



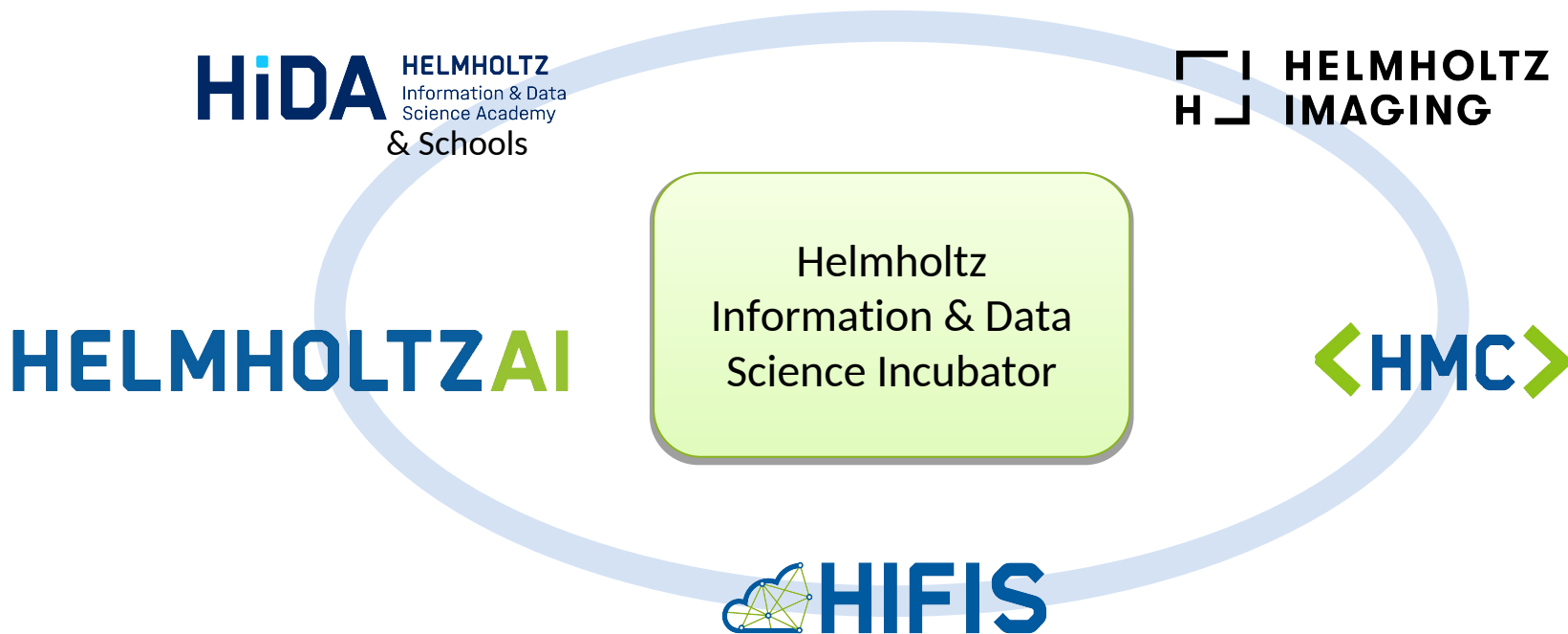
Helmholtz Digital Services for Science - Collaboration made easy.

Cloud and Software Services by HIFIS
GFZ Research Software Meet-up, Potsdam, 2022-09-14

Uwe Jandt
on behalf of the HIFIS Team

Helmholtz aims for joint research & information environment for all Research Fields:

- Cross-centre platforms for Education, interdisciplinary science and IT infrastructure.



Helmholtz Digital Services for Science — Collaboration made easy.

Cloud Services

Software Services

Courses

User Access

Use Cases



HIFIS for...

Scientists

Check out how HIFIS can help you in doing research and more.

Software Engineers

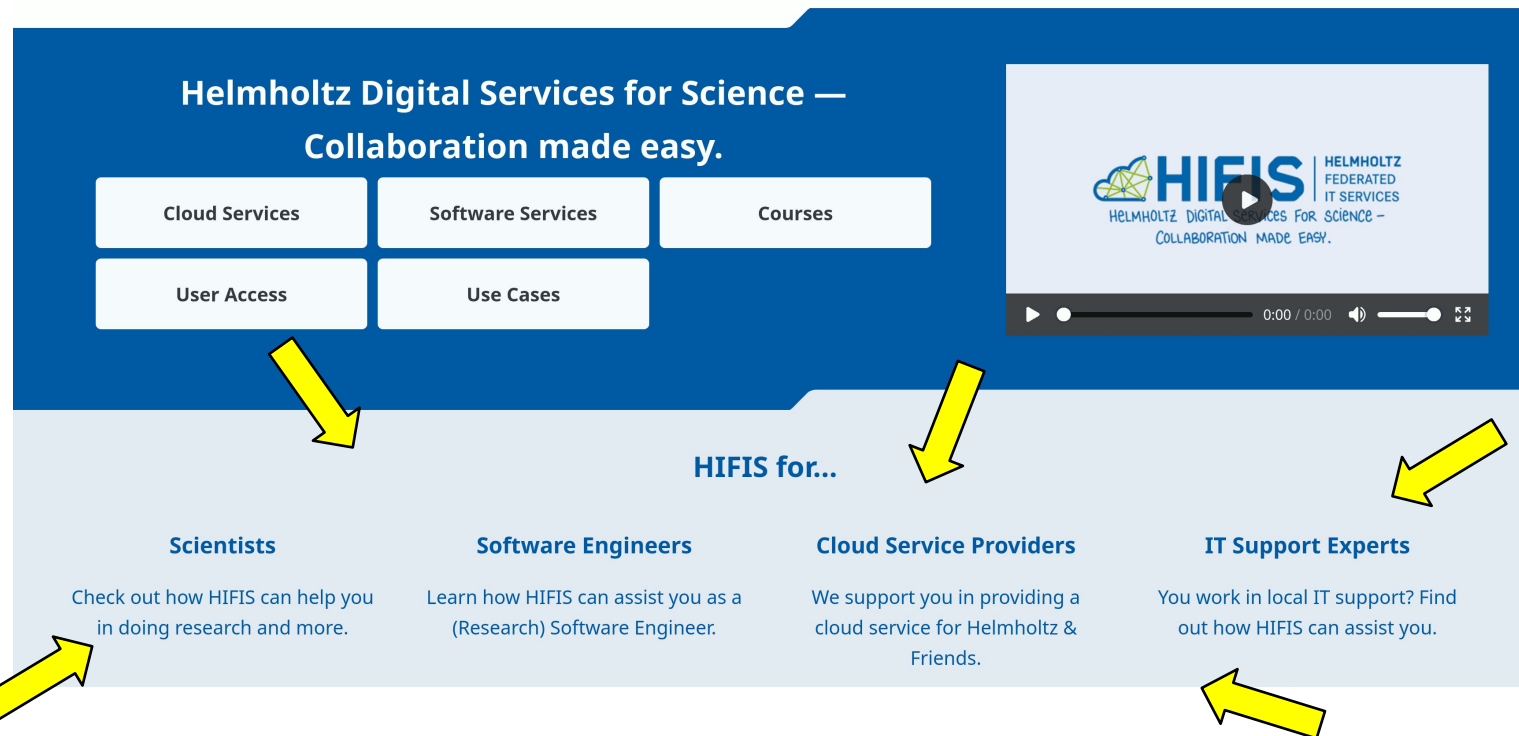
Learn how HIFIS can assist you as a (Research) Software Engineer.

Cloud Service Providers

We support you in providing a cloud service for Helmholtz & Friends.

IT Support Experts

You work in local IT support? Find out how HIFIS can assist you.



**Helmholtz Digital Services for Science —
Collaboration made easy.**

Cloud Services **Software Services** **Courses**

User Access **Use Cases**

HIFIS | HELMHOLTZ
FEDERATED
IT SERVICES
HELMHOLTZ DIGITAL SERVICES FOR SCIENCE —
COLLABORATION MADE EASY.

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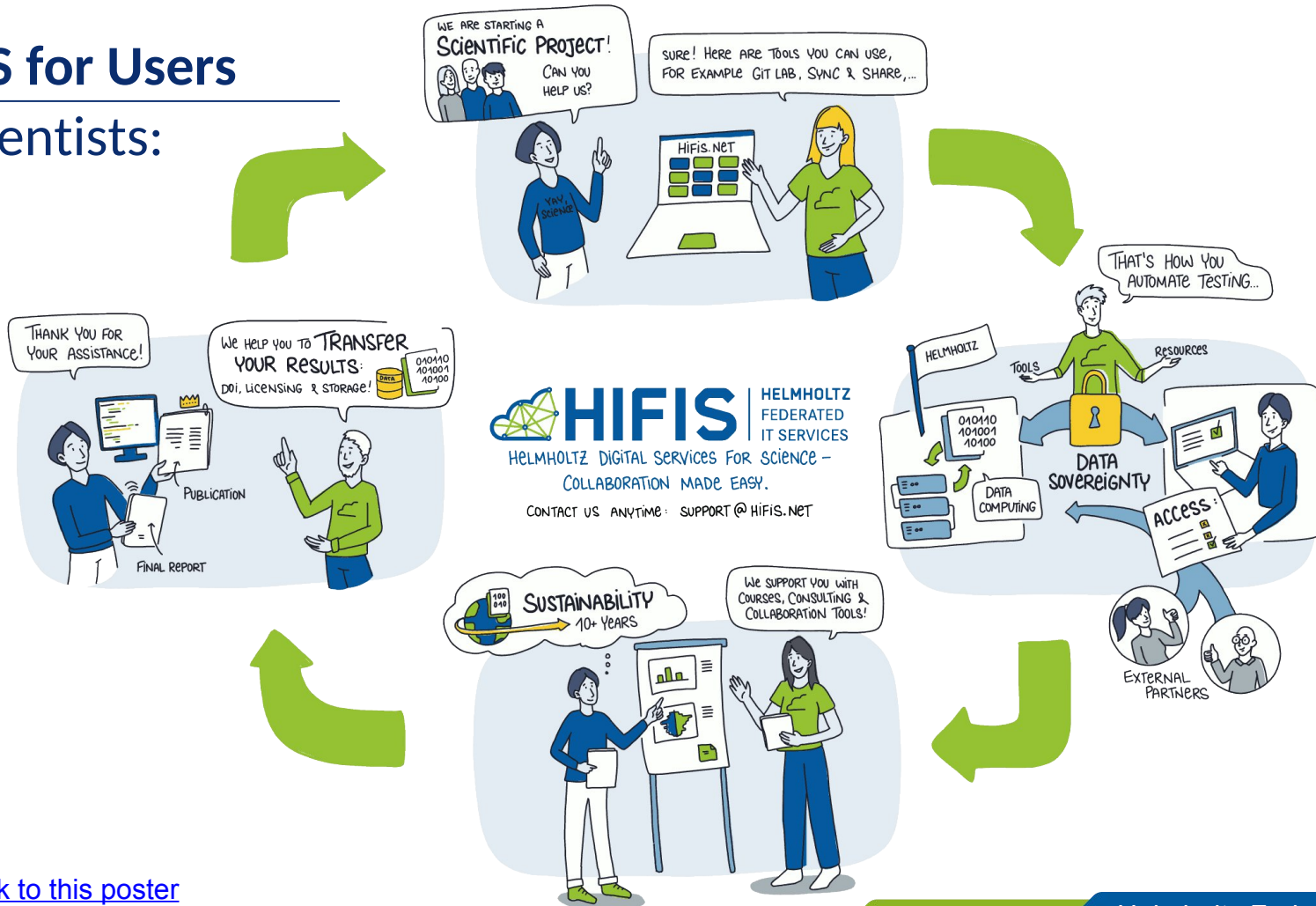
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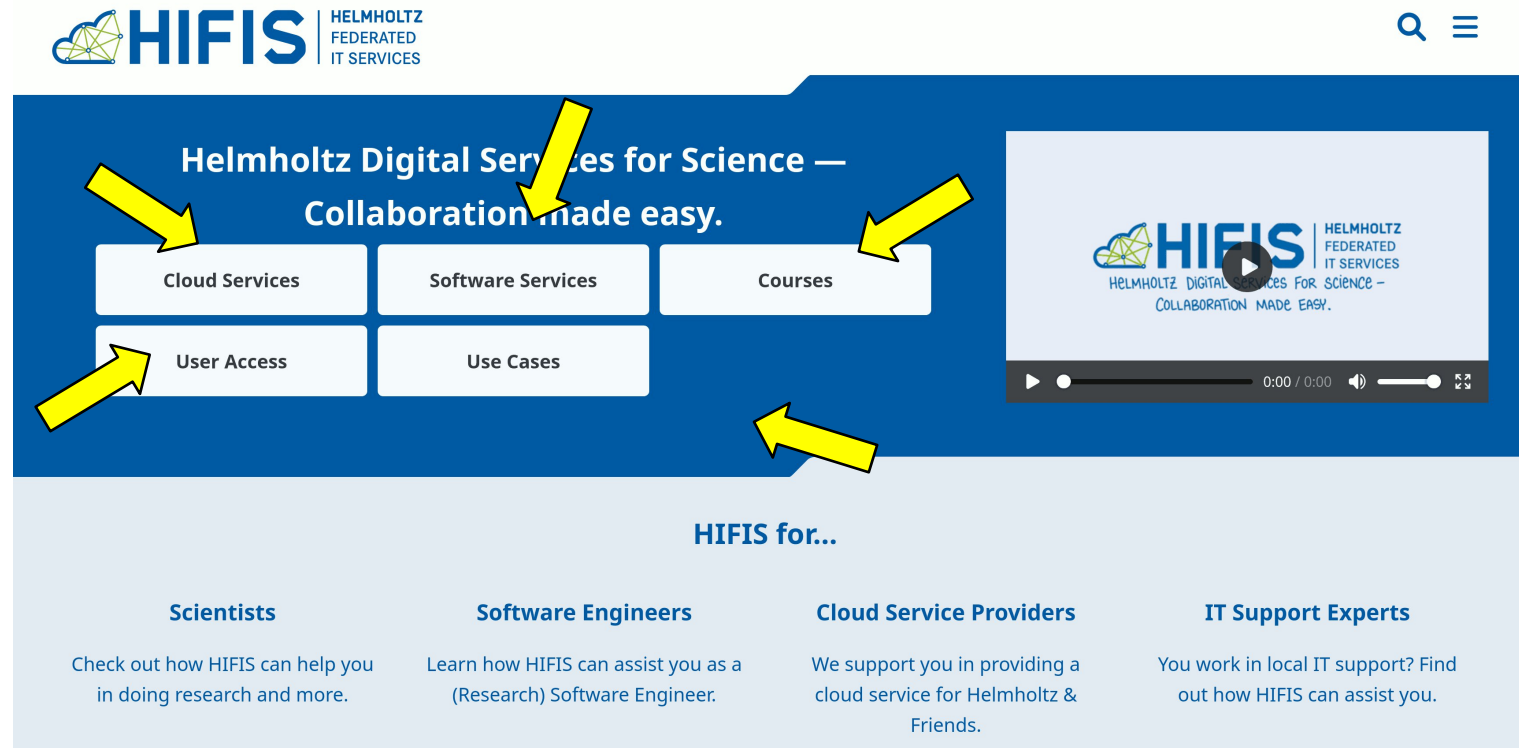
IT Support Experts
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HIFIS for Users

...scientists:



➤ [Link to this poster](#)



The screenshot shows the HIFIS website with the following elements:

- Header:** HIFIS logo and "HELMHOLTZ FEDERATED IT SERVICES" text. Search and menu icons are in the top right.
- Main Section:** "Helmholtz Digital Services for Science — Collaboration made easy." with five service buttons: Cloud Services, Software Services, Courses, User Access, and Use Cases. Yellow arrows point to each of these buttons.
- Video Player:** A video player on the right showing a HIFIS logo and the tagline "HELMHOLTZ DIGITAL SERVICES FOR SCIENCE — COLLABORATION MADE EASY." with a play button and a progress bar.
- HIFIS for... Section:** A section titled "HIFIS for..." with four columns:
 - Scientists:** Check out how HIFIS can help you in doing research and more.
 - Software Engineers:** Learn how HIFIS can assist you as a (Research) Software Engineer.
 - Cloud Service Providers:** We support you in providing a cloud service for Helmholtz & Friends.
 - IT Support Experts:** You work in local IT support? Find out how HIFIS can assist you.

Helmholtz Cloud Services by HIFIS

Cloud: Services + Portal



HELMHOLTZ FEDERATED IT SERVICES

Services Team News Helpdesk About Sign in

Select Keywords Select Providers Select Software Sort Services

B2Share

B2SHARE, based on Invenio
Research Data (+ corresponding Metadata) Publishing service.

Description
Go to service

bwSync&Share

Nextcloud
File Sync and Share, Groupware-Functionalities: Files, Fotos, Calendar, etc.

Description
Go to service

Compute Projects

Slurm
Apply for Computing Time at Jülich Supercomputing Centre (JSC).

Description
Go to service

Container- Runtime

Apptainer
Container runtime environment on HPC systems at FZJ / Jülich Supercomputing Centre (JSC).

Description
Go to service

Data Projects (HDF)

JARDS
Apply for data projects at FZJ / Jülich Supercomputing Centre (JSC).

Description
Go to service

GPU compute Service

Jupyter
Jupyter Notebooks on GPU Nodes containing Nvidia A100 GPUs

Description
Go to service

HAICORE

HAICORE
Dedicated Computing Resources for the Helmholtz AI community.

Description
Go to service

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HAICORE
Dedicated Computing Resources for the Helmholtz AI community.

Description
Go to service

Helmholtz Codebase

GitLab
A web-based DevOps lifecycle tool that provides a Git-repository

Description
Go to service

HIFIS Events

Indico
An Events Management service for everyone within Helmholtz and their partners, based on Indico.

Description
Go to service

HIFIS Helpdesk

Zammad
HIFIS Helpdesk Ticketing System based on Zammad.

Description
Go to service

JuChat

Rocket.Chat
Rocket.Chat enables users to use direct conversation, conversations in private groups and public

Description
Go to service

Jupyter

Jupyter
Open source software and service for interactive computing.

Description
Go to service

Jupyter

Jupyter
Interactive supercomputing in a browser.

Description
Go to service

Jupyter on HAICORE

Jupyter
Jupyter enables interactive supercomputing on HPC resources.

Description
Go to service

LimeSurvey

LimeSurvey CE
An Open source on-line statistical survey web application.

Description
Go to service

LimeSurvey

LimeSurvey CE
An online survey tool offered by DKFZ to everyone within Helmholtz Association.

Description
Go to service

Mattermost

Mattermost
A hosted chat service for everyone within Helmholtz based on Mattermost.

Description
Go to service

Notes

HedgeDoc
A collaborative platform to write and share markdown based documents.

Description
Go to service

nubes

Nextcloud
Sync&Share based on Nextcloud with OnlyOffice and Calendar function.

Description
Go to service

OpenStack (HDF Cloud)

OpenStack
The Service allows provisioning of user-controlled VMs with Linux OS

Description
Go to service

Rancher managed Kubernetes

Rancher
Container orchestration on Rancher managed Kubernetes Cluster

Description
Go to service

Singularity on HAICORE

Singularity
Container runtime environment on KIT HAICORE HPC systems.

Description
Go to service

Sync & Share

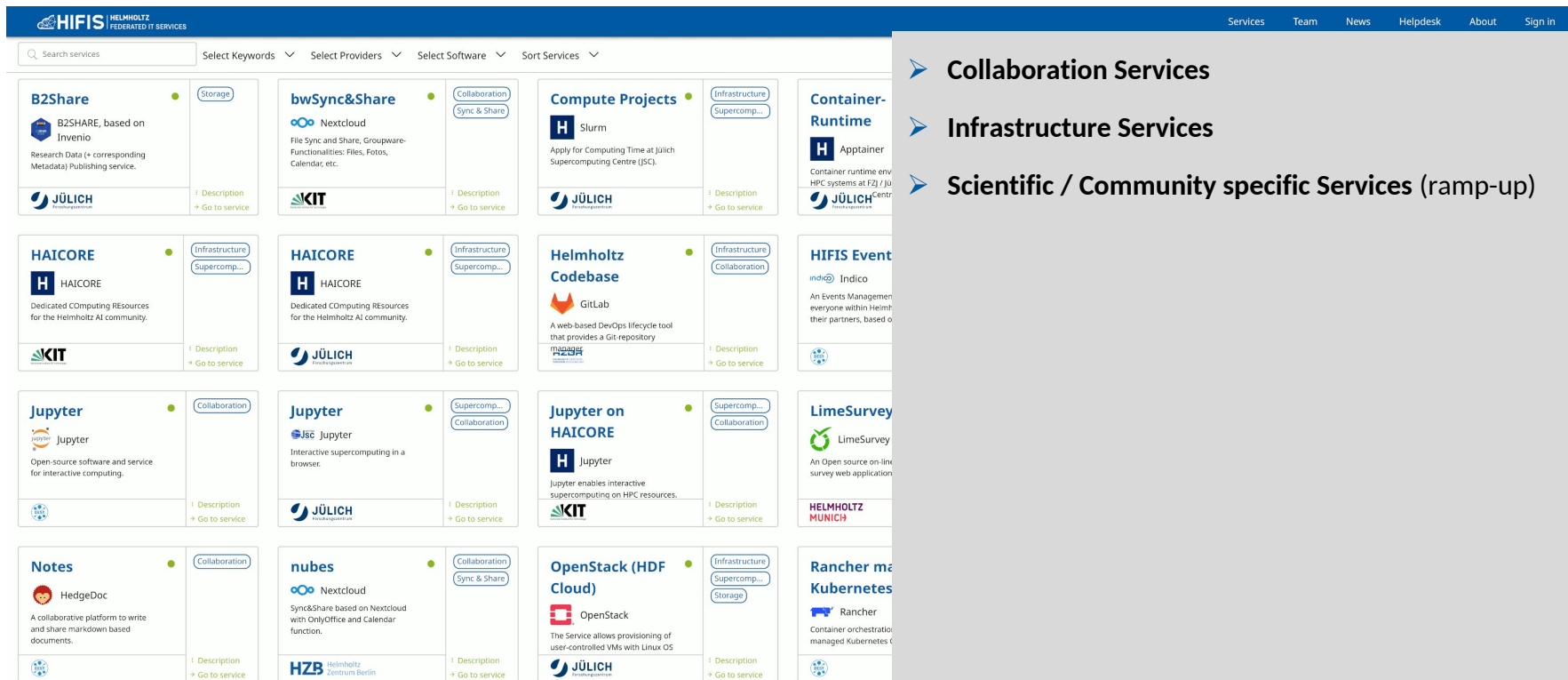
NextCloud, dCache
File Sync and Share, Collaborative Editing using OnlyOffice.

Description
Go to service



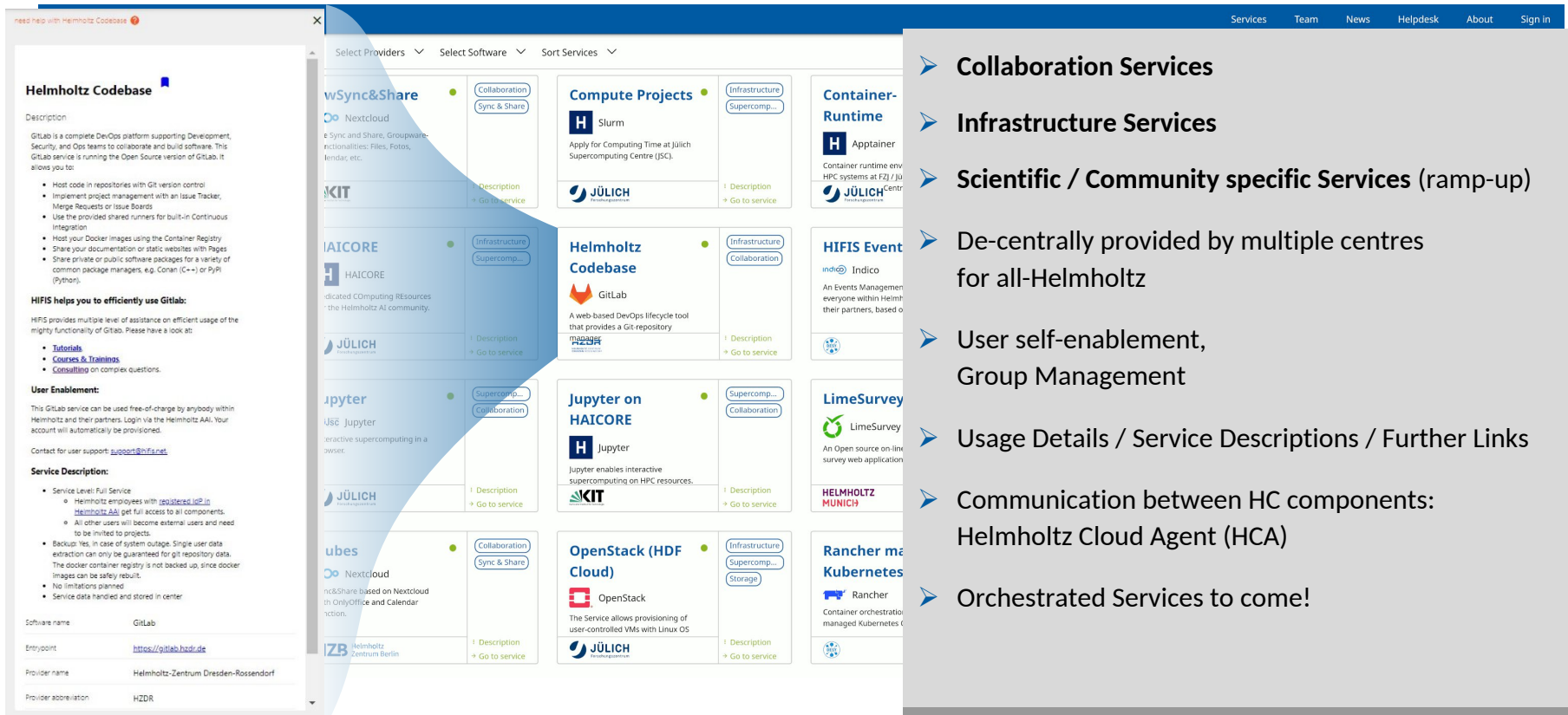
<https://helmholtz.cloud/services>

Cloud: Services + Portal



The screenshot displays the HIFIS Cloud Services Portal interface. At the top, a navigation bar includes the HIFIS logo, a search bar, and dropdown menus for 'Select Keywords', 'Select Providers', 'Select Software', and 'Sort Services'. The main content area is a grid of service cards, each featuring a logo, title, brief description, and a 'Go to service' link. The services are categorized by tags such as 'Storage', 'Collaboration', 'Infrastructure', 'Supercomp...', and 'Container Runtime'. The services listed include B2Share, bwSync&Share, Compute Projects, Container Runtime, HAICORE, Helmholtz Codebase, Jupyter, Jupyter on HAICORE, Notes, nubes, OpenStack (HDF Cloud), and Rancher. A grey overlay on the right side of the screenshot contains a list of service categories with arrows pointing to the right.

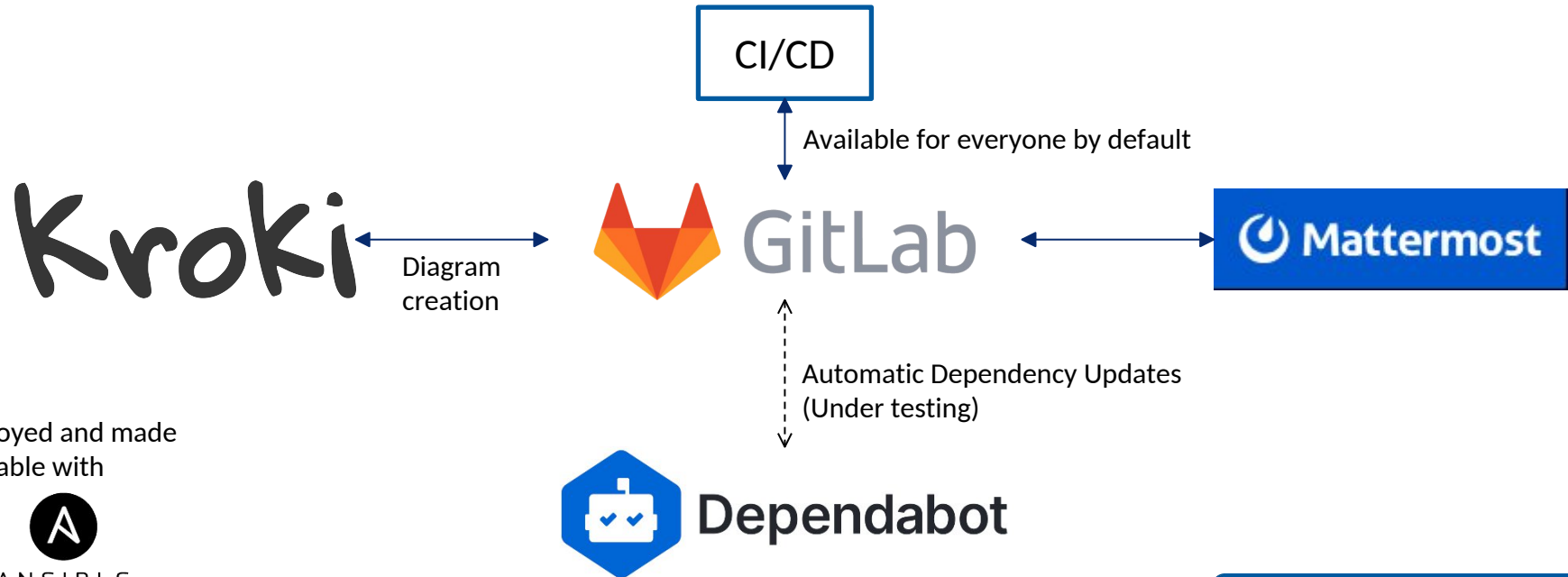
- Collaboration Services
- Infrastructure Services
- Scientific / Community specific Services (ramp-up)

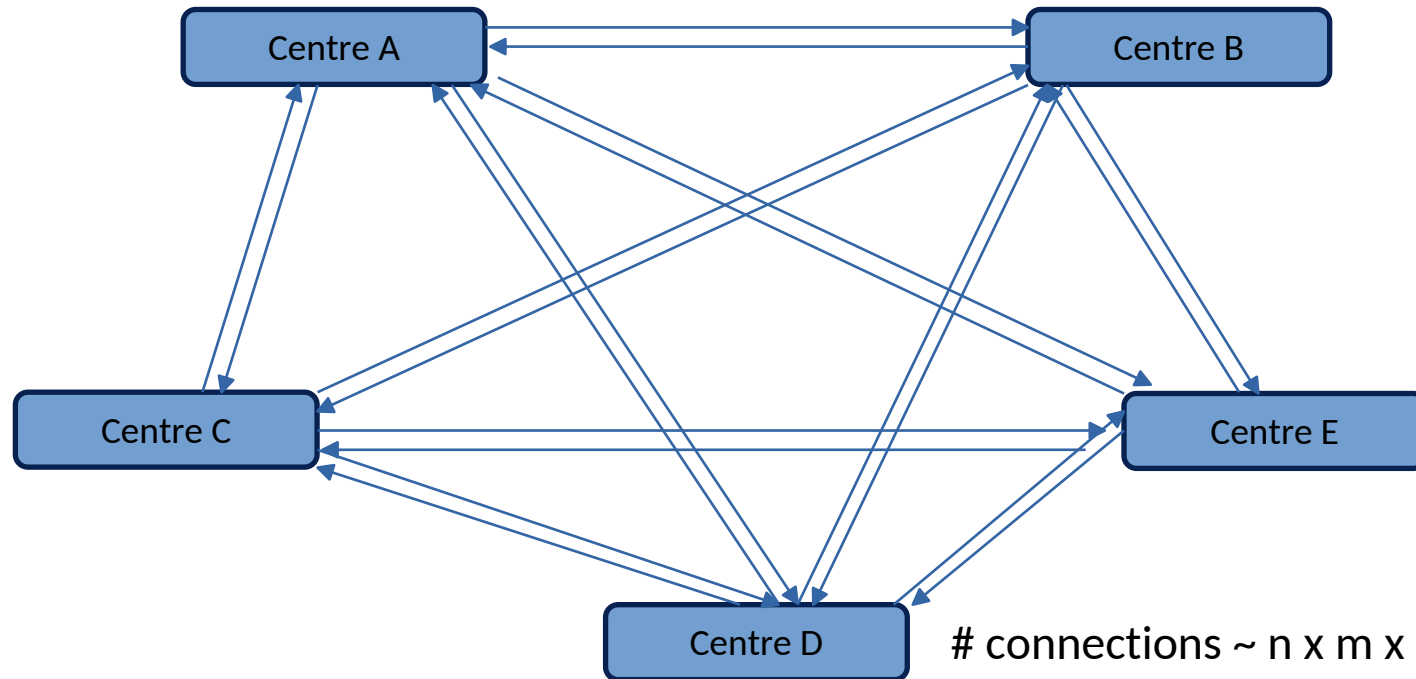


The screenshot displays the Helmholtz Cloud Services Portal. At the top, there is a navigation bar with links for Services, Team, News, Helpdesk, About, and Sign in. Below this, a header section allows users to 'Select Providers', 'Select Software', and 'Sort Services'. The main content area is a grid of service cards, each representing a different tool or platform available on the cloud. These include services like wSync&Share, Compute Projects, Container-Runtime, HAICORE, Helmholtz Codebase, Jupyter, Jupyter on HAICORE, OpenStack (HDF Cloud), and others. Each card provides a brief description, a 'Go to service' link, and a 'Description' link. On the left side of the grid, a detailed description for the 'Helmholtz Codebase' service is visible, explaining its purpose as a complete DevOps platform and listing its features. The portal is designed to be user-friendly, with clear categorization and easy access to service details.

- Collaboration Services
- Infrastructure Services
- Scientific / Community specific Services (ramp-up)
- De-centrally provided by multiple centres for all-Helmholtz
- User self-enablement, Group Management
- Usage Details / Service Descriptions / Further Links
- Communication between HC components: Helmholtz Cloud Agent (HCA)
- Orchestrated Services to come!

Provide a sustainable, well integrated and easy to use technology infrastructure for research software development.





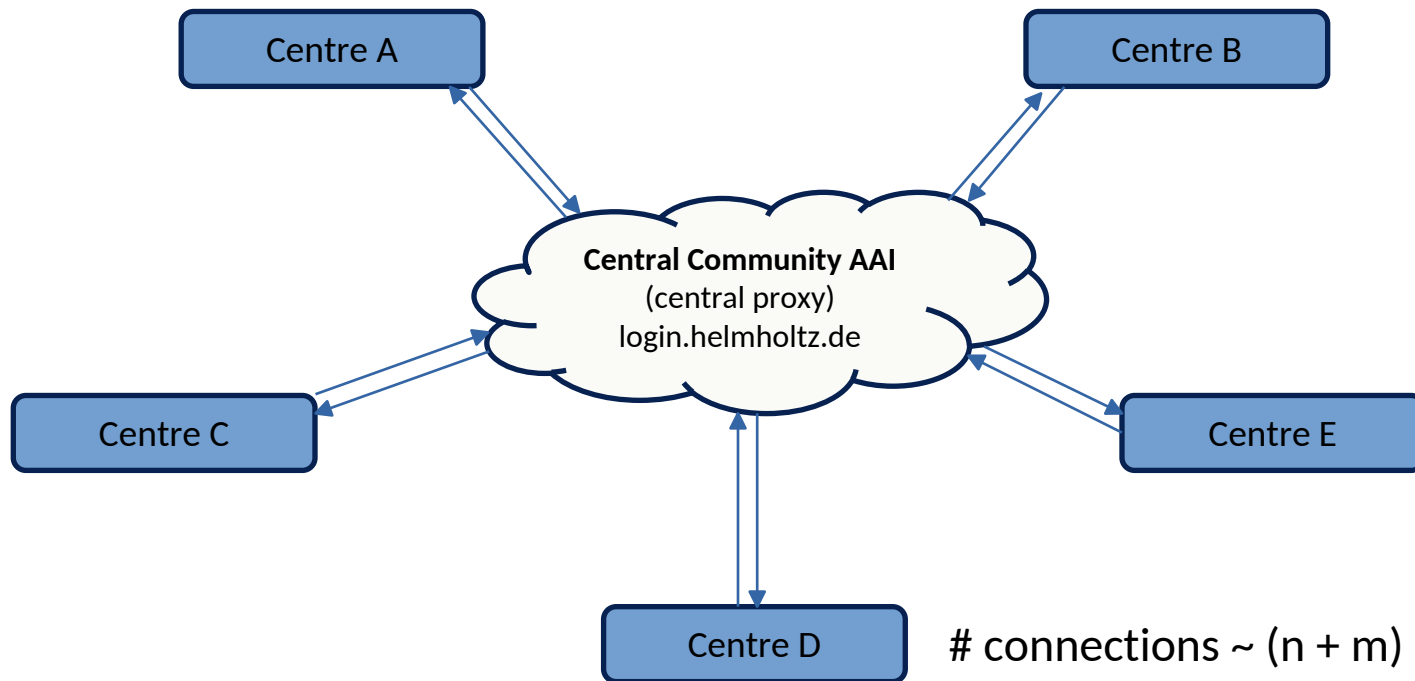
connections ~ $n \times m \times s$

n: number of service providing centres
(>10)

m: numbers of using centres (19)

s: number of services

- <https://aai.helmholtz.de/howto>
- <https://aai.helmholtz.de/concept>



connections $\sim (n + m)$

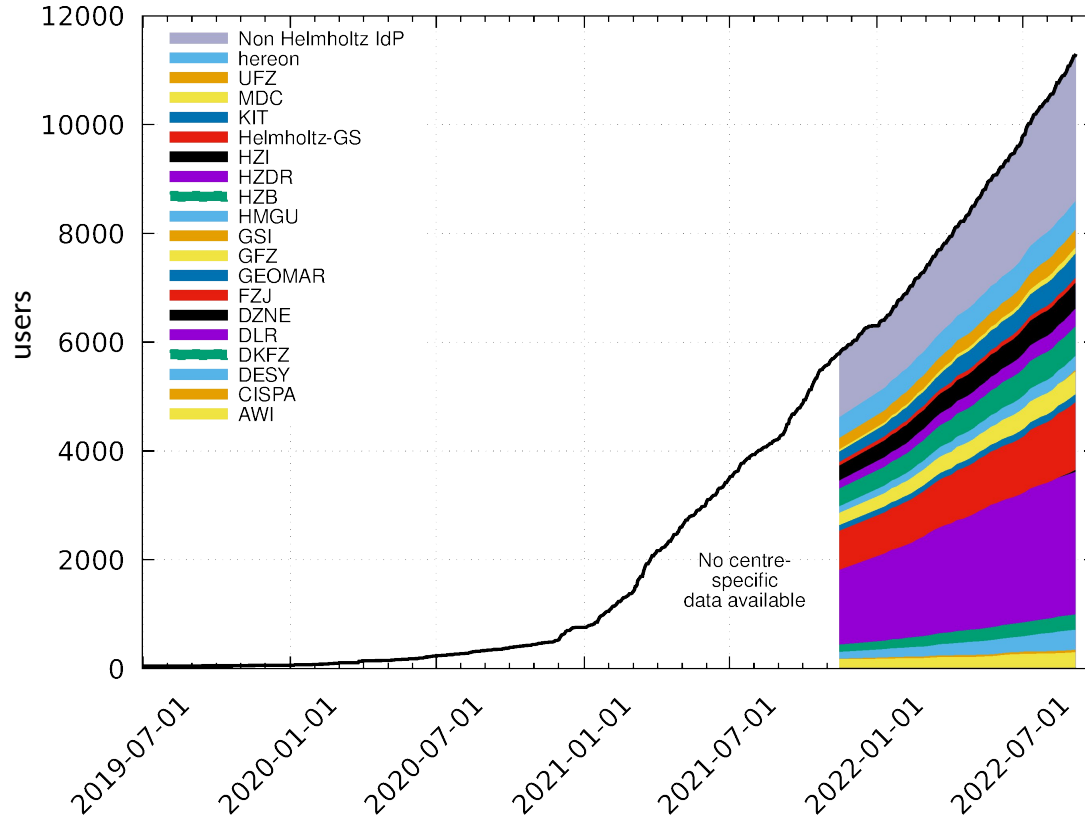
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Overall Usage



- All Helmholtz Centres connected
- Overall >11k users
 - Join them ;-D
- >2000 from outside Helmholtz
- Cross-centre group management
- One Helmholtz – One Login
- Single-Sign On

I. Helmholtz Digital Services for Science - Collaboration made easy.

Try it! Most Software and Cloud Services readily available for Helmholtz + Partners.

II. Consult us:

- <https://hifis.net>
- <https://hifis.net/news>
- support@hifis.net

III. Instead of talking f2f today:

- Mattermost (link in indico)



Katerina Limpitsouni via undraw.co