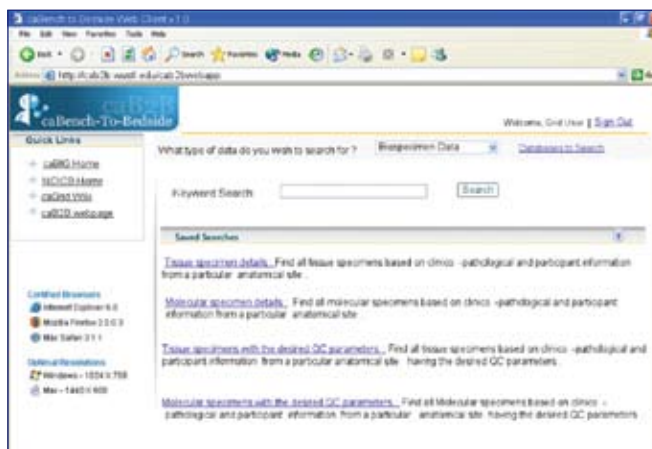


caBench-to-Bedside (caB2B)

Query for data across caGrid

caBench-to-Bedside (caB2B) is an open-source tool that allows researchers to search datasets across caGrid easily and securely and join diverse datasets based on user-specified selection criteria—providing key capabilities for integrative research and data analysis. The caB2B application suite contains three components: the Web application, the client application, and the administration tool.



caB2B interface

caB2B Web Application Capabilities

The caB2B Web Application provides predefined queries to easily search and retrieve remote microarray data (from caArray), imaging data (from the National Biomedical Imaging Archive, or NBIA) and specimen data (from caTissue) across the grid. This Web-based tool allows users to

- Execute predefined queries on selected data sources of different types, or combinations of data sources using form-based or keyword searches
- Create query profiles with a saved set of searches
- Select query targets on an ad-hoc basis
- Export data in Excel or CSV formats

caB2B Client Application Capabilities

The caB2B Client Application allows advanced users to create and execute queries across multiple caGrid data services. This interface enables researchers to execute “on-the-fly” and saved queries as well as graphically visualize and analyze the results. The caB2B Client Application may also be used to

- Create new queries or execute saved queries based on models loaded from the Cancer Data Standards Registry and Repository (caDSR), which allows users to access common data elements developed by the NCI in concert with caBIG® and other partners
- Save results as data sets and save data as virtual experiments for further analyses
- Visualize results using viewers that are provided as part of the application

Categories of Use

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Biospecimens | <input checked="" type="checkbox"/> Data Sharing | <input checked="" type="checkbox"/> Imaging | <input type="checkbox"/> Proteomics |
| <input type="checkbox"/> Clinical Trials Management | <input type="checkbox"/> Genome Annotation | <input checked="" type="checkbox"/> Microarrays | <input checked="" type="checkbox"/> Translational Research |
| <input type="checkbox"/> Data Analysis & Statistical Tools | <input type="checkbox"/> Infrastructure | <input type="checkbox"/> Pathways | <input type="checkbox"/> Vocabularies |



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caB2B Administration Tool Capabilities

The caB2B Administration Tool is a Web-based resource that allows users to

- Load models from the caDSR, or models in XML format
- Create new categories to simplify data joining within or across domain models
- Manually add service instance URLs
- Curate frequently used paths to facilitate query building
- Define inter-model joins to facilitate interoperability across applications (e.g., caTissue and caArray)

Architecture Overview

- **Application type:** Enterprise application with Web components and Java client application; metadata loading and configuration are achieved through the caB2B Administrative tool (Web based); services may be queried using the Java client or the Web interface.
- **System requirements:** caB2B Web-based components may be accessed using a simple Web browser; a downloadable software stack is available to install the server, client and administration tools; Java runtime libraries are required to install the Java client; MySQL and JBoss are required for local installation.

Installation and Administration

- **Skill set needs:** System administration and full access rights to the deployment environment; these may include Unix root access as well as database administrator access.
- **Infrastructure needs:** The installation scripts validate the infrastructure at installation time; pre-existing versions of JBoss or MySQL are maintained or acquired and installed.
- **Long-term administration needs:** Updates will be made available for user installation through GUI installers.

Key Contributors

- Persistent Systems
- Washington University at St. Louis
- Capability Plus Solutions
- Sapient Corporation
- NCI Center for Biomedical Informatics and Information Technology (NCI CBIIT)

Resources

Tool Overview Page	https://cabig.nci.nih.gov/caB2B
Primary Workspace	Integrative Cancer Research (ICR) https://cabig.nci.nih.gov/workspaces/ICR
Molecular Analysis Tools Knowledge Center	https://cabig-kc.nci.nih.gov/Molecular/KC/index.php/Main_Page
caBIG® Tool Inventory	https://cabig.nci.nih.gov/inventory
NCI Center for Bioinformatics Applications Support	ncicb@pop.nci.nih.gov



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