

Life Sciences Distribution Browser (LSDB)



LSD Portal and Query Tool

The LSD Browser is a free-form search tool intended to provide a simple search interface allowing users of the caBIG® Life Sciences Distribution tools to query across local or remote instances of those tools. Users can also use the LSDB to access their local installations of life sciences research tools from a single location. The current version of the LSDB can search across instances of NCIA and caArray. Future releases will provide search access across the other LSD applications.

Features:

- Free form search across caArray and NCIA applications connected to caGrid
- Integration of like objects across applications so that data can be easily compared with other data regardless of which application that data came from. Users can view all of the data that matched their search criteria from a single screen, regardless of whether that data is from caArray or NCIA.
- Configurable discovery of local LSD and non-LSD applications. For example, if users have a local, non-LSD application that they use for clinical data management, one can add that application and query criteria to the LSDB configuration parameters, and LSDB will be able to search that application if it has a caGrid-compliant data service interface.
- Portal access to local applications. The configuration for this access is created automatically during LSD application installation, but it can be modified afterwards should users wish to consider other applications as “local.”

The screenshot shows the LSDB Browser interface with search results for the query 'test'. The results are displayed in a table with columns for Data Type, ID, Title/Description, Application, and Location. The table lists various experiments and samples, including those from the National Cancer Institute Center for Bioinformatics (NCIB) and local installations.

Data Type	ID	Title/Description	Application	Location
Sample		TestS-1-121562	caArray	NCIB (local)
Sample		TestS-1-121562	caArray	National Cancer Institute Center for Bioinformatics - NCIB
Sample		sample_1	caArray	National Cancer Institute Center for Bioinformatics - NCIB
Experiment	admin-0018	DEF11994	caArray	NCIB (local)
Experiment	admin-0090	Importing with 3rd option	caArray	National Cancer Institute Center for Bioinformatics - NCIB
Experiment	admin-00104	testing permissions change	caArray	NCIB (local)
Experiment	admin-00114	test	caArray	National Cancer Institute Center for Bioinformatics - NCIB
Experiment	admin-00143	test-vite	caArray	National Cancer Institute Center for Bioinformatics - NCIB
Experiment	babel-00013	Vesiae-test-Afly	caArray	NCIB (local)
Experiment	babel-00019	Vesiae-test-Afly	caArray	National Cancer Institute Center for Bioinformatics - NCIB

LSDB Browser interface

Categories of Use:

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



Architecture Overview

- **Application type:** Open-source, Web-based application built on a J2EE platform incorporating the Java Struts framework
- **System requirements:** Java Software Development Kit (JDK) version 1.5.0_10; JBoss Container version 4.0.4; MySQL 5.0.27; Jakarta Ant version 1.7, Firefox v2.0 OR IE v7

Installation and Administration:

- **Skill sets needed:** Users will need system administration and full access rights to the deployment environment; these may include Unix root access as well as database administrator access
- **Infrastructure needed:** The installation checks for existing environment dependencies and either respects them if they exist or acquires the corresponding versions of JBoss and MySQL.
- **Long-term administration needs:** Updates will be provided through GUI installers.

Key Contributors:

- NCI Center for Bioinformatics
- Science Applications International Corporation
- Capability Plus Solutions
- Sapient

Other Life Sciences Distribution Components:

- caArray
- caTissue Core
- National Cancer Imaging Archive (NCIA)
- geWorkbench
- Clinical Trials Object Data System (CTODS)
- Cancer Genome Wide Association Studies (caGWAS)

Resources

Tool Overview Page	https://cabig.nci.nih.gov/tools/LSDB
Primary Workspace	Integrative Cancer Research (ICR) https://cabig.nci.nih.gov/workspaces/ICR
Knowledge Center	https://cabig-kc.nci.nih.gov/Molecular/KC/index.php/Main_Page
LSDB Users LISTSERV	https://list.nih.gov/archives/lldb_users.html
LSDB Developers LISTSERV	https://list.nih.gov/archives/lld_developers.html
caBIG® Tool Inventory	https://cabig.nci.nih.gov/inventory
NCI Center for Bioinformatics Applications Support	ncicb@pop.nci.nih.gov



**Online Version Updated
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