LRZ Research Data Management & NFDI Neuroscience

Leibniz Supercomputing Centre

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Leibniz Supercomputing Centre

of the Bavarian Academy of Sciences and Humanities (BAdW)

- ✓ IT Service Provider (“Rechenzentrum”) for the **Munich** Universities
- ✓ Regional Computing Centre for Research Institutions in **Bavaria**
- ✓ **German** National Supercomputing Centre (in GCS, one of the three strongest machines in D); **serves EU users** (PRACE)

all services, easy access, local customer base

„premium“ services, access by proposal, EU customer base

- ✓ Classical **High-Performance-Computing clusters**
- ✓ **Cloud-Computing Resources** (OpenStack, VMWare) - IaaS Virtual Machines
- ✓ **Data-analysis platform service** solutions in making (e.g. RStudio server, Jupyter)

RDM support at LRZ: metadata & „FAIR“

Experience from GeRDI, LRZ

Setting up a simple metadata store for existing data stores

- LRZ Research Data Management (“Let The Data Sing”) for supercomputing

OAI-PMH server for metadata catalogue

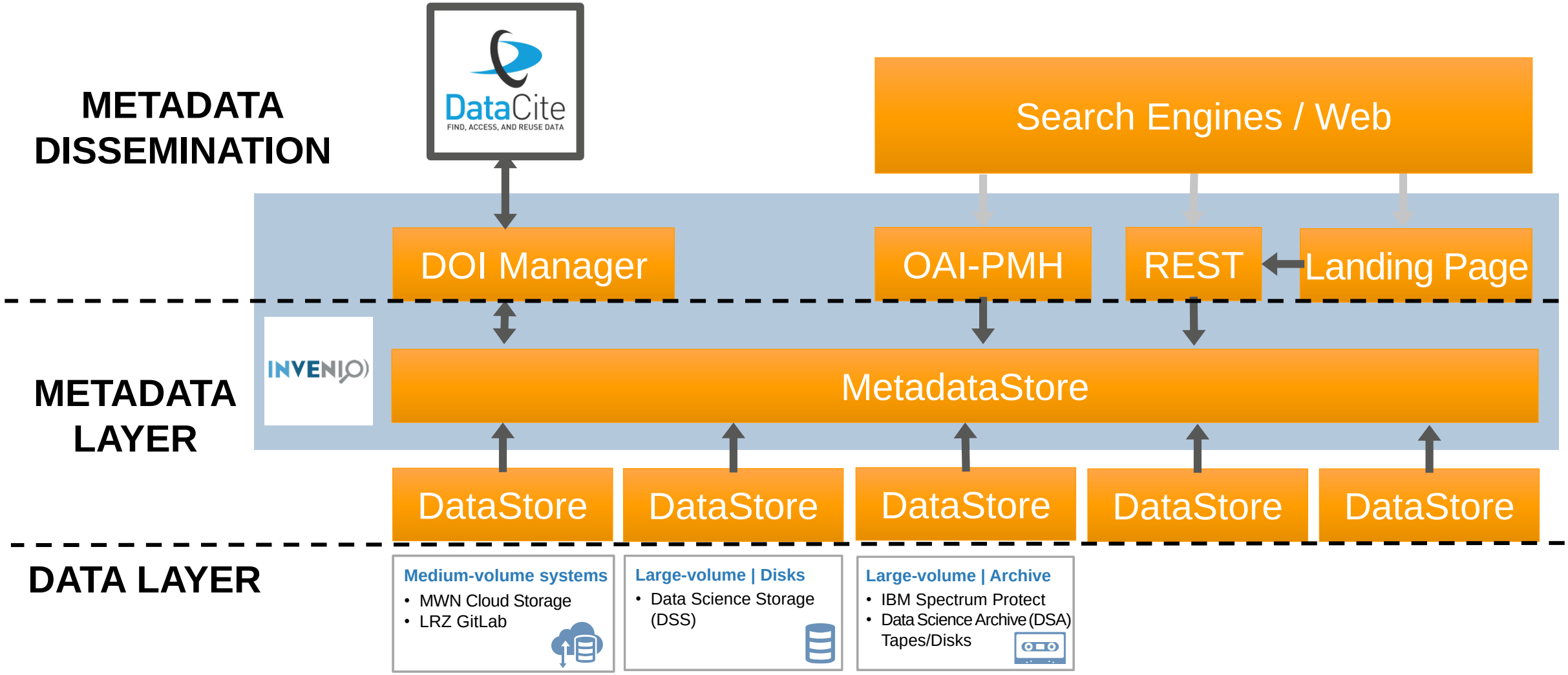
- Help with server set-up, automatization

Having catalogues integrated in

- EUDAT
- BASE
- … (other search engines)

data store(s), community repositories

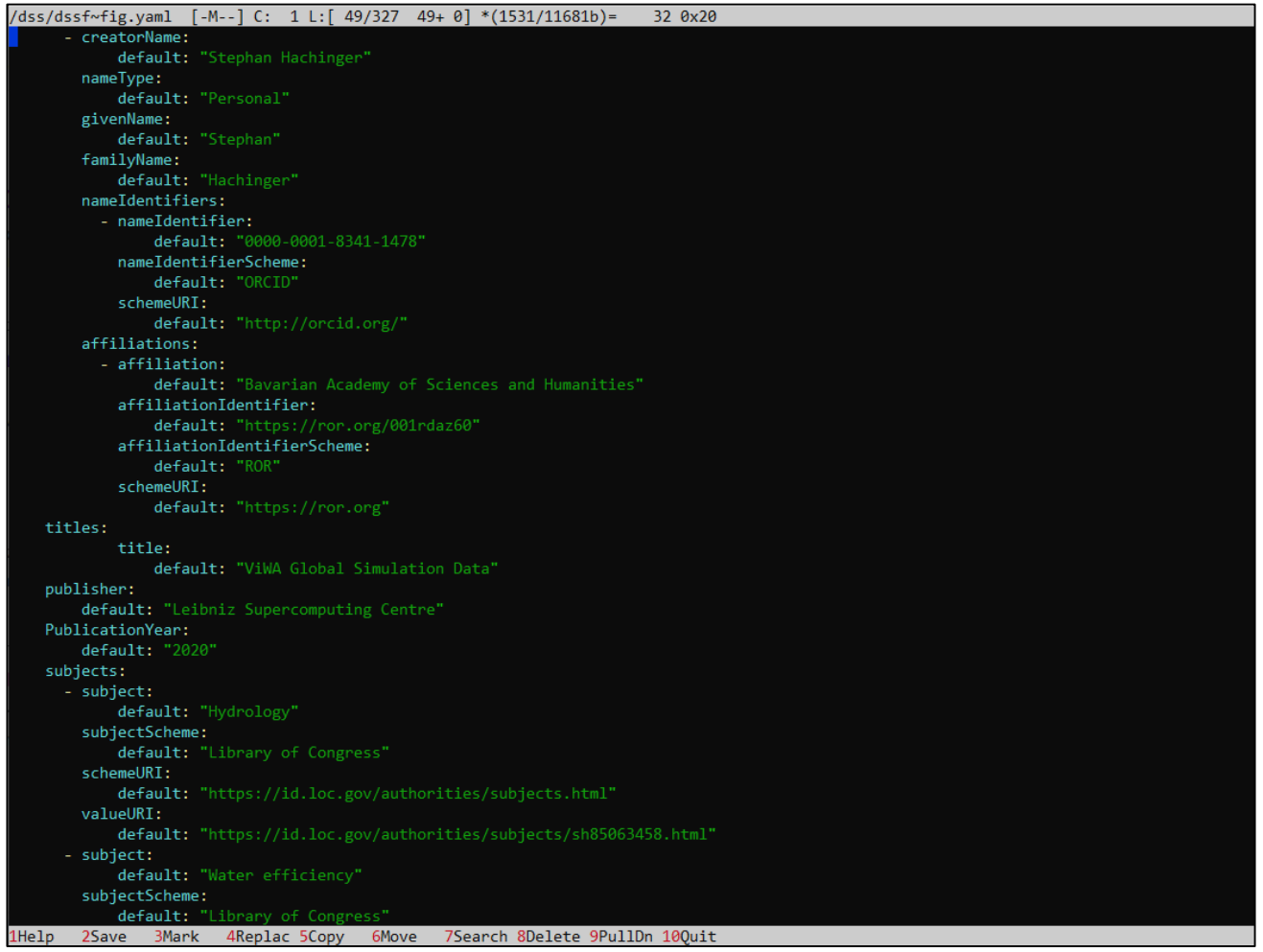
Let the Data Sing: A lightweight RDM layer



Where are we going with this system?

Metadata standard & „crawling“

- DataCite metadata in .metadata.yaml
  - discipline-agnostic, minimal (for DOI)
  - .yaml file creation via web interface
  - links to domain-specific metadata possible
- Metadata „defaults“ or instructions to system to get it:
  - from files with metadata (e.g. HDF5, netcdf)
  - from directory names
- Harmonisation of methods at different computing centres (in InHPC-DE and other projects, from 2022 on) as aim



Possible tasks for LRZ in NFDI Neuroscience

NFDI Neuroscience – LRZ concept

- *Data Store Interoperability LTDS – NFDI Neuroscience*
  - Converters e.g. DataLad ↔ LTDS metadata
    - integration of HPC data at LRZ with NFDI Neuroscience
  - Given the standardisation efforts among supercomputing centres,
    this should evolve to a general „HPC data“ approach for NFDI Neuroscience
- *NFDI-Neuroscience tools at LRZ*
  - NFDI Neuroscience analysis tools on LRZ Systems
  - Access to data at LRZ via APIs (give PID – get data)
  - NFDI Neuroscience data management tools on LRZ systems
- *Access control*
  - Restricted access to data via APIs (giving, e.g. a PID)
- *Consulting, co-development*

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