

LIFE SCIENCES DISTRIBUTION 1.0

Local Installation Guide



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Center for Biomedical Informatics
and Information Technology (CBIT)

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Introduction

This Life Sciences Distribution (LSD) installation Guide provides you with the instructions to install and configure the LSD application in your environment. The LSD installation installs and configures multiple JBoss application servers, grid services and creates databases on a preinstalled MySQL server.

 <p>NOTE</p>	<p>More information on capabilities of individual tools in LSD can be found on the LSD page of the caBIG™ web site:</p> <p>https://cabig.nci.nih.gov/tools/toolsuite_view#LSD</p>
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Overview of LSD Installation

The process for installing the LSD includes the following tasks described in this document:

- Downloading and installing required software
- Setting environment variables
- Downloading and installing the User Provisioning Tool (UPT)
- Downloading and installing LSD software applications
- Configuring JBoss and MySQL
- Advertising the grid service

The following applications are provided in the LSD distribution:

- UPT 3.2.0
- caArray 2.0.x
- caGWAS 1.0.0
- caTissue 1.2.2
- CTODS 1.0.0
- NCIA 3.0.0

<p>Before You Proceed</p> 	<ul style="list-style-type: none">• Please contact us directly for support: Web: http://ncicb.nci.nih.gov/NCICB/support/ E-mail: ncicb@pop.nci.nih.gov Telephone: 301-451-4384 Toll free: 888-478-4423• Directions are given in this document for both Linux and Windows operating systems.
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LSD 1.0.0 Software and Technology Requirements

Tested Environment

The LSD 1.0.0 installation has been tested on Linux Red Hat Enterprise Linux AS 4 64/32-bit (for AMD chipset) and the Windows XP/2003 environments. While the installation may work in other Linux and Windows environments, it has only been tested in these environments.

Linux - Tested Environment

- HP ProLiant DL585
- AMD Opteron 852 2.4 (4 processors)
- 32GB memory
- Red Hat Enterprise Linux 4 AS
- 400 GB local storage

Windows - Tested Environment

- HP ProLiant DL585
- AMD Opteron 852 2.4 (4 processors)
- 16GB memory
- Windows 2003 Enterprise Edition Service Pack 2
- 400 GB NTFS local storage

Required Software—Not Included in the LSD


Many of the servers and services that make up LSD are automatically installed as part of this installation. However, certain tools that you must manually install and configure are listed in Table 1. The software name, version, description, and URL hyperlinks (for download) are indicated in the table.

Prior to the LSD installation, you must download and install the following tools and recommended versions, in the order they are listed. Complete the directions for installing each, as directed on the corresponding website. (Apache ant installation follows on page 4.)

Required Software Name Version URL to Download	Description
Java 2 Platform Standard Edition 5.0 Update 10 (J2SE 5.0) http://java.sun.com/products/archive/j2se/5.0_10/ Be sure to download the correct Java SDK for your operating environment. For example, for Linux AMD 64, you would download <code>jdk-1_5_0_10-linux-amd64-rpm.bin</code> . For Windows, you might download <code>jdk-1_5_0_10-windows-i586-p.exe</code> .	The J2SE Development Kit (JDK) supports creating J2SE applications.
Apache Ant, 1.7.0 https://gforge.nci.nih.gov/svnroot/lzd/trunk/tools/apache-ant-1.7.0-bin.zip	Apache Ant is a Java-based build tool.
MySQL, 5.0.27	MySQL is an open-source

Required Software Name Version URL to Download	Description
http://downloads.mysql.com/archives.php?p=mysql-5.0&v=5.0.27	database software application.


Table 1 Required Software

<p>IMPORTANT</p> 	<ul style="list-style-type: none"> • As you install each application, make note of the installation directory path, and the database server, database username and password. • Installation of each application requires extracting zipped files. It is important that you extract each set of files to unique directories. Unzipping them all to the same directory may lead to installation issues. • LSD users should be aware that the size of installed applications and their corresponding downloaded datasets may impact the installation and performance of other installed LSD applications. For more information about recommendations, see individual application installation guides. • Database name should not be MySQL • The installer deletes all files in the application base path directory. This property is called application.base.path, and this property is set for each application in the property file. Do not use a directory where you have other files, as the installer will delete these files. • Always use forward slashes (“/”) for the directory path. • Grid service registration URL used for discovering the running grid nodes is http://cagrid-index.nci.nih.gov:8080/wsrf/services/DefaultIndexService
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Java SDK Installation

When you install the Java SDK, you will be prompted to select the installation directory. Record the path, as this directory will be used when you set the environment variables.

Apache Ant Installation


 <p>NOTE</p>	Apache Ant, version 1.7.0, is the required build tool to install the LSD 1.0.0 applications and services.
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To download and extract the Ant build tool, follow these steps:

Step	Action
1	Download Apache Ant, as described in Table 1, to a directory where you wish to install the tool. Example: <code>/usr/java</code>
2	From the directory where you downloaded the <code>apache-ant-1.7.0-bin.zip</code> file, unzip the files, using one of these two methods: a. Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q apache-ant-1.7.0-bin.zip</code> (You must have a ZIP tool installed). b. Use WinZip or a similar utility to unzip the files.

After extracting the zip, you must set the environment variables, described in the following section, so that Ant is available in the system PATH.

Apache Ant Environment Variables

 <p>NOTE</p>	The purpose of setting operating system environment variables is so that the Java SDK and Ant build tool are available to run from anywhere in the system.
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Linux

To set the environment variables in Linux, follow the steps below.

NOTE



The `JAVA_HOME`, `ANT_HOME` and `PATH` environment variables are set in `/etc/profile`. You may need to create the variables, or modify them if they already exist.

Step	Action
1	<p>As the root user, enter the following in the <code>/etc/profile</code> file. A <code>PATH</code> variable should already be created in this file, so be sure to define the <code>JAVA_HOME</code> and <code>ANT_HOME</code> export before the <code>PATH</code> export. Replace <code><installation_directory></code> with the directory where you have installed the Java SDK and Ant.</p> <p>(The location example in the Apache Ant installation (p. 3) is <code>/usr/java</code>.)</p> <pre>export JAVA_HOME=<installation_directory>/jdk1.5.0_10 export ANT_HOME=<installation_directory>/apache-ant-1.7.0 export PATH=\$JAVA_HOME/bin:\$ANT_HOME/bin:\$PATH</pre>
2	Log out and log back in so that the system recognizes your changes.

Verifying the Environment Variables in Linux

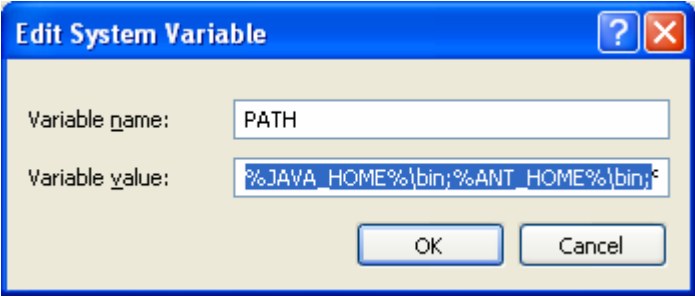
To verify that environment variables have been set correctly, follow these steps:

Step	Action
1	<p>From the command line, enter:</p> <pre>echo \$JAVA_HOME echo \$ANT_HOME</pre> <p>Both of these commands should return the location where you installed these tools.</p>
2	To verify your Java SDK installation, enter <code>java -version</code> from a command prompt. You should see <code>java version "1.5.0_10"</code> .
3	To verify your Ant installation, enter: <code>ant -version</code> from a command prompt. You should see: <code>Apache Ant version 1.7.0 compiled on December 13 2006</code> .

Windows

To set the environment variables in Linux, follow these steps:

 <p>NOTE</p>	<p>The JAVA_HOME, ANT_HOME and PATH environment variables are set in the Systems Properties.</p>
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Step	Action
1	In Windows, select Control Panel , then select the Systems application. In the Systems window, select the Advanced tab.
2	On the Advanced tab, click the Environment Variables button; to add a new system variable, select the New button. <ol style="list-style-type: none"> a. In the Variable name text box, enter JAVA_HOME. b. In the Variable value text box, enter the location of your Java installation.
3	Click the New button again. <ol style="list-style-type: none"> a. In the Variable name text box, enter ANT_HOME. b. In the Variable value text box, enter the location of your Java installation.
4	Select the PATH system environment variable, and select the Edit button. This opens the Edit System Variable dialog box, displayed here as an example. <div style="border: 1px solid black; padding: 10px; margin: 10px 0;">  </div>
5	In the Variable value text box, prepend the following text in front of the text that already exists in the Variable Value field. <pre>%JAVA_HOME%\bin;%ANT_HOME%\bin;</pre> <p>Click OK.</p>

Verifying the Environment Variables in Windows


To verify that environment variables have been set correctly, follow these steps:


Step	Action
1	From the command line, enter: <code>echo %JAVA_HOME%</code> <code>echo %ANT_HOME%</code> Both of these commands should return the location where you installed these tools.
2	To verify your Java SDK installation, enter <code>java -version</code> from a command prompt. You should see <code>java version "1.5.0_10"</code> .
3	To verify your Ant installation, enter <code>ant -version</code> from a command prompt. You should see: <code>Apache Ant version 1.7.0 compiled on December 13 2006.</code>

MySQL Installation and Configuration

To download and install MySQL, follow the steps outlined on the MySQL website.

A MySQL 5.0.27 server must be installed and running in order for the installation to work successfully.

<p>TIP</p> 	<p>You should consult the following three links to successfully set up secure and well-performing MySQL servers, in preparation for installing LSD tools:</p> <ul style="list-style-type: none">• MySQL Security Guide - http://dev.mysql.com/doc/refman/5.0/en/security-guidelines.html• Performance –<ul style="list-style-type: none">○ General performance tuning - http://dev.mysql.com/books/hpmysql-excerpts/ch06.html○ InnoDB engine performance tuning - http://dev.mysql.com/doc/refman/5.0/en/innodb-tuning.html
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<p>MORE TIPS</p> 	<ul style="list-style-type: none"> • Record the MySQL root password chosen during the MySQL installation process, as you may choose to use this as your <code>database.system.user</code> later in the LSD tool installation processes. • Note the MySQL port chosen during the MySQL installation process, as you may choose to use this as your <code>database.port</code> later in the installation process. • As part of the installation process, the default character set is set to <code>latin1</code> for the caArray MySQL database.
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Once installed, you must configure My-SQL for the LSD tools you may install.

Linux

Configure MySQL in Linux using the following steps:

Step	Action
1	<p><i>Lowercase table names in MySQL</i></p> <p>Edit the <code>/etc/init.d/mysql</code> (or <code>mysqld</code>) file as follows:</p> <ol style="list-style-type: none"> Locate the <code>start()</code> section and modify the <code>mysqld_safe</code> command (do not include the ellipses): <pre style="margin-left: 40px;"><code>/usr/bin/mysqld_safe --lower_case_table_names=1 ...</code></pre> Restart the MySQL service for the changes to take effect: <pre style="margin-left: 40px;"><code>Restart /etc/init.d/mysqld</code></pre>
	<p><i>Modify MySQL parameters</i></p> <p>Open the <code>/etc/my.cnf</code> and add the following text. If the file is not present, you will need to create it.</p> <pre style="margin-left: 40px;">[mysqldump] max_allowed_packet=64M [mysqld] max_allowed_packet=64M [mysql] max_allowed_packet=64M</pre>

Windows


Configure MySQL in Windows using the following steps:


Step	Action
1	<p><i>Modify the MySQL parameters</i></p> <p>a. Locate the [MySQL installation directory]/my.ini file. Open the file in a text editor and add the following text:</p> <pre>[mysqldump] max_allowed_packet=64M [mysqld] max_allowed_packet=64M [mysql] max_allowed_packet=64M</pre> <p>Note: If the file is not present, you will need to create it.</p> <p>b. Save the amended or new my.ini file in the [MySQL installation directory].</p> <p>c. Restart the MySQL Windows service for the changes to take effect. To do so, select Settings > Control Panel. Select Administrative Tools > Services. Scroll down to MySQL. Right click and select Restart.</p>

Installing LSD 1.0.0 Application and Services

To install the LSD 1.0.0 application and services, follow the steps in this section:

- Download and install the User Provisioning Tool 3.2 (UPT)
- Download LSD 1.0.0 tool files from GForge
- Configure JBoss and MySQL server
- Advertise Grid Services

<p>NOTES</p> 	<ul style="list-style-type: none">• For each application you install on Linux, it is recommended that you use a different operating system <code>userid</code>. For example, <code>caarrayuser</code>, <code>nciauser</code> and so on. This will prevent any permissions restrictions.• In Linux, it is NOT recommended, or necessary, to use root/super user to install LSD applications. However, you will need this elevated level of access when running services and other operations that may require it.
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 <p>NOTES</p>	<ul style="list-style-type: none"> • In many of the steps below, there are references to a <code>database.system.user</code> for your MySQL server. To determine which MySQL users have full privileges to create and managed other databases, type show grants; from a MySQL prompt to determine the correct level of privileges. • In each <code>*-install.properties</code> file in the following sections, any property value marked with UPPERCASE <code>REPLACE_*</code> must be manually updated with the appropriate value. • In each <code>*-install.properties</code> file, any property value marked with lowercase <code>replace_*</code> may be optionally updated with the appropriate value.
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In several instances in this section, property variables must be modified. Note the following points about changing or entering variables.

Paths in .properties Files

The paths in the `.properties` files should use *forward* slashes. For example, you would use `caarray2.home=C:/apps/caarray-app`, **not** `caarray2.home=C:\apps\caarray-app`. If you use backslashes, you will experience unexpected results.

Spaces in Property Values

You should not put any spaces in the property values of `*-install.properties` files (e.g. `caarray2-install.properties`). In Windows, note that the `C:\Documents and Settings\` path contains spaces and the installation will likely fail. If you are using Windows, use a path such as `C:/apps/cagwas-app`.

Downloading and Installing the User Provisioning Tool (UPT)


To download and install the UPT 3.2 files, follow these steps:

Step	Action
1	<p>The installation file for UPT 3.2 is over 30MB.</p> <p>Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>upt_distribution_[version].zip</code> file.</p> <p>Remember the download location as you will be using this file to run the installation in the steps that follow. This location will later be referred to as the <code><installation_directory></code>.</p>

Step	Action
2	<p>From the directory where you downloaded the <code>upt_distribution_[version].zip</code> file, unzip the files, using one of these two methods:</p> <ol style="list-style-type: none"> a. Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q upt_distribution_[version].zip</code>. (You must have a ZIP tool installed). This location will be referred to as the <code><installation_directory></code> henceforth. b. Use WinZip or a similar utility to unzip the files to a location unique from the other unzipped files of LSD applications.
3	<p>Create an <code><application root></code> directory that is different from the <code><installation directory></code>. The <code><application root></code> directory is the location where you are going to install UPT. <i>Example:</i> <code>C:\apps</code></p>
4	<p>To modify the default UPT properties, open the <code><installation_directory>/upt/upt-install.properties</code> file and modify the values for your environment and save the file. At a minimum, you will need to modify the following values:</p> <ul style="list-style-type: none"> • <code>application.base.path</code> <ul style="list-style-type: none"> ○ The <code><application root></code> directory. This is the location, created in the previous step 3, where you are going to install UPT. <p>For example, in Windows, the <code><application_root_directory></code> can be <code>C:/apps/upt</code>. Linux users can use <code>\${user.home}/apps/upt</code> or any other folder to which you have write permissions.</p> <p>Important: The <code><application_root_directory></code> must be different than <code><installation_directory></code> or the installation will fail. Specifically, If the <code>upt.home</code> property value is the same location, such as <code>C:\UPT</code>, where the <code>build.xml</code> file is located, such as <code>C:\UPT</code>, the installer will fail.</p> • <code>database.system.user</code> <ul style="list-style-type: none"> ○ This value should correspond to a MySQL username that has full system privileges. You should have recorded this when you installed MySQL. • <code>database.system.password</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the password for the <code>database.system.user</code> user. You should have recorded this when you installed MySQL. In some cases, this password may be blank. • <code>database.server</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the domain name of machine that hosts the MySQL server. Talk to your system administrator to learn the server name and port. • <code>database.port</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the port for the <code>database.server</code>. 3306 is the default port, but check with your database administrator to be certain.


Step	Action
	<ul style="list-style-type: none"> • <code>database.name</code> <ul style="list-style-type: none"> ○ Choose a name for the UPT MySQL database. • <code>database.user</code> <ul style="list-style-type: none"> ○ Choose a username to access <code>database.name</code>. This can be any valid name that you choose, but it must be different than <code>database.system.user</code>. • <code>database.password</code> <ul style="list-style-type: none"> ○ Choose a password to access <code>database.name</code> for the username identified in <code>database.user</code>. This must be different from the <code>database.system.password</code>. <p>Remember the values you have used in this properties file. You may need some of them later in the installation of LSD tools.</p> <p>Note: You should not need to modify the other default values as we have chosen unique ports to reduce the risk of other applications using the same values. However, be sure to check the <code>upt-install.properties</code> to verify that the ports in this file are not being used by other applications, otherwise you will experience problems.</p>
4	From the command line, navigate to <code><installation_directory>/upt</code> (Example: <code>cd C:\UPT</code>) and type <code>ant</code> . This runs the installation. You will verify UPT installation after Installing LSD 1.0.0 Application and Services .
5	After successfully installing UPT, create a backup of <code><installation_directory>/upt/upt-install.properties</code> in another directory for future reference.

UPT Port Usage

<p>NOTE</p> 	<p>Verify that default port values defined in <code>*-install.properties</code> files (e.g. <code>upt-install.properties</code> and any other <code>*-install.properties</code> files) are not in use on your system by running <code>netstat -a</code> from the command line. The installers run pre-installation checks and fail the installation if ports the installer must use are in use. If these ports are in use, you will need to stop any processes that are running.</p>
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Downloading and Installing caArray 2.x

For information about downloading and installing caArray 2.x, see the *caarray_[version]_installation_guide.pdf* (we recommend the latest version 2.0.2 but you can use an earlier version) link at https://gforge.nci.nih.gov/frs/?group_id=305

 <p>NOTE</p>	If you are unable to successfully launch an application after an installation, you may want to check your Firewall settings.
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Downloading and Installing caGWAS

Downloading GWAS Files

To download the caGWAS files, follow these steps:

Step	Action
1	The installation file for caGWAS is over 200MB. Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>cagwas_distribution_[version].zip</code> file. Note: Remember the download location as you will be using this file to run the installation in the steps that follow.
2	These server components are installed and configured as part of the caGWAS installation. You do not need to do anything further to download or install these components. <ul style="list-style-type: none">• JBoss 4.0.4 application server• Grid Service

Installing caGWAS

To install caGWAS, follow these steps:

Step	Action
1	From the directory where you downloaded the <code>cagwas_distribution_[version].zip</code> file, unzip the files, using one of these two methods: <ol style="list-style-type: none">a. Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q cagwas_distribution_[version].zip</code> (You must have a ZIP tool

Step	Action
	<p>installed).</p> <p>b. Use WinZip or a similar utility to unzip the files to a location unique from the other unzipped files of LSD applications.</p> <p>This location will be referred to as the <code><installation_directory></code> henceforth. Once you unzip this file, it creates a directory called <code>cagwas</code> which is a directory below the <code><installation_directory></code>.</p>
2	<p>To modify the default properties, open the <code><installation_directory>/cagwas/cagwas-install.properties</code> file and modify the values for your environment and save the file. At a minimum, you will need to modify the following values:</p> <p>APPLICATION SETTINGS</p> <ul style="list-style-type: none"> • <code><application_base_path></code> <ul style="list-style-type: none"> ○ The location to which you are installing caGWAS (your <code><application_base_path></code>) . For example, in Windows, the <code><application_base_path></code> can be <code>C:/apps/cagwas</code>. Linux users can use <code>\$<application_base_path>/apps/cagwas</code> or any other folder to which you have write permissions . • Important: <code><application_base_path></code> must be different than <code><installation_directory></code> or the installation will fail. • <code>email.support</code> <ul style="list-style-type: none"> ○ Email address for caGWAS support questions at your site. • <code>email.request</code> <ul style="list-style-type: none"> ○ Email address for caGWAS request questions at your site. • <code>support.url</code> <ul style="list-style-type: none"> ○ Website for caGWAS support at your site. • <code>external.url</code> <ul style="list-style-type: none"> ○ URL for accessing the caGWAS application. Modify <code>REPLACE_URL</code> with the domain URL where you are installing caGWAS. <p>DATABASE SETTINGS</p> <ul style="list-style-type: none"> • <code>database.system.user</code> <ul style="list-style-type: none"> ○ This value should correspond to a MySQL username that has full system privileges. This must correspond to that value used in Step 4 on page11. • <code>database.system.password</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the password for the <code>database.system.user</code> used in Step 4 on page 11. • <code>database.server</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the domain name of machine that hosts the MySQL server. Talk to your database administrator to learn the server name and port. • <code>database.port</code>

Step	Action
	<ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the port for the <code>database.server</code>. 3306 is the default port, but check with your database administrator to be certain. • <code>database.csm.name</code> <ul style="list-style-type: none"> ○ Give the caGWAS CSM MySQL database a name. For example, <code>cagwascsmdb</code>. This must be <u>different</u> than the UPT database name (page Step 4 on page 11). • <code>database.csm.user</code> <ul style="list-style-type: none"> ○ Give the username to access <code>csm.database.name</code>. This can be any valid name that you choose, but it must be <u>different</u> than <code>database.system.user</code>. • <code>database.csm.password</code> <ul style="list-style-type: none"> ○ Use a password to access <code>csm.database.name</code> for the username identified in <code>csm.database.user</code>. This must be <u>different</u> than the <code>database.system.password</code>. • <code>database.cagwas.name</code> <ul style="list-style-type: none"> ○ Choose a name for the caGWAS MySQL database. This must be <u>different</u> than the UPT database name (page Step 4 on page 11). • <code>database.cagwas.user</code> <ul style="list-style-type: none"> ○ Choose a username to access <code>cagwas.database.name</code>. This can be any valid name that you choose, but it must be <u>different</u> than <code>database.system.user</code>. • <code>database.cagwas.password</code> <ul style="list-style-type: none"> ○ Choose a password to access <code>cagwas.database.name</code> for the username identified in <code>cagwas.database.user</code>. This must be <u>different</u> than the <code>database.system.password</code>.
	<p>APACHE SETTINGS</p> <ul style="list-style-type: none"> • <code>apache.virtual.ip</code> <ul style="list-style-type: none"> ○ The IP address to which you will bind your virtual server (assuming you use virtual servers). For example, 192.168.1.100. • <code>apache.virtual.name</code> <ul style="list-style-type: none"> ○ Name you will use as the <code>ServerName</code> value within your virtual server. This should be a fully-qualified domain name to access the server from the outside world. For example, <code>www.mycagwas.com</code>. • <code>apache.virtual.port</code> <ul style="list-style-type: none"> ○ Port to which your virtual server will bind. For example, default port is usually 80. • <code>file.transfer.base.dir</code> <ul style="list-style-type: none"> ○ Local directory for ftp server configuration in Apache. <code>file.transfer.base.dir</code> is the directory where the application will write files to be served up by Apache. Configuration happens in both the

Step	Action
	<p>application and the Apache sample file. For example, <code>/var/www/html/cagwas</code>. This property will be part of the caGWAS application configuration and the sample Apache configuration generated by the build. There are several directories that will be based on this base directory.</p> <ul style="list-style-type: none"> • <code>file.transfer.external.base.url.hid</code> <ul style="list-style-type: none"> ○ http://\${apache.virtual.name}/hid_download_cagwas/ (URL sent in the emails where users will download their generated request) • <code>file.transfer.external.base.url.anon</code> <ul style="list-style-type: none"> ○ URL for anonymous browsing of static data • <code>file.transfer.external.base.url.secure</code> <ul style="list-style-type: none"> ○ http://\${apache.virtual.name}/authenticated_browse/ (URL for browsing static data that requires authentication) <p>Note: You shouldn't need to modify the other default values as we have chosen unique ports to reduce the risk of other applications using the same values. However, be sure to check the <code>cagwas-install.properties</code> to verify that the ports in this file are not being used by other applications, otherwise you will experience problems</p>
4	<p>From the <code><installation_directory>/cagwas</code> directory, enter <code>ant</code> from the command prompt. This initiates the installation process. The anticipated duration is anywhere 1-15 minutes depending on your system's resources.</p> <p>The installer creates a cagwas database on your MySQL server, starts and configures a JBoss server and starts up a grid service for the caGWAS application.</p> <p>To verify caGWAS installation, go to: <a href="http://<jboss.server.hostname>:<jboss.server.port>/cagwas">http://<jboss.server.hostname>:<jboss.server.port>/cagwas.</p> <p>Note: <code>jboss.server.hostname</code> and <code>jboss.server.port</code> are values in the <code><installation_directory>/cagwas/cagwas-install.properties</code>.</p>
5	<p>To verify that the application was installed correctly, enter <code>cagwas_user</code> as the user and <code>cagwas_user</code> as the password.</p>
6	<p>After successfully installing caGWAS, create a backup of <code><installation_directory>/cagwas/cagwas-install.properties</code> for future reference.</p>

Configuring Apache for caGWAS

GWAS Data


The caGWAS application provides data in two ways:

1. Content within the web application
2. File based data, of which there are two types: a) dynamic and b) static. Apache serves up both of these types of data. Several properties listed in ***Error! Reference source not found.*** configure Apache for caGWAS.

The caGWAS installation has been tested with Apache 2.0.


Apache Configuration Notes

Because of the highly configurable nature of Apache, we cannot provide instructions that will work for every installation; this section, however, provides the minimal configuration options required to make the application work.

<p>NOTE</p> 	<p>The sample file can be found in <code><application_root_directory>/cagwas/working/apache/apache-sample.conf</code>. There is some documentation in the document</p>
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Linux


To configure Apache for caGWAS in Linux, follow these steps:

<p>NOTE</p> 	<p>Because of the great variability of the installation options, methods, packages for Apache on Linux, we cannot give you much guidance on how to proceed.</p> <p>Read the sample file in the location noted above. Many pointers are included describing how to configure Apache for this application.</p> <p>It is assumed you are running Red Hat Enterprise Linux v. 4 or above.</p>
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Step	Action
1	Edit the sample file, as desired, and copy to the place where your Apache configuration files are generally stored in the Red Hat version of Apache: <code>/etc/httpd/conf.d</code> .
2	Make sure this configuration is included by your <code>httpd.conf</code> . (In the Red Hat version of Apache, <code>httpd</code> contains an include for <code>/etc/httpd/conf.d/*.conf</code> , so nothing needs to be done.)
3	Make sure required modules are loaded. (In the Red Hat version of Apache, required modules are already there, so nothing needs to be done.)
4	Try restarting Apache and work through errors as you encounter them. Refer to the Apache website for support, as needed. http://httpd.apache.org/

Windows

To configure Apache for caGWAS in Windows, follow these steps:

 <p>NOTE</p>	<p>Read the sample file in the location noted above. Many pointers are included describing how to configure Apache for this application.</p>
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Step	Action
1	<p>Copy sample file <code><application_root_directory>/cagwas/working/apache/apache-sample.conf</code> to <code>conf\extras</code> (<code>c:\Program Files\Apache Software Foundation\Apache2.2\conf\extras</code>).</p> <p>Note: You might want to rename the file to <code>cagwas.conf</code> and edit as needed to make it work with your configuration (some notes in the file may help you do that).</p>
2	Edit apache configuration file (<code>c:\Program Files\Apache Software Foundation\Apache2.2\conf\httpd.conf</code>)
3	Add include line that points to the sample above (<code>c:\Program Files\Apache Software Foundation\Apache2.2\conf\extras\cagwas.conf</code>)

Step	Action
4	Uncomment the following Load Modules lines <ul style="list-style-type: none"> • LoadModule authnz_ldap_module modules/mod_authnz_ldap.so • LoadModule ldap_module modules/mod_ldap.so • LoadModule proxy_module modules/mod_proxy.so • LoadModule proxy_ajp_module modules/mod_proxy_ajp.so • LoadModule proxy_connect_module modules/mod_proxy_connect.so • LoadModule proxy_http_module modules/mod_proxy_http.so • LoadModule rewrite_module modules/mod_rewrite.so
5	Try restarting Apache and work through errors as you encounter them. Refer to the Apache website for support, as needed. http://httpd.apache.org/

caGWAS File Transfer Directory Structure

The static file content has a specific structure so that the application can refer you to the proper static content area when you click on the appropriate link. A sample structure is provided in the following zip file `<application_root_directory>/cagwas/working/apache/cagwas-directory-structure.zip`.

To use this file, follow these steps:

Step	Action
1	Extract the <code><application_root_directory>/cagwas/working/apache/cagwas-directory-structure.zip</code> file in the <code>\${file.transfer.base.dir}</code> .
2	Linux: Determine what user and group Apache runs on your system, in the example below replace Apache with your user.
3	Enter command: <code>chown -R apache:apache \${file.transfrer.base.dir}</code>
4	Add your application user to the group Apache Runs as (<code>usermod -G apache applicationuser</code>), so that (s)he will have access to that directory structure.

Suggested Apache Directory Structure

- `${file.transfer.base.dir}`
The base directory structure that Apache and caGWAS use.
- `@file.transfer.base.dir@/hid_download_cagwas`
Location of the files generated by the application stored and accessed by the user through Apache. You should not be able to browse to this directory. When users generate files that show up in this area from the application they will be provided a page that prompts for email address. The application will send an email with the absolute path to the file after it generates the file.
- `@file.transfer.base.dir@/anon_browse`
The directory where public (no authentication) static data is made available. This directory structure is based on the studies loaded on the application.
- `@file.transfer.base.dir@/authenticated_browse`
The directory where private (requires authentication) static data is stored.

Testing the Apache Configuration

The `${property}` references are defined in the `cagwas-install.properties`.

Step	Action
1	Browse to http://\${base.url}:\${port}/anon_browse . When accessing this URL, you should see a directory index
2	Browse to http://\${base.url}:\${port}/authenticated_browse When accessing this URL, you should see a directory index.
3	Browse to http://\${base.url}:\${port}/hid_download_cagwas You should see "Forbidden - You don't have permission to access /hid_download_cagwas/ on this server" or a similar error (based on server configuration for error messages).

Common Errors in the Browser

- "Not Found - The requested url /anon_browse/GWAS STUDY II/Version 2.0/Association/ was not found on this server."

The most common reason for this error is that the directory structure for the static data was not created correctly.

- Another possible issue is that the configurations do not work between the application and the web server. This should not happen unless you have manually edited the configurations.

Downloading and Installing caTissue

Downloading caTissue Files

To download, install and configure caTissue, follow these steps:

Step	Action
1	<p>The installation file for caTissue is close to 80MB.</p> <p>Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>catissue_utilities_[version].zip</code> file.</p> <p>Remember the download location as you will be using this file to run the installation in the steps that follow.</p>
2	<p>These server components are installed and configured as part of the caTissue installation. You do not need to do anything further to download or install these components.</p> <ul style="list-style-type: none">• JBoss 4.0.4 application server• Grid Service

Installing caTissue

Step	Action
1	<p>From the directory where you downloaded the <code>catissue_utilities_[version].zip</code> file, unzip the files, using one of these two methods:</p> <ul style="list-style-type: none"> c. Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q catissue_utilities_[version].zip</code> (You must have a ZIP tool installed). d. Use WinZip or a similar utility to unzip the files to a location unique from the other unzipped files of LSD applications. <p>This location will be referred to as the <code><installation_directory></code> henceforth. Once you unzip this file, it creates a directory called <code>cagwas</code> which is a directory below the <code><installation_directory></code>.</p>
2	<p>To modify the default properties, open the <code><installation_directory>/catissue/catissue - install.properties</code> file and modify the values for your environment and save the file. If necessary, you may need modify the following properties:</p> <ul style="list-style-type: none"> • <code>jboss.base.dir</code> <ul style="list-style-type: none"> ○ Base directory for installing JBoss. For example, in Windows, you may choose to use <code>C:/apps/catissue</code> or, in Linux, you may use <code>\${user.home}/apps/catissue</code> • <code>grid.base.dir</code> <ul style="list-style-type: none"> ○ Base directory for installing Grid service. For example, in Windows, you may choose to use <code>C:/apps/catissue-grid</code> or, in Linux, you may use <code>\${user.home}/apps/catissue-grid</code>
3	<p>From the <code><installation_directory>/catissue</code> directory, enter <code>ant</code> from the command prompt. This initiates the installation process. The anticipated duration is anywhere 1-15 minutes depending on your system's resources.</p> <p>Note: The installer may fail if properties cannot be verified (like connectivity testing or conflicting port numbers). Check <code>./logs/install-@date@.log</code> for the installation log.</p>
4	<p>The installation file for caTissueCore is over 90MB.</p> <p>Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>catissue_distribution_[version].zip</code> file.</p> <p>Remember the download location as you will be using this file to run the installation in the steps that follow. This location will later be referred to as the <code><catissue_home></code>.</p>
5	<p>To configure the rest of caTissue, please download the install guide at:</p> <p>https://gforge.nci.nih.gov/frs/download.php/4208/caTissueLSDDeploymentGuide.doc</p>

Downloading and Installing CTODS

Downloading CTODS Files

To download the CTODS files, follow these steps:

Step	Action
1	<p>The installation file for CTODS is close to 200MB.</p> <p>Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>ctods_distribution_[version].zip</code> file.</p> <p>Remember the download location as you will be using this file to run the installation in the steps that follow.</p>
2	<p>These server components are installed and configured as part of the CTODS installation. You do not need to do anything further to download or install these components.</p> <ul style="list-style-type: none">• JBoss 4.0.4 application server• Grid service

Installing CTODS

To install CTODS, follow these steps:

Step	Action
1	<p>From the directory where you downloaded the <code>ctods_distribution_[version].zip</code> file, unzip the files, using one of these two methods:</p> <ol style="list-style-type: none">e. Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q ctods_distribution_[version].zip</code> (You must have a ZIP tool installed).f. Use WinZip or a similar utility to unzip the files to a location unique from the other unzipped files of LSD applications. <p>This location will be referred to as the <code><installation_directory></code> henceforth. Once you unzip this file, it creates a directory called <code>ctods</code> which is a directory below the <code><installation_directory></code>.</p>
2	<p>To modify the default properties, open the <code><installation_directory>/ctods/ctods-install.properties</code> file and modify the values for your environment and save the file. At a minimum, you will need to modify the following values:</p> <ul style="list-style-type: none">• <code>application.base.path</code>• The location to which you are installing CTODS (your

Step	Action
	<p data-bbox="488 239 1398 369"><application_base_path> . For example, in Windows, the <application_base_path> can be C:/apps/ctods. Linux users can use <application_base_path>/apps/ctods or any other folder to which you have write permissions .</p> <p data-bbox="488 390 1276 453">Important: <application_base_path> must be different than <installation_directory> or the installation will fail.</p> <ul style="list-style-type: none"> <li data-bbox="444 474 1398 579">• database.system.user <ul style="list-style-type: none"> <li data-bbox="488 516 1398 579">○ This value should correspond to a MySQL username that has full system privileges. This must correspond to that value used in Step 4 on page11. <li data-bbox="444 600 1162 705">• database.system.password <ul style="list-style-type: none"> <li data-bbox="488 642 1162 705">○ This value <u>must</u> correspond to the password for the database.system.user used in Step 4 on page11 <li data-bbox="444 726 1398 863">• database.server <ul style="list-style-type: none"> <li data-bbox="488 768 1398 863">○ This value <u>must</u> correspond to the domain name of machine that hosts the MySQL server. Talk to your database administrator to learn the server name and port. <li data-bbox="444 884 1398 1020">• database.port <ul style="list-style-type: none"> <li data-bbox="488 926 1398 1020">○ This value <u>must</u> correspond to the port for the database.server. 3306 is the default port, but check with your database administrator to be certain. <li data-bbox="444 1041 1398 1146">• database.name <ul style="list-style-type: none"> <li data-bbox="488 1083 1398 1146">○ Choose a name for the CTODS MySQL database. This must be <u>different</u> than the UPT database name (page Step 4 on page11). <li data-bbox="444 1167 1398 1272">• database.user <ul style="list-style-type: none"> <li data-bbox="488 1209 1398 1272">○ Give the username to access database.name. This must be <u>different</u> than the UPT database name (page Step 4 on page11). <li data-bbox="444 1293 1398 1430">• database.password <ul style="list-style-type: none"> <li data-bbox="488 1335 1398 1430">○ Use a password to access database.name for the username identified in database.user. This must be <u>different</u> than the database.system.password. <li data-bbox="444 1451 1398 1556">• grid.index.service.base.url <ul style="list-style-type: none"> <li data-bbox="488 1493 1398 1556">○ Grid service registration URL used for discovering the running grid nodes. For example, http://cagrid-portal.nci.nih.gov <p data-bbox="444 1577 1398 1751">Note: You shouldn't need to modify the other default values, as we have chosen unique ports to reduce the risk of other applications using the same values. However, be sure to check the ctods-install.properties to verify that the ports in this file are not being used by other applications, otherwise you will experience problems.</p>

Step	Action
3	<p>From the <code><installation_directory>/ctods</code> directory, enter <i>ant</i> from the command prompt. This initiates the installation process. The anticipated duration is anywhere from 1-15 minutes depending on your system's resources.</p> <p>The installer creates a CTODS database on your MySQL server, starts and configures a JBoss server and starts up a grid service for the CTODS application.</p>
4	<p>a. To verify UPT installation, go to: <a href="http://<jboss.server.hostname>:<jboss.server.port>/upt">http://<jboss.server.hostname>:<jboss.server.port>/upt. (Refer to the <code>upt-install.properties</code> for the correct values. See note below.)</p> <p>b. To access CTODS, open your web browser to <a href="http://<jboss.server.hostname>:<jboss.server.port>/CTODSViewer">http://<jboss.server.hostname>:<jboss.server.port>/CTODSViewer.</p> <p>Note: <code>jboss.server.hostname</code> and <code>jboss.server.port</code> are values in the <code><installation_directory>/caarray/caarray2-install.properties</code> and the <code><installation_directory>/upt/upt-install.properties</code> files. The default administrator name is <i>superadmin</i> and the password is <i>changeme</i>.</p>
5	<p>To verify that the application was installed correctly, enter <i>lsdttestuser1</i> as the user and <i>password</i> as the password.</p>
6	<p>After successfully installing CTODS, create a backup of <code><installation_directory>/ctods/ctods-install.properties</code> for future reference.</p>

Downloading and Installing NCIA

Downloading NCIA Files

To download the NCIA files, follow these steps:

Step	Action
1	<p>The installation file for NCIA is over 200MB.</p> <p>Go to the https://gforge.nci.nih.gov/frs/?group_id=450 directory in GForge and download the <code>ncia_distribution_[version].zip</code> file.</p> <p>Remember the download location as you will be using this file to run the installation in the steps that follow.</p>
2	<p>These server components are installed and configured as part of the NCIA installation. You do not need to do anything further to download or install these components.</p> <ul style="list-style-type: none"> • JBoss 4.0.4 application server • Grid service

Installing NCIA

To install NCIA, follow these steps:

Step	Action
1	<p>From the directory where you downloaded the <code>ncia_distribution_[version].zip</code> file, unzip the files, using one of these two methods:</p> <ol style="list-style-type: none"> Open a command prompt and use it to extract this file to a temporary location. For example, you may enter a command such as <code>unzip -q ncia_distribution_[version].zip</code>. (You must have a ZIP tool installed.) Use WinZip or a similar utility to unzip the files to a location unique from the other unzipped files of LSD applications. <p>This location will be referred to as the <code><installation_directory></code> henceforth. Once you unzip this file, it creates a directory called <code>ncia</code> which is a directory below the <code><installation_directory></code>.</p>
2	<p>To modify the default properties, open the <code><installation_directory>/ncia/ncia-install.properties</code> file and modify the values for your environment and save the file. At a minimum, you will need to modify the following values:</p> <ul style="list-style-type: none"> • <code><application_base_path></code> • The location to which you are installing NCIA (your <code><application_base_path></code>). For example, in Windows, the <code><application_base_path></code> can be <code>C:/apps/ncia</code>. Linux users can use <code><application_base_path>/apps/ncia</code> or any other folder to which you have write permissions. <p style="margin-left: 40px;">Important: <code><application_base_path></code> must be different than <code><installation_directory></code> or the installation will fail.</p> • <code>database.system.user</code> <ul style="list-style-type: none"> ○ This value should correspond to a MySQL username that has full system privileges. This must correspond to that value used in Step 4 on page 11. • <code>database.system.password</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the password for the <code>database.system.user</code> used in Step 4 on page 11 • <code>database.server</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the domain name of machine that hosts the MySQL server. Talk to your database administrator to learn the server name and port. • <code>database.port</code> <ul style="list-style-type: none"> ○ This value <u>must</u> correspond to the port for the <code>database.server</code>. 3306 is the default port, but check with your database administrator to be certain.

Step	Action
	<ul style="list-style-type: none"> • <code>database.name</code> <ul style="list-style-type: none"> ○ Choose a name for the NCIA MySQL database. This must be different than the UPT database name (Step 4 on page11). • <code>database.user</code> <ul style="list-style-type: none"> ○ Choose a username to access <code>database.name</code>. This can be any valid name that you choose, but it must be different than <code>database.system.user</code>. • <code>database.password</code> <ul style="list-style-type: none"> ○ Choose a password to access <code>database.name</code> for the username identified in <code>database.user</code>. This must be different than the <code>database.system.password</code>.
	<ul style="list-style-type: none"> • <code>gov.nih.nci.ncia.imaging.server.url</code> <ul style="list-style-type: none"> ○ URL for image server location. For example, https://imaging.nci.nih.gov • <code>gov.nih.nci.ncia.quarantine.directory</code> <ul style="list-style-type: none"> ○ Directory where quarantined images are stored. For example, <code>/data/ncia_data/webapps/NCICBIMAGE/trial/quarantine</code>. • <code>gov.nih.nci.ncia.mapped.image.path.head</code> <ul style="list-style-type: none"> ○ Mapped image file path in IGS machine. For example, <code>\\fs592\nciaimages\</code>. • <code>gov.nih.nci.ncia.image.path.pattern</code> <ul style="list-style-type: none"> ○ Pattern of the image file path. For example, <code>NCICBIMAGE/documents/</code>. • <code>gov.nih.nci.ncia.zip.location</code> <ul style="list-style-type: none"> ○ Location to place zipped files. For example, <code>/data/ncia_data/ncia_ftp</code>. • <code>gov.nih.nci.ncia.ftp.location</code> <ul style="list-style-type: none"> ○ Location to place zipped files. For example, <code>/data/ncia_data/ncia_ftp</code>. • <code>gov.nih.nci.ncia.grid.local.node.name</code> <ul style="list-style-type: none"> ○ Required Identification of the local instance of NCIA. For example, <code>NCI-1</code>. • <code>gov.nih.nci.ncia.ui.uid.display.length</code> <ul style="list-style-type: none"> ○ Determines the max character length of data representation in the UI tier. For example, <code>100</code>. • <code>gov.nih.nci.ncia.ftp.url</code> <ul style="list-style-type: none"> ○ FTP server URL used for informing users about where to download the larger size files. For example, <code>imaging-dev.nci.nih.gov</code>. • <code>grid.index.service.base.url</code> <ul style="list-style-type: none"> ○ Grid Service registration URL for discovering the running grid nodes. For example, http://cagrid-portal.nci.nih.gov.

Step	Action
	<ul style="list-style-type: none"> • <code>mail.smtp.server</code> <ul style="list-style-type: none"> ○ Location of mail server to send emails for application to forward emails to users, notify users of the location of the download files. For example, <code>mail.nih.gov</code>. <p>Note: You shouldn't need to modify the other default values as we have chosen unique ports to reduce the risk of other applications using the same values. However, be sure to check the <code>ncia-install.properties</code> to verify that the ports in this file are not being used by other applications, otherwise you will experience problems.</p>
4	<p>From the <code><installation_directory>/ncia</code> directory, enter <code>ant</code> from the command prompt. This initiates the installation process. The anticipated duration is anywhere 1-15 minutes depending on your system's resources.</p> <p>The installer will create an NCIA database on your MySQL server, start and configure a JBoss server and start up a grid service for the NCIA application.</p>
5	<ol style="list-style-type: none"> a. To verify UPT installation, go to: <a href="http://<jboss.server.hostname>:<jboss.server.port>/upt">http://<jboss.server.hostname>:<jboss.server.port>/upt. b. To access NCIA, open your web browser to <a href="http://<jboss.server.hostname>:<jboss.server.port>/ncia">http://<jboss.server.hostname>:<jboss.server.port>/ncia. <p>Note: <code>jboss.server.hostname</code> and <code>jboss.server.port</code> are values in the <code><installation_directory>/ncia/ncia-install.properties</code> and the <code><installation_directory>/upt/upt-install.properties</code> files. The default Administrator name is <code>superadmin</code> and the password is <code>changeme</code>.</p>
6	<p>To verify that the application was installed correctly, enter <code>nciaadmin</code> as the user and <code>password</code> as the password.</p>
7	<p>After successfully installing NCIA, create a backup of <code><installation_directory>/ncia/ncia-install.properties</code> for future reference.</p>

Installing MIRC for NCIA


To install and configure MIRC, follow section 5 of the instructions located here:

http://qforge.nci.nih.gov/svnroot/ncia/trunk/docs/guides_and_instructions/system_installation_guide/under_development/release_4.0/NCIA_Installation_Guide.doc


Next, follow the instructions in the Field Center Installation Guide located here:

http://qforge.nci.nih.gov/svnroot/ncia/trunk/docs/guides_and_instructions/system_installation_guide/under_development/release_4.0/FieldCenter_Install_Guide.doc


Verifying Port Usage

<p>NOTE</p> 	<p>Verify that default port values defined in <code>*-install.properties</code> (e.g. <code>caarray2-install.properties</code>) files are not in use on your system by running <code>netstat -a</code> from the command line. If the ports are in use prior to installation, you will likely receive an error message during installation.</p>
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Configuring JBoss, MySQL and Grid Services

<p>NOTE</p> 	<p>Both MySQL and up to eight JBoss servers make up LSD. They must be continually run as services. The instructions in this section cover all of these scenarios.</p> <ul style="list-style-type: none">• JBoss 4.0.4 server for UPT• Separate JBoss 4.0.4 server for each application (caArray for Grid, caGWAS, caTissue (two JBoss servers), CTODS and NCIA)• JBoss 4.0.5 for the caArray application• MySQL 5.0.27
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Running JBoss as a Service

<p>NOTE</p> 	<p>The default installation runs JBoss as a command line process using the user currently logged on. Therefore, when you log out as this user, JBoss will no longer be available. For that reason, it is recommended that you configure your JBoss servers to run as a Linux or Windows service. The instructions are contained in this section.</p>
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To run JBoss as a service, follow these steps:

Step	Action
1	<p>Linux</p> <p>See http://wiki.jboss.org/wiki/Wiki.jsp?page=StartJBossOnBootWithLinux.</p>
2	<p>Windows</p> <p>To run an existing JBoss command line installation as a service, follow the directions for creating a user-defined service at http://support.microsoft.com/kb/137890/EN-US/</p> <p>Note: You need to have access to the Windows Resource Kit.</p>

Running MySQL as a service


<p>NOTE</p> 	<p>It is assumed that your MySQL server was installed as a service. If it was not, follow these recommendations for installing MySQL as a service.</p>
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To run MySQL as a service, follow these steps:

Step	Action
1	<p>Linux</p> <p>See http://dev.mysql.com/doc/refman/5.0/en/unix-post-installation.html#automatic-start</p>
2	<p>Windows</p> <p>When installing MySQL server on Windows, choose the option to run MySQL as a Windows service.</p>

Using UPT

UPT is used to provision users in all LSD applications. Each application installs with its own CSM schema that has sample/default users and a role/permissions structure. To add additional users you need to provision the other application (for example, caGWAS) in the UPT. Then you can assign users to the applications. You can install all the applications and configure them in UPT or install UPT and configure each application one by one. Below is the general flow *using caGWAS as an example*.

<p>Note</p> 	<p><code>\${some.thing}</code> identifies a value to lookup in the <code>*-install.properties</code> file you used to build the application.</p>
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For additional information on using UPT

https://qforge.nci.nih.gov/frs/download.php/2634/UPT_User_Guide.pdf

To use the UPT, follow these steps:

Step	Action
1	Install UPT. See Downloading and Installing the UPT on page 11.
2	Launch a browser and access UPT via <a href="http://<jboss.server.hostname>:<jboss.server.port>/upt">http://<jboss.server.hostname>:<jboss.server.port>/upt (from <code>upt-install.properties</code>).
3	Login to UPT, using the following profile: <ul style="list-style-type: none">○ Login ID=<i>superadmin</i>○ Password=<i>changeme</i>○ Application Name=<i>csmupt</i>
4	Select the User tab, and click Create a New User .
5	Enter Login Name , User First Name , User Last Name , User Password , User Password Confirm and click Add .
6	On the Application tab, click Create a New Application .

Step	Action
7	Enter the following parameters: <ul style="list-style-type: none"> • Application Name=caGWAS • Application Description=<<i>Application Description</i>> • Application Declarative Flag=Yes • Application Active Flag=Yes • Application Database URL=jdbc:mysql://\${database.server}:\${database.port}/\${csm.database.name} • Application Database User Name=\${csm.database.user} • Application Database User Password=\${csm.database.password} • Application Database Confirm Password=\${csm.database.password} • Application Database Dialect=<i>org.hibernate.dialect.MySQLDialect</i> • Application Database Driver=\${database.driver}
8	Click on Add > Associated Admins , then click on Assign Admin .
9	Enter * in a search field and click Search .
10	Select the user you want to be admin of the application, and click Assign Admin .
11	Login to UPT at <a href="http://<jboss.server.hostname>:<jboss.server.port>/upt">http://<jboss.server.hostname>:<jboss.server.port>/upt (from <code>upt-install.properties</code>). Use the following login profile: <ul style="list-style-type: none"> • Login ID=<<i>User created above</i>> • Password=<<i>Password for User created above</i>> • Application Name=<<i>Application name created above</i>>
12	Click Update Association .
13	Click Logout .

Advertising Grid Services

By advertising your grid service, you make pertinent information available so that others can consume your grid services. The sections below describe the configurations necessary to advertise grid services for each project.

Advertising the caArray Grid Service To advertise your caArray grid service see the **Advertising the caArray Grid Service** section in `caarray_[version]_installation_guide.pdf` link at https://gforge.nci.nih.gov/frs/?group_id=305

Advertising other Grid Services

To advertise other grid services within the LSD bundle, follow these instructions.

Step	Action
1	<p>server-config.wsdd</p> <p>Make sure your container is publishing the right host name. Your service must register with a publicly accessible address or DNS-resolvable host name, so the Index Service (and other clients) can connect to it. Add the following lines to this file if you want your service to have a specific name or if your service is trying to register a private IP address which is not allowed. You should see errors in your JBoss 4.0.4 log if you are trying to register a private IP address.</p> <pre><parameter name="logicalHost" value="somehost.cagrid.org"/> <parameter name="publishHostName" value="true"/></pre> <p>File Location:</p> <pre><application_root_directory>/jboss-4.0.4.GA/server/default/deploy/wsrfr.war/WEB-INF/etc/globus_wsrfr_core</pre>
2	<p>serviceMetadata.xml</p> <p>This file contains the service's contact information. The two sections to update are at the top and bottom of the file.</p> <p>Top of file under <ns2:pointOfContactCollection>:</p> <pre><ns3:PointOfContact affiliation="" email="" firstName="" lastName="" phoneNumber="" role="" xmlns:ns3="gme://caGrid.caBIG/1.0/gov.nih.nci.cagrid.metadatat a.common"/></pre> <p>Bottom of file under <ns1:hostingResearchCenter>:</p> <pre><ns14:PointOfContact affiliation="" email="" firstName=" " lastName=" " phoneNumber="" role=" "/></pre> <p>File Location:</p> <pre><application_root_directory>/jboss-4.0.4.GA/server/default/deploy/wsrfr.war/WEB-INF/etc/<Application Service Name Directory></pre>

Step	Action
3	After making these changes, restart the JBoss 4.0.4 server (this hosts the grid service).
For more troubleshooting information : http://www.cagrid.org/mwiki/index.php?title=CaGrid:How-To:TroubleshootIndexService	

FAQs

ERROR MESSAGES from the Installer

This section provides a number of example and interpretations of error or warning messages that you may encounter during your LSD tool installations. For additional help, see Contacting Application Support on page 37.

Java Version check

Fail

Your Java SDK version must be 1.5 (1.5.0_10 recommended). The version you have installed is `${java.version}`. Please install the correct version of the Java SDK and update your System PATH to point to directory where you installed it.

Warn

Java version check: WARNING, version is not 1.5.0_10

REPLACE in property file check

Failed

Property file validation: FAILED 'replace' found in file"

Some properties still have 'REPLACE' in them. These properties require valid values. Please update `${properties.file}` and run the installer again.

replace in property file check

Warn

Some properties still have 'replace' in them, this may cause issues.

Database system user does not match any other type of database user check

Fail

The above line in the properties file uses the same user as the database.system.user. This will cause problems creating the database. Please change the mentioned property value to something other than \${database.system.user} and run the install again.

Database configuration properties and

Fail

Database connection failed for @{{database.system.url}}. Verify that your database.system.user and database.system.password property values are valid in the *-install.properties file. Your database version must be least @{{database.version}}" name="db.connection.success

Port in use check

Fail

Port is listening at
\${jboss.server.hostname}:\${validate.port}.\${line.separator}Verify the JBoss server is not running at
\${jboss.server.hostname}:\${validate.port}. If it is not, there may be a different process or application using this port (\${validate.port}). You can either change the port this application uses by updating your *-install.properties file or change your other application to resolve this issue and continue installing.

Build cannot run as root check

Fail

Cannot run build as root.

Hostname checker

Warn

Could not reach host from property \${hostname.property} with value of \${hostname.value}

jboss.home is out of sync with base path check

Fail

There is an issue with the property for jboss.home, it is recommended to set it back to it's original value.

```
application.base.path = ${application.base.path}
jboss.home = ${jboss.home}
jboss.home property must be set to ${application.base.path}/jboss*
```

Working Directory and application base path checker

Fail

There is an issue with the property for application.base.path, your current working directory this directory or a sub directory. Try changing application.base.path to something else .

```
application.base.path = ${application.base.path}
Working Directory = ${basedir}
application.base.path cannot be where you are install from.
```

Jboss exists warning

Input

The jboss.home (\${jboss.home}) already exists. Please be sure you have a recent backup of this directory. This process will alter files in the jboss.home area and any customizations you have could be lost. Do you want to proceed? (y,n)

DB exists warning

Input

The database @{database.name} already exists. Please be sure you have a recent backup of this database. This process will alter the database if you need to return your database to the current state you need a good backup. Please ensure you have a good backup before proceeding. Do you want to proceed? (y,n")

Contacting Application Support

CBIIT	CBIIT Application Support
Application	Email: ncicb@pop.nci.nih.gov
Support	Local: 301.451.4384
	Toll-Free: 888.478.4423
	http://ncicb.nci.nih.gov/support