



BRICS

Biomedical Research
Informatics Computing System



Next Seminar September 12, 2024
Keep an eye out for the Teams meeting invite.

INTRODUCTION

Welcome to the Biomedical Research Informatics Computing System (BRICS) quarterly newsletter. We are excited to share our recent achievements and updates with you.

This Quarter's Highlights:



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About Us

- BRICS is a comprehensive but customizable data science platform designed to efficiently collect, validate, harmonize, and analyze research datasets.
- The platform includes various modules that can be tailored as per program's needs.



Learn more about BRICS at: <https://brics.cit.nih.gov>

BRICS Overview Video: <https://youtu.be/eMNDrJp2LbI>



2024 Monthly Seminars

- Responding to your interest in learning more about the BRICS features, we are excited to announce a series of monthly demonstrations. The link for the Teams meeting recordings and presentation slides can be found [here](#).
- January 11, 2024, we presented our first seminar focused on the Privacy Preserving Record Linkage (PPRL) and Data Repository modules
- February 8, 2024, Dr. Dominic Nathan presented on Electronic Data Capture (eDC)
- April 11, 2024, we presented on Query tool and API access using Python/R
- May 9, 2024, Dr. Alexandra Bokinsky presented on the Data Discovery Tool
- June 13, 2024, Dr. Dominic Nathan provided a BRICS demo on Specimen Tracking and Management Module (STAMS) and Clinical Trials Management Module (CTMS)



What's New with BRICS

New BRICS Intramural Site

We have launched a new BRICS instance deployed on the AWS Cloud for the intramural users. This instance will allow intramural researchers to explore and test various BRICS modules and learn the system's capabilities and workflows. Note: This site is a Testbed and not yet approved for long-term storage of data. Please contact us at matthew.mcauliffe@nih.gov for further information on account creation and access to the site.

[BRICS Intramural Site](#)

Data Elements to Unified Medical Language System (UMLS) Tool

The [BRICS Data Element to UMLS Mapping Tool](#) was created to assist the user to assign UMLS Concept Unique Identifier (CUIs) to Common Data Elements (CDEs). The tool provides search features by keyword or key phrase, by UMLS CUI, or batch CDE upload, enabling the user to search the UMLS [Metathesaurus](#) and over one million biomedical concepts from over 100 source vocabularies. The user can filter results by source vocabulary, definition, or semantic type. The tool provides semantic type information based on the UMLS Semantic Network, which defines 133 broad categories and fifty-four relationships between categories for describing the biomedical UMLS concepts. An interactive visualization of the UMLS Semantic Network supports better understanding of

the UMLS semantic types and relationships for more accurate and appropriate labeling of CDEs with UMLS CUIs.

MongoDB Release:

(Live since July 2024)

Intends to replace the Data Repository backend from current PostgreSQL to MongoDB NoSQL document store.

- Enables a more efficient storing and retrieval for the repository data.
- Provides a foundation for two additional improvements in the future releases
 - Merging the ProFORMS data storage to repository data storage.
 - Query Tool could be integrated with MongoDB to support real time querying.

Spiderman Release

(Live since June 2024)

- Real time saving of locked ProFoRMS data to the repository
- Submission Tool | Globus Integration
- User Interface Enhancements for the Accounts and Query Tool modules
- Centralized GUID Enhancements
- Various UI and feature enhancements across the BRICS modules
- System / Library upgrades – jQuery, Struts
- Query Tool enhancements to support download from the screen, continue to display group name while scrolling through the result data table.
- DOI Enhancement
- Addressing high priority defects from previous releases.
- Globus Integration – Infrastructure Setup, design of workflow

Please review the detailed release notes [here](#) for a comprehensive overview of the changes and updates included in this version.

UPCOMING RELEASES

Thor Release:

(Winter 2024)

- AI-Enabled Data Element Mapping Tool
- FHIR (Fast Healthcare Interoperability Resources) Tool
- Globus Functionality to support faster and more robust Data Submission
- Meta Study Enhancements

Federal Interagency Traumatic Brain Injury Research (FITBIR) Core Trust Recertification

We are pleased to announce that BRICS (FITBIR instance 2024-2027) has been re-certified as a Core Trust Seal repository.

What is the CoreTrustSeal certification?

It is a certification based on requirements established by the World Data Systems (WDS) and the Data Seal of Approval (DSA) reflecting the core characteristics of trustworthy data repositories. CoreTrustSeal certification is a process whereby a data repository provides evidence it is sustainable and trustworthy via an online application. Evidence must be presented for 16 Requirements which span background, organizational infrastructure (mission, continuity of access, sustainability), digital object management (integrity, authenticity, storage, preservation, quality, identifiers, re-use), and technology (technical infrastructure and security) information. Applicants indicate a compliance level for each requirement, as well as, evidence in support of the requirement.

What are the benefits of being a certified repository?

- Enhances the reputation of the repository
- Builds stakeholder confidence establishing trust for both data funders, depositors, and users
- Data Funders: Data reuse yields a higher return on investment.
- Data Depositors: Data is well structured, safe, accessible, and usable.
- Data Users: Data is high quality and properly preserved.
- Increases awareness of and compliance with established standards

The certification for FITBIR is valid for 3 years.

To learn more about the requirements for the Core Trust certification, [click here](#).



Are you interested in a specific topic or would like a demo to see how BRICS can work for you? Please request a Demo [here](#) and we would be happy to provide more information about BRICS.

For more information, contact the BRICS Team at:

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