caGrid 1.2

Installer Guide

NATIONAL® CANCER INSTITUTE

Center for Bioinformatics

March 28, 2008

Model caBIG™ Open Source Software License

v.2

Release Date: January 7, 2008

This caBIG™ Software License (the "License") is between caBIG™ Participant and You. "You (or "Your") shall mean a person or an entity, and all other entities that control, are controlled by, or are under common control with the entity. "Control" for purposes of this definition means (i) the direct or indirect power to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

License. Provided that You agree to the conditions described below, caBIG™ Participant grants You a non-exclusive, worldwide, perpetual, fully-paid-up, no-charge, irrevocable, transferable and royalty-free right and license in its rights in the caBIG™ Software, including any copyright or patent rights therein, to (i) use, install, disclose, access, operate, execute, reproduce, copy, modify, translate, market, publicly display, publicly perform, and prepare derivative works of the caBIG™ Software in any manner and for any purpose, and to have or permit others to do so; (ii) make, have made, use, practice, sell, and offer for sale, import, and/or otherwise dispose of caBIG™ Software (or portions thereof); (iii) distribute and have distributed to and by third parties the caBIG™ Software and any modifications and derivative works thereof; and (iv) sublicense the foregoing rights set out in (i), (ii) and (iii) to third parties, including the right to license such rights to further third parties. For sake of clarity, and not by way of limitation, caBIG™ Participant shall have no right of accounting or right of payment from You or Your sublicensees for the rights granted under this License. This License is granted at no charge to You. Your downloading, copying, modifying, displaying, distributing or use of caBIG™ Software constitutes acceptance of all of the terms and conditions of this Agreement. If you do not agree to such terms and conditions, you have no right to download, copy, modify, display, distribute or use the caBIG™ Software.

1. Your redistributions of the source code for the caBIG™ Software must retain the above copyright notice, this list of conditions and the disclaimer and limitation of liability of Article 6 below. Your redistributions in object code form must reproduce the above copyright notice, this list of conditions and the disclaimer of Article 6 in the documentation and/or other materials provided with the distribution, if any.
2. Your end-user documentation included with the redistribution, if any, must include the following acknowledgment: "This product includes software developed by the Ohio State University Research Foundation (OSURF), Argonne National Labs (ANL), SemanticBits LLC (SemanticBits), and Ekagra Software Technologies Ltd. (Ekagra)." If You do not include such end-user

documentation, You shall include this acknowledgment in the caBIG™ Software itself, wherever such third-party acknowledgments normally appear.

3. You may not use the names “The Ohio State University Research Foundation”, "OSURF", “Argonne National Labs”, “ANL”, “SemanticBits LLC”, "SemanticBits", “Ekagra Software Technologies Ltd.”, “Ekagra”, “The National Cancer Institute”, “NCI”, “Cancer Bioinformatics Grid” or “caBIG™” to endorse or promote products derived from this caBIG™ Software. This License does not authorize You to use any trademarks, service marks, trade names, logos or product names of either caBIG™ Participant, NCI or caBIG™, except as required to comply with the terms of this License.
4. For sake of clarity, and not by way of limitation, You may incorporate this caBIG™ Software into Your proprietary programs and into any third party proprietary programs. However, if You incorporate the caBIG™ Software into third party proprietary programs, You agree that You are solely responsible for obtaining any permission from such third parties required to incorporate the caBIG™ Software into such third party proprietary programs and for informing Your sublicensees, including without limitation Your end-users, of their obligation to secure any required permissions from such third parties before incorporating the caBIG™ Software into such third party proprietary software programs. In the event that You fail to obtain such permissions, You agree to indemnify caBIG™ Participant for any claims against caBIG™ Participant by such third parties, except to the extent prohibited by law, resulting from Your failure to obtain such permissions.
5. For sake of clarity, and not by way of limitation, You may add Your own copyright statement to Your modifications and to the derivative works, and You may provide additional or different license terms and conditions in Your sublicenses of modifications of the caBIG™ Software, or any derivative works of the caBIG™ Software as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.
6. THIS caBIG™ SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES (INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE) ARE DISCLAIMED. IN NO EVENT SHALL THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION ("OSURF"), ARGONNE NATIONAL LABS (“ANL”), SEMANTICBITS LLC ("SEMANTICBITS"), AND EKAGRA SOFTWARE TECHNOLOGIES LTD. (EKAGRA) OR ITS AFFILIATES BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS caBIG™ SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Revision History

The following is the revision history for this document.

Date	*Version*	*Description*	*Revised By*
3/23/2008	1.2.1	Formatted and Edited to Match NCI Documentation Standards	Carolyn 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

Contents

Figures

Tables

About This Guide

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

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 and appendix of this guide.

- *About This Guide, this chapter, provides an overview of the guide.*
- *Chapter 1, Downloading, on page # describes where to get the caGrid installer and how to unpack it.*

- *Chapter 2, Running, on page # describes the prerequisites for running the caGrid Installer, and how to invoke it.*
- *Chapter 3, Usage, on page # describes the installation phases, types of installations, container configuration, installing caGrid services, and installing the caGrid Portal.*
- *Chapter 4, Step-by-Step: Install Secure Container, on page # describes how to install caGrid components into a secure container.*
- *Chapter 5, Environment Settings, on page # describes the nuances on installing on Unix/Linux, Macintosh OS, and Microsoft Windows.*
- *Chapter 6, Advanced Usage, on page # describes off-line installation and choosing a custom target grid.*
- *Chapter 7, Troubleshooting, on page # describes*

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]		
1. Ohio State University - Biomedical Informatics Department	2. University of Chicago/Argonne National Laboratory	3. SemanticBits, LLC.
4. Ekagra Software Technologies, Ltd.	5. NCI - Center for Biomedical Informatics and Information Technology (CBIIT)	6. Booz Allen Hamilton
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
caBioconductor – 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 Downloading

This chapter provides an overview of the caGrid Installer, how to obtain it,

Topics in this chapter include:

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.

New features included 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 caGrid Installer can only be obtained from the caGrid gforge project page. The caGrid 1.2 installer can be downloaded by clicking here: 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
```

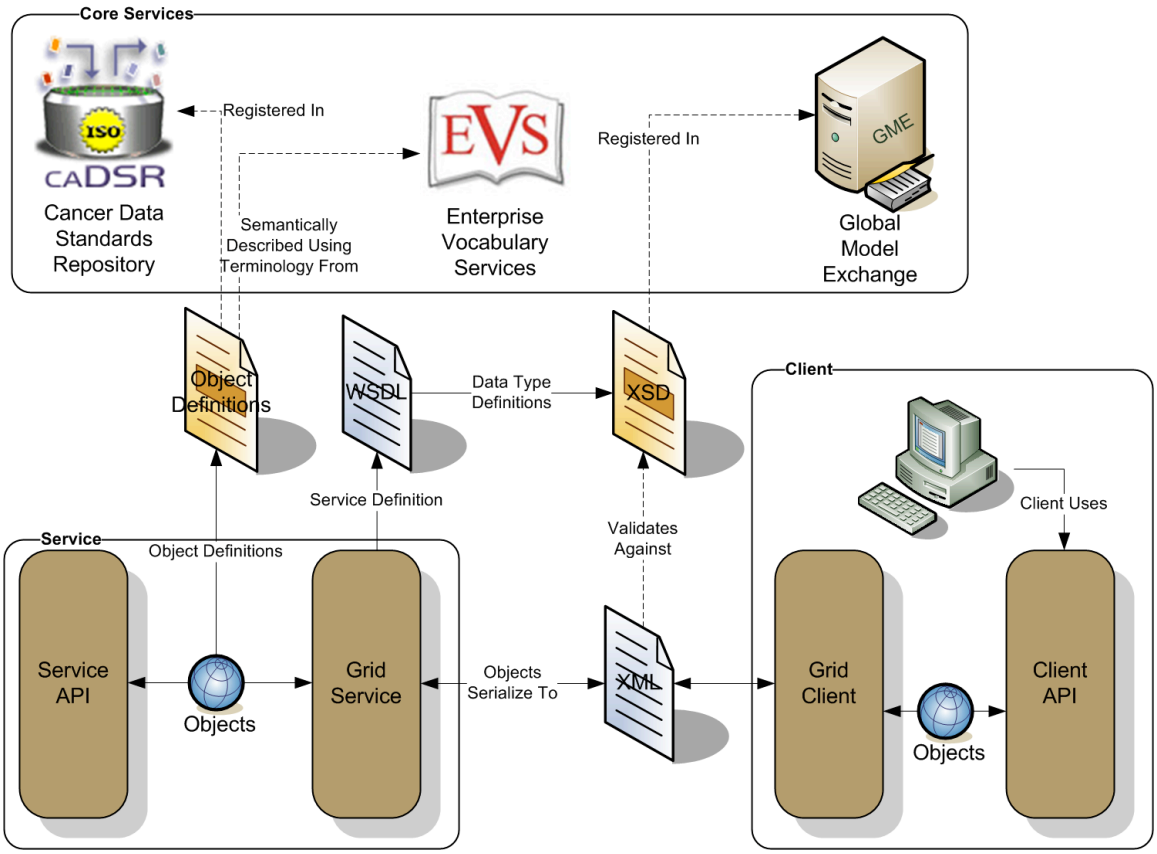

Figure 1-1 caGrid Data Description Infrastructure

Chapter 2 caGrid Release Structure

This chapter describes the basic layout of the caGrid release.

Topics in this chapter include:

Overview

caGrid is released as a source release, as well as with an automated installer. In order to use any feature of caGrid or to develop applications with it, you must build caGrid. The installer will do this automatically for you, but if you are using the source release, you must build it yourself. You can find detailed instructions on building caGrid on the caGrid wiki: http://www.cagrid.org/wiki/CaGrid:How-To:Build.Generally you just need to type the following command from the caGrid directory:

```
ant all
```

The caGrid release is oriented around a number of individual projects and the build process manages inter-project dependencies. Each project provides a specific set of functionality, and is self-contained once caGrid is built. That is, once caGrid is built, each of the projects can be used independently. For example, if you are only interested in Introduce, you can safely copy around caGrid/projects/introduce as a standalone copy of Introduce. The same is true for core services; once caGrid is built, all their dependencies are copied into the lib and ext/lib directories of the service.

Index