synchronize AGATA data.
- Applies the storage standard and produces manifests and provenance automatically.
- Distributed as Docker and Apptainer images.

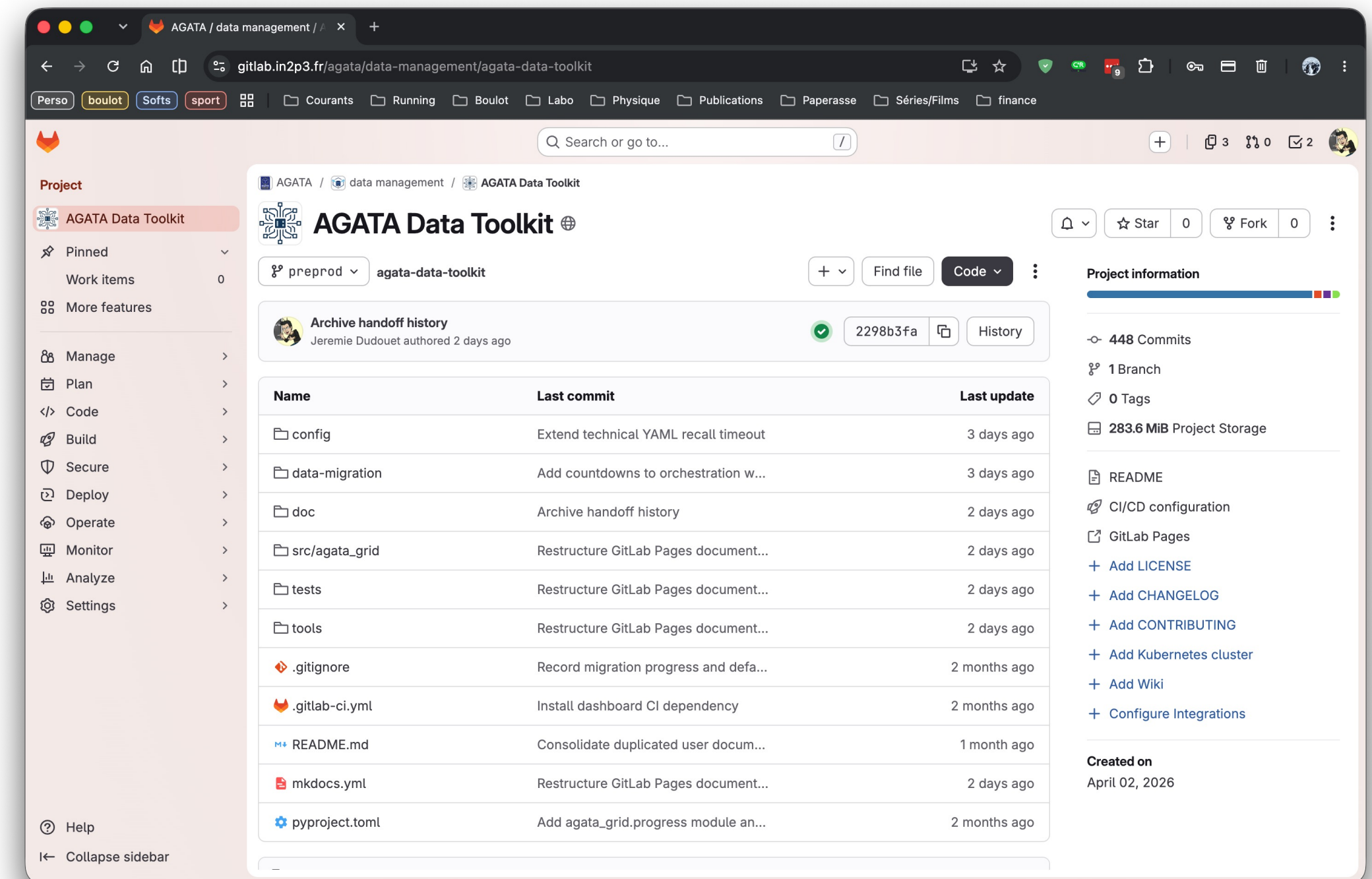
AGATA data storage on the grid

agata-data-toolkit: the GitLab project

Source code, configuration and project documentation



AGATA data management group



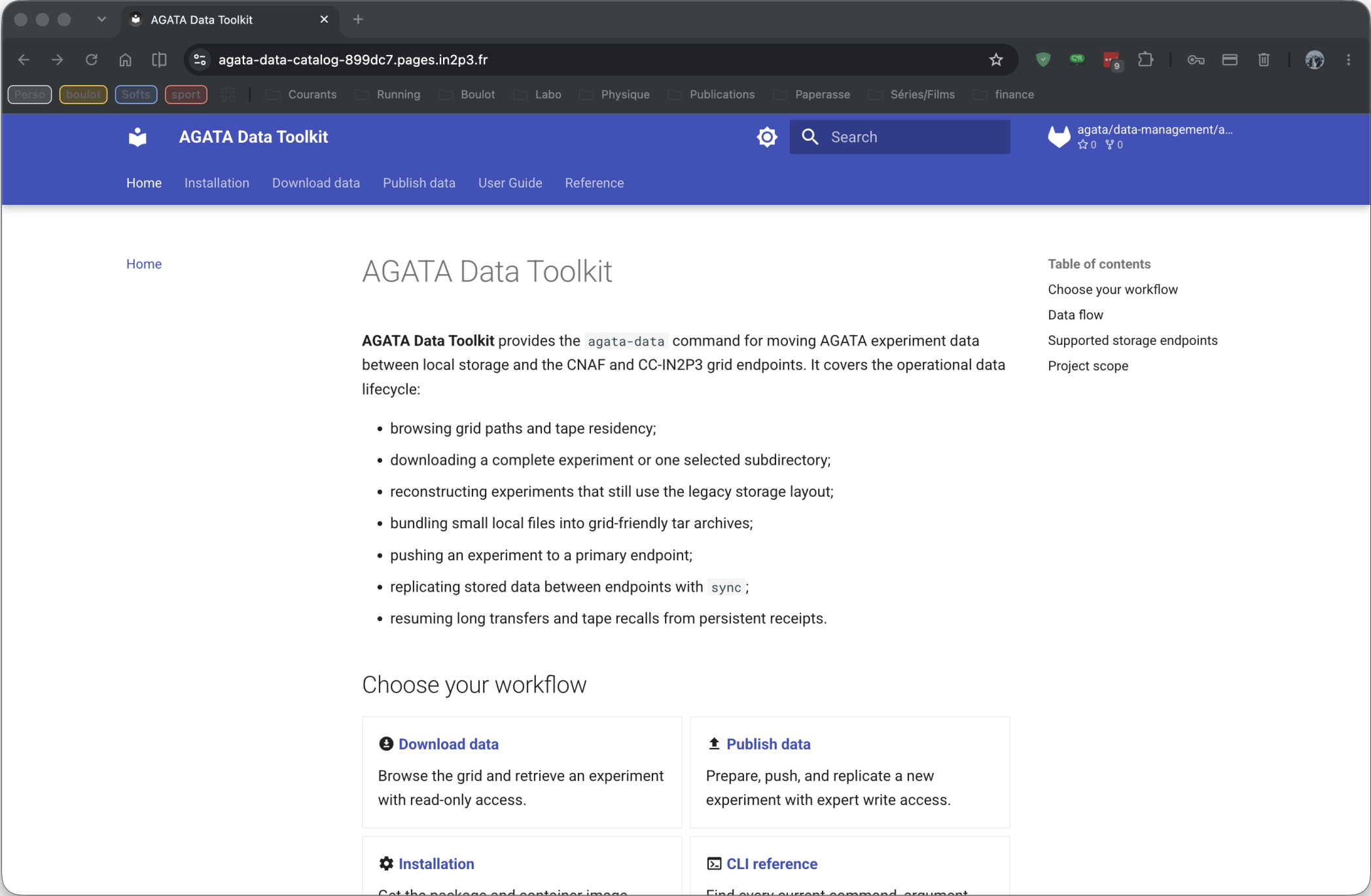
agata-data-toolkit repository

- Source code, configurations and documentation are versioned in GitLab.
- Development and project activity can be followed through the repository.

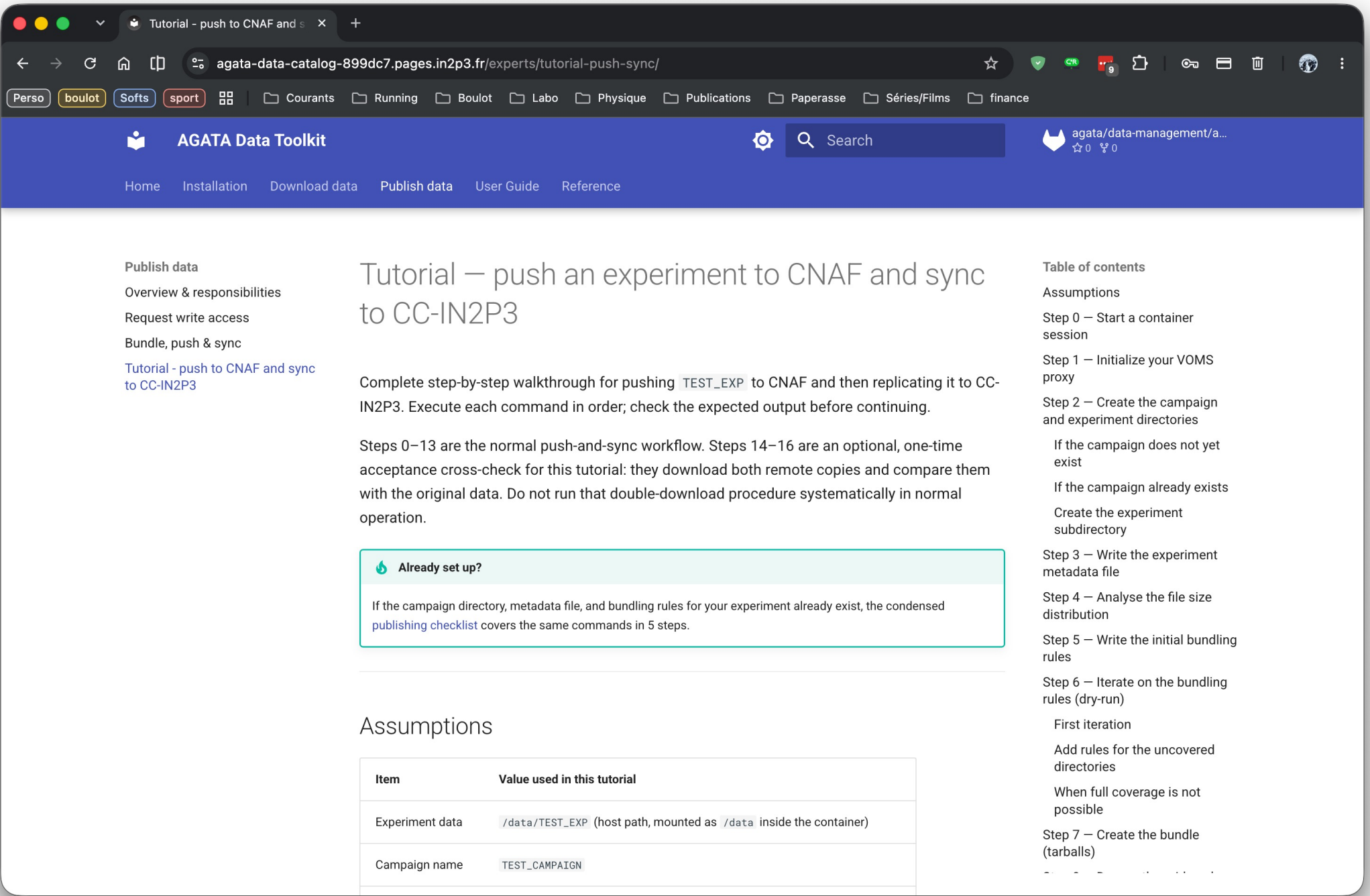
AGATA data storage on the grid

agata-data-toolkit: online documentation

Installation, authentication, storage procedures and command reference



Documentation home page

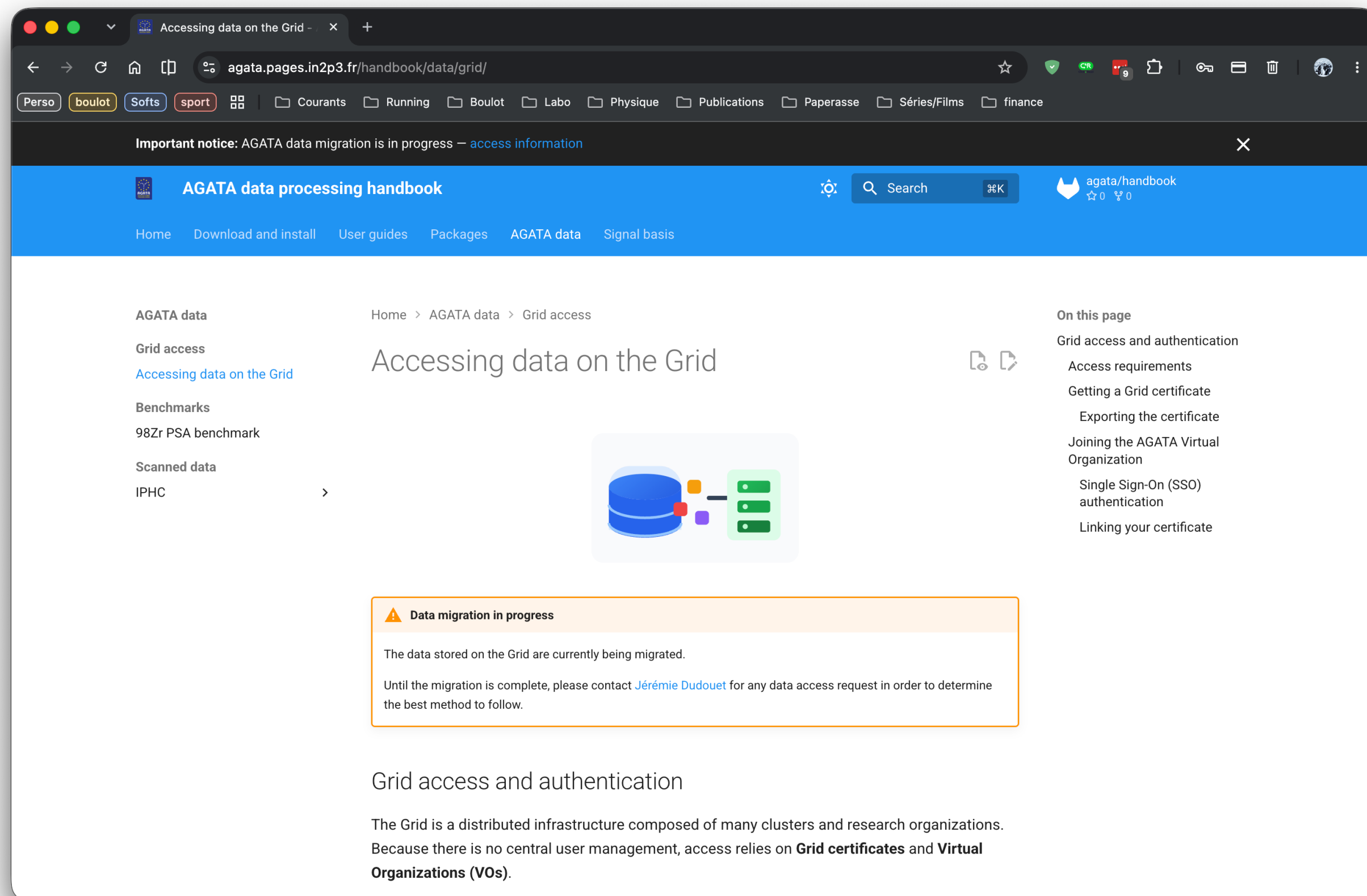


Step-by-step publishing tutorial

- Documentation is published automatically from GitLab Pages.
- The online data catalogue remains under development.

AGATA data storage on the grid

Data access during the migration



Until the migration is complete

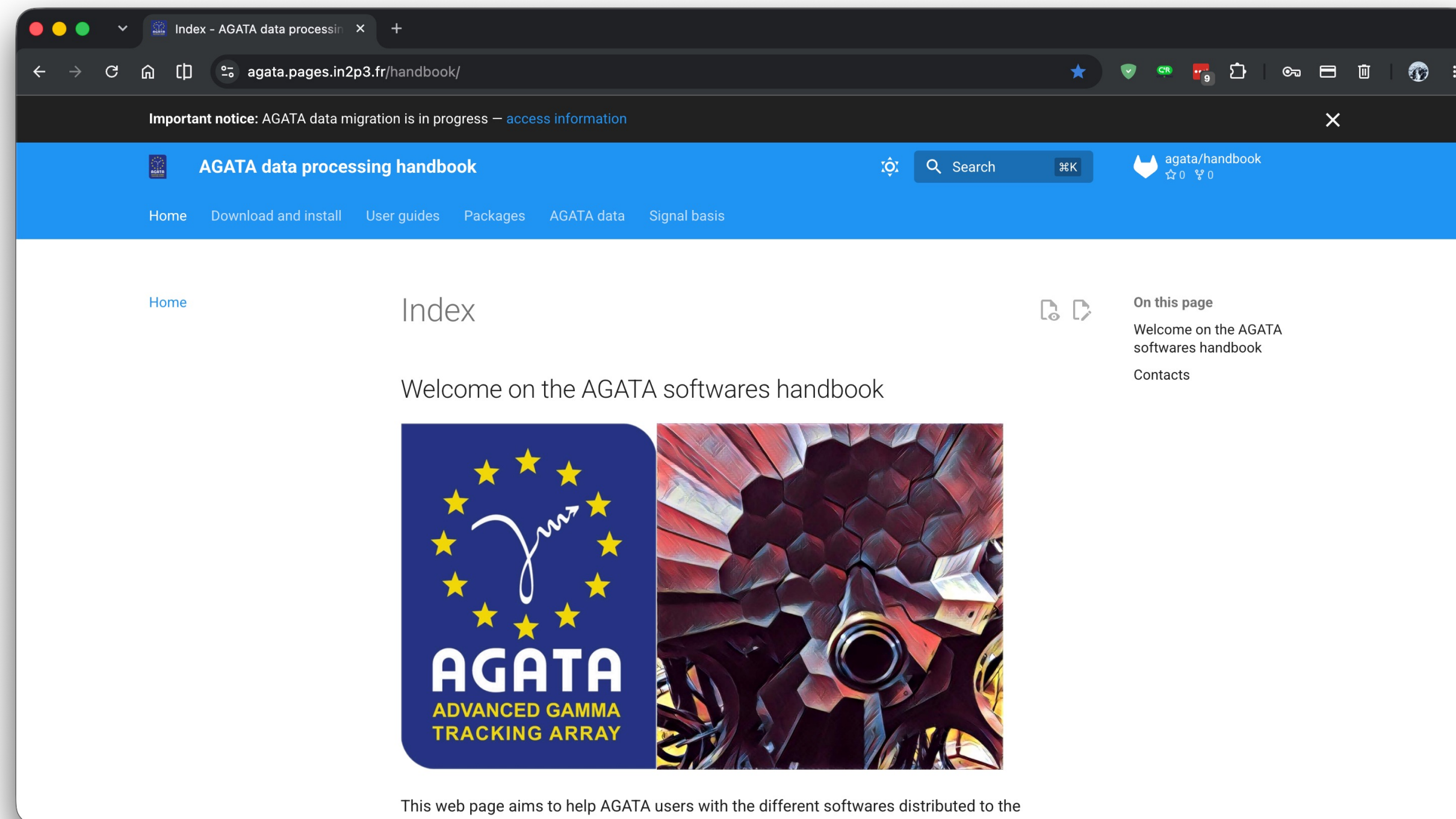
- The download procedure depends on the status of each experiment.
- Please contact me before submitting a data access request.

Target

- Full migration expected by the end of 2026, if all goes well.

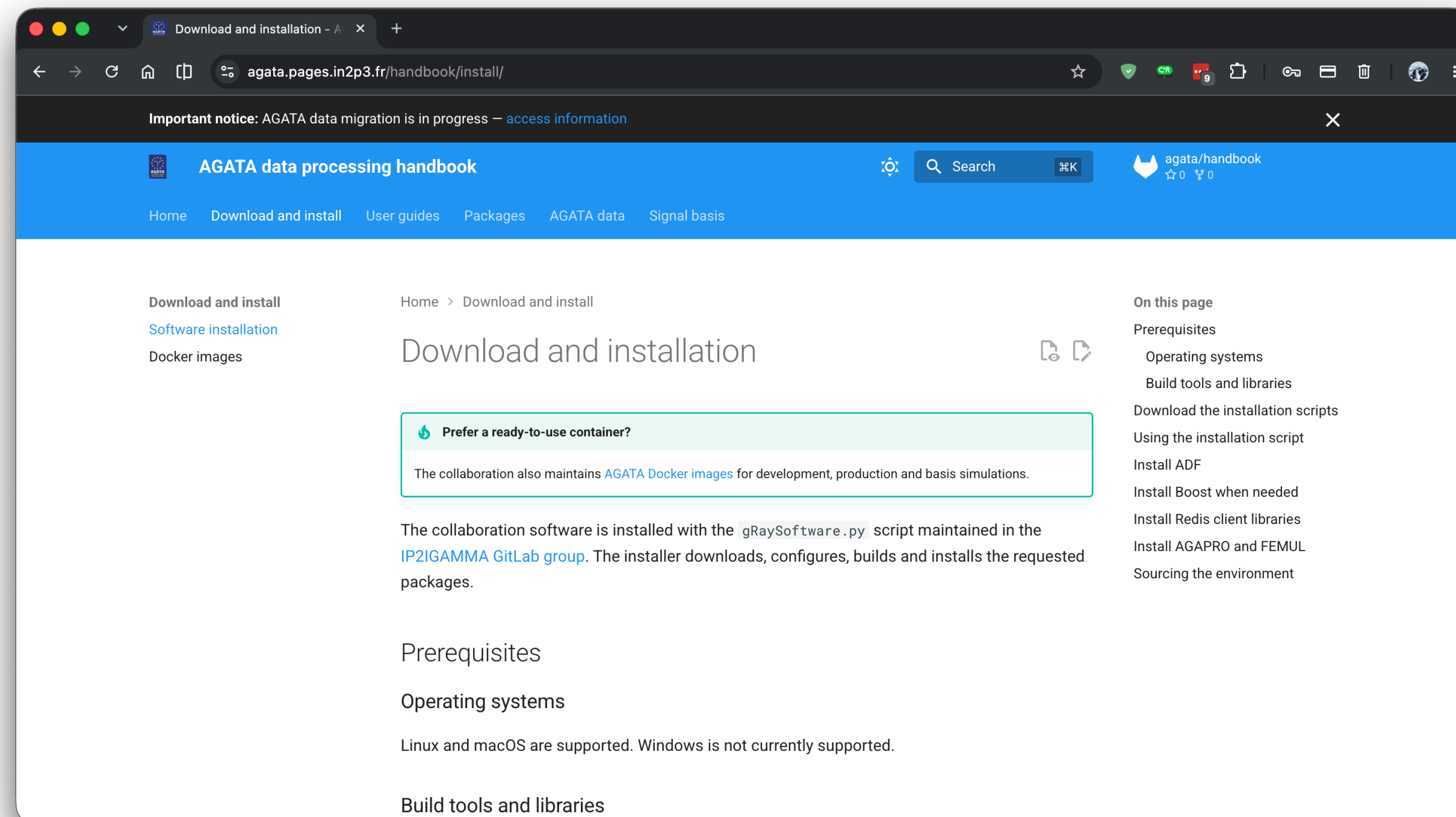
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➔ Software installations and container images



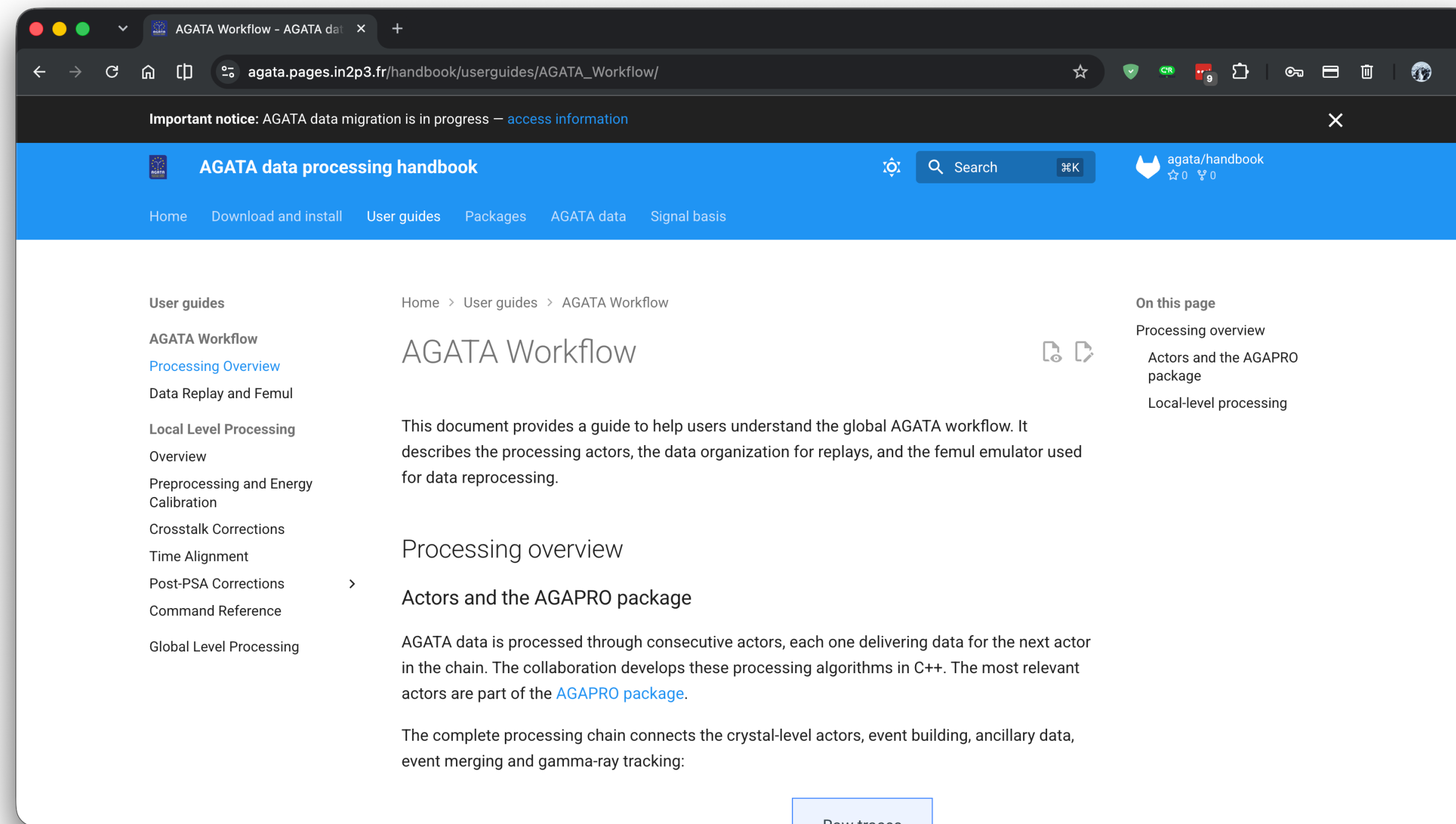
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images



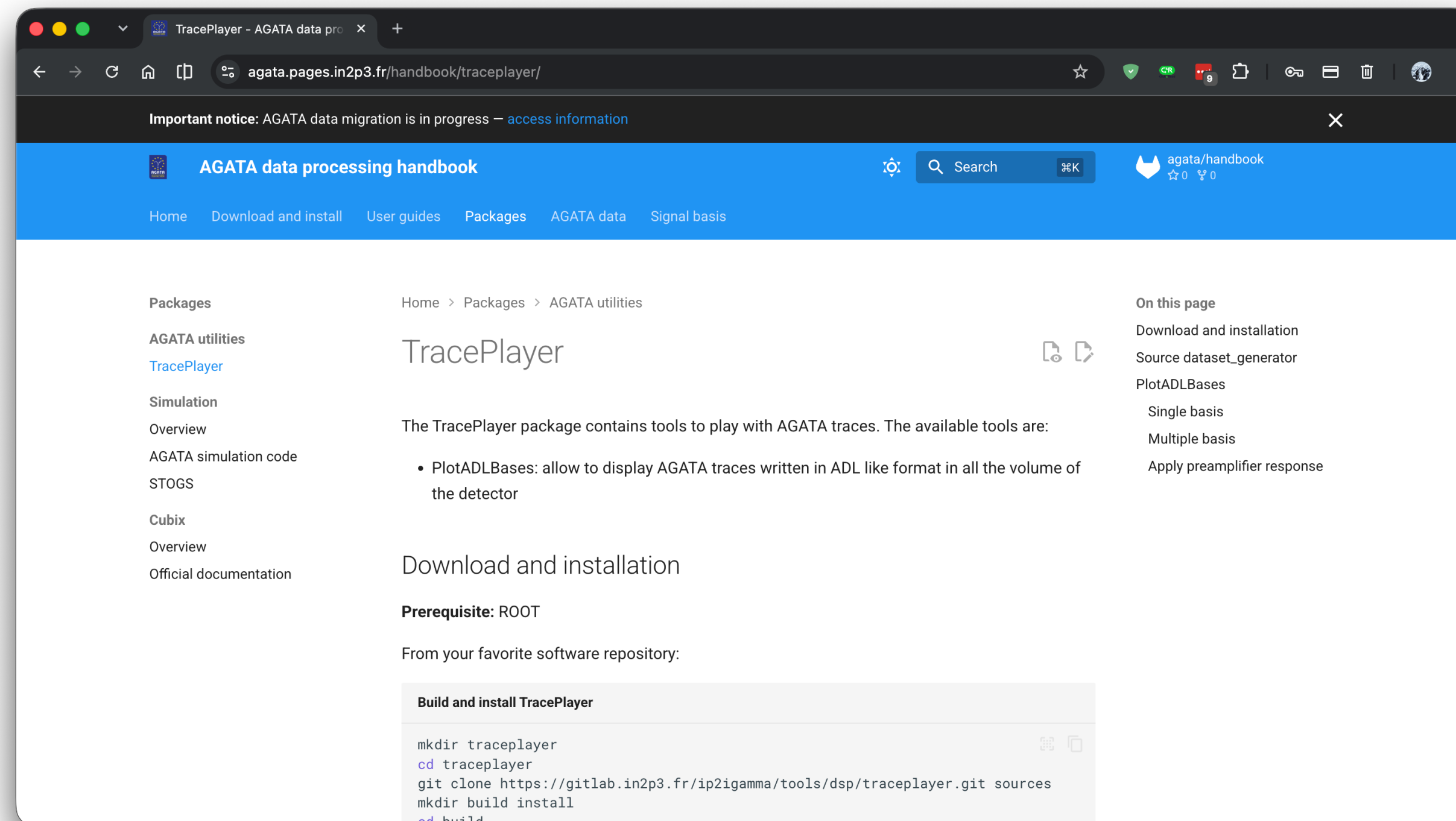
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide



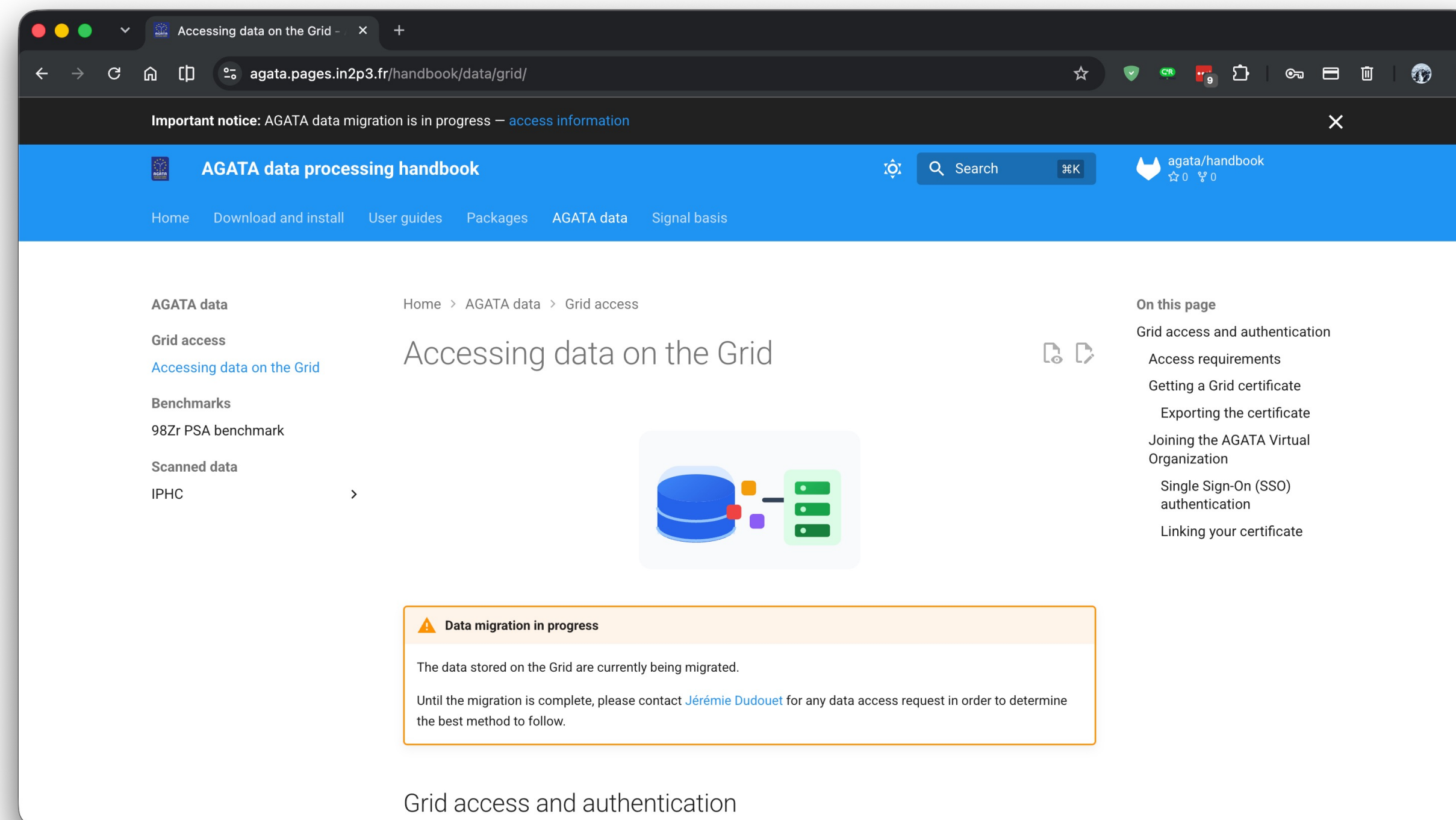
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide
 - ➡ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)



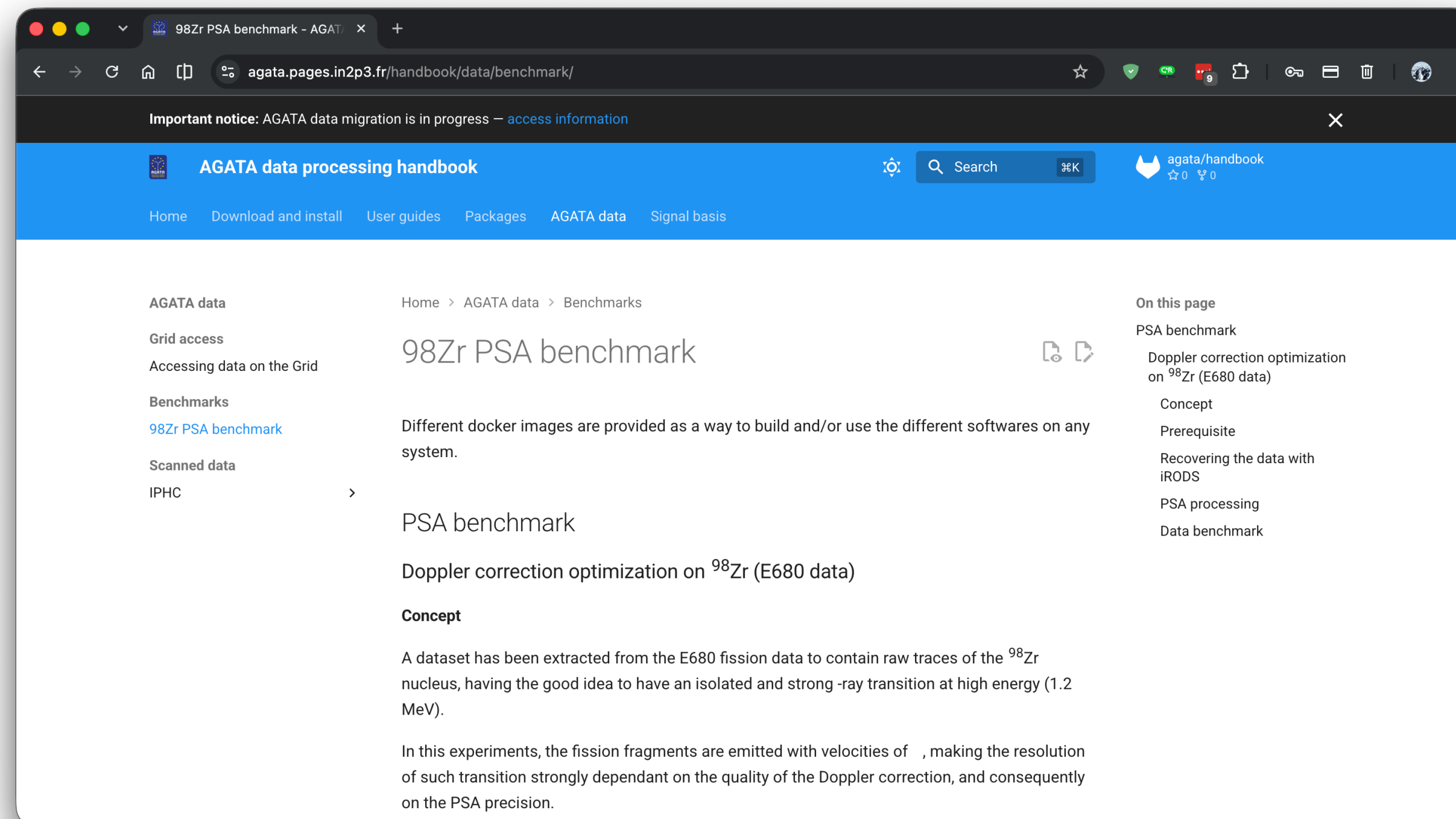
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➔ Software installations and container images
 - ➔ AGATA calibrations and data processing user guide
 - ➔ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➔ Access to AGATA data (**grid**, benchmark datasets, scanned data...)



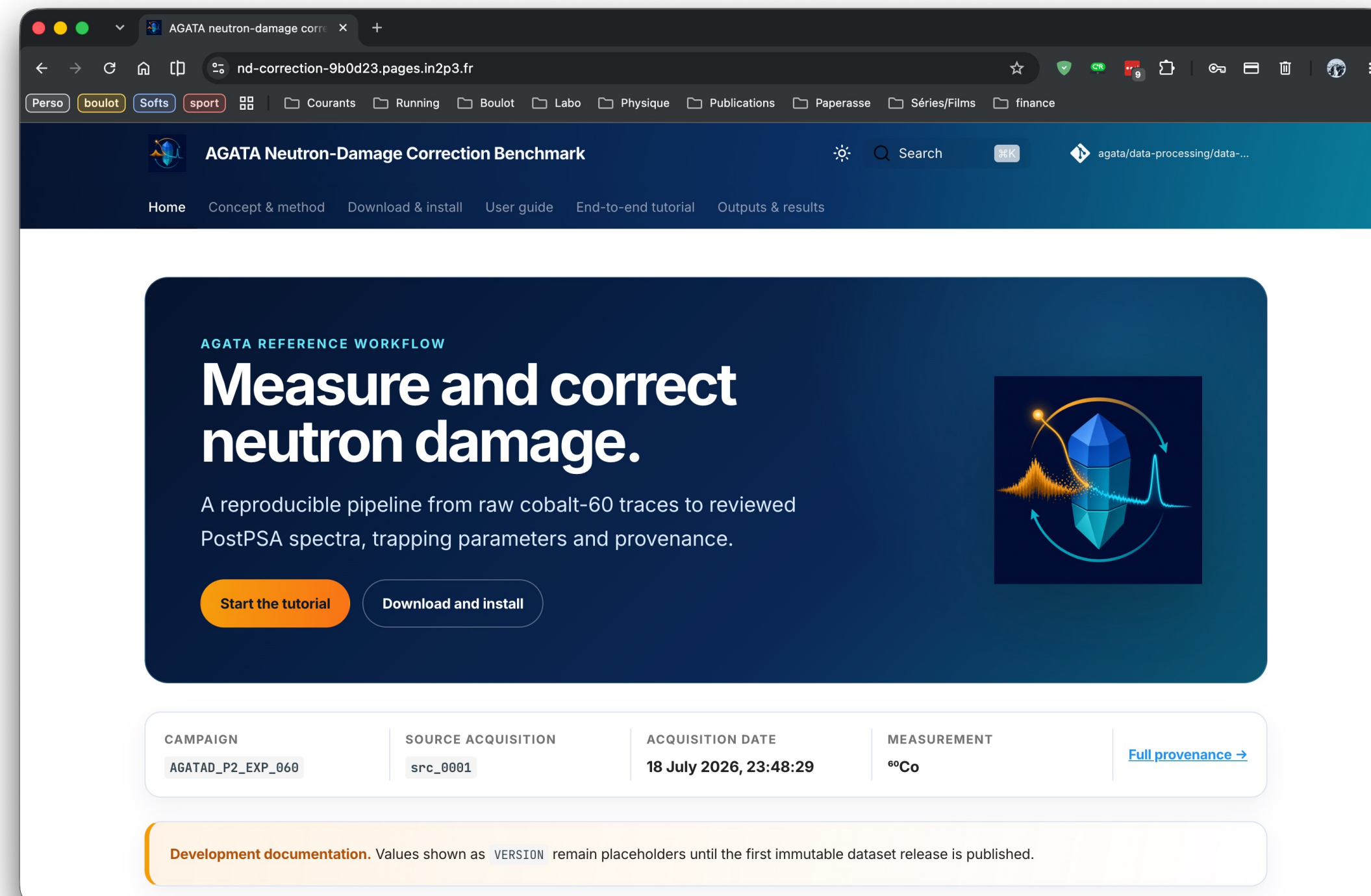
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➔ Software installations and container images
 - ➔ AGATA calibrations and data processing user guide
 - ➔ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➔ Access to AGATA data (grid, **benchmark datasets**, scanned data...)



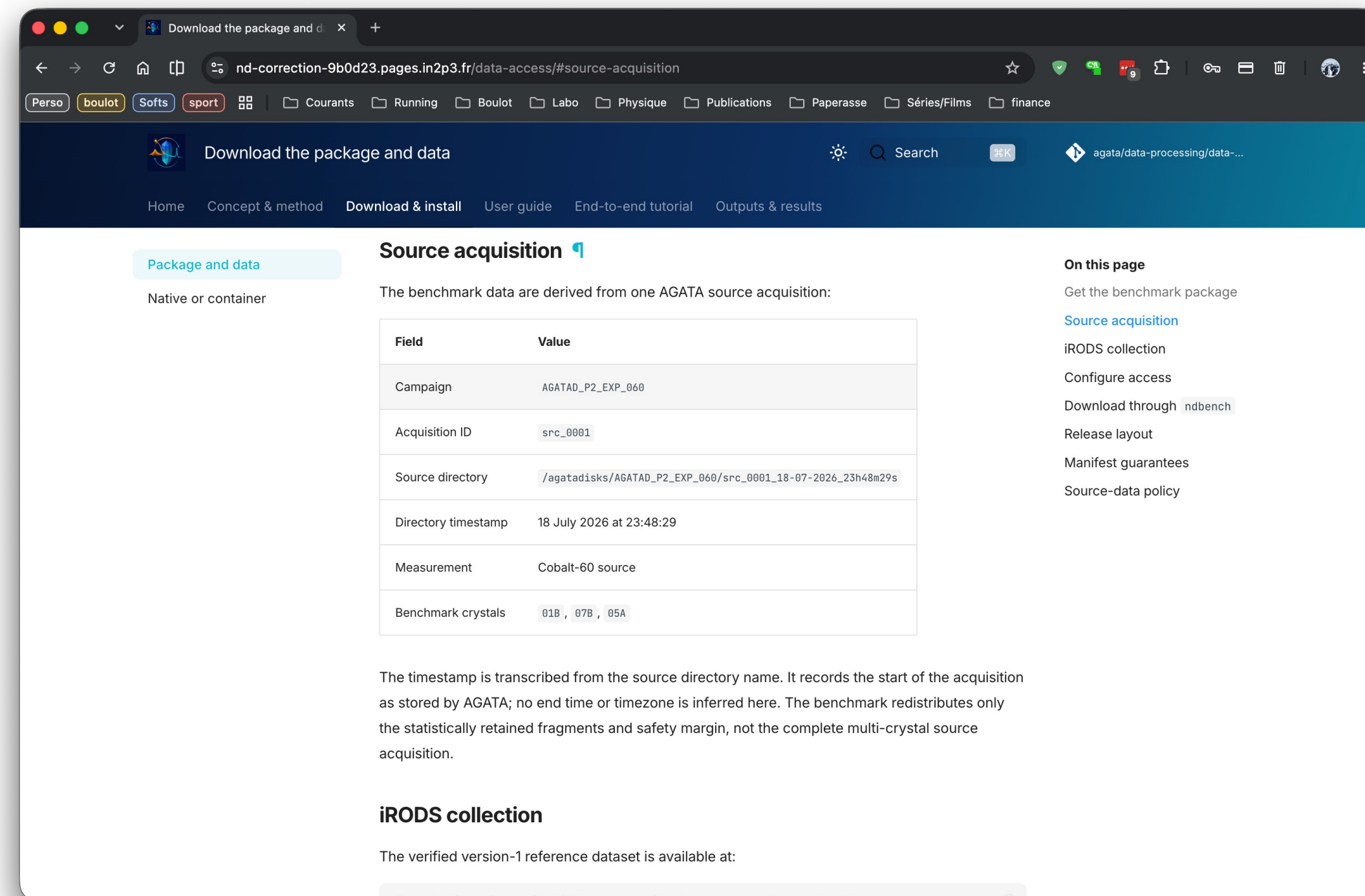
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➔ Software installations and container images
 - ➔ AGATA calibrations and data processing user guide
 - ➔ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➔ Access to AGATA data (grid, **benchmark datasets**, scanned data...)



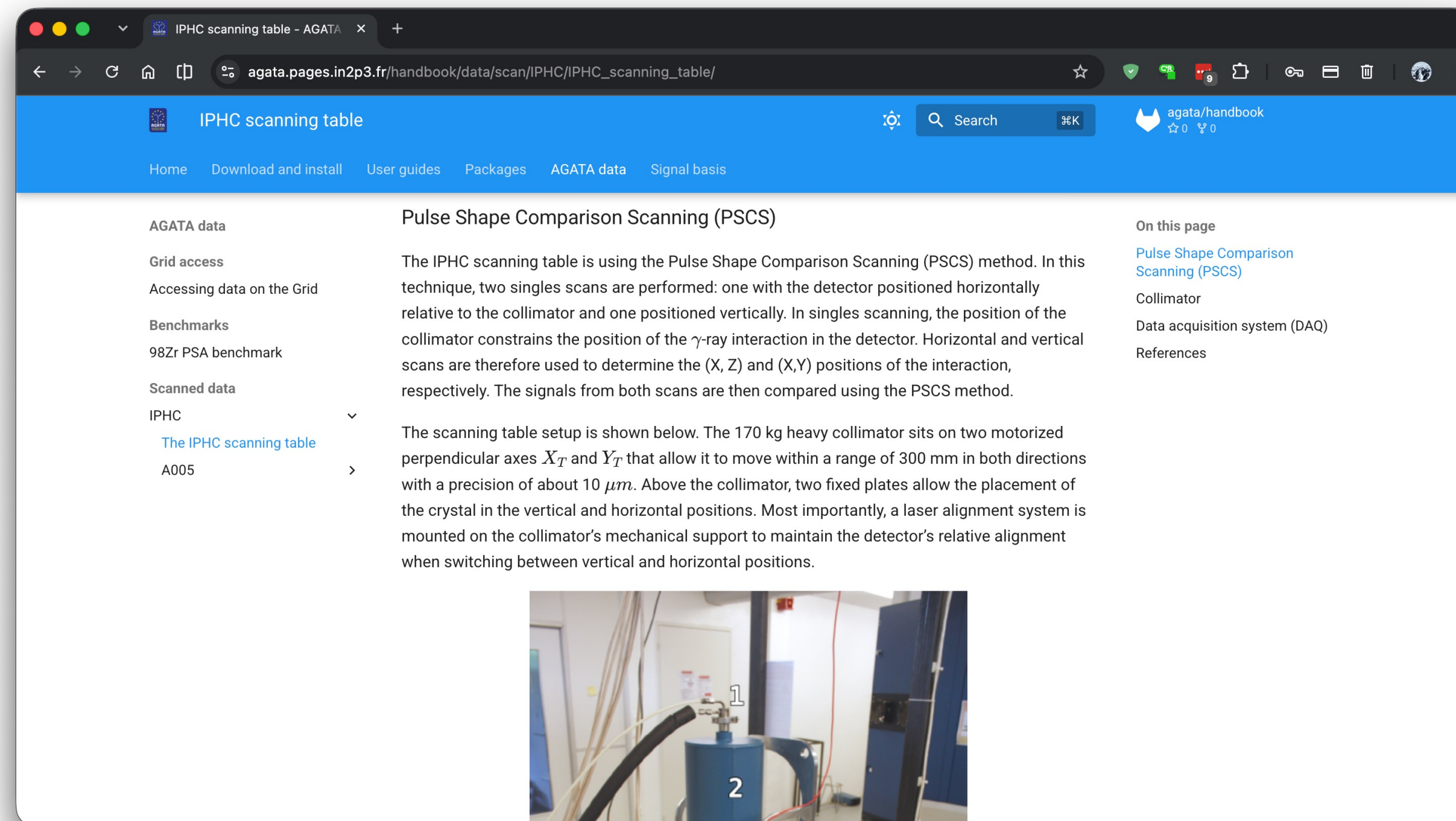
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide
 - ➡ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➡ Access to AGATA data (grid, **benchmark datasets**, scanned data...)



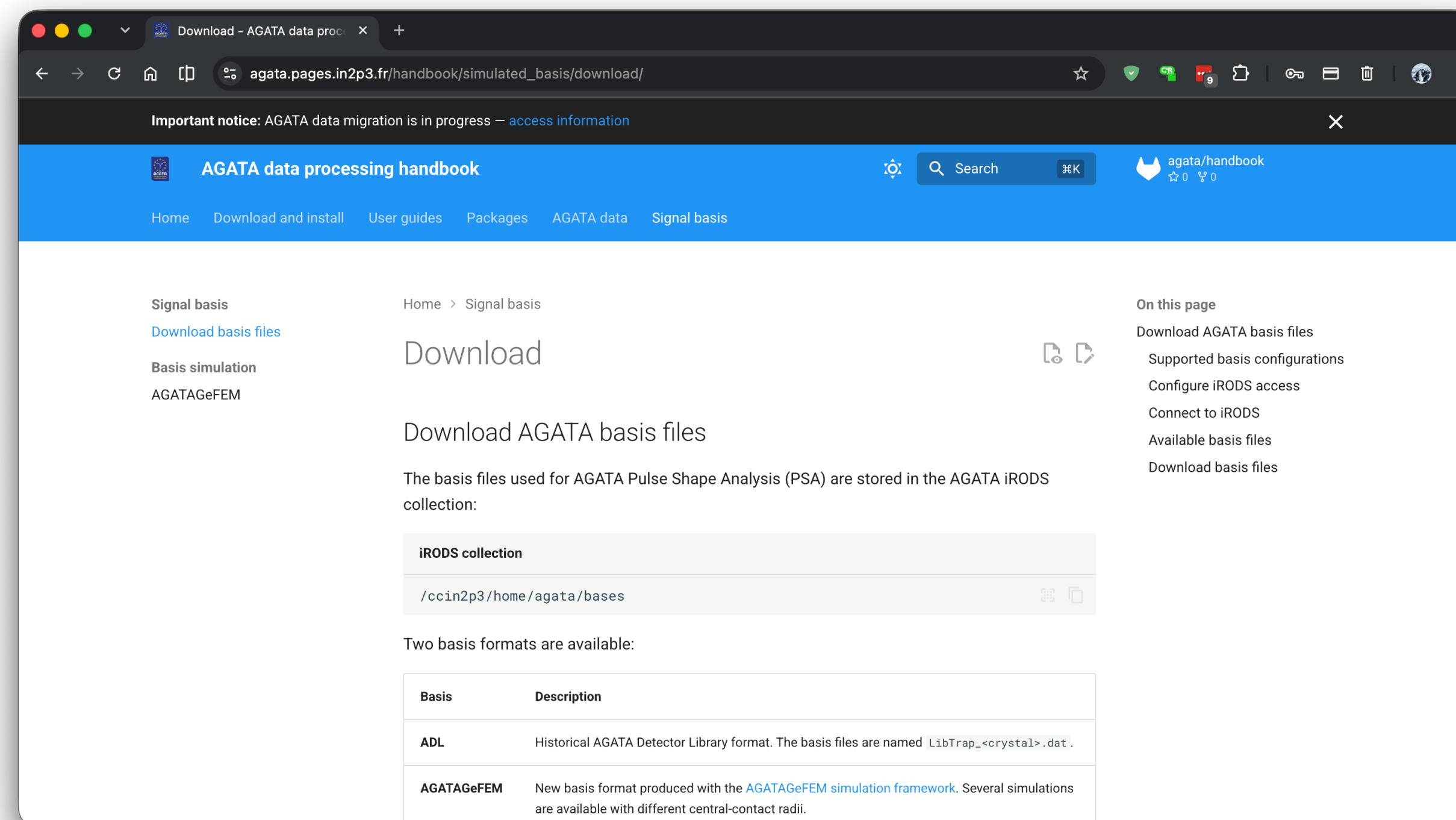
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➔ Software installations and container images
 - ➔ AGATA calibrations and data processing user guide
 - ➔ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➔ Access to AGATA data (grid, benchmark datasets, **scanned data...**)



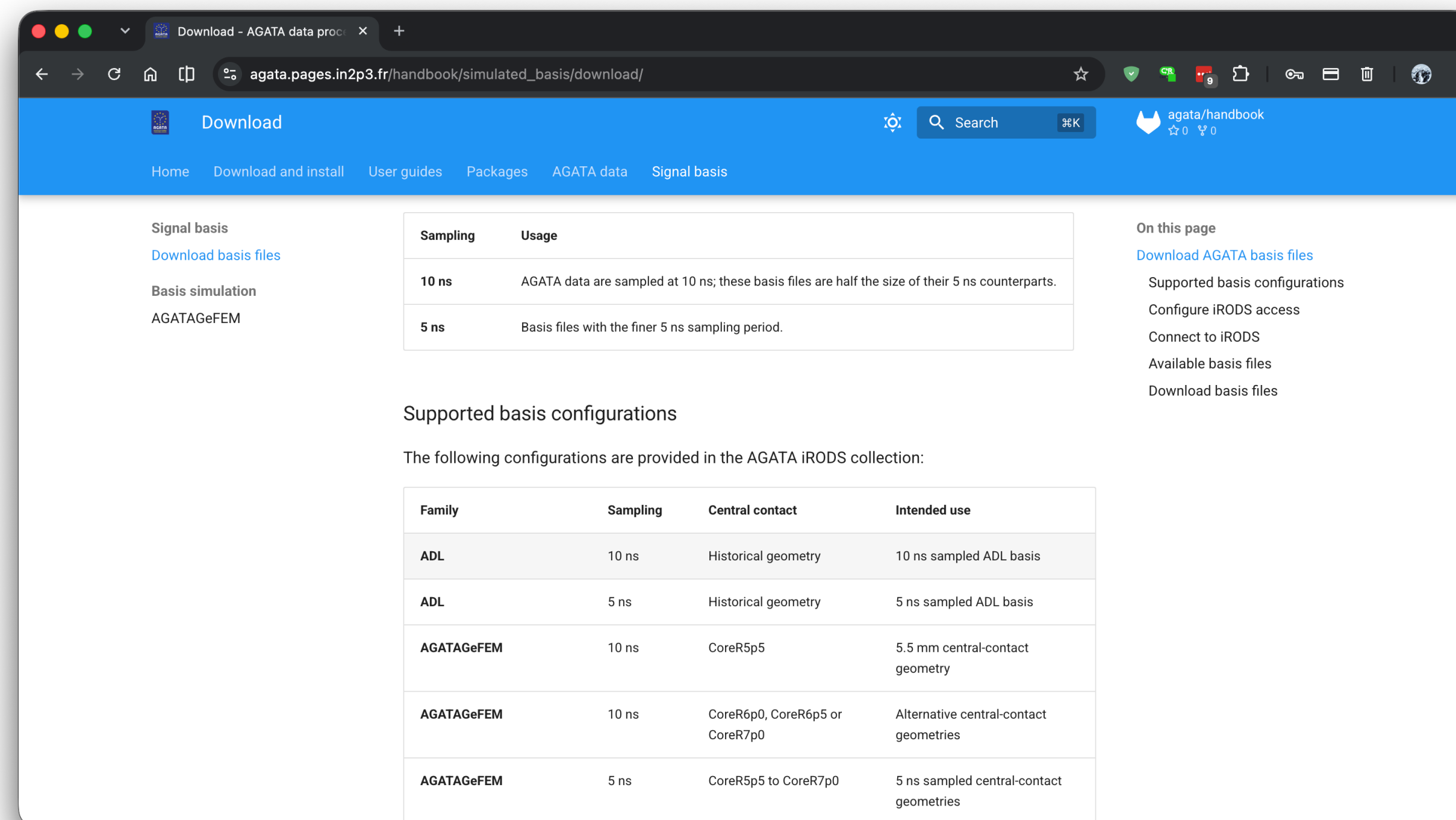
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide
 - ➡ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➡ Access to AGATA data (grid, benchmark datasets, scanned data...)
 - ➡ Access to simulated bases via iRODS (ADL and AGATAGeFEM)



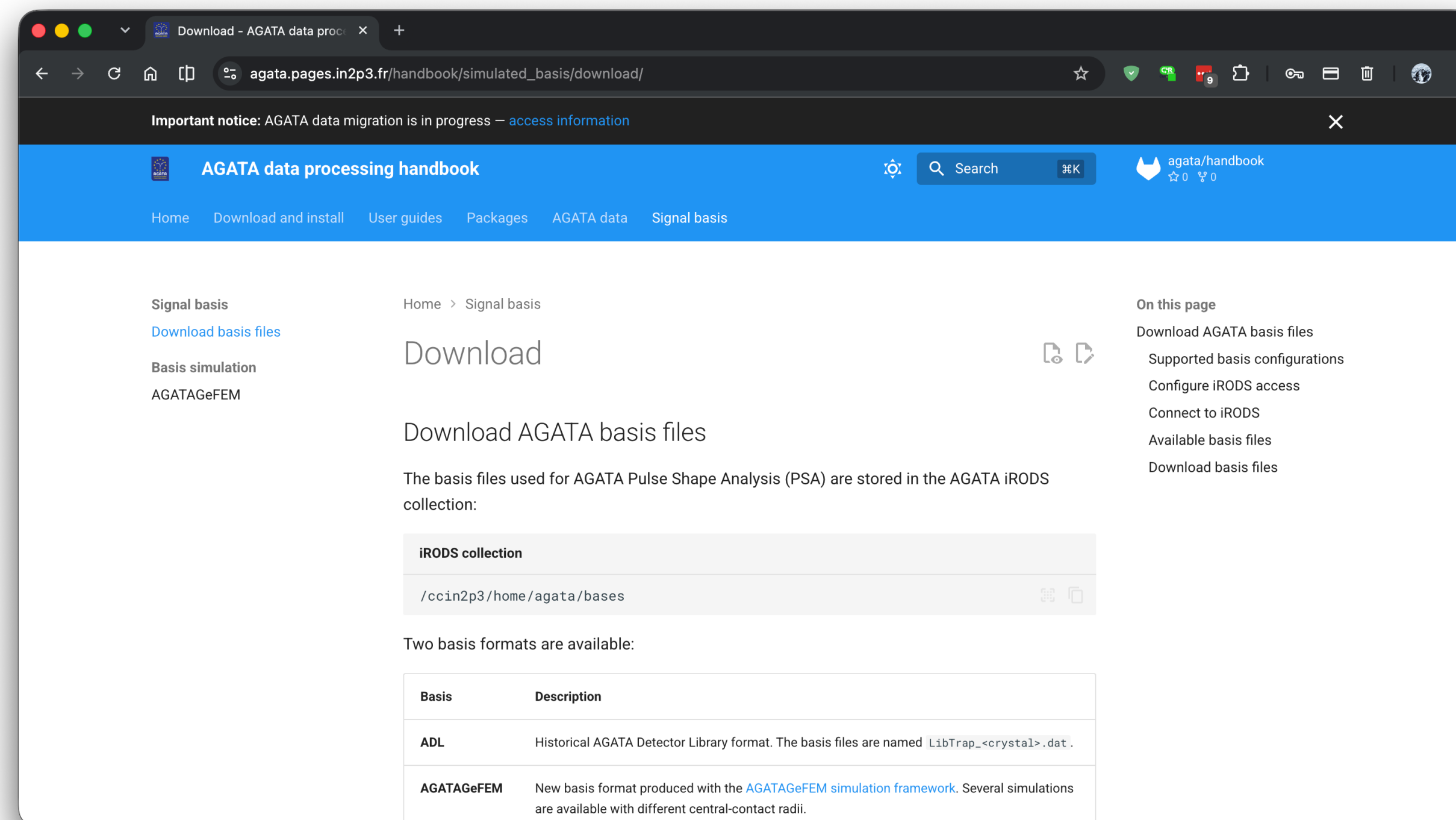
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide
 - ➡ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➡ Access to AGATA data (grid, benchmark datasets, scanned data...)
 - ➡ Access to simulated bases via iRODS (ADL and AGATAGeFEM)



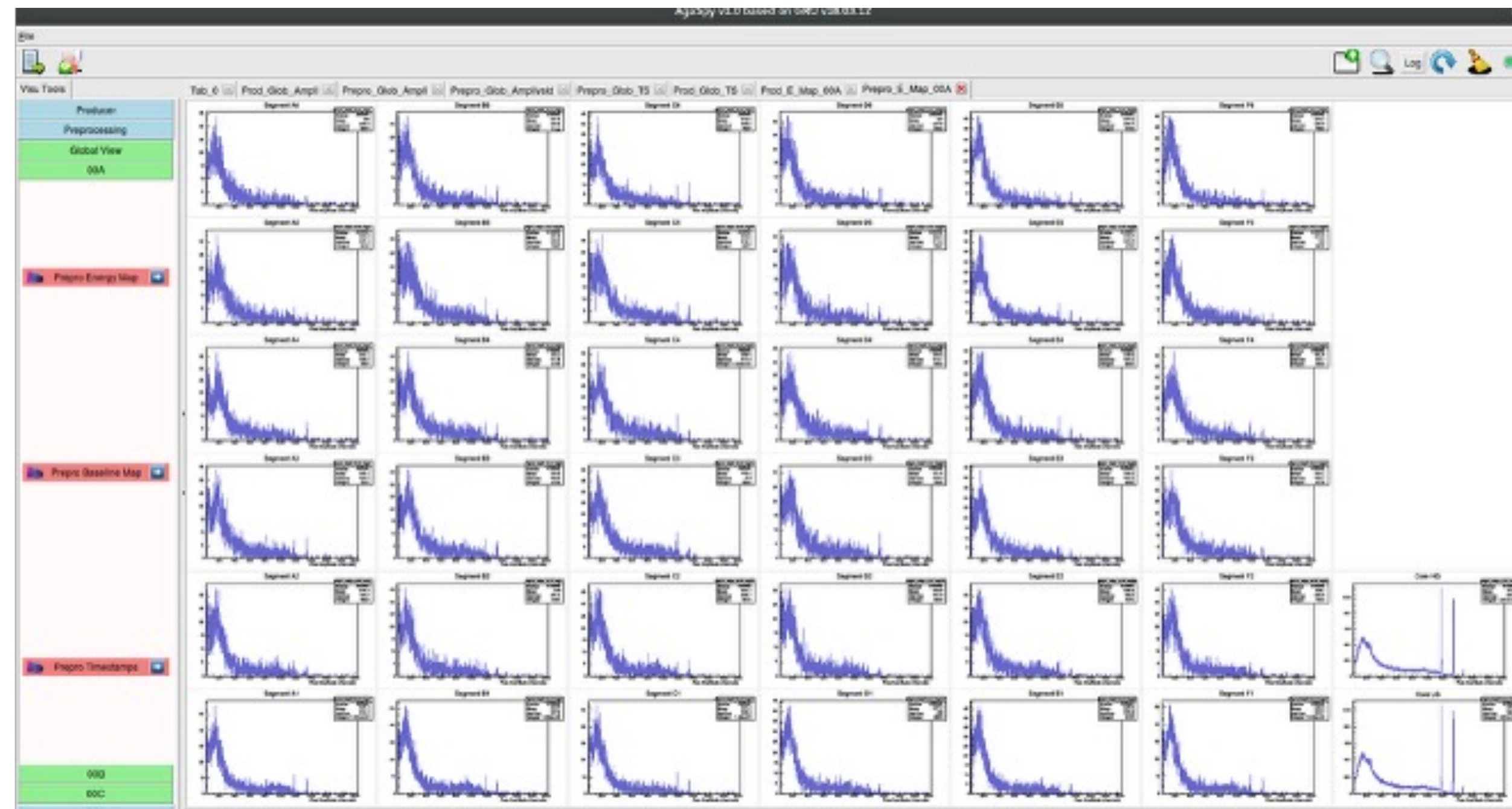
Documentation

- AGATA user guide website: <https://agata.pages.in2p3.fr/handbook>
 - ➡ Software installations and container images
 - ➡ AGATA calibrations and data processing user guide
 - ➡ Access to AGATA-linked packages (TracePlayer, Simulation tools, Cubix...)
 - ➡ Access to AGATA data (grid, benchmark datasets, scanned data...)
 - ➡ Access to simulated bases via iRODS (ADL and AGATAGeFEM)



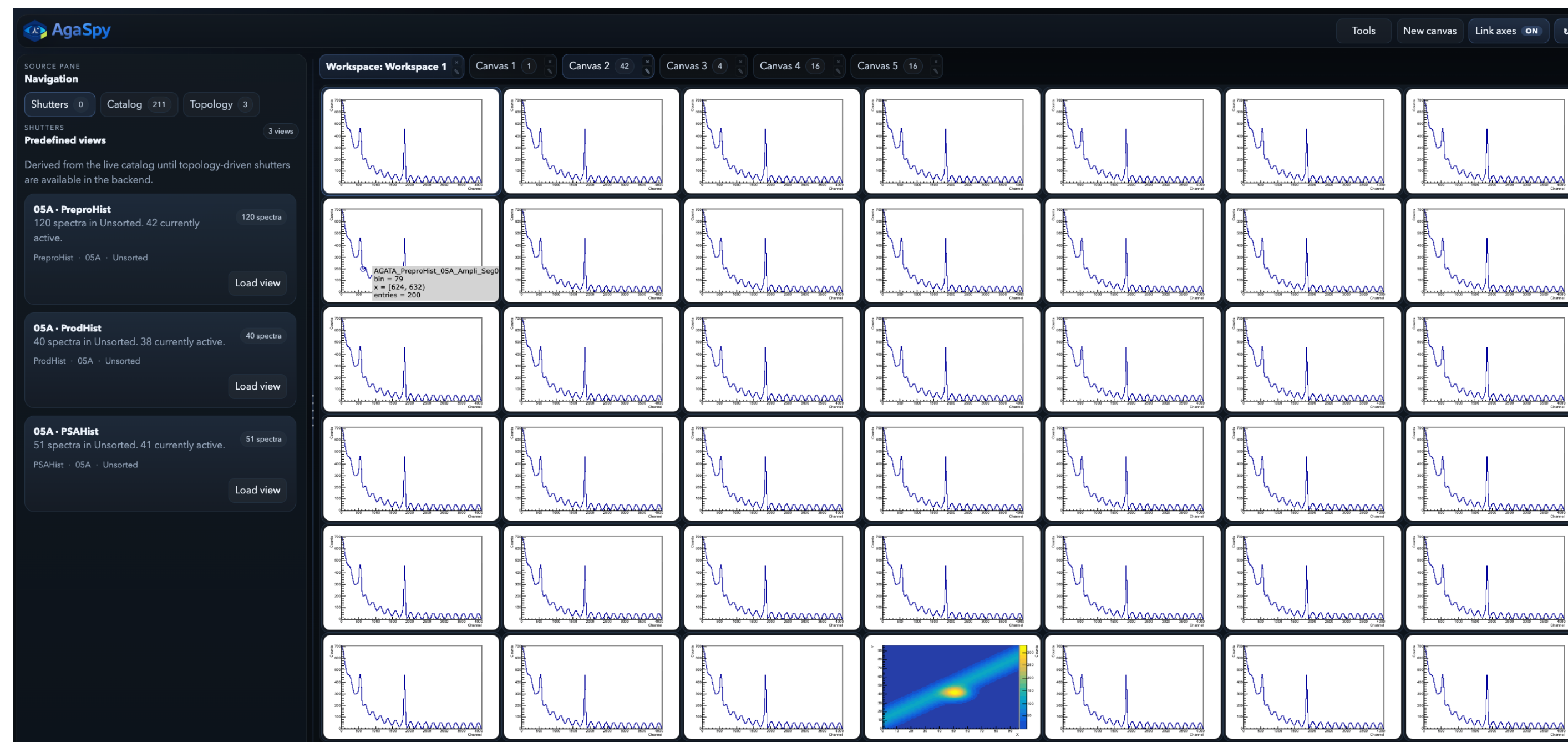
New AgaSpy

- The current AgaSpy needs a full revision:
 - ➔ Uses a ROOT GUI that is being deprecated
 - ➔ Based on GANIL GRU system
 - ➔ Not compatible with V2 data processing



New AgaSpy

- **New AgaSpy in development:**
 - ➔ C++ backend linked with Redis server and spectra
 - ➔ Web frontend using new JSROOT integration (compatible with other GUI systems)





Merci !