

CANANOLAB INSTALLATION GUIDE FOR WINDOWS

Version 1.3



**NATIONAL[®]
CANCER
INSTITUTE**

Center for Bioinformatics

February 7, 2008

TABLE OF CONTENTS

Installing Windows caNanoLab 1.3	1
Introduction to caNanoLab	1
General System Requirements	2
Installing caNanoLab	2
Verification	7
Appendix A	
Administrator's Guide to UPT	9
User Provisioning Tool (UPT)	9
Setting Up caNanoLab Users with the UPT	10
Initial Passwords and Changing Passwords	11
Appendix B	
Application Support	11

INSTALLING WINDOWS caNANO LAB 1.3

This chapter, describes how to use the caNanoLab installer for the Window's platform.

Note: This Windows installer is for first-time users only. The installer sets up the caNanoLab database and JBoss and starts up the application with one user, **superadmin**. The superadmin can set up users and passwords with the User Provisioning Tool (UPT) discussed in *Administrator's Guide to UPT* on page 9.

The following chapter provides instructions for these topics:

- *Introduction to caNanoLab* on page 1
- *General System Requirements* on page 2
- *Installing caNanoLab* on page 2

Introduction to caNanoLab

Welcome to the *cancer Nanotechnology Laboratory Analysis Bench (caNanoLab) Windows 1.3 Installation Guide*. caNanoLab is a data sharing portal designed for laboratories performing nanoparticle assays. caNanoLab provides support for the annotation of nanoparticles with characterizations resulting from physical and *in vitro* nanoparticle assays and the sharing of these characterizations in a secure fashion.

As of release 1.1, the caNanoLab domain model has been caGrid enabled. In other words, a caNanoLab grid data service can be deployed and registered with caGrid 1.0 index server, allowing sharing of public characterizations across the caGrid. For more information, see <https://cabig.nci.nih.gov/workspaces/Architecture/caGrid>. The caNanoLab web application now allows remote searches against remote grid services hosting the caNanoLab data model.

Note: The grid service is not included in this windows installation. For instructions on setting up the grid service, refer to the *caNanoLab 1.3 Manual Installation Guide* available at the following link: http://gforge.nci.nih.gov/docman/index.php?group_id=69&selected_doc_group_id=2863&language_id=1.

General System Requirements

The following open source technologies power the caNanoLab web application:

- Java Software Development Kit (JDK) version 5.0
- JBoss version 4.0.5
- Jakarta Ant version 1.6.5
- mySQL version 5.0.x

The caNanoLab web application has been tested within NCICB against JBoss servers hosted on Windows XP and RedHat Linux systems, and against mySQL 5.0.27 databases hosted on RedHat Linux systems and mySQL 5.0.45 on Windows XP systems. Prior to release 1.2.1, the caNanoLab web application had been tested against Oracle 9i databases hosted on Sun Solaris systems, and Oracle 10g XE database hosted on Windows XP.

Installing caNanoLab

To install caNanoLab, follow these directions:

1. Once you start the installation, the Welcome to the caNanoLab Installer window (*Figure 1*) appears.

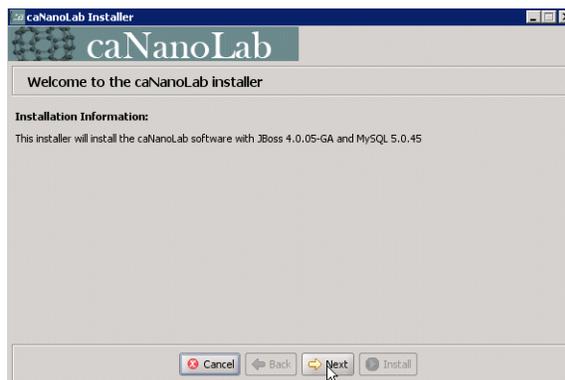


Figure 1 Welcome window

To cancel the installation, click the **Cancel** button.

2. To start the installation, click the **Next** button.

The License Conditions window (*Figure 2*) appears.

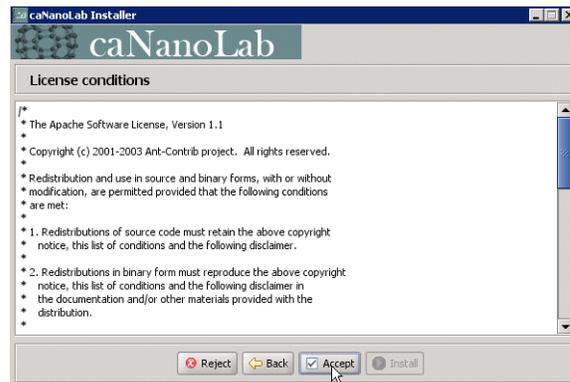


Figure 2 License Conditions window

3. Read the conditions.

To return to the previous window, click the **Back** button.

Note: If you reject the conditions, the installation stops.

4. To continue with the installation, click the **Accept** button.

The Installation Folder window (*Figure 3*) appears.

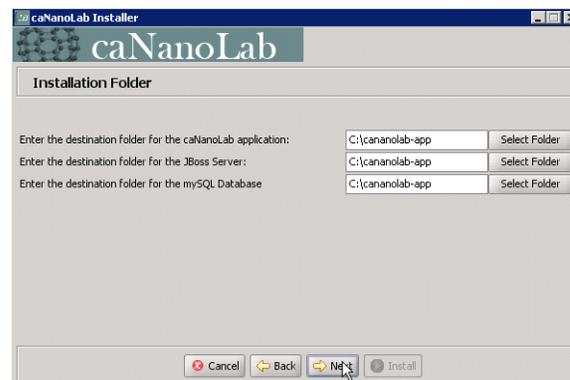


Figure 3 Installation Folder window

The window lists the default destination for the following:

- **caNanoLab application**
- **JBoss Server**
- **mySQLDatabase**

You can maintain the default location (c : \cananolab-app) or change the destinations.

5. To change the destination folder locations, type in the path of the folder, or click the **Select Folder** button and select another folder.

To cancel the installation, click the **Cancel** button.
To return to the previous window, click the **Back** button.

6. To save the selected locations, click the **Next** button.

The JBoss Configuration window (*Figure 4*) appears.

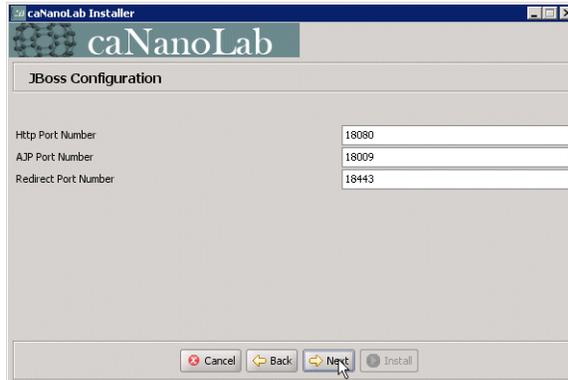


Figure 4 JBoss Configuration window

The JBoss Configuration window displays the following port numbers which replace the default values in the file server.xml that is under the subdirectory server\default\deploy\jbossweb-tomcat55.sar of the JBoss download.

- **HTTP Port Number:** Port for the HTTP 1.1 connector. Please refer to this link for details: <http://tomcat.apache.org/tomcat-5.5-doc/config/http.html>.
 - **RMI Bind Port Number:** Port for the AJP 1.3 connector. Please refer to this link for details: <http://tomcat.apache.org/tomcat-5.5-doc/config/http.html>.
 - **Redirect Port Number:** Port to which non-SSL requests will be redirected when requesting secured content
7. To change the configurations, enter different information.
To cancel the installation, click the **Cancel** button.
To return to the previous window, click the **Back** button.
 8. To save the selected configurations, click the **Next** button.
The Enter the build properties window (*Figure 5*) appears.

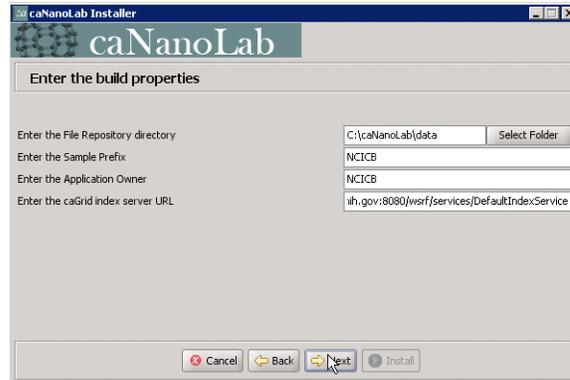


Figure 5 Enter the build properties window

The window displays the following build properties:

- **Enter the File Repository directory:** A directory on the system that hosts the JBoss application server for storing uploaded files, for example, `C:\caNanoLab\data`.
- **Enter the Sample prefix:** The prefix used for auto-accessioning samples, for example, **NCICB** is used for sample accessions NCICB-1, NCICB-2, etc. at the National Cancer Institute Center for Bioinformatics.
- **Enter the Application Owner:** The owner of the caNanoLab release installation, for example, **NCICB**.
- **Enter the caGrid Index Server URL:** The grid index server hosting the caNanoLab grid data services, for example, `http://cagrid-index.nci.nih.gov:8080/wsrf/services/DefaultIndexService`, the NCICB's production caGrid index server.

To cancel the installation, click the **Cancel** button.

To return to the previous window, click the **Back** button.

9. To change the build properties, enter different information.
10. To save the properties, click the **Next** button.

The Confirmation window ([Figure 6](#)) appears.

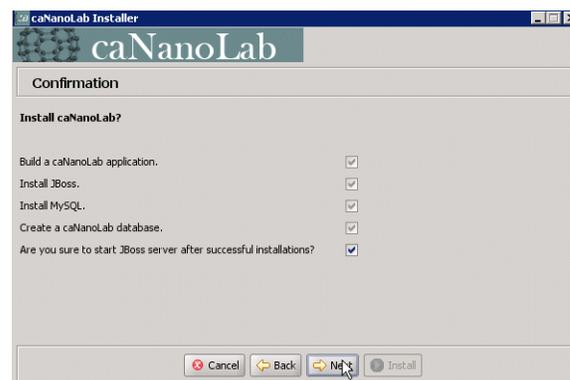


Figure 6 Confirmation window

The window lists the items to be installed. If you do not want to install something, deselect the check box. You cannot de-select the first four items. They are installed automatically, but if you do not want to start the JBoss server after the installation, uncheck the box.

- **Are you sure to build a caNanoLab installation?**
- **Are you sure to install JBoss?**
- **Are you sure to install mySQL?**
- **Are you sure to create caNanoLab database?**
- **Are you sure to start JBoss server after successful installation?**

To cancel the installation, click the **Cancel** button.

To return to the previous window, click the **Back** button.

11. To save the confirmation information, click the **Next** button.

12. The Installation Progress window appears. To see details during the installation, click the **Show Details** button. Two tabs with Output and Errors appear.

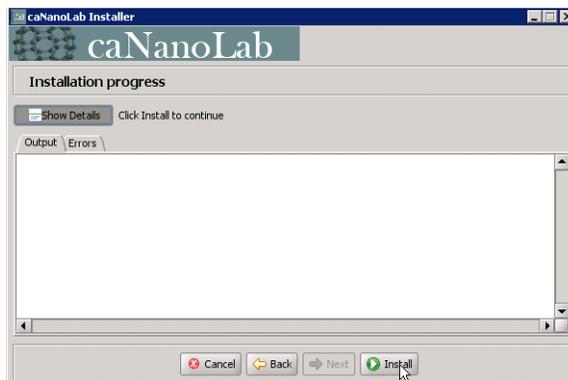


Figure 7 Installation Progress window

13. To start the installation, click the **Install** button. The installation begins.

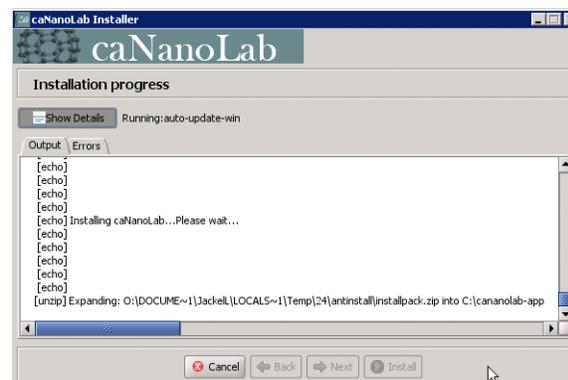


Figure 8 Installation begins

Note: To display errors during installation, click the **Errors** tab.

Verification

If you did not select the **Are you sure to start JBoss server after successful installation?** box on the Confirmation window of the installer (see *Figure 6* on page 5), the JBoss server was not started during installation. When the installation is complete, start the JBoss server, and the caNanoLab application starts. Open the URL <http://localhost:18080/caNanoLab>. A disclaimer page appears. Click on **CLICKING HERE** to display the Welcome/Log in page and log in. For instructions on using caNanoLab, see the *caNanoLab 1.3 User's Guide*.

ADMINISTRATOR'S GUIDE TO UPT

Once caNanoLab is installed with the Windows InstallShield, **superadmin** is the only user defined in the application. As a superadmin, you can set up additional users with the User Provisioning Tool (UPT).

The following chapter provides instructions for these topics:

- *User Provisioning Tool (UPT)* on page 9
- *Setting Up caNanoLab Users with the UPT* on page 10

User Provisioning Tool (UPT)

Before users can log in to the caNanoLab application to submit and search data, you must first create their user accounts and assign them to the pre-defined user groups with the pre-defined roles to access the pre-defined protection groups. The caNanoLab application makes use of the NCICB's User Provisioning Tool (UPT), a separate web application, for user account management. The concepts of users, groups, roles, protection groups are defined according the CSM/UPT principles. See the CSM documentation at http://gforge.nci.nih.gov/frs/?group_id=12 for details on these concepts and the use of the UPT tool.

In release 1.3, as a part of the database seed data, a default user group `Public` has been created and has been assigned role `R` to protection groups `protocol`, `nanoparticle` and `report`, i.e. assigned access to search protocols, nanoparticles and reports. During the caNanoLab application start up, two more default users groups are auto-generated: `<application.owner>_Researcher`, `<application.owner>_PI`, where the value for `<application.owner>` is specified in the file `build.properties` prior to building the application.

Automatic roles are assigned for the two default user groups at start up as follows:

- `<application.owner>_Researcher` is assigned role **CURD** to protection group **sample**. These users have access to submit samples.
- `<application.owner>_PI` (Principal Investigator) is assigned role **CURD** to protection groups **sample**, **protocol**, **nanoparticle**, and **report**. These users have access to submit samples, protocols, nanoparticles and reports.

In release 1.3, a user must be assigned as a caNanoLab administrator to see the ADMINISTRATION menu item in the application to log into the UPT tool.

Setting Up caNanoLab Users with the UPT

The following steps illustrate an example use of the UPT tool to create a new user, to assign the user to be a caNanoLab administrator, and to assign the user to a pre-defined user group.

Step	Action
1	<p>Launch the UPT tool at <code>http://<SERVER_URL>/upt</code> and login as superadmin/password. Use caNanoLab-upt as the application name when prompted at the UPT log in.</p> <p>Note: The user superadmin was created as a part of the database setup.</p>
2	<p>Once logged into the UPT tool, follow these steps:</p> <ul style="list-style-type: none"> • Select User > Create a New User. • Create a new user account named admin. • Select Application > Select an Existing Application; click Search. • Select caNanoLab from the application list. • Click View Details, then Associated Admins. • Assign this user to be an administrator for the caNanoLab application. • Click Update Association to commit the change.
3	<p>Log out of the UPT tool and log back in as admin/admin. Use caNanoLab as the application name when prompted at the UPT log in.</p> <p>Note: When a new user account is created, its initial default password is the same as its login name. Given that the UPT tool is lacking a function for users to manage their own passwords, users can only update their passwords within the caNanoLab application. See the Notes below on how to update user passwords.</p>
4	<ul style="list-style-type: none"> • Select User > Select an Existing User, and click Search. Select admin from the User list. • Click View Details, then Associated Groups. • Select <application.owner>_PI from the pre-defined group list and assign it to the user. • Click Update Associations to commit the change.

Table A.1 Setting up caNanoLab users with the UPT

5	Follow similar steps to create other application user accounts and to assign them to different users groups, as appropriate.
---	--

Table A.1 Setting up caNanoLab users with the UPT

Initial Passwords and Changing Passwords

The initial passwords for user accounts are set to be the same as their user accounts. When a user first logs into the caNanoLab application at http://<APP_SERVER_URL>/caNanoLab, the user is prompted to change the initial password. Users can update their passwords at any time within the caNanoLab application. Additional information includes the following:

- Only users assigned as caNanoLab administrators and assigned to the `<application.owner>_PI` group can delete characterizations.
- Publicly available data can be browsed through the public browse links on the home page without logins.
- Users logged into the application have to be assigned to one of the predefined user groups to be able access data.
- New sample sources entered during sample creation are automatically created as new user groups. Using the UPT tool, one can assign different roles to different protection groups for these new user groups.
- A user can be assigned to multiple user groups,
- The initial passwords for user accounts are set to be the same as their user accounts. When a user first logs into the caNanoLab application at `http://<SERVER_URL>/caNanoLab`, a user is prompted to change the initial password. Users can update passwords at any time within the caNanoLab application.

Note: For more information about how to use the UPT tool for managing user accounts, contact NCICB Application Support ncicb@pop.nci.nih.gov and request that the caNanoLab technical team give you a demonstration of the UPT tool in the context of the caNanoLab application.

APPENDIX
B

APPLICATION SUPPORT

For any general information about the application, application support or to report a bug, contact NCICB Application Support.

Email: ncicb@pop.nci.nih.gov	When submitting support requests via email, include the following: <ul style="list-style-type: none">• Your contact information, including your telephone number.• The name of the application/tool you are using• The URL if it is a Web-based application• A description of the problem and steps to recreate it. The text of any error messages you have received
Application Support URL	http://ncicb.nci.nih.gov/NCICB/support
Telephone: 301-451-4384 or toll free: 888-478-4423	Telephone support is available Monday to Friday, 8 am – 8 pm Eastern Time, excluding government holidays.

