

Integration Workshop III preparation: Overview basic services

Team Base4NFDI
Status March 2025



Questions? Send an email to:






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Check our website:




www.base4nfdi.de

Current basic service projects

Currently in Initialisation Phase

<p>Jupyter®4.nfdi A central JupyterHub for the German National Research Data Infrastructure</p> 	<p>DMP4.nfdi Data Management Plans for the German National Research Data Infrastructure</p> 	<p>KGI4.nfdi Knowledge Graph Infrastructure for the German National Research Data Infrastructure</p> 	<p>nfdi.software A research software marketplace for the German National Research Data Infrastructure</p> 	<p>RDMT4.nfdi Research Data Management Training for the German National Research Data Infrastructure</p> 
<p>Jupyter4NFDI <i>A central JupyterHub</i> - Phase started in June 2024 -</p>	<p>DMP4NFDI <i>Data Management Plans</i> - Phase started in June 2024 -</p>	<p>KGI4NFDI <i>Knowledge Graph Infrastructure</i> - Phase started in June 2024 -</p>	<p>nfdi.software <i>Software Marketplace</i> - Phase started in Nov 2024 -</p>	<p>RDMTraining4NFDI <i>Research Data Management Training</i> - Phase starts in Feb 2025 -</p>

Currently in Integration Phase

<p>IAM4.nfdi Identity and Access Management for the German National Research Data Infrastructure</p> 	<p>PID4.nfdi Persistent Identifier Services for the German National Research Data Infrastructure</p> 	<p>TS4.nfdi Terminology Services for the German National Research Data Infrastructure</p> 
<p>IAM4NFDI <i>Identity and Access Management</i> - Phase started in Feb 2024 -</p>	<p>PID4NFDI <i>Persistent Identifiers</i> - Phase started in Jan 2025 -</p>	<p>TS4NFDI <i>Terminology Services</i> - Phase started in Jan 2025 -</p>

IAM4NFDI - Goals and Benefits

Integration

IAM4nfdi

Identity and Access Management
for the German National Research
Data Infrastructure



base4nfdi.de/projects/iam4nfdi.html

iam.services.base4nfdi.de



aai-kernteam@lists.kit.edu


Why?

to provide state-of-the-art Identity and Access Management (IAM) to NFDI - including processes, GDPR aligned policies and technologies.

Goal

to have a decentralised, federated IAM that integrates with EOSC solutions.

What is in it for you?

- Users & service providers do not need to bother with managing accounts
- Users can access services & data via their home organization 
- Scalable and efficient governance in user management with VOs (virtual organisations)
- NFDI consortia can join via compact solutions (**Community AAI**: didmos, AcademicID, Helmholtz AAI, RegApp)
- Connection to EOSC-AAI

IAM Explainer Video



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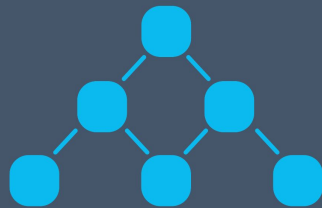


TS4NFDI - Goals and Benefits

Integration

TS4nfdi

Terminology Services
for the German National Research
Data Infrastructure



base4nfdi.de/projects/ts4nfdi.html

ts.services.base4nfdi.de



ts4nfdi@lists.nfdi.de

Why? to provide a central access via web interface or API to the diverse landscape of terminology services in NFDI consortia

Goal to integrate, standardise, harmonise and map terminologies

What is in it for you?

- This Terminology Service Suite consists of JavaScript based widgets that can be integrated into each web based application.
- Users can integrate terminologies via widget to any web application (annotation tools, ELNs, search engines, data repositories).

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PID4NFDI - Goals and Benefits

Integration

PID4.nfdi

Persistent Identifier Services
for the German National Research
Data Infrastructure



base4nfdi.de/projects/pid4nfdi.html

pid.services.base4nfdi.de



pid4nfdi@lists.nfdi.de

Why?

to consolidate and evolve PID service landscape within NFDI at all levels: technical, organisational, methodological, and in communication

Goal

to build an NFDI foundation service on established PID infrastructures

What is in it for you?

- Users can access a central place to find transparent information on existing PIDs incl. a decision guide, how to implement them, and a comparison of different governance models and costs.
- Users can get in-depth portfolio analytics on the basis of well-curated metadata and support in the identification of suitable project partners.

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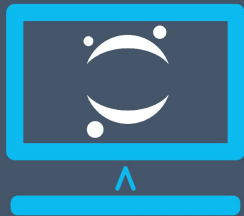


Jupyter4NFDI - Goals and Benefits

Initialisation

Jupyter[®]4.nfdi

A central JupyterHub
for the German National Research
Data Infrastructure



base4nfdi.de/projects/jupyter4nfdi

<https://nfdi-jupyter.de/>



jupyter4nfdi@lists.nfdi.de

Why?

consolidate and grant access to fragmented and partly inaccessible service landscape

Goal

a centralised JupyterHub to provide access to software stacks and HPC computing resources

What is in it for you?

- User-friendly, customisable Jupyter Notebook + JupyterLab webservice
- Remote (HPC) computing resources and data storage in a centralised JupyterHub
- Easy creation, accessibility & reproducibility of code scripts and Fair Digital Objects (FDOs)

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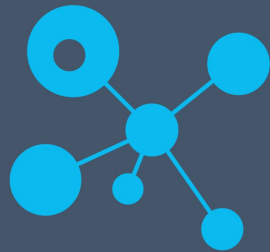


KGI4NFDI - Goals and Benefits

Initialisation

KGI4nfdi

Knowledge Graph Infrastructure
for the German National Research
Data Infrastructure



 base4nfdi.de/projects/kgi4nfdi

 kgi4nfdi@lists.nfdi.de

Why? better findability and exploration of knowledge,
more KGI visibility and interoperability

Goal help consortia, institutions and researchers to
create and link KGs

What is in it for you?

- Central KG registry, search and query platform
- Support in KG adoption, creation and linking
- (Inter)national KG interoperability

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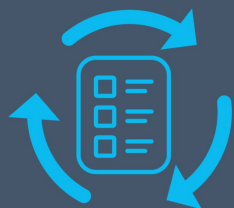


DMP4NFDI - Goals and Benefits

Initialisation

DMP4nfdi

Data Management Plans
for the German National Research
Data Infrastructure



base4nfdi.de/projects/dmp4nfdi

dmp.services.base4nfdi.de



dmp4nfdi@lists.nfdi.de

Why?

DMPs are essential to prepare and maintain proper RDM/FAIRness and should precede and accompany every research project

Goal

host open-source tool RDMO and coordinate interoperable template creation

What is in it for you?

- centrally hosted, open source tool (RDMO) for DMPs + SMPs with customisable client for each consortium
- support in discipline-specific, interoperable DMP template creation
- support in RDMO plugin development
- Open Educational Resources and support on outreach, DMP/SMP awareness and training

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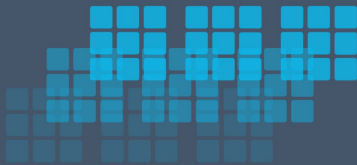


nfdi.software - Goals and Benefits

Initialisation

nfdi.software

A research software marketplace
for the German National Research
Data Infrastructure



 base4nfdi.de/projects/nfdi-software

 nfdi-software@lists.nfdi.de

Why?

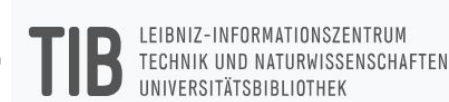
Research software is distributed everywhere in the community

Goal

design, implement and test a central marketplace for research software

What is in it for you?

- Single point of access for research software within the NFDI
- Research Software Directory to improve citability and findability of software
- LLM based search engine which finds publications and related software without knowing the name



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RDMTraining4NFDI - Goals and Benefits



Initialisation

RDMT4.nfdi

Research Data Management Training
for the German National Research
Data Infrastructure



 base4nfdi.de/projects/rdmtraining4nfdi

 rdmtraining4nfdi@lists.nfdi.de

Why?

Lack of open tailored training materials among different disciplines which all have their own unique requirements and subject cultures

Goal

Modular collection of foundational RDM training materials (Train the Trainer) for consortia staff (data stewards, trainers)

What is in it for you?

- Adaptable, documented, proven training formats and methods, e.g. summer schools, workshop series
- Exploration of (NFDI) certification to establish quality standards and document the skills acquired by participants

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