

Michael Sonntag, Achilleas Koutsou, Thomas Wachtler

German Neuroinformatics Node, Faculty of Biology, Ludwig-Maximilians-Universität München, Germany

Maintaining reproducible data workflows while keeping data in sync, backed up, and easily accessible from within and outside the lab is a growing challenge in research. To help minimize the time and effort required for these tasks, the GIN services provide support for comprehensive, reproducible and versioned management of scientific data throughout the data lifecycle.

GIN Services for Data Storage, Collaboration and Data Publication



GIN core features

- Access data from any location
- Built-in version control
- Platform and format independent
- Secure access
- Public and private repositories

In-lab Local Instance



Local
GIN
Server



Intranet



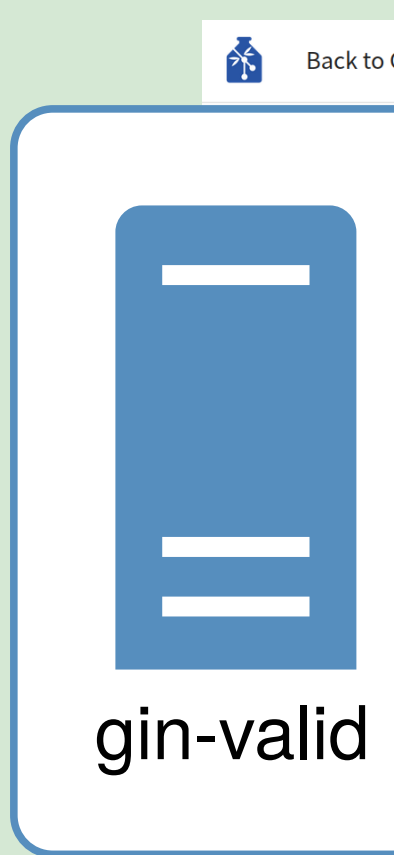
Command
line client

Local Hosting

- GIN is open source
- use your own data storage
- prebuilt docker containers
- extensive documentation for easy installation



Automation and Validation



Data validation service
valid.gin.g-node.org

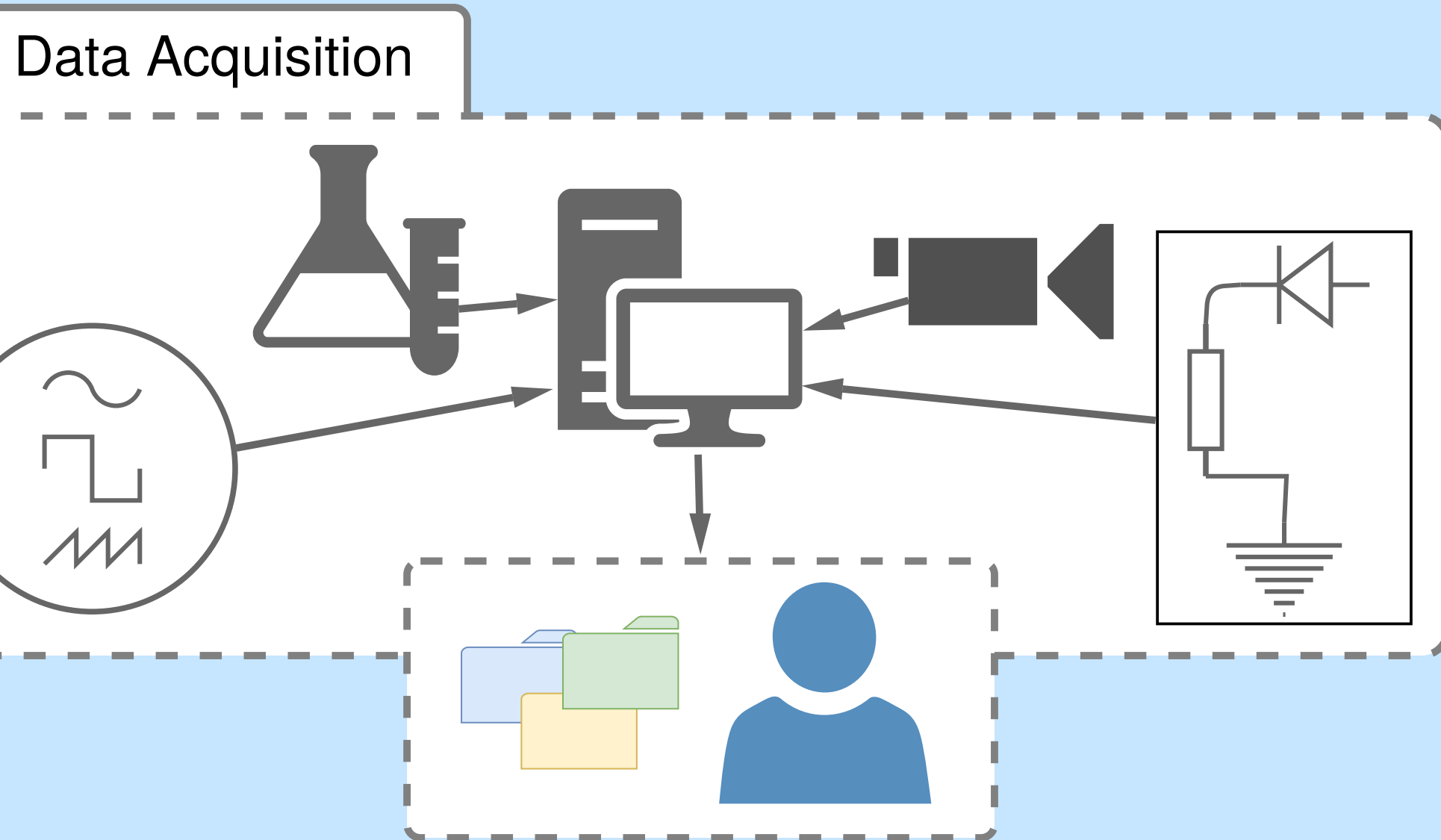
Automated Data Validation

- Automatically find irregular data in GIN repositories
- Validation history
- Supported validation formats
 - BIDS
 - odML
 - NIX
- Easily extensible to other formats
- Format validation contributions are welcome

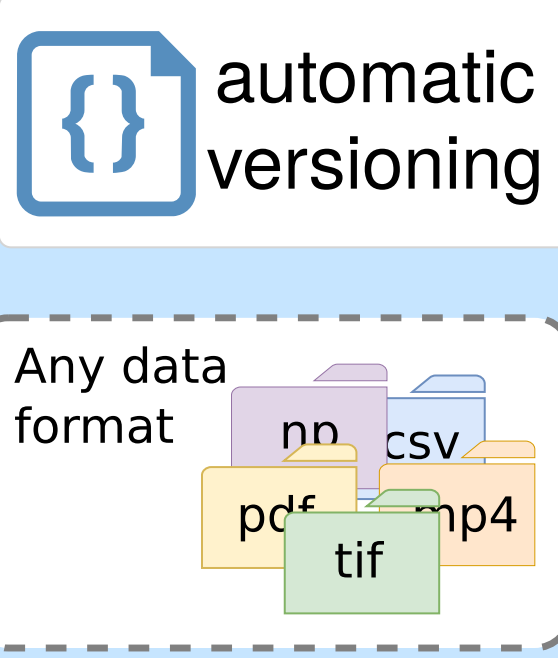
Automated repository handling

Create custom apps interacting with the GIN API

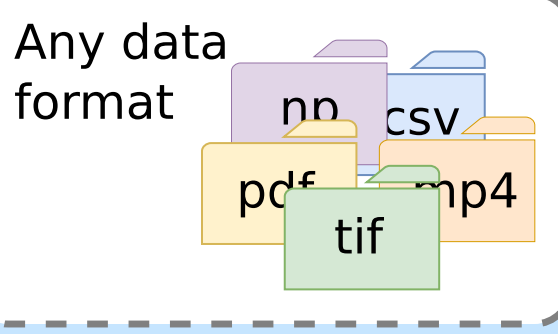
- Automate repository setup
- Manage lab-wide permissions
- Create repository templates



Interfaces



automatic
versioning



Any data
format

Supporting research data management throughout the data lifecycle

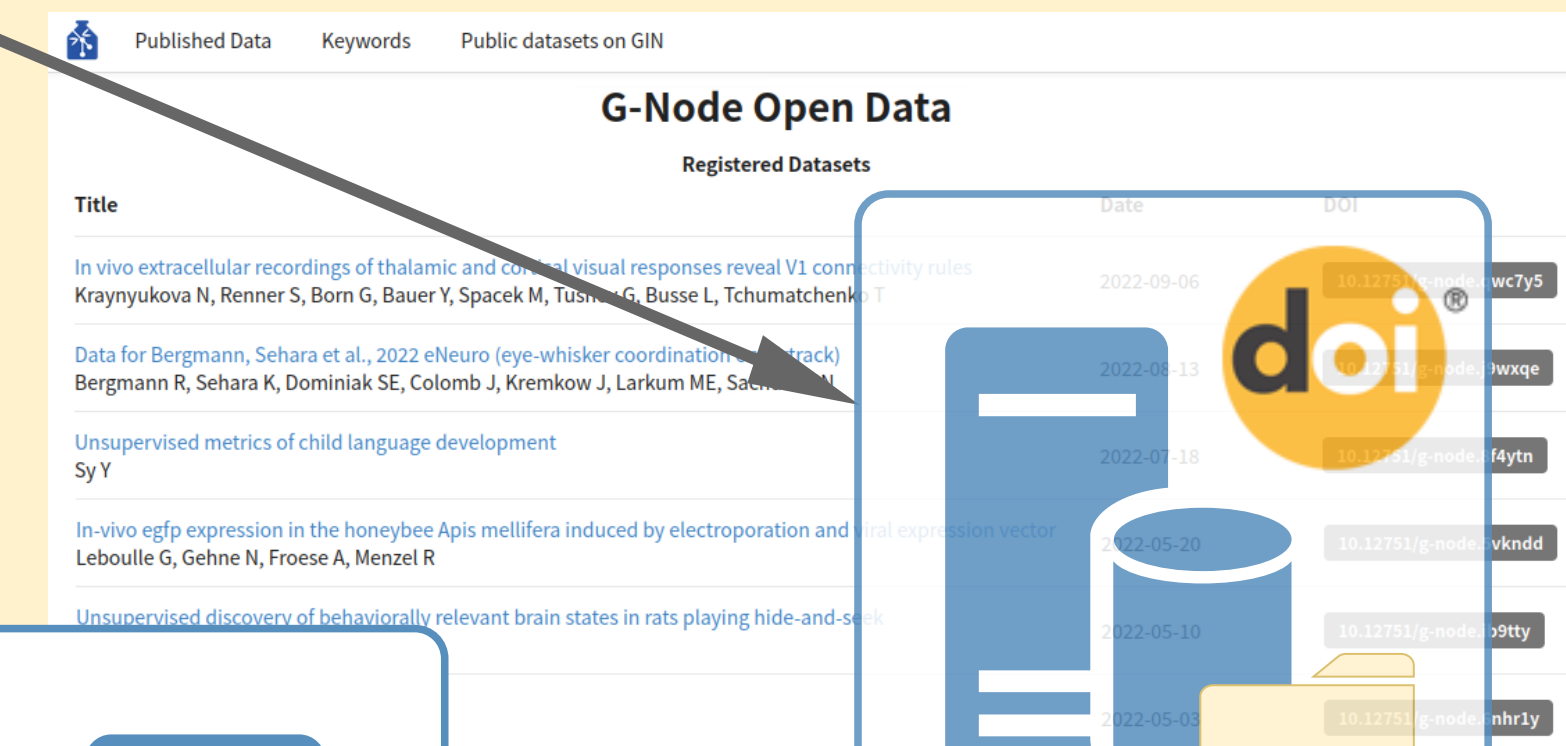
- Version control for code and data
- Efficient collaboration through access control and tracking of changes
- Validation services to ensure data quality
- Data publication (DOI) with a button click

Collaboration



- User management
- User access levels
- On and offsite collaboration
- Online issues help coordination
- Ensure repository integrity with versioning and pull requests

Data Publication and Findability



DOI service
doi.gin.g-node.org



Data search service
gin.g-node.org/explore/data

Findable Data via GIN

- Automatic indexing of text based files
- Online search for repository content
- Interactive rendering of markdown formats

Data Publication

- Persistent identifiers (DOI)
- Easy DOI assignment
- Links to research papers
- Web indexed

Contact us at

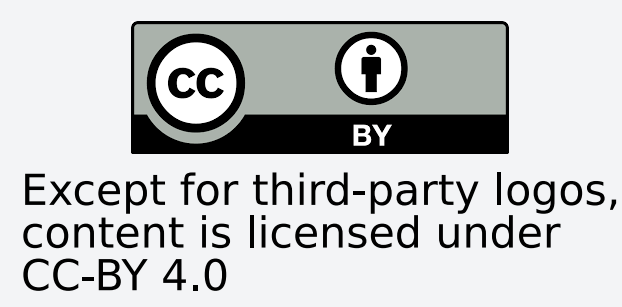
info@g-node.org

Resources and References



Contact:
dev@g-node.org

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BCCN 2022



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GIN (RRID:SCR_015864):

BIDS (RRID:SCR_016124):

NIX (RRID:SCR_016196):

odML (RRID:SCR_001376):

DataLad (RRID:SCR_003931):

<https://gin.g-node.org>

<https://gin.g-node.org/G-Node/in-house-gin>

<https://bids.neuroimaging.io>

<https://www.g-node.org/nix>

<https://www.g-node.org/odml>

<https://datalad.org>

<https://github.com/G-Node/tonic>

NFDI
Neuroscience

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