Details

BIH / Charité Virtual Research Environment (BIH/Charité VRE)

The Virtual Research Environment (VRE) is an open-source data management platform that enables medical researchers to store, process and share data in compliance with the European Union (EU) General Data Protection Regulation (GDPR). The VRE addresses the present lack of digital research data infrastructures fulfilling the need for (a) data protection for sensitive data, (b) capability to process complex data such as radiologic imaging, (c) flexibility for creating own processing workflows, (d) access to high performance computing. The platform promotes FAIR data principles and reduces barriers to biomedical research and innovation. The VRE is based on a modular and extendable state-of-the art cloud computing framework, a RESTful API, open developer meetings, hackathons, and comprehensive documentation for users, developers, and administrators. The VRE with its concerted technical and organizational measures can be adopted by other research communities and thus facilitates the development of a co-evolving interoperable platform ecosystem with an active research community.

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Host Institution

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https://www.charite.de/

Scientific Domain

Primary Subjects:
- Medicine

Secondary Subjects:
- Biology
- Mathematics
- Computer Science, Electrical and System Engineering

Category

Virtual research environments

Scientific Services

The VRE offers a web portal with graphical and command-line interfaces, segregated data zones and organizational measures for lawful data onboarding, isolated computing environments where large teams can collaboratively process sensitive data privately, analytics workbench tools for processing, analyzing, and visualizing large datasets, automated ingestion of hospital data sources, project-specific data warehouses for structured storage and retrieval, graph databases to capture and query ontology-based metadata, provenance tracking, version control, and support for automated data extraction and indexing.

Scientific Equipment

- Virtual Research Environment

Keywords

- health data
- GDPR conform
- sensitive data
- data protection
- Jupyter workbench

Networks

European Open Science Cloud
https://eosc-portal.eu/

EBRAINS Research Infarstructure
https://ebrains.eu/

Users per annum

Internal Users: 60
External Users in total: 60
External Users: 30
External Users in the EU: 20
External Users outside of EU: 10