Off- and on-site collaboration and publication: The G-Node Infrastructure Services for research data management in neuroscience and beyond

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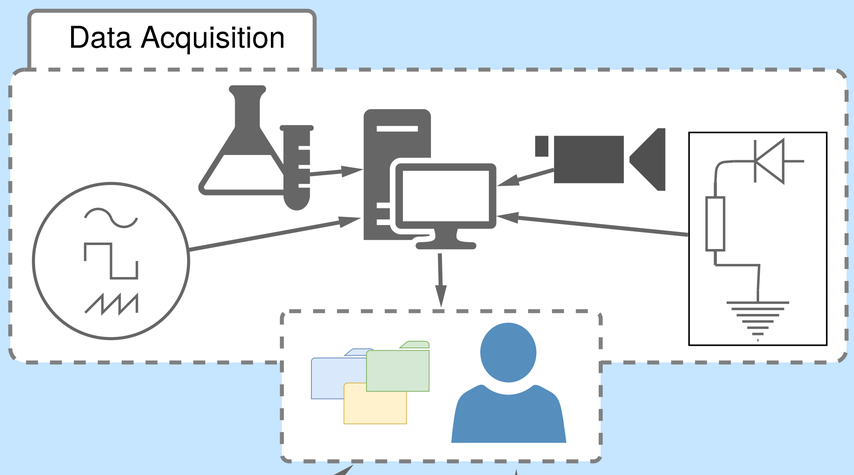
Maintaining reproducible data workflows while keeping data in sync, backed up, and easily accessible from within and outside the lab is a growing challenge in research. To help minimize the time and effort required for these tasks, the GIN services provide support for comprehensive, reproducible and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

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

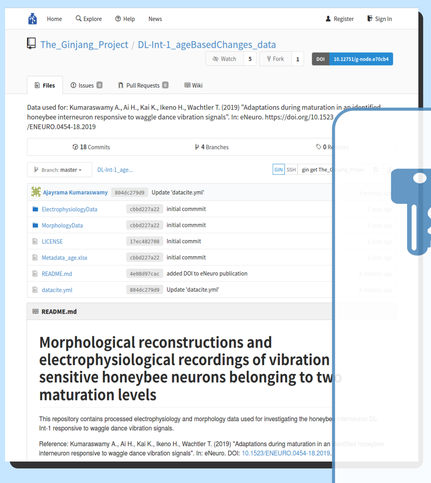
In-lab Local Instance

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



GIN Platform Server

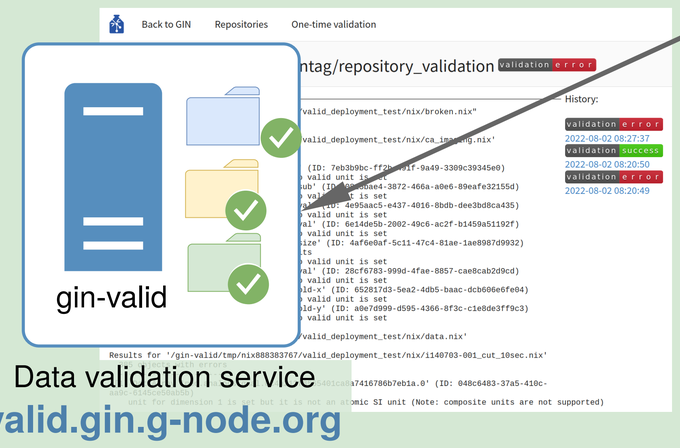
gin.g-node.org

re3data.org REGISTRY OF RESEARCH DATA REPOSITORIES http://doi.org/10.17616/R3SX9N GIN

Collaboration

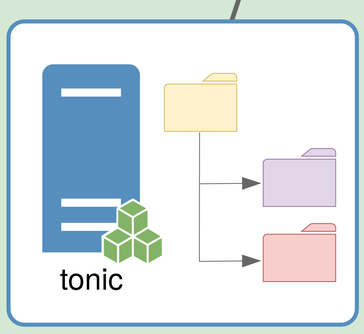
- User management
- User access levels
- On and offsite collaboration
- Online issues help coordination
- Ensure repository integrity with versioning and pull requests

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

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

Recommended by:

SCIENTIFIC DATA OFFICIAL RECOMMENDED REPOSITORY
PLOS
eLIFE

DataCite FIND, ACCESS, AND REUSE DATA

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

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Resources and References

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GIN (RRID:SCR_015864): https://gin.g-node.org
https://gin.g-node.org/G-Node/in-house-gin
BIDS (RRID:SCR_016124): https://bids.neuroimaging.io
NIX (RRID:SCR_016196): https://www.g-node.org/nix
odML (RRID:SCR_001376): https://www.g-node.org/odml
Datalad (RRID:SRC_003931): https://datalad.org
https://github.com/G-Node/tonic

NFDI Neuroscience

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