CAGRID 1.2

Installer Guide

NATIONAL INSTITUTES OF HEALTH

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Center for Bioinformatics

March 28, 2008

Model caBIG™ Open Source Software License

v.2

Release Date: January 7, 2008

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Revision History

The following is the revision history for this document.

Date	Version	Description	Revised By
3/28/2008	1.2.3	Formatted and Edited to Match NCI Documentation Standards	Carolyn Kelley Klinger
3/28/2008	1.2.2	Moved from wiki to Word Template	John Eisenschmidt
3/25/2008	1.2.1	Final Draft for wiki: caGrid 1.2	Scott Oster
3/11/2008	1.2.0	Initial Draft for wiki: caGrid 1.2	Scott Oster

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About This Guide

This section introduces you to the *caGrid 1.2 Installer Guide*. Topics in this section include

- *Purpose* on this page
- *Release Schedule* on this page
- *Audience* on this page
- *Topics Covered* on page 2
- *Document Text Conventions* on page 2
- *Credits and Resources* on page 3

Purpose

The cancer Biomedical Informatics Grid, or caBIG™, is a voluntary virtual informatics infrastructure that connects data, research tools, scientists, and organizations to leverage their combined strengths and expertise in an open environment with common standards and shared tools. The current grid architecture of caBIG™ is dubbed caGrid. The software embodiment and corresponding documentation of this architecture constitute the caGrid release.

This guide describes the caGrid Installer, which simplifies the installation of caGrid. More information about caGrid can be found in the User's Guide and Programmer's Guide.

Release Schedule

This guide has been updated for the caGrid 1.2 release. It may be updated between releases if errors or omissions are found. The current document refers to the 1.2 version of caGrid, released in March 2008 by caBIG.

Audience

The primary audience of this guide is the caGrid service developer, client application developer, and service administrator.

This guide assumes that you are familiar with the Java programming language and/or other programming languages, database concepts, and the Internet. If you intend to use caGrid resources in software applications, it assumes that you have experience with building and using complex data systems.

Topics Covered

This brief overview explains what you will find in each chapter of this guide.

- *About This Guide*, this chapter, provides an overview of the guide.

- *Chapter 1, Getting Started with the Installer* on page 5, explains how to download, run, and install the caGrid Installer.

- *Chapter 2, Using the caGrid Installer* on page 11, describes how to install caGrid components into a secure container, installation differences between operating systems, advanced usage scenarios, and troubleshooting options.

Document Text Conventions

The following table shows how text conventions are represented in this guide. The various typefaces differentiate between regular text and menu commands, keyboard keys, and text that you type.

Convention	*Description*	*Example*
Bold	Highlights names of option buttons, check boxes, drop-down menus, menu commands, command buttons, or icons.	Click **Search**.
URL	Indicates a Web address.	http://domain.com
text in SMALL CAPS	Indicates a keyboard shortcut.	Press ENTER.
text in SMALL CAPS + text in SMALL CAPS	Indicates keys that are pressed simultaneously.	Press SHIFT + CTRL.
Italics	Highlights references to other documents, sections, figures, and tables.	See *Figure 4.5*.
`Italic boldface monospace` type	Represents text that you type.	In the **New Subset** text box, enter `Proprietary Proteins`.
Note:	Highlights information of particular importance.	**Note:** This concept is used throughout this document.
{}	Surrounds replaceable items.	Replace {last name, first name} with the Principal Investigator's name.

Table 1-1 Document Conventions

Credits and Resources

caGrid 1.2 Programmer's Guide Development and Management Teams		
Development	**Support (Systems, QA, Documentation)**	**Management**
Scott Oster (Lead Architect)[1]	Aynur Abdurazik[7]	Avinash Shanbhag (Product Manager)[5]
David Ervin[1]	Chet Bochan[9]	John Eisenschmidt[10]
Ian Foster[2]	Gavin Brennan[9]	Michael Keller[6]
Shannon Hastings[1]	Carolyn Kelley Klinger[8]	David Wu[6]
Tahsin Kurc[1]	Wei Lu[9]	Peter Yan[7]
Manav Kher[3]	Ye Wu[5]	
Stephen Langella[1]		
Ravi Madduri[2]		
Kunal Modi[4]		
Joshua Phillips[3]		
Joel Saltz[1]		
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[7] Science Application International Corporation (SAIC)	[8] Lockheed Martin Management System Designers	[9] Terrapin Systems LLC (TerpSys)
[10] 5AM Solutions		

Other Acknowledgements
GeneConnect – Project - Washington University
GridIMAGE – Project - Ohio State University
caBIO – Project - National Cancer Institute Center for Bioinformatics (NCICB)
caArray – Project - National Cancer Institute Center for Bioinformatics (NCICB)
caTRIP – Project – Duke Comprehensive Cancer Center
GenePattern – Project – Broad Institute

Other Acknowledgements
geWorkbench – Columbia University
caBiocondutor – Project – Fred Hutchinson Cancer Research Center

Contacts and Support	
NCICB Application Support	http://ncicbsupport.nci.nih.gov/sw/ Telephone: 301-451-4384 Toll free: 888-478-4423

LISTSERV Facilities Pertinent to caGrid		
LISTSERV	**URL**	**Name**
cagrid_users-l@list.nih.gov	https://list.nih.gov/archives/cagrid_users-l.html	caGrid Users Discussion Forum

Chapter 1   Getting Started with the Installer

This chapter provides an overview of the caGrid Installer, including how to install it and choosing a custom target grid.

Topics in this chapter include:

- *Introduction* on this page
- *Downloading the Installer* on this page
- *Running the Installer* on page 6
- *Usage Scenarios* on page 6
- *Installation Phases* on page 7

Introduction

The caGrid installer provides a graphical, wizard-like interface for installing caGrid dependencies, source code, services, and applications. It was first introduced for caGrid 1.0, and overhauled for caGrid 1.1.

The following features are new in the 1.2 release:

- Small download: under 3MB
- Component installers: install all caGrid services and applications
- Can be used to re-install or re-configure previous installations
- Installer now uses MD5 checksums to verify downloads

Downloading the Installer

The caGrid Installer can only be obtained from the caGrid gforge project page. The caGrid 1.2 installer can be downloaded by clicking caGrid-installer-1.2.zip.

The installer zip file must be saved to your file system. Unzip the file into a directory of your choosing, for example `/opt/cagrid/installer`. The contents of that directory should look like this:

```
caGrid-installer-1.2.jar
caGrid-installer-1.2.zip
lib/
  caGrid-1.2-wizard.jar
  cog-jglobus.jar
  commons-logging.jar
  jce-jdk13-125.jar
  log4j-1.2.8.jar
  mysql-connectory-java-3.0.16-ga-bin.jar
  xmltask-v1.14.jar
scripts/
  build.xml
  resources/
    spring-beans.dtd
    web-app_2_3.dtd
```

```
web-facesconfig_1_1.dtd
```

Running the Installer

caGrid requires the Java 1.5 JDK. If the installer cannot locate this version of Java, an error message will be displayed when you try to run the installer. If you see this error message, see "Environment Settings" on page 16 to learn how to configure your environment on various platforms. You will also need to be connected to the Internet because the installer will download caGrid and its dependencies. If you are behind a firewall or need to install to hosts that have no route to the Internet, see "Off-Line Installation" on page 19.

You will find a Java archive (Jar) file named caGrid-installer-1.2.jar in the directory where you unzipped the downloaded zip file. This is the installer program. On some operating systems (e.g. Microsoft Windows, Macintosh), you can double-click on this file.

Note: Some programs that unzip zip files will display the contents of the zip file in a folder-like view (e.g. Microsoft Windows XP and Vista). Be sure to first extract the zip file before double-clicking on the installer Jar file. Otherwise, the installer will fail to start.

On other systems (e.g. Linux, Unix), you must run this program from the command line. To run this program from the command line, change to the directory where you unzipped the the downloaded file. Then type the following:

```
java -jar caGrid-installer-1.2.jar
```

Note: Make sure you have changed to the same directory as the Jar file before running the installer.

When the installer starts, you will see a splash screen which displays the caGrid logo.

Usage Scenarios

The installer has been designed for the following usage scenarios:

1. Installing the caGrid source distribution and dependencies.

2. Configuring a container into which caGrid services can be deployed.

3. Installing any of the caGrid services.

4. Installing caGrid applications (portal).

If you are developing your own services that you wish to expose to an existing grid, then you will be interested in only scenarios 1 and 2. If you are creating your own grid or you would like to integrate your institution's security domain into other grids, then you would also be interested in scenario 3. If you would like to be able to use a web interface to discover and view metadata that is exposed by services which do not advertise to the NCICB's index services, then you would be interested in scenario 4.

Scenarios 1 and 2 require essentially no knowledge of how caGrid works. In a matter of minutes, you should be able to download and install caGrid, configure your container, and start using Introduce (and other core caGrid tools) to develop and deploy services. (Refer to the Introduce guide to get started developing services: http://www.cagrid.org/wiki/Introduce)

Scenarios 3 and 4 require knowledge of how caGrid and each of its components work - both on their own and together. You should refer to the *caGrid User's Guide* for each component. You can also refer to the deployment documentation that describes how the installer is used to deploy the NCICB production grid.

The rest of this chapter will describe usage scenarios 1 and 2.

Installation Phases

Each run of the installer goes through the following phases:

1. Select installation type and desired components

2. Download/install required components (optional)

3. Configure caGrid and container (optional)

4. Configure components

5. Install components

Installation Types

The first screen displayed by the installer (after the license screen) prompts the user to select one of the following installation types:

- Install caGrid

- Configure Container

- Install caGrid Services

- Install caGrid Portal

If you are interested in usage scenarios 1 and 2 (described above), then you will need to select only *Install caGrid* and/or *Configure Container*. If you are interested in usage scenarios 3 and 4, then you would select one or more of the remaining options.

Note: The installer will try to do the "right" thing, based on your selections. If you select only *Install caGrid Services*, but you haven't yet installed caGrid or configured a container, the installer will detect this and prompt you through the process of establishing a working system.

Install caGrid

If you select *Install caGrid* and de-select all other options, the installer will do the following:

1. Download and extract Ant

2. Download and extract Globus

3. Download and extract caGrid

4. Compile caGrid

5. Configure caGrid for a target grid (e.g. NCICB Production Grid)

If your ANT_HOME environment variable already points to the correct version of Ant, the installer will give you the option to us this, or reinstall Ant to the location you choose. Similarly, if your GLOBUS_LOCATION environment variable points to the right version

of Globus, you'll be given the same options. If you have already used the installer to install caGrid 1.2, you'll be given the option re-install it as well. You'll also be given the option to reconfigure it for different target grid.

Configure Container

caGrid services can be deployed to either the Globus container or to the Globus web application that has been deployed to a Jakarta Tomcat servlet container. When you select the *Configure Container* option, you'll be prompted to select the container type: *Globus* or *Tomcat*.

If you select the Globus container, the installer will:

1. (Re-)Install Ant (optional)
2. (Re-)Install Globus (optional)
3. (Re-)Install caGrid (optional)

If you select the Tomcat container, the installer will also give you the option to (re-)install Tomcat.

Once the installer has installed (or identified) the appropriate container, it will ask you a series of questions to determine how the container should be configured.

Secure Container

The first question will ask whether the container should be secure. That means, do you want the container to be able to host secure services? Secure services are those that require clients to use one of the Globus Security Infrastructure (GSI) authentication mechanisms. The authentication mechanisms require that the container be provisioned with grid credentials (i.e. a X.509 certificate and key). Grid credentials that are used for a container that is hosting grid services are referred to as *host credentials*. The GAARDS infrastructure (caGrid's security infrastructure) provides mechanisms to obtain host credentials.

In caGrid, the primary way to obtain host credentials is to request them from the Dorian CA via the GAARDS security UI. That process is described here. The NCICB Production grid includes a Dorian "Level 1" service that will automatically grant host certificates to any grid user, for any host. If you use this approach, your services will be trusted by any other caGrid services that trust the Dorian level 1 CA.

On the other hand, if you just want to experiment with secure grid services, and are not concerned about integrating with an existing trust fabric, you can use the installer to generate both your own CA and host certificates. (The installer just uses the tools found in the caGrid *gridca* project to generate these certificates.)

1. If you choose to install a secure container, the installer will then ask for the host name of the machine. (You can't just make this up. The host name must be a DNS name that resolves to the same IP address as the IP address(es) to which the container is listening on the specified port.). Enter the host name and press *Next*.

2. If you have chosen the Tomcat container, the next screen will prompt you for the Shutdown Port and HTTPS port. If you are installing multiple containers on the same machine, ensure that these are different than the ports that other containers are using.

> **NOTE:** The installer will attempt to remove the existing HTTP Connector element in Tomcat's server.xml. But it will not remove any other Connector elements. If you are running multiple containers on the same machine, you will have to manually modify/remove other Connectors (e.g. the AJP/1.3 Connector) if there are port conflicts.

3. If you have chosen the Globus container, you will not be prompted for port information. The port that the Globus container listens to is specified as a command line argument to the container's startup script. See here for further information.

4. Next the installer will ask if the service certificate and key (i.e. the host credentials) are present.

   ° If you have these, select the *Yes* check box, and click *Next*. On the next screen, you'll be prompted for the location of these credentials.

   ° If you don't have host credentials, do **NOT** select the *Yes* check box. Then press **Next**.

5. The installer asks if you have a CA certificate and key. These are what the installer will need in order to generate host credentials for you.

   ° If you have these, select the Yes check box. Then press Next. On the following screen, you'll be prompted for the locations of the CA certificate and key as well as the password for the key. Once you've entered these, press **Next**. You'll then be prompted for the location to write the host certificates.

   ° If you don't have a CA certificate and key, do **NOT** select the *Yes* check box on the screen that asks if they are present. Then press **Next**.

6. You'll then be prompted for locations to write the certificate and key as well as the CA password, the distinguished name (DN) to be used, and the number of days that the CA certificate will be valid. Once you've entered that information, press **Next**. The following screen will prompt you for the location to write the host certificates.

Non-secure Container

If you have not chosen to configure a secure container, the installer will just ask you for the host name and, if using Tomcat, the shutdown and HTTP ports.

Install caGrid services

If you choose the *Install caGrid Services* installation type, the installer will present the following list of caGrid services that can be installed:

- My Introduce Service
- Dorian
- Credential Delegation Service (CDS)
- GTS
- SyncGTS
- AuthenticationService

- GridGrouper
- Index Service
- GME
- EVS
- caDSR
- FQP
- Transfer Service (Tomcat Only)
- Workflow

For details on the configuration of each of these components, see the [TODO: set me caGrid User's Guide]. You could also look here to see how these services have been deployed using the installer at NCICB.

The *My Introduce Service* option allows you to configure the standard properties of any Introduce-created service and deploy it.

If you choose to install the Workflow service, ActiveBPEL will be downloaded and installed as well, in the same manner as other dependencies such as Tomcat or Ant.

Install caGrid Portal

See here for details on install the caGrid Portal.

Chapter 2   Using the caGrid Installer

Topics in this chapter include:

- *Creating a Secure Container* on this page
- *Environment Settings* on page 16
- *Advanced Usage* on page 19
- *Troubleshooting* on page 21

Creating a Secure Container

This section explains how to create a secure container using the caGrid Installer. The overall process invokes the following basic steps:

- Download, extract, run the installer to install just caGrid.
- Use the caGrid security UI to request host credentials.
- Run the installer again to install the container and point it at the credentials created in the previous step.

To create a secure container using the caGrid Installer:

1. Download the Installer. For more information, see *Downloading the Installer* on page 5.
2. Run the installer. For more information, see *Running the Installer* on page 6.
3. Agree to the license.
4. Select the **Install caGrid** option and clear all other options.
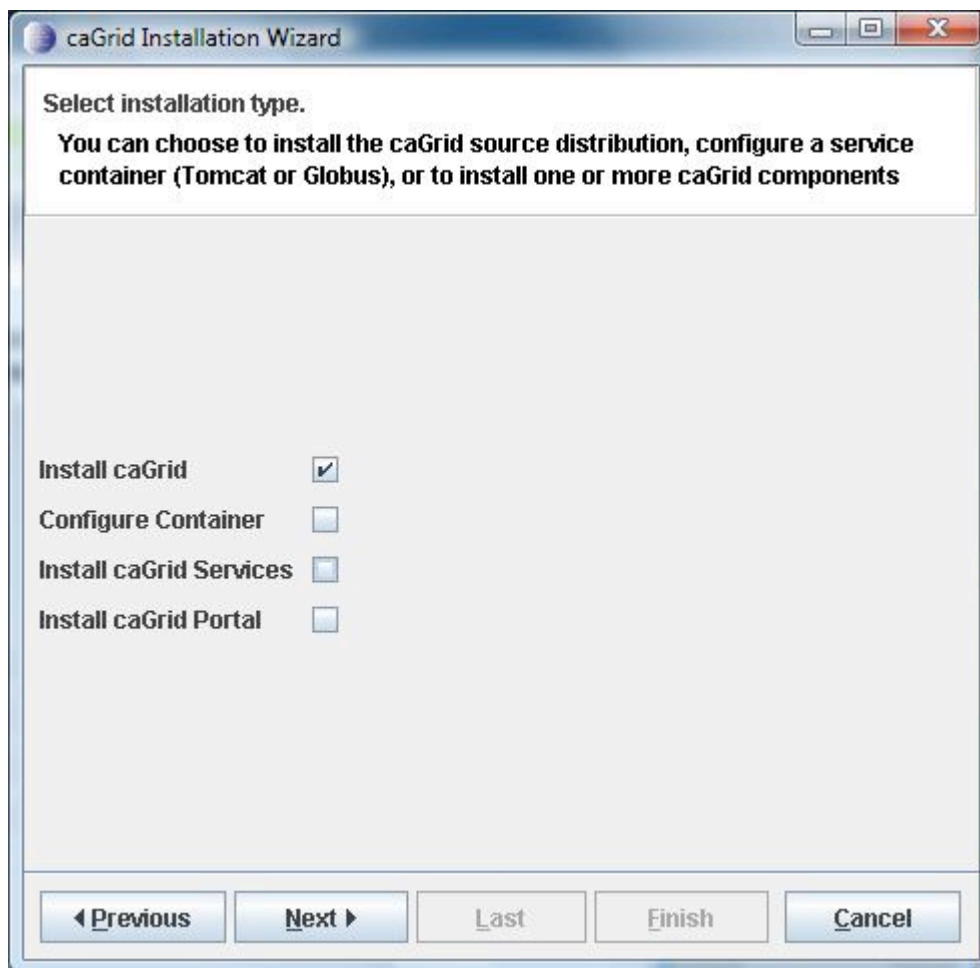
Figure 2-1: Select caGrid

7. Click **Next**. In the following screens, indicate where Ant, Globus and caGrid should be installed. The Select Target Grid screen appears.

8. Select the grid that you intend to integrate with. Click **Next**. The **Install Components** screen appears.
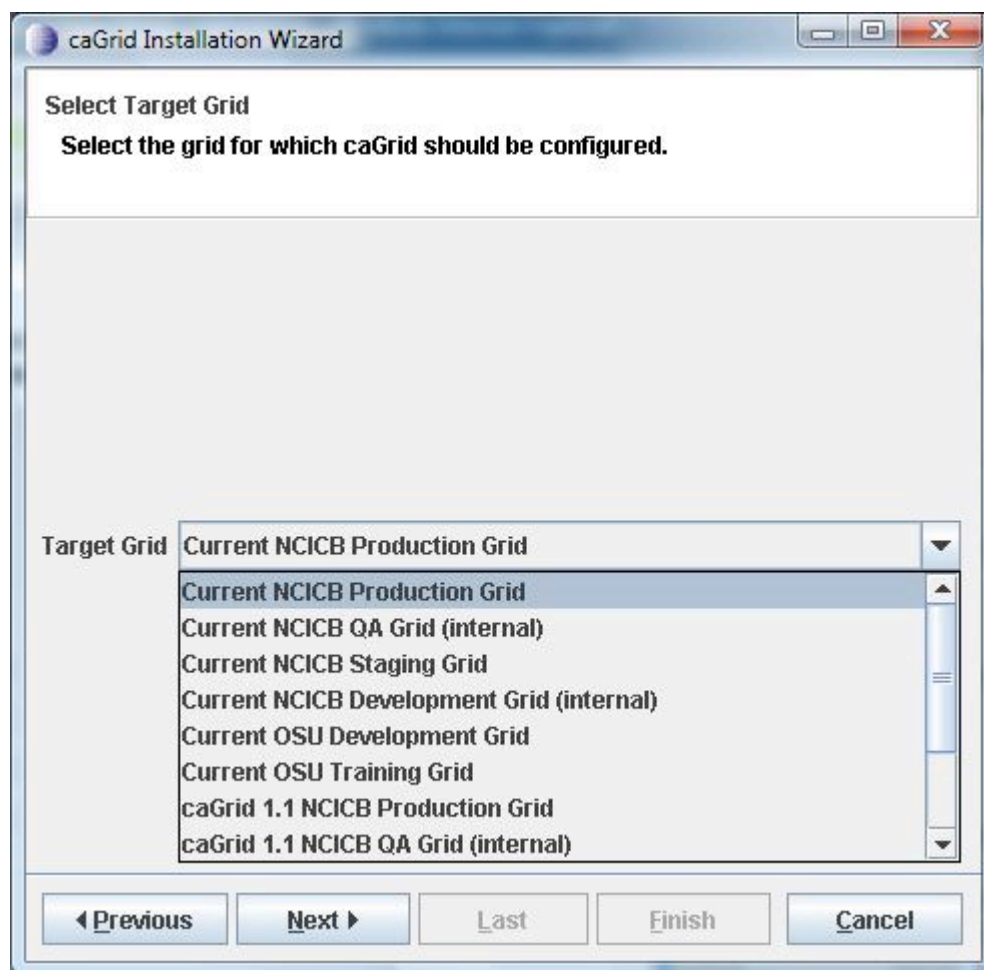
Figure 2-2: Select target grid

9. Click **Start**. The Installed Components screen appears. Wait while the installer downloads and extracts the required components.
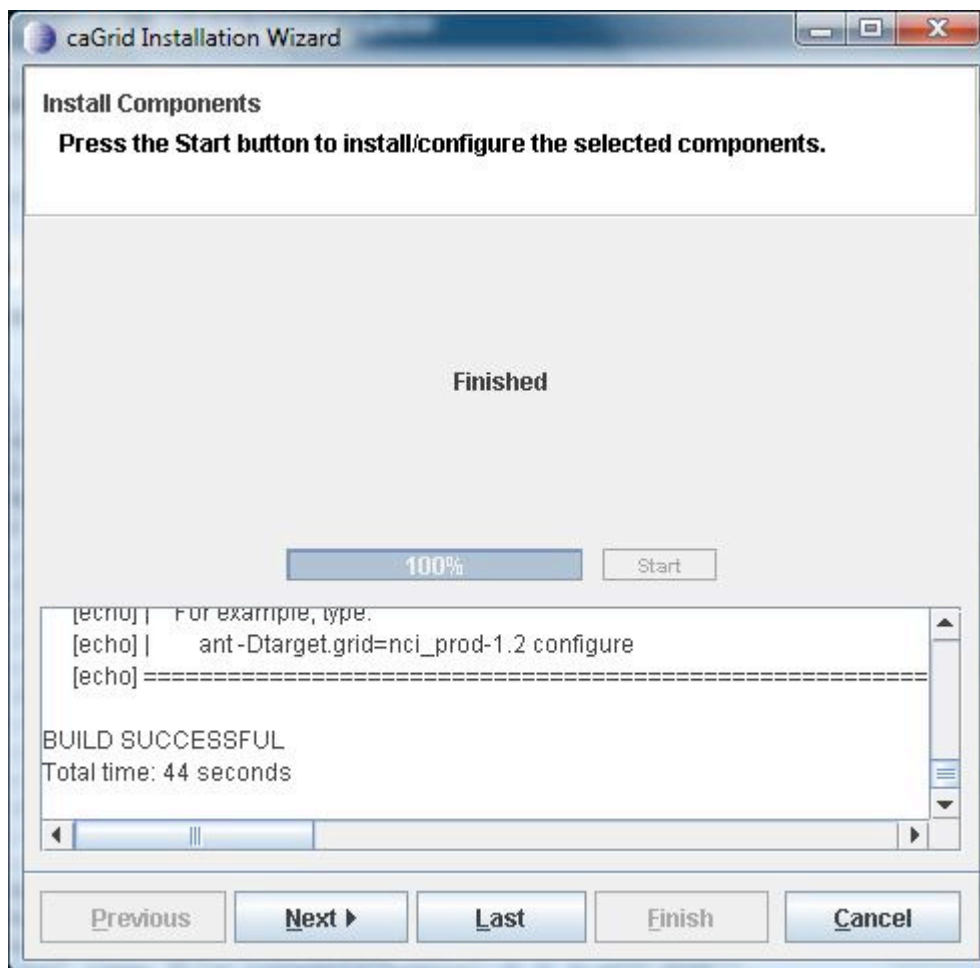
Figure 2-3: Required components installed

10. Click **Next**. The Installation Complete screen appears once caGrid has been successfully installed. It also lists the environment variables that you need to set.
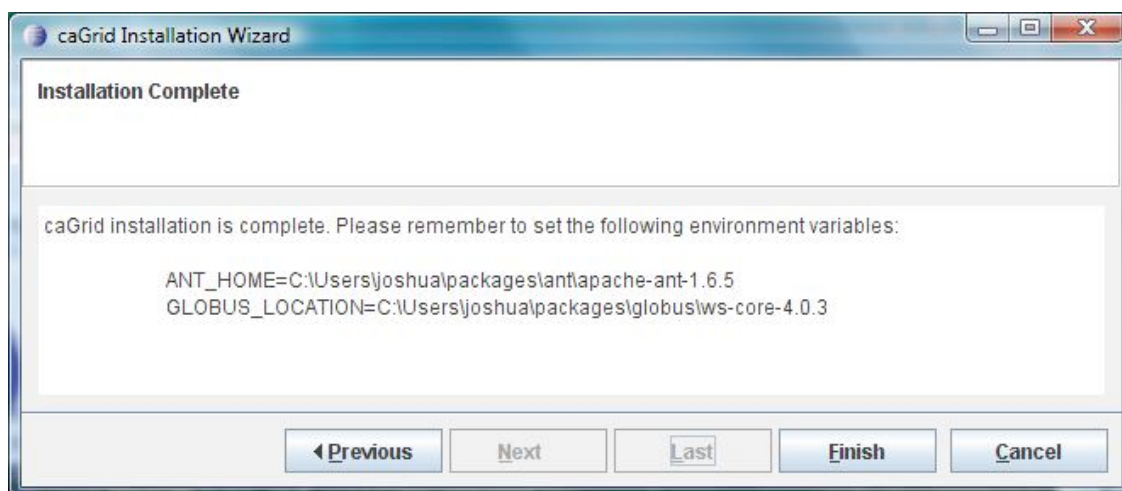

Figure 2-4: caGrid installation complete

11. Click **Finish**, then **Close**.

    The ANT_HOME and GLOBUS_LOCATION variables should now be set as the installer indicated. If you haven't already set the JAVA_HOME variable, the installer will also indicate what that should be set to. See here for instructions on setting environment variables on various operating systems.

12. Open a command prompt and change directories to where caGrid has been installed. Type the following command:
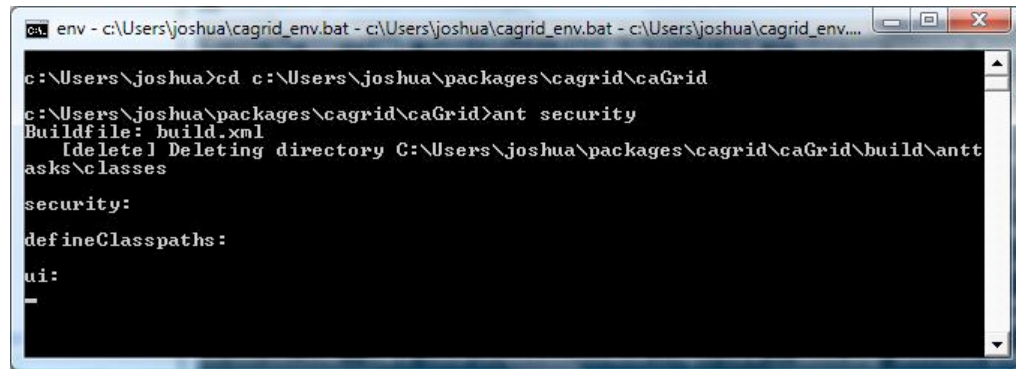
    ```
    ant security
    ```


Figure 2-5: Start up the caGrid security UI

13. You will need to authenticate to the grid, which requires an account. Anyone can get an account automatically using the caGrid Dorian Level 1 service. If your institution already has an AuthenticationService that is integrated with the NCICB Production grid, you will be able to use the same username and password that you us at your institution. See here for directions on requesting an account. See here for directions on authenticating through the caGrid security UI. Once you have successfully authenticated, follow these instructions for requesting host credentials.

14. Once you have obtained host certificates, start up the installer again.

    a. Agree to the license; then select **Configure Container** and clear all other options. Click **Next**.

    b. Select the Tomcat container type. Click **Next**.

    c. Do **NOT** select the **Yes** check box on the Reinstall Ant? screen. Click **Next**.

    d. On the Tomcat screen, indicate where Tomcat should be installed. Click **Next**.

    e. Click **Next**. Indicate where Tomcat should be installed. Click **Next**.

    f. Do **NOT** select the *Yes* check box on the Reinstall Globus? screen. Click **Next**.

    g. Do **NOT** select the *Yes* check box on the Reinstall caGrid? screen. Click **Next**.

    h. Do **NOT** select the *Yes* check box on the Reconfigure caGrid for target grid? screen. Click **Next**.

    i. Click **Start** on the Install Components screen. When it finishes, click **Next**.

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j.   On the Secure Deployment screen, select the **Yes** check box. Click **Next**.

k.   On the Service Hostname screen, enter the host name of this machine. Click **Next**.

l.   On the Specify Tomcat Ports screen, enter the Shutdown Port and HTTPS port. (In most cases, the defaults should be fine) Click **Next**.

m. On the Service Credentials screeen, select the **Yes** check box. Click **Next**.

n.   On the Service Credentials Information screen, navigate to and select the certificate and key files that you created through the caGrid security UI. Click **Next**.

o.   Click **Start**. The installer deploys Globus to Tomcat and configures Tomcat and the Globus web application accordingly.

p.   Once the installer is finished, click **Next**. The installer indicates that the CATALINA_HOME environment variable must now also be set.
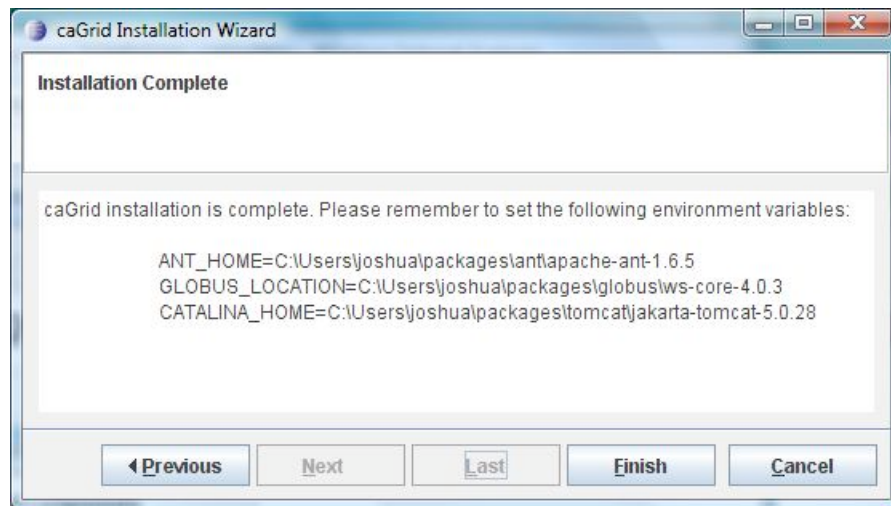

Figure 2-6: Container configuration complete

On some systems, you will also need to modify the file permissions of the components that have been installed. For example, on Mac and *nix type systems, you could run the following commands:

```
chmod u+x $CATALINA_HOME/bin/*.sh

chmod u+x $ANT_HOME/bin/*.sh

chmod u+x $GLOBUS_LOCATION/bin/*
```

Environment Settings

In order for the caGrid development environment and deployed caGrid services to work properly, you must set certain environment variables. If these environment variables have not been set, the installer will indicate how they should be set based on the input you provide during the installation process. Also, since the installer is designed to work on systems where caGrid (and some or all of its dependencies) have already been installed, the installer will examine the environment and give the user options to re-use or re-install these components (possibly to a new location on the file system).

The environment variables that the installer looks for are as follows:

- JAVA_HOME: This should point to the Java 1.5 Java Develop Kit (JDK), not the Java Runtime Environment (JRE).

- ANT_HOME: Should point to the Ant 1.6.5 installation directory. The caGrid development environment requires this variable, but running caGrid services do not.

- GLOBUS_LOCATION: Should point to the caGrid Globus 4.0.3 distribution installation directory. This is required by the caGrid development environment and caGrid services that are running in the Globus container.

- CATALINA_HOME: Should point to the Jakarta Tomcat 5.0.28 installation directory. This is required by the caGrid development environment and is necessary to run the Tomcat container.

The next sections provide examples of how to set these variables for various systems.

Unix/Linux and Mac

Suppose you have the following installation:

- Java: /usr/local/jdk1.5.0_12

- Ant: /usr/local/apache-ant-1.6.5

- Globus: /usr/local/ws-core-4.0.3

- Tomcat: /usr/local/jakarta-tomcat-5.0.28

If you are using the Bash shell, then you should add the following to your ~/.bash_profile file:

```
export JAVA_HOME=/usr/local/jdk1.5.0_12
export ANT_HOME=/usr/local/apache-ant-1.6.5
export GLOBUS_LOCATION=/usr/local/ws-core-4.0.3
export CATALINA_HOME=/usr/local/jakarta-tomcat-5.0.28
export PATH=$JAVA_HOME/bin:$ANT_HOME/bin:$PATH
```
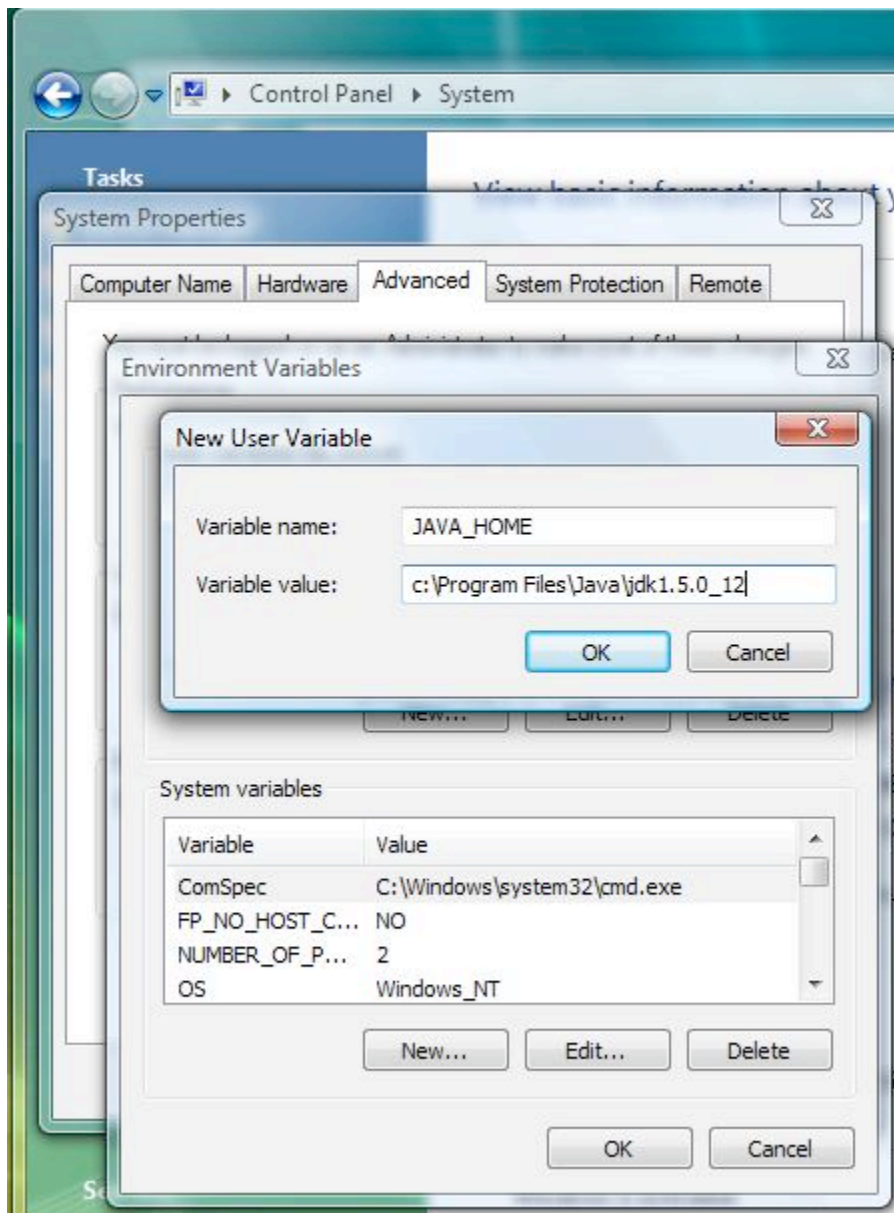
Microsoft Windows

Figure 2-7: Setting MS Windows environment variables

Suppose you have the following installation:

- Java: C:\Program Files\Java\jdk1.5.0_12
- Ant: C:\Users\me\apache-ant-1.6.5
- Globus: C:\Users\me\ws-core-4.0.3
- Tomcat: C:\Users\me\jakarta-tomcat-5.0.28

In the Microsoft Windows operating system, you can set environment variables in the registry using the System administration application that is found in the Control Panel.

To set environment variables in the Windows registry:

1. Click the **Start** button.

2. Select Control Panel.

3. Double-click the **System** application.

4. Select **Advanced System Settings** (or the **Advanced** tab, depending on your version of MS Windows).

5. Click **Environment Variables**.

6. Create environment variables as in Figure 2-7 on page 18. These can be either User or System variables.

You could also run a batch file that contains the following from the command prompt:

```
set JAVA_HOME=C:\Program Files\Java\jdk1.5.0_12
set ANT_HOME=C:\Users\me\apache-ant-1.6.5
set GLOBUS_LOCATION=C:\Users\me\ws-core-4.0.3
set CATALINA_HOME=C:\Users\me\jakarta-tomcat-5.0.28
set PATH=%JAVA_HOME%\bin;%ANT_HOME%\bin;%PATH%
cmd
```

Note: Environment variables set in this way will only be noticed by programs that are launched from the same command prompt window.

Advanced Usage

Off-Line Installation

The installer can be configured to pull dependencies from the file system (or local network).

Step 1: Create a file named `cagrid.installer.properties` and enter the following content into it.

```
cagrid.version=1.2
ant.download.url=http://archive.apache.org/dist/ant/binaries/apache-ant-1.6.5-
bin.zip
ant.md5.checksum=50b60129b54fc8f96a84ee60d7599188
ant.temp.file.name=apache-ant-1.6.5-bin.zip
ant.dir.name=apache-ant-1.6.5
tomcat.download.url=http://archive.apache.org/dist/tomcat/tomcat-
5/v5.0.28/bin/jakarta-tomcat-5.0.28.zip
tomcat.md5.checksum=4ab725ca651ec0d6b87df78474482f43
tomcat.temp.file.name=jakarta-tomcat-5.0.28.zip
tomcat.dir.name=jakarta-tomcat-5.0.28
globus.download.url=http://gforge.nci.nih.gov/frs/download.php/1334/ws-core-
enum-4.0.3.zip
globus.md5.checksum=1771116b144f2bb66c01c99a2af90c1d
globus.temp.file.name=ws-core-enum-4.0.3.zip
globus.dir.name=ws-core-4.0.3
cagrid.download.url=http://gforge.nci.nih.gov/frs/download.php/3685/caGrid-
1.2.zip
cagrid.md5.checksum=96025912fe076b41806a50ca435bb468
cagrid.temp.file.name=cagrid.zip
cagrid.dir.name=caGrid
activebpel.download.url=http://64.119.177.125/download/files/3.0/patches/active
bpel-3.0.3-all.zip
activebpel.md5.checksum=77da133f689ea9ca37c9f4aadcef0759
activebpel.dir.name=activebpel-3.0.3
```

```
activebpel.temp.file.name=activebpel-3.0.3-all.zip

#portal properties
portal.download.url=http://gforge.nci.nih.gov/frs/download.php/3672/cagrid-
portal-2.0.1.zip
portal.md5.checksum=c9a88d66aad84f1a5670a9f3b0c66a00
portal.temp.file.name=cagrid-portal.zip
portal.dir.name=cagrid-portal

available.target.grids=nci_prod-1.2,nci_qa-1.2,nci_stage-1.2,nci_dev-
1.2,osu_dev-1.2,training-1.2,nci_prod-1.1,nci_qa-1.1,nci_stage-1.1,nci_dev-
1.1,osu_dev-1.1,training-1.1
jdbc.driver.path=lib/mysql-connector-java-3.0.16-ga-bin.jar
jdbc.driver.classname=com.mysql.jdbc.Driver

java.version.pattern=1.5.*
```

Modify the properties that end in "download.url" to point to the location on your file system where you have saved copies of the caGrid dependencies. If you are using different files than the release, you should also update the corresponding properties which end in md5.checksum (you can get these values by running `md5sum <file>`).

Note: For Globus and ActiveBPEL, you have to use the caGrid-specific, patched versions:

- http://gforge.nci.nih.gov/frs/download.php/1334/ws-core-enum-4.0.3.zip

- http://64.119.177.125/download/files/3.0/patches/activebpel-3.0.3-all.zip

Step 2: Create a file named download.properties and enter the following content:

```
download.url=file:/home/me/cagrid.installer.properties
```

Modify the value of `download.url` to be the path to the cagrid.installer.properties file that you created previously.

Step 3: Point the installer at your modified properties file

```
java -Ddownload.properties=/home/me/download.properties -jar caGrid-installer-
1.2.jar
```

Custom Target Grid

If you are setting up your own grid, you can configure the installer to provide the option to configure caGrid for your custom target grid.

Step 1: Create a your own custom grid in caGrid/repository/caGrid/target_grid, by copying an example directory and ivy file.

Step 2: Configure the installer to present custom target grid option

Follow these instructions to create a custom cagrid.installer.properties file. In that file, edit the *available.target.grids* property to include the name of the custom target grid directory that you created in Step 1. For example, if you created...

```
caGrid/repository/caGrid/target_grid/custom_grid
```

The property should look like this (or whatever subset of grids you want to present):

```
available.target.grids=nci_prod-1.2,nci_qa-1.2,nci_stage-1.2,nci_dev-
1.2,osu_dev-1.2,training-1.2,nci_prod-1.1,nci_qa-1.1,nci_stage-1.1,nci_dev-
1.1,osu_dev-1.1,training-1.1,custom_grid
```

Step 3: Add a label for your custom target grid.

First...

```
jar xf caGrid-installer-1.2.jar CaGridInstallerMessages_en_US.properties
```

...then add this new property to that file:

```
target.grid.custom_grid.label=My Custom Grid
```

...then,

```
jar uf caGrid-installer-1.2.jar CaGridInstallerMessages_en_US.properties
```

Step 4: Follow *Step 3* of these instructions to point the installer at your custom `cagrid.installer.properties` file.

Troubleshooting

Problems you may encounter include the following errors:

- Error loading default properties
- Error initializing: The version of Java is not correct
- Could not connect to the database

More information about these problems and suggested solutions follow.

Error loading default properties

This error message will be displayed at startup if the host on which the installer is running has no connection to the Internet. Check your network settings.

You may need to specify proxy settings if you are behind a firewall. For example:

```
java –Dhttp.proxyHost=<your proxy host>  -Dhttp.proxyPort=<your proxy host> –
Dftp.proxyHost=<your proxy host>  -Dftp.proxyPort=<your proxy host> –jar
caGrid-installer-1.2.jar
```

Consult the java network settings for more details.

Error initializing: The version of Java is not correct

This error message will be displayed if the installer could not locate the correct version of Java. You can point it to the correct version by setting the JAVA_HOME environment variable to point to the Java 1.5 JDK. See here for directions on setting environment variables.

Could not connect to database

Several of the caGrid services require a database. During the configuration of these services, the installer will need to interact with the database (i.e. to validate the connection, create/destroy the database, pre-populate the database, etc.) If you are seeing a message like this, check that 1) the database services is running; 2) you have specified the correct connection and user account information; and 3) the user account has privileges to create and drop database, and query/insert/update/delete data.