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."

LSD Browser interface

Categories of Use:

- ☐ Biospecimens
- ☐ Clinical Trials Management
- ☒ **Data Analysis & Statistical Tools**
- ☒ **Data Sharing**
- ☐ Genome Annotation
- ☐ Infrastructure
- ☐ Imaging
- ☐ Microarrays
- ☐ Pathways
- ☐ Proteomics
- ☒ **Translational Research**
- ☐ Vocabularies

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caBIG®
cancer Biomedical
Informatics Grid®

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.

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/lsdb_users.html
LSDB Developers LISTSERV	https://list.nih.gov/archives/lsd_developers.html
caBIG® Tool Inventory	https://cabig.nci.nih.gov/inventory
NCI Center for Bioinformatics Applications Support	ncicb@pop.nci.nih.gov

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)

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