

CAGRID PORTAL 2.0

User's Guide



Center for Bioinformatics

This is a U.S. Government work.

December 21, 2007



caBIG™

cancer Biomedical
Informatics Grid™



Contents

Illustrations	iii
About This Guide	1
Purpose.....	1
Audience	1
Prerequisites	1
Topics Covered.....	2
Text Conventions Used	2
Credits and Resources	3
Chapter 1 About the caGrid Portal.....	4
Purpose of the caGrid Portal	4
caGrid Portal Features.....	4
Discovery.....	4
Service Metadata Exploration	5
Data Service Query	5
Query Sharing	6
caGrid Account Registration	6
Grid Status Overview	7
News and Events	7
Visual Overview of the caGrid Portal Home Page.....	8
Chapter 2 Registering and Logging In	11
About Registration	11
Registering for a Login Account.....	12
Logging in with Your caGrid Portal Account.....	14
Logging in with Your NIH Account.....	15
About the Welcome Menu	15
Chapter 3 Using the Map Portlet.....	17
About the Map Portlet	17
Selecting a Category View.....	18
Selecting a Service, Participant, or POC.....	19
Selecting a Data Service.....	19
Selecting an Analytical Service.....	21
Selecting a Participant Institute.....	22
Selecting a Hosting Research Center.....	24
Selecting a POC.....	25
Chapter 4 Using the Discovery Portlet.....	27
About the Discovery Portlet	27
Using the Directory Tab	28
Using the List View Subtab	28
Using the Map View Subtab	30
Using the Search Tab	31
Searching for a Service	31
Searching for a Participant.....	32
Searching for a POC	33
Using the Details Tab	35
Viewing Details for Services.....	35
Viewing Details for a Participant	38

Viewing Details for a POC	39
Chapter 5 Using the Data Service Query Portlet	41
About the Data Service Query Portlet	41
Query-Building Scenarios	42
Scenario 1: Starting without a URL or CQL Query	42
Scenario 2: Starting with a URL but No CQL Query	43
Scenario 3: Starting with a URL and a CQL Query	43
Building a Query Using the CQL Builder Tool	44
About the History Tab	48
Working with Shared Queries	50
Sharing a Query	50
Searching for a Shared Query	52
Chapter 6 Using Other Portal Features.....	53
Using the News Portlet	53
About the caGrid Links Portlet.....	54
Using the caGrid Status Portlet	55
Viewing Details for a Recently Registered Service or Participant	55
Viewing a List of Participants or Services	55
About the Calendar Portlet	56
Index	57

Illustrations

Figure 1.1. caGrid Portal home page.....	8
Figure 2.1. Register links	12
Figure 2.2. Registration page.....	12
Figure 2.3. Successful login message	14
Figure 2.4. Welcome message with Logout link	14
Figure 2.5. Welcome menu.....	15
Figure 3.1. Map portlet.....	17
Figure 3.2. Categories list.....	18
Figure 3.3. Callout balloon for a data service center	20
Figure 3.4. Discovery Portlet showing details for a selected data service	20
Figure 3.5. Callout balloon for a selected participant.....	22
Figure 3.6. Discovery portlet showing details for a participant institute	23
Figure 3.7. Callout balloon for an analytical service center	24
Figure 3.8. List of hosting research centers with More Details links	25
Figure 4.1. Directory tab > List View subtab – results for All Services category.....	28
Figure 4.2. Map View subtab	30
Figure 4.3. Services subtab	31
Figure 4.4. Participants subtab	32
Figure 4.5. POCs subtab	33
Figure 4.6. Details for a selected data service.....	35
Figure 4.7. Selecting a UML class for a query	36
Figure 4.8. Details for a selected analytical service.....	37
Figure 4.9. Details for a selected participant.....	38
Figure 4.10. Details for a selected POC	39
Figure 5.1. Starting a query from a selected result	42
Figure 5.2. Working query.....	43
Figure 5.3. CQL Builder subtab with selected UML class Gene	44
Figure 5.4. Attributes and associations for selected class	45
Figure 5.5. Specifying a predicate and value for a selected attribute	46
Figure 5.6. CQL Builder subtab with added criterion	46
Figure 5.7. CQL XML tab	47
Figure 5.8. History tab with query information	47
Figure 5.9. Results tab > Tabular subtab with query results.....	48
Figure 5.10. Query tab > CQL Builder subtab – Share Query button	50
Figure 5.11. Form for adding a query name and description	51
Figure 5.12. Saved query.....	51
Figure 5.13. Shared Queries tab > Find Shared Queries subtab – Search form.....	52
Figure 6.1. News links.....	53
Figure 6.2. News page.....	54
Figure 6.3. Status portlet.....	55
Figure 6.4. Calendar portlet	56

About This Guide

This section introduces you to the *caGrid Portal 2.0 User's Guide* and provides an orientation to using the guide. It also includes support contact information.

Topics in this section:

- *Purpose* on this page
- *Audience* on page 1
- *Prerequisites* on page 1
- *Topics Covered* on page 2
- *Text Conventions Used* on page 2
- *Credits and Resources* on page 3

Purpose

This guide introduces you to the caGrid Portal. It explains how to use the portal features to do the following:

- Discover caGrid services, caBIG participants, and caGrid points of contact
- Explore the service metadata of a discovered service
- Build queries using the CQL query language
- Share queries and search for shared queries
- Register for an account so that you can interact with secure caGrid services
- View the status of caGrid services
- View caGrid-related news using the portal or using an RSS 2.0-compliant news reader
- View a calendar of caGrid-related events.

Audience

This guide is intended for the following users:

- Non-developer members of the caBIG community
- caGrid service developers
- Anyone interested in caBIG and caGrid

Prerequisites

To get the most out of this guide, you should have the following skills:

- Ability to browse the Internet using a Web browser
- Understanding of caGrid metadata concepts (for building CQL queries)

Topics Covered

This brief overview explains what you will find in each chapter and appendix.

- Chapter 1, *About the caGrid Portal* (p. 4), provides an overview of the caGrid Portal and its feature set.
- Chapter 2, *Registering and Logging In* (p. 11) covers the registration process and the procedures for logging in as a new portal user or an NIH user.
- Chapter 3, *Using the Map Portlet* (p. 17), explains how to use the Map portlet to select a service or institution and link to more detailed information.
- Chapter 4, *Using the Discovery Portlet* (p. 27), explains how to use the Discovery portlet to browse, search, and view details for caGrid services, caBIG participants, and caGrid POCs.
- Chapter 5, *Using the Data Service Query Portlet* (p. 41), explains how to use the Data Service Query portlet to build and share queries.
- Chapter 6, *Using Other Portal Features* (p. 53), covers the News, caGrid Links, Grid Status, and Calendar portlets.

Text Conventions Used

This section explains conventions used in this guide. The various typefaces represent interface components, keyboard shortcuts, toolbar buttons, dialog box options, 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 .
<u>URL</u>	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 you press simultaneously.	Press SHIFT + CTRL.
<i>Italics</i>	Highlights references to other documents, sections, figures, and tables.	See <i>Figure 4.5</i> .
<i>Italic boldface monospace</i> type	Represents text that you type.	In the New Subset text box, enter <i>Proprietary Proteins</i> .
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.

Credits and Resources

caGrid Portal Development and Management Teams		
Development	Quality Assurance	Program and Project Management
Joshua Phillips ²	Aynur Abdurazik ³	Krishnakant Shanbhag ¹
Apara Ranjan ⁴		Peter Yan ³
Documentation		
	Eddie VanArsdall ⁶	
^{1.} National Cancer Institute Center for Bioinformatics (NCICB)	^{2.} SemanticBits	^{3.} Science Applications International Corporation (SAIC)
^{4.} Persistent Systems Ltd	^{5.} Lockheed Martin	

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

Chapter 1 About the caGrid Portal

This chapter introduces you to the caGrid Portal and describes its feature set.

Topics in this chapter:

- *Purpose of the caGrid Portal* on this page
- *caGrid Portal Features* on this page
- *Visual Overview of the caGrid Portal Home Page* on page 8

Purpose of the caGrid Portal

The caGrid Portal is a Web-based application that enables you to discover and interact with the services that are available on the caGrid infrastructure. The portal serves as the primary visualization tool for the caGrid middleware and provides a standards-based platform for hosting caBIG-related tools. It also serves as a caBIG information source. Using the caGrid portal, you have instant access to information about caBIG participants, caGrid points of contact (POCs), and caGrid-related news and events.

caGrid Portal Features

The following sections discuss the various caGrid Portal features:

- *Discovery* on this page
- *Service Metadata Exploration* on page 5
- *Data Service Query* on page 5
- *Query Sharing* on page 6
- *caGrid Account Registration* on page 6
- *Grid Status Overview* on page 7
- *News and Events* on page 7

Discovery

One of the goals of the caGrid infrastructure is to enable you to easily discover and access services. To achieve this goal, caGrid services register with a central index service. This service allows other applications to locate caGrid services and retrieve the necessary information for interacting with those services.

The caGrid Portal uses caGrid component APIs to provide an interface that you can use to query information gathered from one or more index services. Regardless of whether you are a service developer or non-developer, you can use this interface to determine how to use and benefit from caGrid.

In addition to service information, the portal also provides information about caBIG participant institutions and caGrid points of contact (POCs). The goal is to enable you to quickly determine who the point of contact is for specific activities and easily obtain contact information for that person.

The process of locating services, participants, and POCs is known as *discovery*. The portal provides the following modes of discovery: *map view*, *directories*, and *keyword search*. The following subsections describe these modes.

Map View

The portal home page displays a map of the U.S. that shows the geographic location of services and participant institutions. You can click the icon for a service or institution and link to more detailed information.

Categories

Services, participants, and POCs are grouped into categories. You can browse these categories and click hyperlinks that lead to more detailed information.

Keyword Search

The portal provides an intuitive, keyword search interface that enables you to enter one or more keywords and match them against one or more fields.

Service Metadata Exploration

To support the caBIG goals of syntactic and semantic interoperability, caGrid services expose a rich, standard set of metadata. This metadata not only describes the operations that the services support; it also links the data types that those operations use to concepts defined in the NCICB Enterprise Vocabulary Services (EVS), common data elements defined in the Cancer Data Standards Repository (caDSR), and XML schemas defined in the Global Metadata Exchange (GME) service.

caGrid services that support the caGrid Query Language (CQL) also expose an XML representation of the UML domain model that the service supports. This model is also linked to the EVS, caDSR, and GME. While caGrid services support standard Web service APIs for retrieving metadata, the caGrid project provides client API components that facilitate the process.

The portal uses caGrid client APIs to build an interface that enables you to explore caGrid service metadata. You can view the semantic descriptions that come from the EVS, the data type descriptions from the caDSR, and XML schemas that are registered with the GME. The interface makes it easier for you to determine whether a service meets your needs and what is necessary to interact with the service.

Data Service Query

caGrid services that support CQL are known as *data services*. They expose a UML domain model, support a query operation that processes CQL queries against that domain model, and return XML documents that contain serialized instances of the UML classes defined in the domain model. These serialized instances conform to the XML schemas that are registered with the GME.

The portal provides an interface that enables you to select a service and target UML class, build a query, execute the query, and view the results in both tabular and XML form. While using the discovery tool or while exploring service metadata, you can select the service and UML class to be queried. You can then use a graphical

query-building interface to construct CQL, or you can manually type the CQL query text.

If you are a registered caGrid Portal user (discussed under *caGrid Account Registration* on this page), the portal maintains a complete history of your queries so that you can always retrieve and work with previously executed queries. The results of all queries that you execute during a single session (while your browser is open) are available for viewing in tabular or XML format. You can also export to Microsoft Excel.

Query Sharing

Although data service domain models are linked to semantic metadata and data type specifications, you still need to do a fair amount of exploring to construct useful queries. If you have query-building knowledge, the portal enables you to share that knowledge with the rest of the community. Any portal user can publish CQL queries and provide documentation to accompany the query. Others can search for CQL queries based on the target service, the target UML class, the creator of the query, or the associated name and description of the query.

caGrid Account Registration

The caGrid security infrastructure, known as GAARDS, uses an authentication approach that is based on Public Key Infrastructure (PKI). PKI requires that users have an X.509 certificate and private key, also known as *grid credentials*.

The caGrid Dorian service is used to provide users with grid credentials. To obtain grid credentials, you must register either with the Dorian service or another Identity Provider (IdP) that has established a trust relationship with Dorian.

Secure caGrid services apply an authorization policy to incoming requests based on the identity of the client (*i.e.*, the user who is making the request). The identity is determined through the authentication process by inspecting the client's grid credentials. So, in order to interact with secure services, caGrid users need to obtain grid credentials.

While nearly all the functionality that the portal provides is available to un-authenticated users, only authenticated users can share queries and maintain a query history across browser sessions. The portal uses GAARDS to authenticate users. So, to use the query sharing and persistent query history features, you need to obtain grid credentials.

The portal provides an interface that enables you to register for an account with the caGrid Dorian service that is hosted by the NCICB. This service provides a Level of Assurance 1 (LOA1), which means anyone can request an account and the request will automatically be approved. Once your request is approved, you can provide log in to the portal using your username and password. The portal will then use the grid credentials obtained from Dorian when interacting with secure caGrid services.

Grid Status Overview

The caGrid Portal provides a quick, visual description of the scale and activity of caGrid. The map on the front page of the portal not only indicates where services are being hosted, but whether those services are currently running. Icons of various colors indicate the service status.

In addition to the map, a status portlet presents up-to-date counts of all participants, all services, data services, and analytical services. It also provides links to more information about the five most recently registered services.

News and Events

A news portlet on the front page of the portal displays a running list of the latest caGrid-related news items. You can click each item to link to the full news article. You can also click a link to subscribe to the news feed using your browser or any other RSS 2.0-compliant news feed reader.

The portal provides a news feed editor application that is available to the portal administrator. This application can be used to maintain one or more RSS news channels.

The portal home page also includes a full-featured calendar application. This application enables you to browse through caGrid-related events by day, week, month, and year. A portal administrator can import and export calendar events using the standard iCal format <http://tools.ietf.org/html/rfc2445>.

Visual Overview of the caGrid Portal Home Page

The caGrid Portal is located at <http://cagrid-portal.nci.nih.gov/web/guest/home>. This address launches the portal home page, shown in Figure 1.1.

Each numbered callout represents one of the features discussed in *caGrid Portal Features* on page 4.

The screenshot shows the caGrid Portal home page with the following features highlighted by numbered callouts:

- 1**: caGrid Portal logo
- 2**: Navigation tabs: HOME, TOOLS, NEWS, REGISTER
- 3**: News section: Subscribe to caGrid News Feed, caGrid Portal 1.2 is Ready for Release
- 4**: caGrid Links: caBIG Community Website, caGrid Website, caGrid Wiki
- 5**: Calendar view for December 16, 2007
- 6**: caGrid Status section: Here are the five newest services... (CaArraySvc, CaDSRService, GridGrouper, WorkflowFactoryService, CoomCoams)
- 7**: Log In / Register link

The main content area includes a map of the United States with markers for participating institutions, a list of categories (Data Service, Analytical Service, Participant Institute, Hosting Research Center, Point of Contact), and a summary table showing 0 results for the selected date.

Time	Title	Type
There are no events on this day.		

Figure 1.1. caGrid Portal home page

For a description of each numbered callout in Figure 1.1, see Table 1-1 on page 9.

Callout Number	Feature/Description
1	<p>Main Navigation Bar with four links:</p> <ul style="list-style-type: none"> • Home: Returns to the home page from any other portal page. • Tools: Opens the Tools page, where you can use the Discovery and Data Service Query tools to search for services, participant institutions, and POCs. You can also build and share queries from this page. • News: Displays a News page with announcements and links to caGrid-related news. • Register page: Enables you to register as a caGrid Portal user.
2	News portlet: Enables you to link to caGrid-related news stories and subscribe to the caGrid News Feed.
3	caGrid Links portlet: Lists links to external caGrid-related sites. Each link destination opens a new window or tab.
4	Map portlet with legend: Shows the geographic location of services and participant institutions. You can click the icon for a service or institution and link to more detailed information.
5	Calendar: Enables you to browse through caGrid-related events by day, week, month, and year.
6	caGrid Status portlet: Provides a quick, visual description of the scale and activity of caGrid.
7	Log In and Register links: Links for logging in using your existing account or registering as a caGrid Portal user.

Table 1-1. Description of feature callouts in Figure 1.1

Chapter 2 Registering and Logging In

Although you can freely browse and use the caGrid Portal without logging in to an established account, consider becoming a *registered* user. This chapter explains the benefits of registration, the procedure for registering, and the procedures for logging in as a new portal user or an NIH user.

Topics in this chapter:

- *About Registration* on this page
- *Registering for a Login Account* on page 12
- *Logging in with Your caGrid Portal Account* on page 14
- *Logging in with Your NIH Account* on page 15
- *About the Welcome Menu* on page 15

About Registration

As discussed in *caGrid Account Registration* on page 6, becoming a registered caGrid Portal user gives you Grid credentials so that you can interact with caGrid services. If you are a registered user, the portal maintains your query history from previous sessions and enables you to share queries with other users. In addition, future releases of the portal will enable you to further customize your user experience.

Note: If you already have a login account through the National Institutes of Health (NIH), you can log in to the portal using your existing credentials. For more information, see *Logging in with Your NIH Account* on page 15.

Registering for a Login Account

To register for a caGrid Portal login account, follow these steps:

1. Click either of the following **Register** links:
 - The link appearing on the main navigation toolbar, or
 - The link appearing in the upper right of the home page.

Figure 2.1 shows pointers to both links.

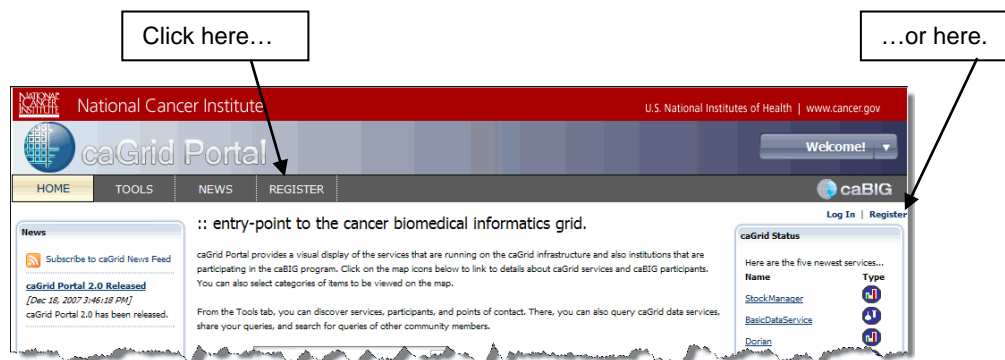


Figure 2.1. Register links

The Registration page appears, as shown in Figure 2.2.

The screenshot shows the registration page of the caGrid Portal. The page has a header with the National Cancer Institute logo and the text "U.S. National Institutes of Health | www.cancer.gov". The main content area is titled "Registration" and contains the following sections:

- Username Constraints:** Must be between 4 and 15 characters in length.
- Password Constraints:** Must be between 10 and 20 characters and CANNOT contain a dictionary word and MUST contain at least one upper case letter, at least one lower case letter, at least one number, and at least one symbol (~!@#\$%^&*()_+~{}|:;<>.,?).
- Registration Fields:** A series of input fields for user information, each marked with a red asterisk to indicate it is required:
 - First Name:
 - Last Name:
 - Username:
 - Password:
 - Email:
 - Phone:
 - Organization:
 - Street Address 1:
 - Street Address 2:
 - City:
 - State:
 - Postal Code:
 - Country:
- Submit Button:** A button labeled "Submit" at the bottom of the registration form.

At the bottom of the page, there is a footer with links for "CONTACT US", "PRIVACY NOTICE", "DISCLAIMER", "ACCESSIBILITY", and "APPLICATION SUPPORT". Logos for the National Cancer Institute, the U.S. Department of Health and Human Services, and FIRSTGOV are also displayed.

Figure 2.2. Registration page

2. Complete the registration fields.

Note: Pay special attention to the password constraints. A password cannot be a dictionary word and must be constructed as follows:

Length: 10 to 20 characters (10-character minimum)

Characters: at least one uppercase letter, one lowercase letter, one number, and one of the following symbols:

~!@#\$%^&*()_{}[]|:;<>,.?

3. When you are finished, click **Submit**.
 - If your username or password did not conform to the required constraints, an invalid username or password message appears in red.
 - If your submission was successful, the following message appears in green: *Your account was approved, your current account status is Active.*
- Note:** Although you are still on the Registration page, do not click **Submit** again if you received a successful confirmation message.
4. Do either of the following:
 - Click the **Home** link on the navigation bar to return to the home page, or
 - Click the **Log In** link to log in using the account that you just created.
5. Log in by following the instructions in *Logging in with Your caGrid Portal Account* on page 14.

Logging in with Your caGrid Portal Account

To log in with your caGrid Portal (non-NIH) account, follow these steps:

1. If you are not currently viewing the home page, click the **Home** link on the navigation bar.
2. Click the **Log In** link in the upper right corner of the page.
3. Enter your username and password.
4. Ensure that the **Identity Provider** field shows **NCICB Dorian**.
5. Click **Log In**.
 - If your login is not recognized, the following message appears:
Invalid username and/or password.
 - If your login was successful, the following message appears:
You are logged in as: {your name}



Figure 2.3. Successful login message

6. Click the **<< To Full Page** link to return to the home page.

In the upper right corner of the home page, a welcome message confirms that you are logged in.

Note: At the end of your session, be sure to log out by (1) clicking the **Log Out** link below the welcome message, or (2) clicking the drop-down arrow to the right of the Welcome message and selecting **Sign Out**.



Figure 2.4. Welcome message with Logout link

Logging in with Your NIH Account

To log in with your NIH account, follow these steps:

1. If you are not currently viewing the home page, click the **Home** link on the navigation bar.
2. Click the **Log In** link in the upper right corner of the page.
3. Enter your username and password.
4. Ensure that the Identity Provider field shows **NCICB Authentication Service**.
5. Click **Log In**.
 - If your login is not recognized, the following message appears:
Invalid username and/or password.
 - If your login was successful, the following message appears:
You are logged in as: {your name}
6. Click the **<< To Full Page** link to return to the home page.

In the upper right corner of the home page, a welcome message confirms that you are logged in. (See Figure 2.4 on page 14.)

Note: At the end of your session, be sure to log out by clicking the **Log Out** link below the welcome message.

About the Welcome Menu

The Welcome message in the upper right corner of the caGrid Portal includes a drop-down menu with four commands:

- **Home:** Returns to the home page
- **Sign Out:** Logs you out of the caGrid Portal
- **My Places:** Links to public pages.



Figure 2.5. Welcome menu

Chapter 3 Using the Map Portlet

As discussed in Chapter 1, the caGrid Portal home page includes a Map portlet that shows the geographic location of services and participant institutions in the United States. This chapter explains how to use the Map portlet to select a service or institution and link to more detailed information.

Topics in this chapter:

- *About the Map Portlet* on this page
- *Selecting a Category View* on page 18
- *Selecting a Service, Participant, or POC* on page 19

About the Map Portlet

The Map portlet provides a visual perspective of caGrid services, participants, and POCs. It serves as an access point for getting started with discovery.

As shown in Figure 3.1, the map is preceded by a **Categories** drop-down list and a legend explaining the map icons. The next two sections explain the list and the icons.

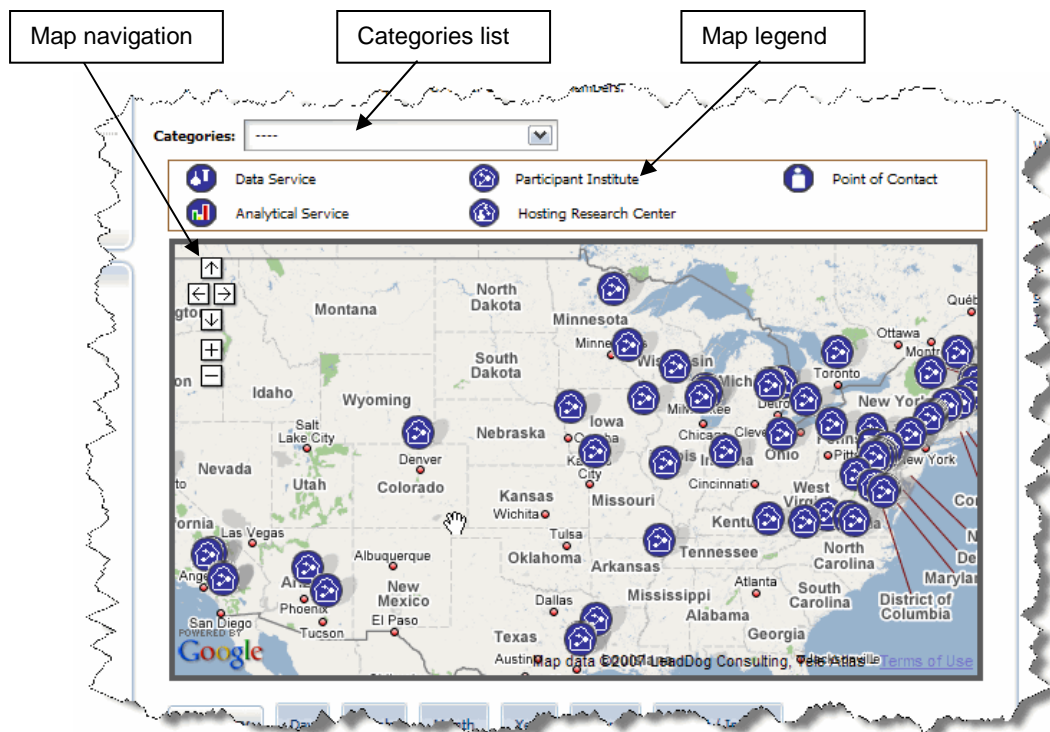



Figure 3.1. Map portlet

The Map portlet uses the Google Maps API and has standard Google Maps navigation features. These include navigation arrows, zoom in (+) and zoom out (-) buttons, and the “grabbing hand” mouse pointer  for moving around the map.

Selecting a Category View

The **Categories** list enables you to filter the map view to show specific categories. The default view, shown as a series of dashes (----), displays all participant institutes.

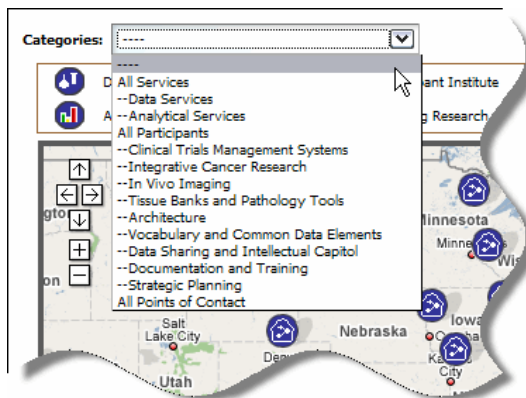


Figure 3.2. Categories list

The list also provides the following views:

- All Services
 - Data Services
 - Analytical Services
- All Participants
 - Clinical Trials Management Systems
 - Integrative Cancer Research
 - In Vivo Imaging
 - Tissue Banks and Pathology Tools
 - Architecture
 - Vocabulary and Common Data Elements
 - Data Sharing and Intellectual Capitol
 - Documentation and Training
 - Strategic Planning
- All Points of Contact (not currently available)

To select a category view, follow these steps:

1. Click the drop-down arrow to the right of the **Categories** list.
2. Select a category from the list.

Selecting a Service, Participant, or POC

.Map portlet icons are clickable links. Table 3-1 lists each icon type and includes a cross-reference to the relevant section for working with the selected type.

Note: Icons for active entities appear in dark blue. Identical icons appearing in gray indicate inactive entities. Those appearing in red indicate partially active entities. Table 3-1 shows only icons for active entities.






Icon	Description
	Data Service See <i>Selecting a Data Service</i> on this page.
	Analytical Service See <i>Selecting an Analytical Service</i> on page 21.
	Participant Institute: See <i>Selecting a Participant Institute</i> on page 22.
	Hosting Research Center See <i>Selecting a Hosting Research Center</i> on page 24. Note: A hosting research center represents one or more services (data or analytical) that are hosted at the same location.
	Point of Contact (POC) The Map portlet does not currently display POC information. For more information on finding and viewing details for a POC, see the following sections: <ul style="list-style-type: none"> • <i>Searching for a POC</i> on page 33 • <i>Viewing Details for a POC</i> on page 39

Table 3-1. Map icon descriptions for active entities

Selecting a Data Service.

To locate and view details for a data service, follow these steps:

1. Select the **Data Services** category from the drop-down list.

The map refreshes to show only data services.

2. Click a **data service** icon to select the represented service.

A callout balloon appears above the icon. The balloon displays the following information:

- a link to more details
- the name of the hosting center
- the current status of the hosting center (active, inactive, or partially active).

Figure 3.3 shows the results of clicking the NCICB hosting center *CaArraySvc*.

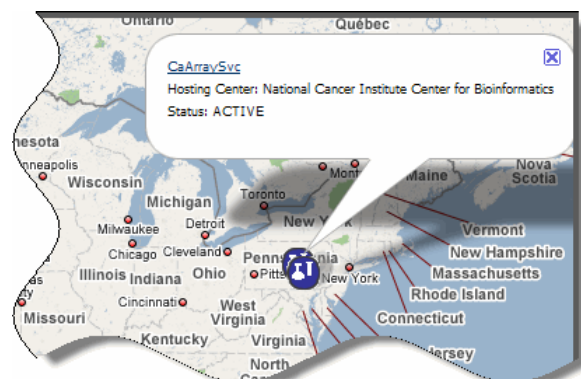


Figure 3.3. Callout balloon for a data service center

3. Click the underlined link.

The Tools page appears with the **Details** tab and **Service** subtab of the Discovery portlet selected, as shown in Figure 3.4.

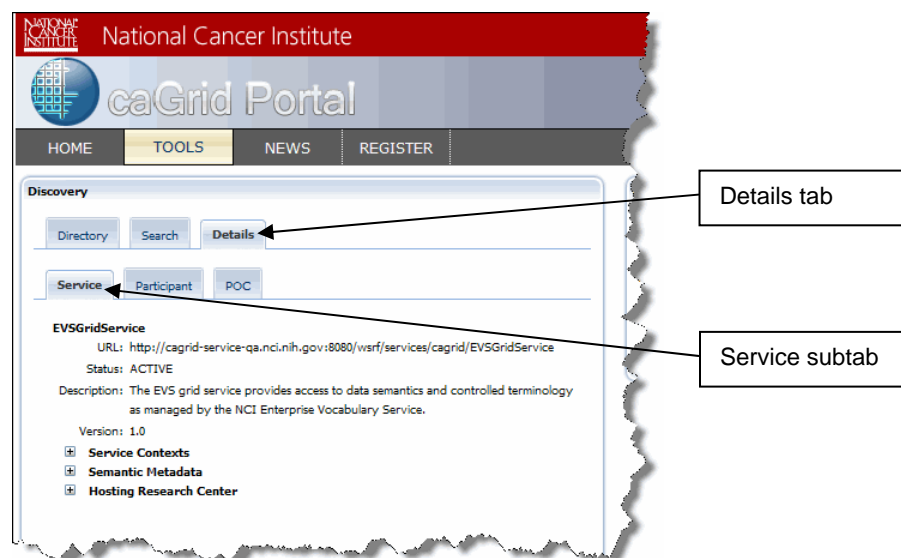




Figure 3.4. Discovery Portlet showing details for a selected data service

For more information about the Discovery portlet and the Service subtab, see *Viewing Details for Service* on page 35.


Selecting an Analytical Service.

1. Select the **Analytical Services** category from the drop-down list.


The map refreshes to show only analytical services.

Note: The portal represents some analytical services using the **analytical service** icon . Others that are part of a group of services in the same geographic location show a **hosting research center** icon . You can find analytical services by clicking either icon, but the results will differ slightly, as explained in the next step.

2. Click the appropriate icon:

- If you clicked the **analytical service** icon , the callout balloon displays the same information used for a data service center (shown in Figure 3.3 on page 20):
 - a link to more details
 - the name of the hosting center
 - the current status of the hosting center (active, inactive, or partially active).

Click the details link to view more information on the **Service** subtab of the Discovery portlet, as shown in Figure 3.4 on page 20.

- If you clicked the **hosting research center** icon , follow the steps explained in *Selecting a Hosting Research Center* on page 24.

Selecting a Participant Institute.

1. Select the **All Participants** category from the drop-down list, or select a specific sub-category (for example, **Clinical Trials Management Systems**).

The map refreshes to show only the selected participant category.

2. Click a **Participant Institute** icon  to select the represented service.

A callout balloon appears above the icon. The balloon displays the following information:

- a participant name link
- a URL to the participant's home page.

Figure 3.5 shows an example of a callout balloon for Lombardi Comprehensive Cancer Center.

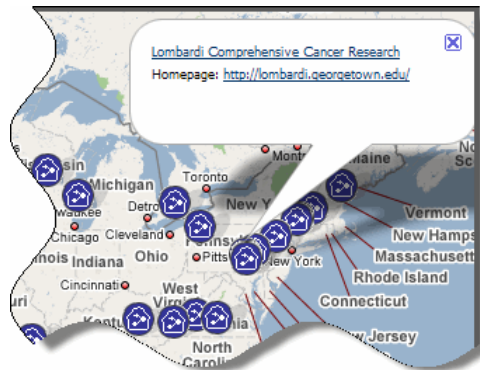


Figure 3.5. Callout balloon for a selected participant

3. Click the participant name link (top link).

The Tools page appears with the **Details** tab and **Participant** subtab selected, as shown in Figure 3.6.

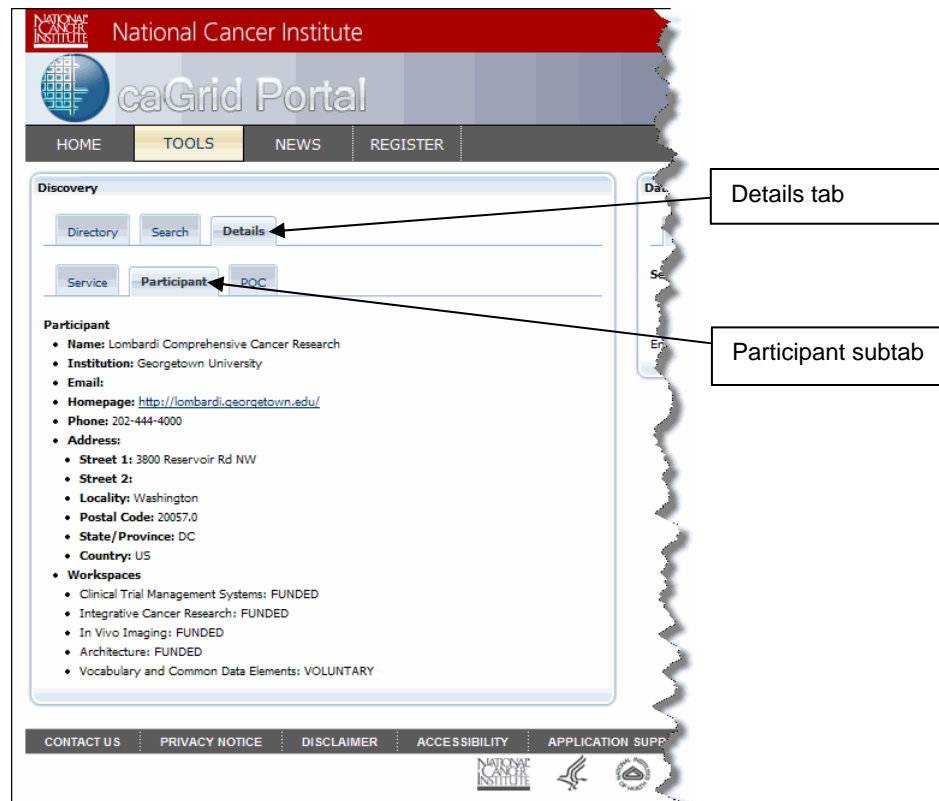


Figure 3.6. Discovery portlet showing details for a participant institute

For more information about the information available on this page, see *Viewing Details for a Participant* on page 38.

Selecting a Hosting Research Center.

1. Find a **Hosting Research Center** icon , then click the icon.

A callout balloon appears above the icon. The balloon displays the following information:

- the number of services available at the selected location
- a **View** link.

Figure 3.7 shows an example of a callout balloon for a hosting research center.



Figure 3.7. Callout balloon for an analytical service center

2. Click the **View** link.

The Tools page appears with the **Directory** tab and **List View** subtab selected. The **List View** subtab displays a list of services.

3. In the list at the bottom of the page, do the following:
 - a. Locate the service that you want to view.
 - b. Select the **More Details...** link on the right, as shown in Figure 3.8.

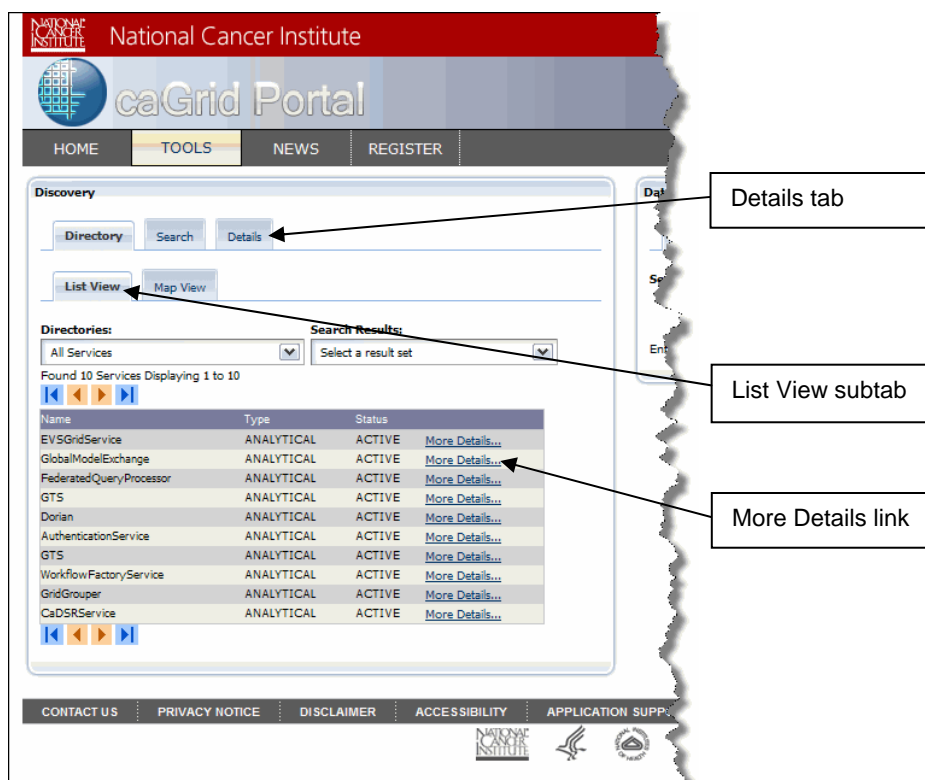


Figure 3.8. List of hosting research centers with More Details links

For more information about the information available on the List View subtab, see *Viewing Details for an Analytical Service* on page 37.

4. Click the **Home** link in the upper left to return to the home page.

Selecting a POC.

As explained in *Selecting a Category View* on page 18, the Map portlet does not currently display POC information. For more information on finding and viewing details for a POC, see the following sections:

- *Searching for a POC* on page 33
- *Viewing Details for a POC* on page 39

Chapter 4 Using the Discovery Portlet

In Chapter 1, the *Discovery* section on page 4 introduced you to the concept of *discovery*. This chapter introduces the Discovery portlet, which enables you to discover caGrid services, caBIG participants, and caGrid POCs.

Topics in this chapter:

- *About the Discovery Portlet* on this page
- *Using the Directory Tab* on page 28
- *Using the Search Tab* on page 31
- *Using the Details Tab* on page 35

About the Discovery Portlet

The Discovery portlet offers a versatile interface for browsing, searching, and viewing metadata. The interface includes drop-down lists, keyword entry fields, and search field selection boxes.

The various Discovery portlet features are available in a series of tabs with subtabs. Table 6-1 describes each tab and its subtabs.

Feature	Description
Directory tab	Enables you to browse for services, participants, or POCs by selecting directories from a drop-down list. You can use a List view or Map view (discussed below).
List View subtab	Displays browsing results in a paginated list. Each result includes a link for viewing more details (metadata).
Map View subtab	Displays selected items on a map of the U.S. and enables you to link to further information. This tab works the same way as the Map portlet discussed in Chapter 3 (p. 17).
Search tab	Enables you to search for services, participants, and POCs using keywords and search fields.
Services subtab	Used to search for a service by entering one or more keywords and selecting fields to constrain the search. This tab includes both a simple and advanced field set.
Participants subtab	Used to search for a participant by entering one or more keywords and selecting fields to constrain the search.
POCs subtab	Used to search for a POC by entering one or more keywords and selecting fields to constrain the search.

Feature	Description
Details tab	Displays metadata for a selected service, participant, or POC.
Service subtab	Displays metadata for a selected service.
Participant subtab	Displays metadata for a selected participant.
POC subtab	Displays metadata for a selected POC.

Table 4-1. Discovery portlet tab descriptions

Using the Directory Tab

Use the **Directory** tab when you want to select a category and view its results in a list or on a map. This tab has two subtabs: **List View** and **Map View**. The next two sections explain how to use these subtabs.

Using the List View Subtab

The **List View** subtab enables you to select a category from the **Directories** list and view the results in a paginated results list. You can also select a saved result set from your current browser session.

Figure 4.1 shows the List View subtab with results displayed for the **All Services** category. The result list displays ten results per page. Note that each result includes a **More Details** link. Data services also include a **Query** link that enables you to build a query for the selected service.

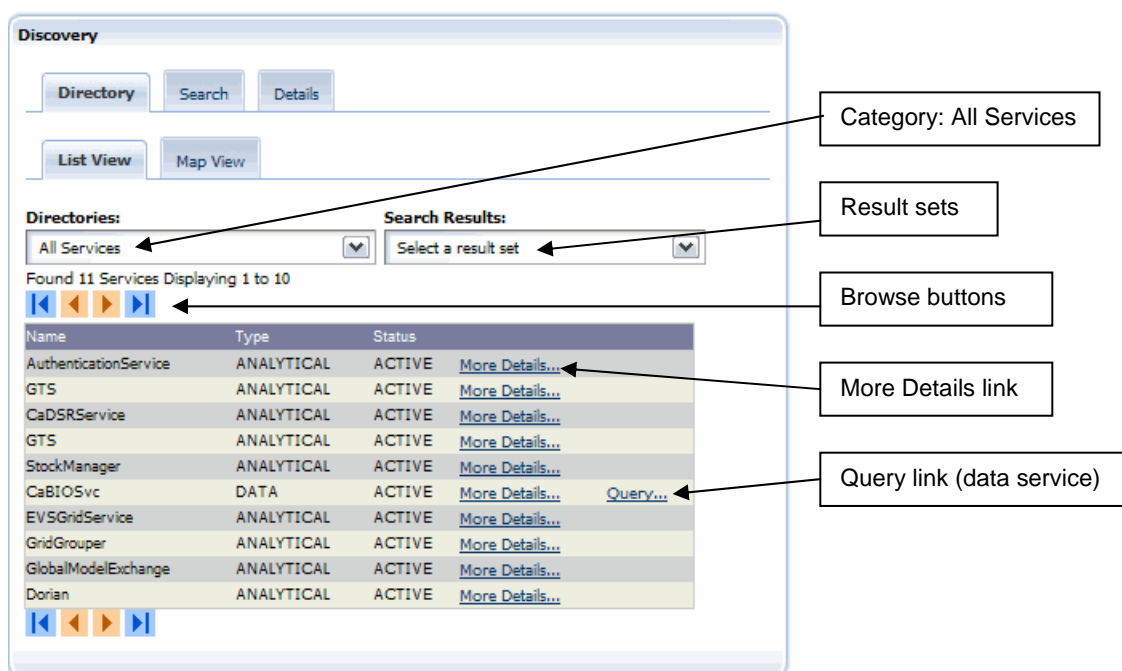






Figure 4.1. Directory tab > List View subtab – results for All Services category

To view results for a selected category, follow these steps:

1. Select the **Directory** tab.
2. Select the **List View** subtab.
3. Do either of the following:
 - Select a category from the **Directories** list; or
 - Select a result set from the **Search Results** list.

The results appear in the lower area of the subtab.

4. Use the browse buttons to page through the list:
 - Click the **Forward** button  to page forward.
 - Click the **Back** button  to page backward.
 - Click the **Return**  to return to the beginning of the list.
 - Click the **Skip to End**  to skip to the end of the list.

5. To view details for a result, click the **More Details** link.

For more information about viewing details for a result, see *Using the Details Tab* on page 35.

6. If the results include data services and you want to build a query for a selected service, click the **Query** link.

For more information about building queries, see *Building a Query Using the CQL Builder Tool* on page 44.

Using the Map View Subtab

After you select a category and view the results, you can switch to the **Map View** subtab for a graphical view of the results. Or, instead of starting with the List View subtab, you can start with the Map View subtab and select a category or result set using its drop-down lists.

To view search results using the Map View subtab, follow these steps:

1. Use the **List View** subtab to select a category and display the results.
For complete instructions, see *Using the List View Subtab* on page 28.
2. Click the **Map View** subtab.

The map displays the results as shown in Figure 4.2.

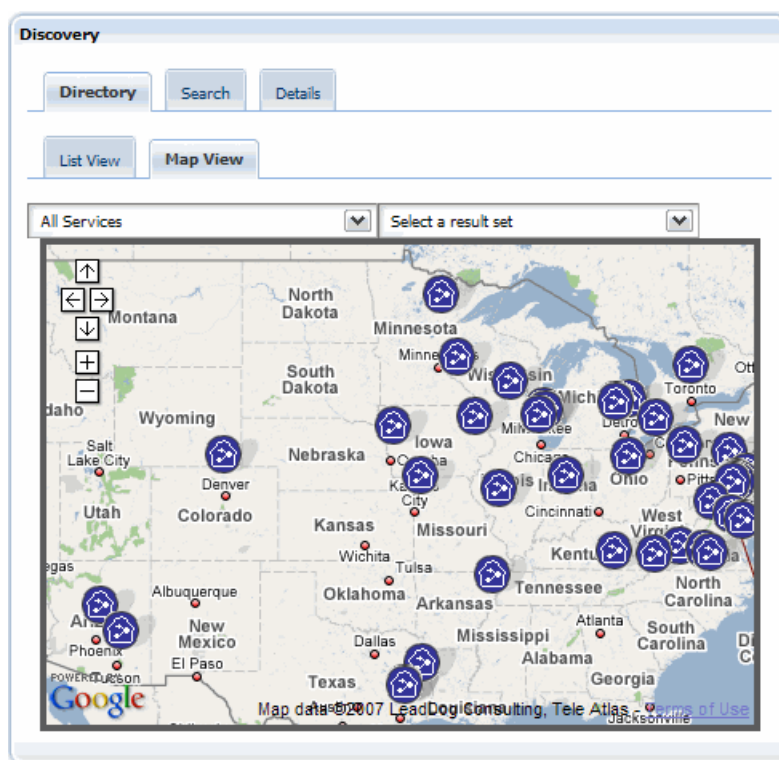


Figure 4.2. Map View subtab

The Map View subtab functions exactly like the Map portlet. For more information, see the following sections in Chapter 3, *Using the Map Portlet*, on page 17.

- *About the Map Portlet* on page 17
- *Selecting a Category View* on page 18
- *Selecting a Service, Participant, or POC* on page 19

Using the Search Tab

The **Search** tab provides a comprehensive solution for finding caGrid services, caBIG participants, or and caGrid POCs. Each of these entities has its own search subtab.

The following topics explain how to use each subtab to execute a search:

- *Searching for a Service* on this page
- *Searching for a Participant* on page 32
- *Searching for a POC* on page 33

Searching for a Service

Use the **Services** subtab to search for a service by entering one or more keywords and selecting fields to constrain the search. The search form includes a **Keyword** field and a **Search Fields** selection box. It also has **Simple** and **Advanced** option buttons that control the available search fields.

Figure 4.3 shows the layout of the Services subtab.

The screenshot shows the 'Discovery' portlet interface. At the top, there are three tabs: 'Directory', 'Search', and 'Details'. The 'Search' tab is active. Below this, there are three subtabs: 'Services', 'Participants', and 'POCs'. The 'Services' subtab is selected. The search form includes a 'Keyword:' text input field, a 'Search Fields:' dropdown menu, and two radio buttons labeled 'Simple' (selected) and 'Advanced'. The 'Search Fields:' dropdown menu is open, showing a list of search criteria: URL, Name, Description, Input/Output Class Names, Operation Names, Semantic Metadata, and Domain Model Class Names. A 'Search' button is located at the bottom left of the form.

Figure 4.3. Services subtab

To search for a service, follow these steps:





1. Click the **Search** tab.
2. Click the **Services** subtab.
3. Enter one or more keywords in the **Keyword** field.
4. (Optional) Select the **Advanced** option to display more search fields.
5. Select fields from the **Search Fields** selection box.

Note: If you do not select search fields, all of the fields are used in the search.

6. Click **Search**.

The results appear in the lower area of the subtab.

7. Use the browse buttons to page through the list:

- Click the **Forward** button  to page forward.
- Click the **Back** button  to page backward.
- Click the **Return**  to return to the beginning of the list.
- Click the **Skip to End**  to skip to the end of the list.

8. To view details for a result, click the **More Details** link.

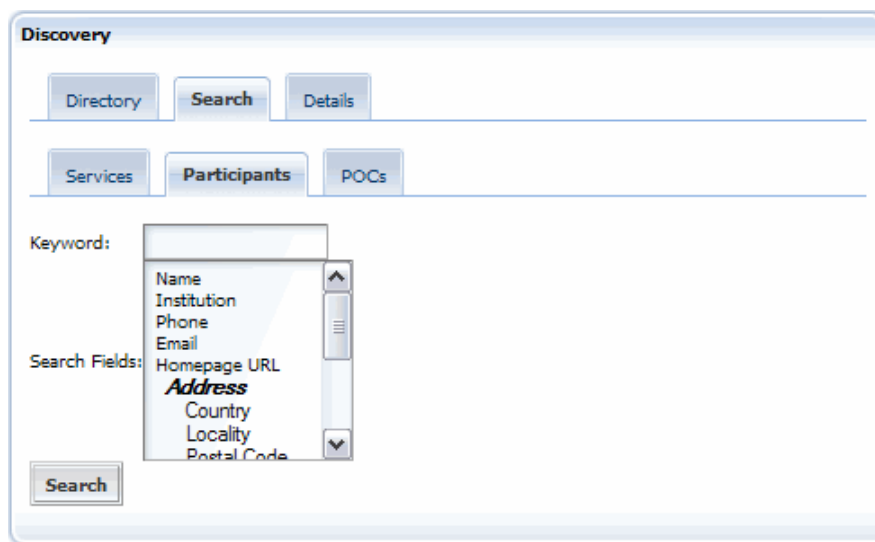
For more information about viewing details for a result, see *Using the Details Tab* on page 35.

9. If the results include data services and you want to build a query for a selected service, click the **Query** link.

For more information about building queries, see *Building a Query Using the CQL Builder Tool* on page 44.

Searching for a Participant

Use the **Participants** subtab to search for a participant by entering one or more keywords and selecting fields to constrain the search. The search form includes a **Keyword** field and a **Search Fields** selection box, as shown in Figure 4.4.



The screenshot shows a web interface titled "Discovery". At the top, there are three tabs: "Directory", "Search", and "Details". Below these, there are three subtabs: "Services", "Participants", and "POCs". The "Participants" subtab is selected. The main area contains a "Keyword:" label followed by a text input field. Below this is a "Search Fields:" label followed by a list box. The list box contains the following items: "Name", "Institution", "Phone", "Email", "Homepage URL", "Address" (which is bolded), "Country", "Locality", and "Postal Code". At the bottom left of the form is a "Search" button.

Figure 4.4. Participants subtab

To search for a participant, follow these steps:

1. Click the **Search** tab.
2. Click the **Participants** subtab.
3. Enter one or more keywords in the **Keyword** field.





4. Select fields from the **Search Fields** selection box.

Note: If you do not select search fields, all of the fields are used in the search.

5. Click **Search**.

The results appear in the lower area of the subtab.

6. Use the browse buttons to page through the list:

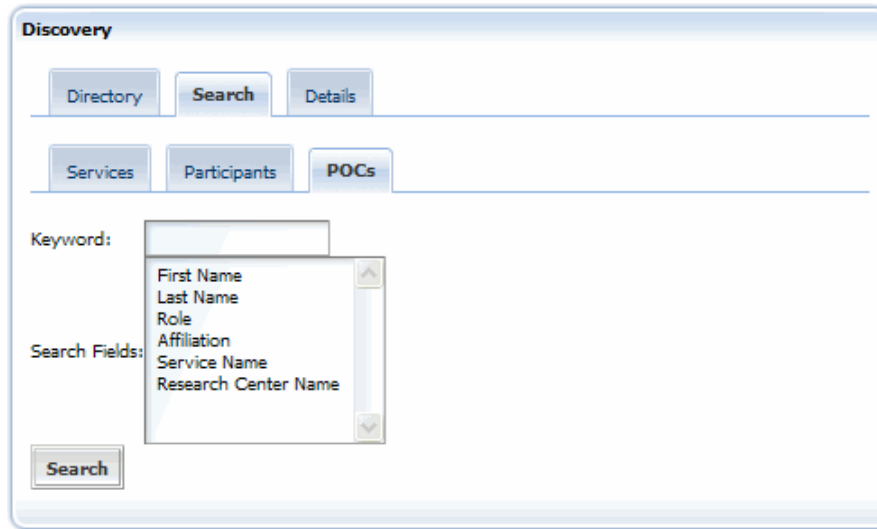
- Click the **Forward** button  to page forward.
- Click the **Back** button  to page backward.
- Click the **Return**  to return to the beginning of the list.
- Click the **Skip to End**  to skip to the end of the list.

7. To view details for a result, click the **More Details** link.

For more information about viewing details for a result, see *Using the Details Tab* on page 35.

Searching for a POC

Use the **POCs** subtab to search for a POC by entering one or more keywords and selecting fields to constrain the search. The search form includes a **Keyword** field and a **Search Fields** selection box, as shown in Figure 4.5.



The screenshot shows the 'Discovery' portlet interface. At the top, there are three tabs: 'Directory', 'Search', and 'Details'. Below these, there are three subtabs: 'Services', 'Participants', and 'POCs'. The 'POCs' subtab is selected. In the center, there is a 'Keyword:' label next to a text input field. Below the input field is a 'Search Fields:' label next to a list box. The list box contains the following items: 'First Name', 'Last Name', 'Role', 'Affiliation', 'Service Name', and 'Research Center Name'. At the bottom left of the form is a 'Search' button.

Figure 4.5. POCs subtab

To search for a POC, follow these steps:





1. Click the **Search** tab.
2. Click the **POCs** subtab.
3. Enter one or more keywords in the **Keyword** field.
4. Select fields from the **Search Fields** selection box.

Note: If you do not select search fields, all of the fields are used in the search.

5. Click **Search**.

The results appear in the lower area of the subtab.

6. Use the browse buttons to page through the list:

- Click the **Forward** button  to page forward.
- Click the **Back** button  to page backward.
- Click the **Return**  to return to the beginning of the list.
- Click the **Skip to End**  to skip to the end of the list.

7. To view details for a result, click the **More Details** link.

For more information about viewing details for a result, see *Using the Details Tab* on page 35.

Using the Details Tab

The **Details** tab displays metadata for services, participants, and POCs. The following topics discuss the level of detail for each entity:

- *Viewing Details for Services* on this page
- *Viewing Details for a Participant* on page 38
- *Viewing Details for a POC* on page 39

Viewing Details for Services

caGrid Services provide a standard set of metadata. This metadata includes descriptions of the service's operations, information about the hosting research center and, if the service is a data service, the complete domain model that is supported by the service.

In addition, data types that the service operations use are defined by XML schemas and are registered with the Global Metadata Exchange (GME) service.

Viewing Details for a Data Service

To view details for a data service, follow these steps:

1. Use the **Directory** or **Search** tabs to find the desired data service.

For more information, see the following topics:

- *Using the List View Subtab* on page 28
- *Searching for a Service* on page 31

2. Click the **Details** tab.

Details for the selected data service appear on the **Service** subtab, as shown in Figure 4.6.

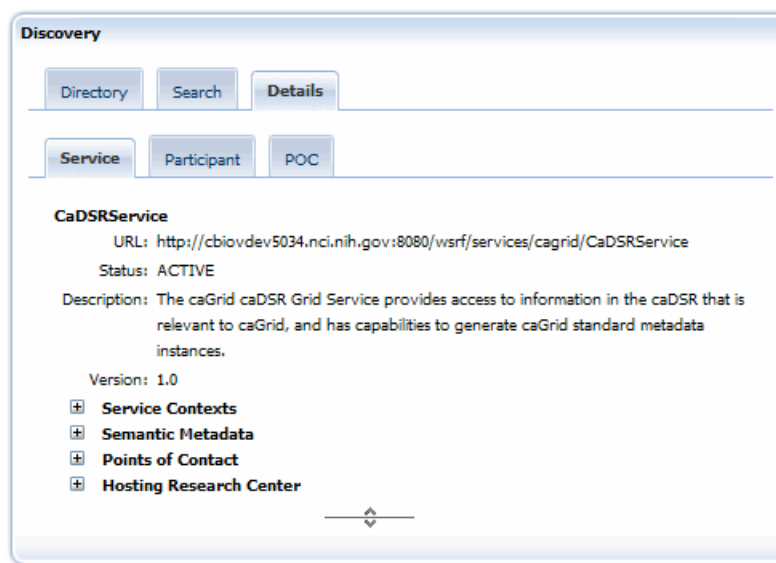


Figure 4.6. Details for a selected data service

3. Click the plus sign preceding each top-level of metadata to drill down to the sub-levels.

For example, when viewing details for a data service, you can drill down through the complete domain model that the service supports. You can then select a class for a query by clicking the **Select For Query** button, as shown in Figure 4.7.

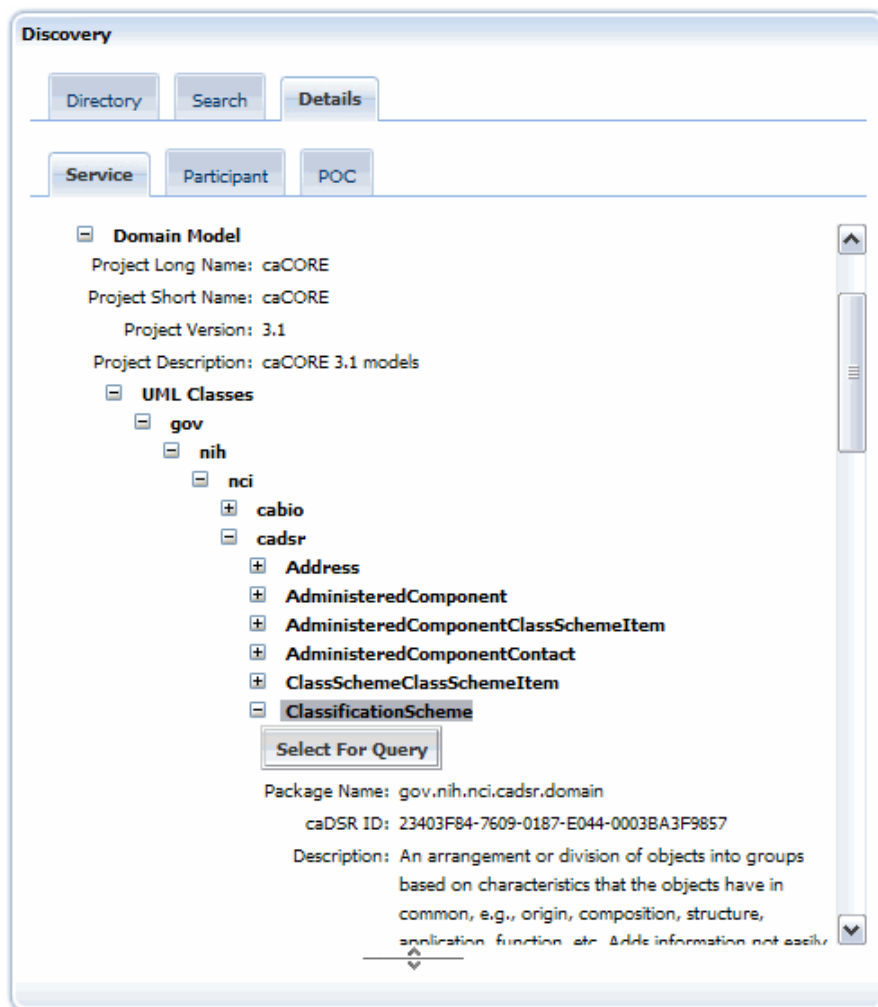


Figure 4.7. Selecting a UML class for a query

Viewing Details for an Analytical Service

To view details for an analytical service, follow these steps:

1. Use the **Directory** or **Search** tabs to find the desired analytical service.

For more information, see the following topics:

- *Using the List View Subtab* on page 28
- *Searching for a Service* on page 31

2. Click the **Details** tab.

Details for the selected analytical service appear on the **Service** subtab, as shown in Figure 4.8.



Figure 4.8. Details for a selected analytical service

3. Click the plus sign preceding each top-level of metadata to drill down to the sub-levels.

Note: Analytical services do not include a domain model.

Viewing Details for a Participant

To view details for a participant, follow these steps:

1. Use the **Directory** or **Search** tabs to find the desired participant.

For more information, see the following topics:

- *Using the List View Subtab* on page 28
- *Searching for a Participant* on page 32

2. Click the **Details** tab.

Details for the selected participant appear on the **Participant** subtab, as shown in Figure 4.9.

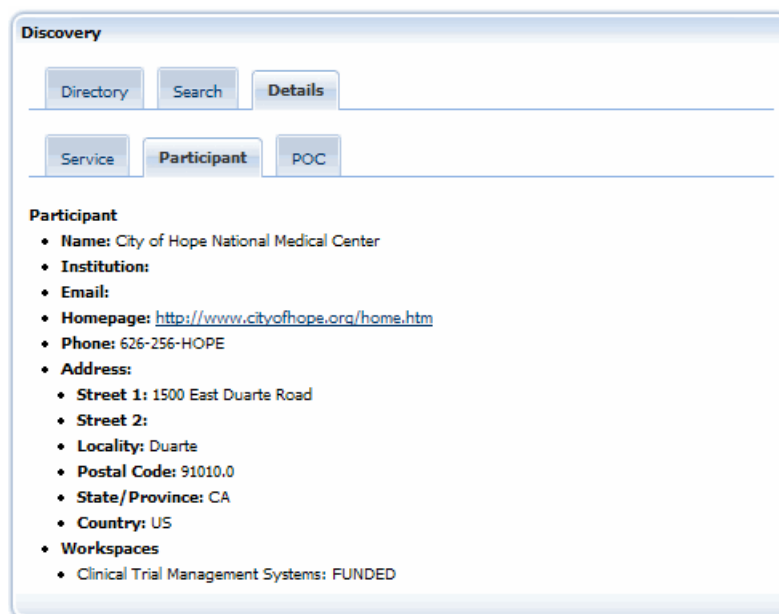


Figure 4.9. Details for a selected participant

Viewing Details for a POC

To view details for a POC, follow these steps:

1. Use the **Directory** or **Search** tabs to find the desired POC.

For more information, see the following topics:

- *Using the List View Subtab* on page 28
- *Searching for a POC* on page 33

2. Click the **Details** tab.

Details for the selected POC appear on the **POC** subtab, as shown in Figure 4.10.

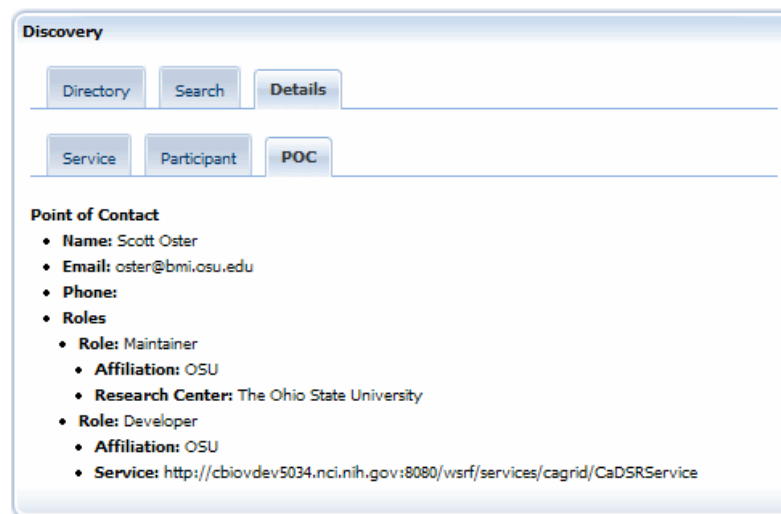


Figure 4.10. Details for a selected POC

Chapter 5 Using the Data Service Query Portlet

The Data Service Query portlet enables you to query services that support the CQL query language. This chapter explains how to build and share queries.

Topics in this chapter:

- *About the Data Service Query Portlet* on this page
- *Query-Building Scenarios* on page 42
- *About the History Tab* on page 48
- *Working with Shared Queries* on page 50

About the Data Service Query Portlet

Using the Data Service Query portlet, you can select a service and target UML class, build a query, execute the query, and view the results in both tabular and XML form. As long as you are a registered portal user, the portal maintains a complete history of your queries so that you can always retrieve and work with your previously executed queries.

The Data Service Query portlet interface is organized in a series of tabs. Table 5-1 describes each tab.

Tab	Description
Select UML Class	Enables you to enter a URL for a selected data service and view a list of UML classes.
Query	Provides two subtabs: <ul style="list-style-type: none">• CQL Builder, which provides a graphical interface for building CQL queries• CQL XML, which enables you to enter a data service URL and CQL query directly and then execute or share the query
History	Shows all of your stored queries.
Results	Displays query results in tabular or XML form.
Shared Queries	Provides a Find Shared Queries subtab that includes both a Keyword field and a Search Fields selection box. You can use these tools to search for shared queries.

Table 5-1. Data Service Query portlet tab descriptions

Tip: For more information about CQL and CQL concepts, see http://www.cagrid.org/mwiki/index.php?title=Data_Services:CQL.

Query-Building Scenarios

To execute a CQL query, you need the following:

- The URL of the caGrid data service to which the query will be sent.
- The CQL query itself.

The portal provides several approaches for specifying these requirements. The following scenarios explain each approach.

Scenario 1: Starting without a URL or CQL Query

If you do not have the service URL or the CQL query, follow these steps:

1. Locate a service using either the **Directory** or **Search** tab of the Discovery portlet.

For more information, see *Searching for a Service* on page 31.

2. If you want to view metadata for a UML class before selecting it for a query, follow substeps 2a through 2d. Otherwise, skip to step 3:
 - a. Click the **More Details** link for the desired service.
 - b. Expand the **Domain Model**.
 - c. Drill down to the metadata for a selected class.
 - d. Click **Select for Query**.
3. To select the desired service from the results list, follow these steps:
 - a. Click the **Query** link for the desired service.

On the Data Service Query portlet > **Select UML Class** tab, the **Service URL** field displays the URL for the selected service. A list of UML classes appears below the field, as shown in Figure 5.1.

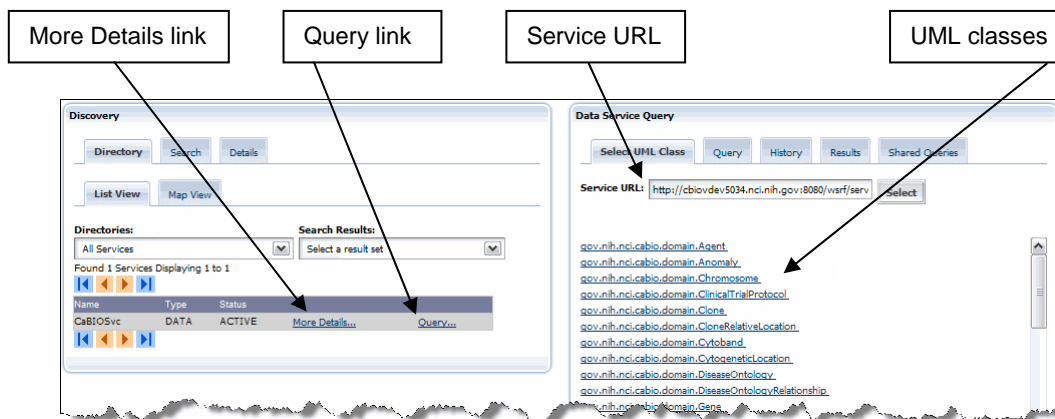


Figure 5.1. Starting a query from a selected result

- b. Click the desired UML class.

On the Data Service Query portlet, the **Query** tab > **CQL Builder** subtab displays a working query, as shown in Figure 5.2.

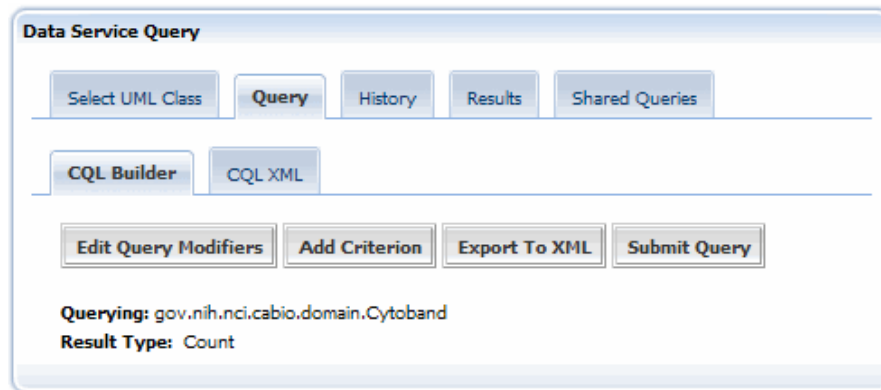


Figure 5.2. Working query

Scenario 2: Starting with a URL but No CQL Query

If you have the service URL but no CQL query, follow these steps:

1. On the Data Service Query portlet, click the **Select UML Class** tab.
2. Enter the URL in the **Service URL** field.
3. Click **Select**.
4. Click the desired UML class from the list.

The **Query** tab > **CQL Builder** subtab displays a working query.

Scenario 3: Starting with a URL and a CQL Query

If you have both the URL and the CQL query, follow these steps:

1. On the Data Service Query portlet, click the **Query** tab.
2. Click the **CQL XML** subtab.
3. Enter the URL in the **URL** field.
4. Enter the CQL query in the **Query** text field.
5. Click **Submit Query**.

Building a Query Using the CQL Builder Tool

The **Query** tab > **CQL Builder** subtab provides a graphical interface for building CQL queries. Although you can use this tool without knowing CQL, you can more easily use the tool if you understand CQL concepts. You can learn more at http://www.cagrid.org/mwiki/index.php?title=Data_Services:CQL.

To use the CQL Builder subtab, you must first select the service and URL as explained in *Scenario 1: Starting without a URL or CQL Query* on page 42. After you have selected a UML class for the query, the CQL Builder tab resembles Figure 5.3.

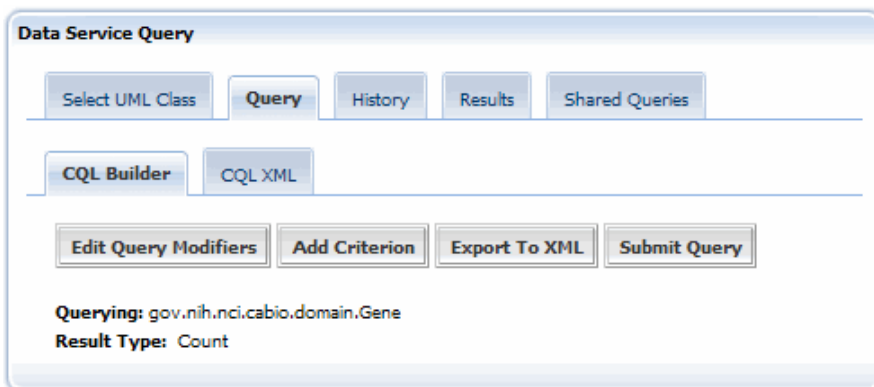


Figure 5.3. CQL Builder subtab with selected UML class Gene

To modify and submit the query, follow these steps:

1. Click **Edit Query Modifiers** to select one of the options described in Table 5-2.

Option	Description
Object	Returns full results from the data service.
Count Only (the default)	Returns only the count of objects that match specified criteria.
Distinct Attribute	Returns the unique value of one of the following attributes of the UML class being queried: <ul style="list-style-type: none"> • clusterID • fullName • id • symbol You can select only one of these attributes.
Selected Attributes	Displays the same four attributes offered by the Distinct Attribute option, but enables you to select multiple attributes. If you select this modifier, the results will include only these attribute values for each object in the result set.

Table 5-2. Options for editing query modifiers

2. When you have finished editing modifiers, click **Update**.

The Result Type updates to show the selected attributes.

3. To add a criterion to the query, click **Add Criterion**.

The CQL Builder subtab displays a list of attributes and associations for the selected class, as shown in Figure 5.4.

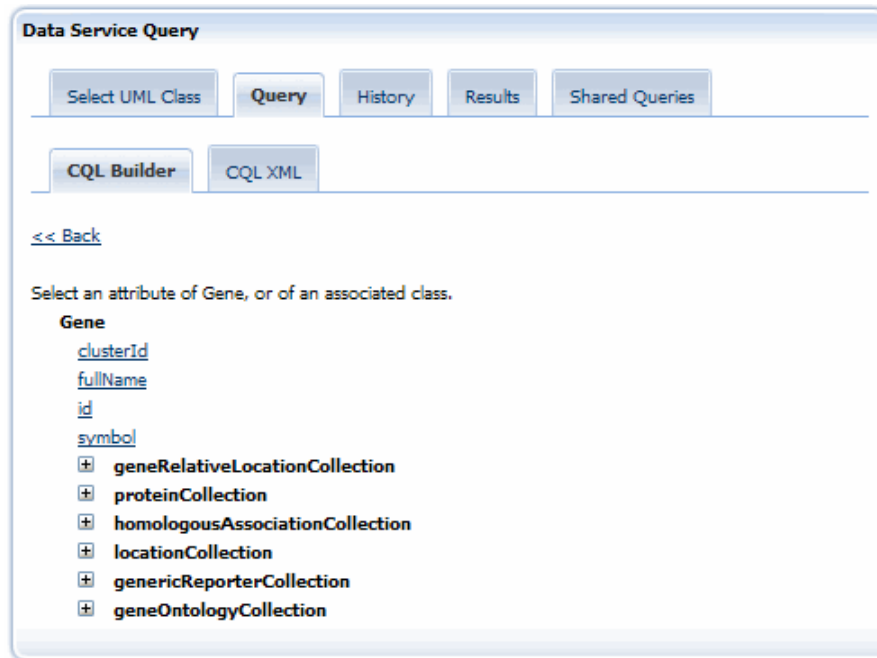


Figure 5.4. Attributes and associations for selected class

4. Select an attribute.

A form appears with the name of the selected attribute.

5. Set the predicate by selecting it from the drop-down list.
6. Enter a value.

The form should now resemble Figure 5.5.

Data Service Query

Select UML Class **Query** History Results Shared Queries

CQL Builder CQL XML

Attribute Name	Predicate	Value(s)
commonName	EQUAL_TO	mouse

Update Delete Cancel

Figure 5.5. Specifying a predicate and value for a selected attribute

7. Click **Update**.

The CQL Builder subtab should now resemble Figure 5.6

Data Service Query

Select UML Class **Query** History Results Shared Queries

CQL Builder CQL XML

Edit Query Modifiers Add Criterion Export To XML Submit Query

Querying: gov.nih.nci.cabio.domain.Gene
Result Type: Selected Attributes [clusterId , fullName , id , symbol]
 proteinCollection
 taxonCollection
 commonName EQUAL_TO mouse

Figure 5.6. CQL Builder subtab with added criterion

Although you can add multiple criteria to a query, the CQL Builder does not currently support logical OR groupings other than for multiple values specified for the same criterion. Currently, the tool groups all criteria using a logical AND. If you specify multiple values for a specific criterion, the tool creates multiple criteria and groups them by OR. To further edit your query, you can export it to XML format.

Note: Once you export a CQL query to XML, you cannot edit the query and then switch back to using the CQL Builder tool.

8. (Optional) To export your query to XML format, follow these steps:
 - a. Click **Export to XML**.
The **CQL XML** tab appears in front. The **URL** field displays the service URL, and the **Query** field displays the XML structure for the query.
 - b. Edit the XML structure as needed.

Data Service Query

Select UML Class **Query** History Results Shared Queries

CQL Builder **CQL XML**

URL: `http://cbiovddev5034.nci.nih.gov:8080/wsrf/services/cagrid/CaBIOSvc`

Query:

```
<ns1:CQLQuery xmlns:ns1="http://CQL.caBIG/1/gov.nih.nci.cagrid.CQLQuery">
  <ns1:Target name="gov.nih.nci.cabio.domain.Gene">
    <ns1:Group logicRelation="AND">
      <ns1:Association name="gov.nih.nci.cabio.domain.Protein"
        roleName="proteinCollection">
        <ns1:Group logicRelation="AND">
          <ns1:Association name="gov.nih.nci.cabio.domain.Taxon"
            roleName="taxonCollection">
            <ns1:Group logicRelation="AND">
              <ns1:Attribute name="commonName" predicate="EQUAL_TO" value="mouse"/>
            </ns1:Group>
          </ns1:Association>
        </ns1:Group>
      </ns1:Association>
    </ns1:Group>
  </ns1:Target>
</ns1:CQLQuery>
```

Submit Query Share Query

Figure 5.7. CQL XML tab

9. When you have finished building the query, click **Submit Query**.
The **History** tab appears in front. This tab displays the query State, Start Time, Finish Time, and Service, as shown in Figure 5.8.

Data Service Query

Select UML Class Query **History** Results Shared Queries

Operations	State	Start Time	Finish Time	Service
---	COMPLETE	Dec 20, 2007 2:37:10 PM	Dec 20, 2007 2:37:12 PM	CaBIOSvc

Figure 5.8. History tab with query information

For more information about the History tab, see the next section.

About the History Tab

As noted in the last section, when you run a query from the CQL Builder or CQL XML subtabs, the **History** tab becomes the active tab. This tab displays information about all of the queries that the you has executed.

If are a registered caGrid Portal user, the History list displays all queries that you have executed since you registered. If you are not registered, then you will see only queries that you have executed during the current browser session. The most recent query is displayed first.

The History tab also includes an **Operations** drop-down list, which includes the following operations:

- **View Results** – Displays the query results in the **Results** tab > **Tabular** subtab, shown in Figure 5.9. The result list shows ten results at a time and includes buttons for browsing by page, skipping to the end of the list, or skipping to the beginning of the list. The **Export to Excel** link enables you to save the query to an Excel (*.xls) workbook.

Data Service Query

Select UML Class Query History **Results** Shared Queries

Tabular XML

Displaying 1 to 10 of 90 results. [Export to Excel](#)

clusterId	fullName	id	symbol
435052	ATPase, aminophospholipid transporter (APLT), Class I, type 8A, member 1	17356	ATP8A1
26514	ATP binding domain 3	125393	Atpbd3
524464	ATP synthase, H ⁺ transporting, mitochondrial F0 complex, subunit C2 (subunit 9)	24399	ATP5G2
60134	ATPase, (Na ⁺)/K ⁺ transporting, beta 4 polypeptide	128787	Atp1b4
514870	ATP synthase, H ⁺ transporting, mitochondrial F0 complex, subunit B1	23032	ATP5F1
477126	ATG3 autophagy related 3 homolog (S. cerevisiae)	20581	ATG3
321755	ATPase, Ca ⁺⁺ transporting, plasma membrane 2	141985	Atp2b2
241152	ATPase family, AAA domain containing 3A	135938	Atad3a
513870	ATPase, Ca ⁺⁺ transporting, ubiquitous	22883	ATP2A3
512651	Ataxin 7-like 3	22695	ATXN7L3

Figure 5.9. Results tab > Tabular subtab with query results

- **Reload** – Reloads the query into the **CQL XML** subtab, where you can edit the query or run it again.
- **Delete** – Removes the query from the query history.

Table 5-3 describes the remaining information displayed on the History tab.

Option	Description
State	The current state of the query. The next five rows lists each status and explain what operations you can perform while each status is in effect.
RUNNING	Indicates that the query is still running. You can cancel or delete the query.
COMPLETE	Indicates that the query completed successfully. You can view results, reload, or delete the query.
ERROR	Indicates that the query failed. You can view the error, reload the query, or delete the query.
CANCELED	Indicates that you canceled the query. You can reload or delete the query
TIMED OUT	Indicates that the system canceled the query. You can reload or delete the query
Start Time	The time that the query started running, displayed in hours, minutes, and seconds.
Finish Time	The time that the query finished running, displayed in hours, minutes, and seconds.
Service	The name of the target service.

Table 5-3. History tab information

Working with Shared Queries

If you are currently logged in, you can share new or previously executed queries with other caGrid Portal users. This section explains how to share a query and how to search for shared queries.

Sharing a Query

To share a query, follow these steps:

1. If you are not currently using the Data Service Query portlet, click the **Tools** link on the main navigation bar.
2. To share a *new* query, follow these steps:
 - a. Build the query as explained in *Building a Query Using the CQL Builder Tool* on page 44.
 - b. Skip to step 4.
3. To share a *previously executed* query, follow these steps:
 - a. Click the **History** tab.
 - b. Select the **Re-load** command from the **Operations** drop-down list.
 - c. Continue to the next step.
4. On the **Query** tab > **CQL Builder** or **CQL XML** subtab, click **Share Query**.

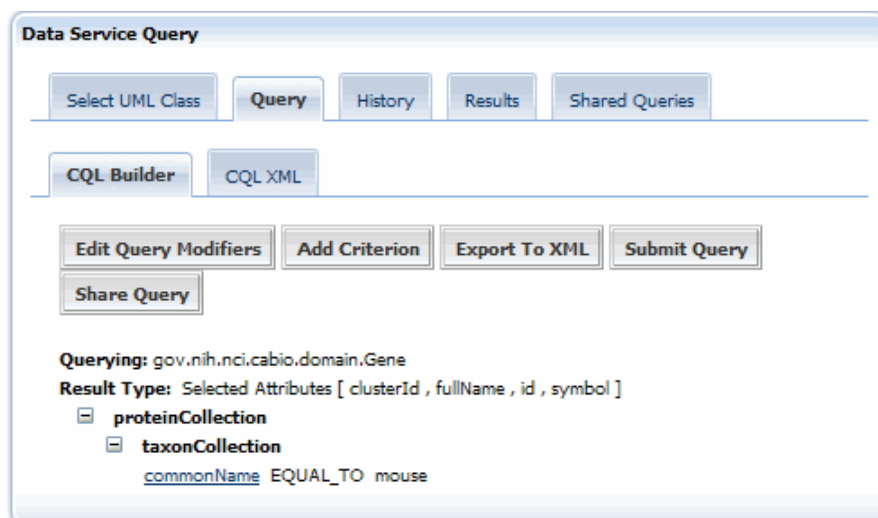


Figure 5.10. Query tab > CQL Builder subtab – Share Query button

The **Shared Queries** tab > **My Queries** subtab becomes the active tab.

5. Enter a name and description for the query using the **My Queries** form shown in Figure 5.11.

Note: The name and description are required.

Figure 5.11. Form for adding a query name and description

6. Click **Save**.

A message confirms that the shared query has been successfully saved.

7. Click the **<< To shared queries list** link.

The **Shared Queries** tab > **My Queries** subtab becomes the active tab. Your saved, shared query is summarized at the bottom of the form.

Operations	Name	Target Service	Target UML Class	Share Date
---	Gene Domain - Mouse	CaBIOSvc	Gene	Dec 21, 2007 8:49:43 AM

Figure 5.12. Saved query

The query summary shows the following information:

- A slightly different version of **Operations** drop-down list (see step 8)
- Name
- Target Service
- Target UML Class
- Shared Date

8. (Optional) Select any of the following options from the **Operations** drop-down list:
 - **Edit** – Returns to the **Shared Queries** tab > **My Queries** subtab, where you can edit the query name and description.
 - **Load** – Runs the query and displays the **Query** tab > **CQL XML** subtab.
 - **View** – Activates the **Shared Queries** tab > **My Queries** subtab and shows the query in XML format.

Searching for a Shared Query

You can search for shared queries using a keyword search and selected constraints, including the target service, target UML class, and query creator.

To search for a shared query, follow these steps:

1. If you are not currently using the Data Service Query portlet, click the **Tools** link on the main navigation bar.
2. Click the **Shared Queries** tab.
3. Click the **Find Shared Queries** subtab.

Figure 5.13. Shared Queries tab > Find Shared Queries subtab – Search form

4. Enter one or more keywords in the **Keyword** field.
5. Select desired search constraints in the **Search Fields** selection box.

Note: If you do not select search fields, all of the fields are included in the search.
6. Click **Search**.

The query results appear in a paginated list.
7. (Optional) To edit, load, or view a found query, select an option from the **Operations** list.

Chapter 6 Using Other Portal Features

The previous chapters covered the main caGrid Portal features used for discovering and querying caGrid services, caBIG participants, and caGrid POCs. The portal includes other useful portlets: *News*, *caGrid Links*, *caGrid Status*, and *Calendar*. This chapter provides an overview of these portlets.

Topics in this chapter:

- *Using the News Portlet on this page*
- *Using the caGrid Status Portlet on page 55*
- *About the Calendar Portlet on page 56*

Using the News Portlet

The caGrid Portal gives you the latest caGrid-related news through an RSS news feed. You can view the latest news on the portal site using two links:

- The **News** portlet on the home page
The portlet displays news headlines as links. Each headline is followed by the posting date and time, as well as a portion of the text from the article. Clicking a link opens the News page, where you can read the full article.
- The **News** link on the main navigation bar
This link takes you directly to the News page, shown in Figure 6.2 on page 54.

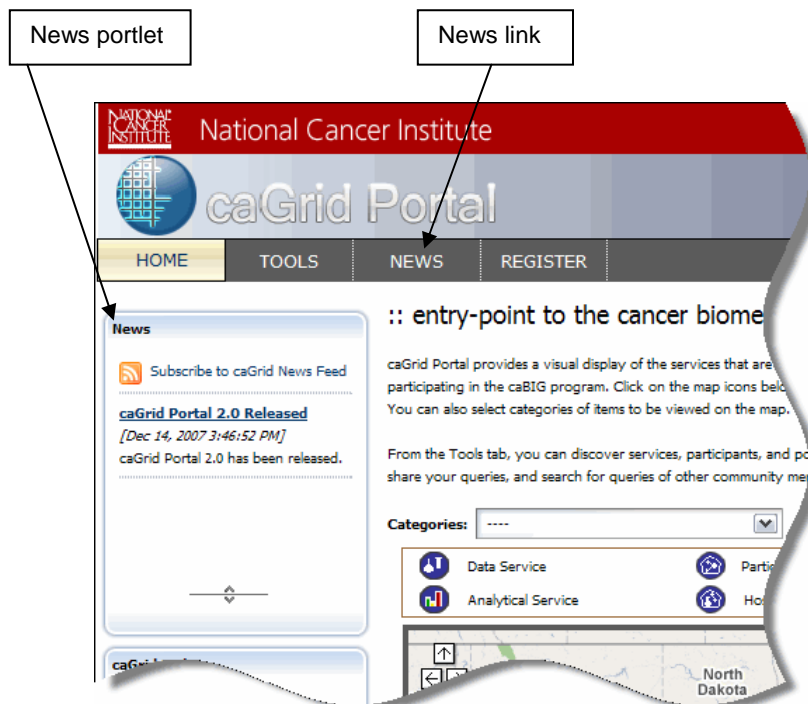


Figure 6.1. News links

On the News page, the main article appears in the middle area of the page. Other article links are listed in the **Other News** section at the bottom of the page.

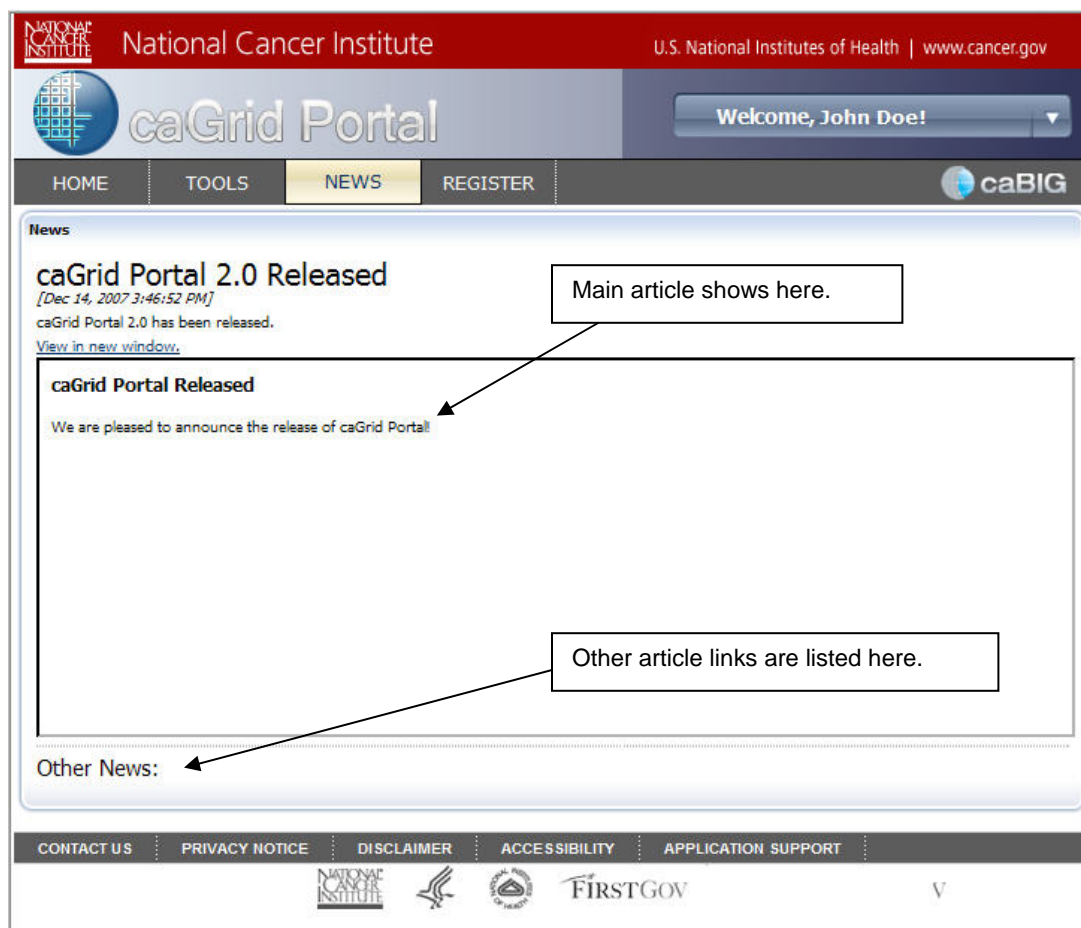


Figure 6.2. News page

Note: You can subscribe to the portal news feed directly from your browser or using any RSS 2.0-compliant news reader.

About the caGrid Links Portlet

The caGrid Links portlet includes links to the following sites:

- The caBIG Community Website at <https://cabig.nci.nih.gov/>. This site provides a comprehensive overview of caBIG.
- The caGrid Website at <https://cabig.nci.nih.gov/workspaces/Architecture/caGrid>. This site provides an overview of the caGrid.
- The caGrid Wiki at <http://www.cagrid.org/mwiki/index.php?title=CaGrid>. This site provides a collaborative environment for caGrid users.

Using the caGrid Status Portlet

The caGrid Status portlet provides an overview of the status of the services that make up caGrid as a whole. This portlet provides up-to-date counts of services and participants. From the Status portlet, you can link to the Tools page and use the Discovery portlet to view details for a specific service or select from a list view.

As shown in Figure 6.3, the Status portlet is located on the right side of the home page, just below the **Login** and **Register** links.

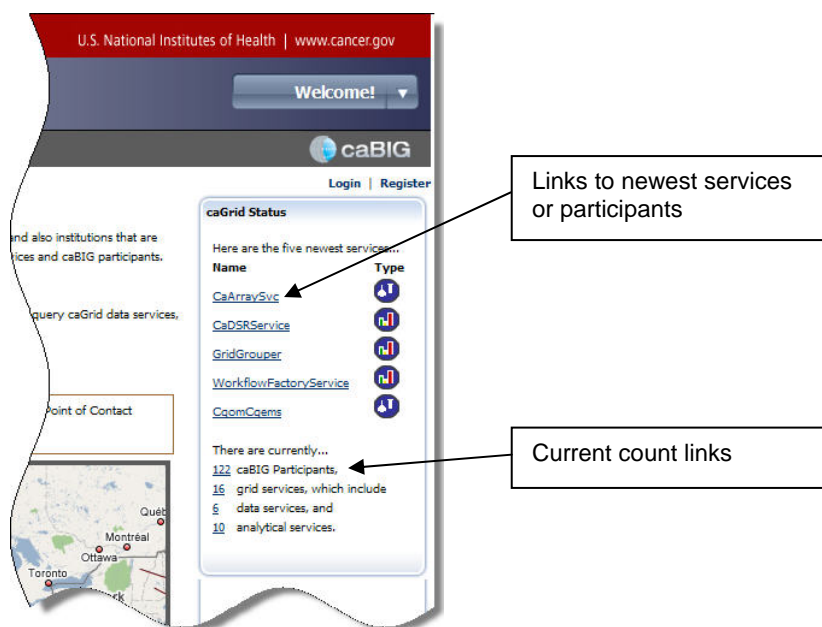


Figure 6.3. Status portlet

Viewing Details for a Recently Registered Service or Participant

The upper half of the Status portlet lists the five most recently registered services or participants with an identifying icon to the right of each listed item.

To view details for an item, click the name of the item. The Tools page appears with the **Details** tab and **Service** subtab of the Discovery portlet selected. From there you can drill down to more detail as discussed in Chapter 4, *Using the Discovery Portlet*, on page 27.

Viewing a List of Participants or Services

The lower half of the Status portlet shows current counts for caGrid participants and services. Here you can view totals for all participants, all services, all data services, and all analytical services.

To view a list of services or participants, click the underlined number preceding each item. The Tools page appears with the **Directory** tab and **List View** subtab of the Discovery portlet selected. The list display varies according to whether you selected a participant or service. You can select a list item and drill down to more detail as discussed in *Using the List View Subtab* on page 28.

About the Calendar Portlet

Appearing at the bottom of the caGrid Portal home page, the Calendar portlet provides dates of important caGrid-related events. Figure 6.4 shows this portlet as it appears on the home page.

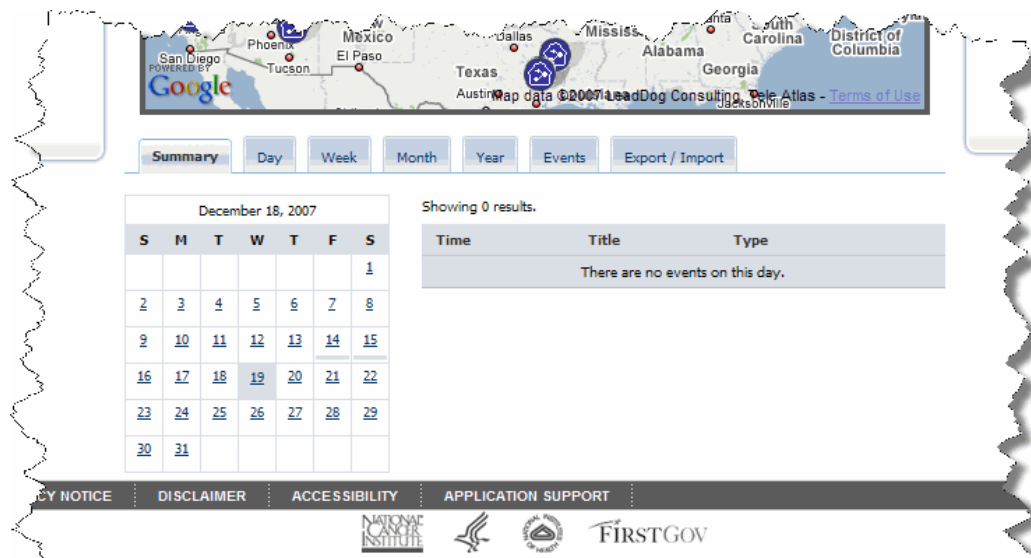


Figure 6.4. Calendar portlet

You can change the view of the calendar by clicking the various tabs described in ?.

Tab	Description
Summary	Shows a calendar on the left and a list of events on the right.
Day	Shows events for the selected day and enables you to browse forward or backward in one-day increments.
Week	Shows a seven-day view starting with the selected day and enables you to browse forward or backward in seven-day increments.
Month	Shows the current month as a full-sized calendar.
Year	Shows a calendar for each day of the current year.
Events	Shows a listing of events, including the date, time, title, and type. Click the event title to view details for the event.
Export/Import	Enables you to import a file and add an event to your calendar.

Table 6-1. Description of Calendar portlet tabs

Index

A

analytical service
 selecting (Map portlet), 21
 viewing details for, 37

C

Calendar portlet, about, 7, 56
Categories list (Map portlet), 18

D

data service
 query, about, 5
 selecting (Map portlet), 19
 viewing details for, 35
Data Service Query Portlet, about, 41
Details tab
 Participant subtab, 38
 POC subtab, 39
 Service subtab, 35
details, viewing
 for data service, 35
 for new participant, 55
 for participant, 38
 for POC, 39
Directory tab
 List View subtab, 28
 Map View subtab, 30
Discovery portlet, about, 27
discovery, about, 4–5

E

events. See Calendar portlet

H

History tab, about, 48
home page, about, 8
hosting research center, selecting (Map portlet), 24

I

icons for Map portlet, 19

L

Links portlet, about, 54
List View subtab, using, 28

logging in

 as NIH user, 15
 as registered user, 14

M

Map portlet
 about, 17
 analytical service, selecting, 21
 Categories list, 18
 data service, selecting, 19
 hosting research center, selecting, 24
 icons for, 19
 participant institute, selecting, 22
 POC, selecting, 25
Map View subtab, using, 30
metadata

 for analytical service, 37
 for data service, 35
 for participant, 38
 for POC, 39
 for services, 5

N

News portlet, about, 7, 53

P

participant
 searching for, 32
 viewing details for, 38
participant institute, selecting (Map portlet), 22
POC
 searching for, 33
 selecting (Map portlet), 25
 viewing details for, 39

Q

query
 building, 44
 for data service, 5
 portlet overview, 41
 scenarios for building, 42
 shared, searching for, 52
 sharing
 about, 6
 procedure for, 50

R

registration
 about, 11
 procedure for, 12
 technical details for, 6

S

Search tab

- Participant subtab, 32
- POC subtab, 33
- Services subtab, 31

searching

- for participant, 32
- for POC, 33
- for service, 31
- for shared query, 52

service

- analytical, viewing details for, 37
- data, viewing details for, 35
- searching for, 31
- viewing details for, 35

Status portlet

- about, 7
- using, 55

W

Welcome menu, about, 15