

⚠ It's important to know that when we refer to caXchange, contractually it encompasses three different tools - the caXchange ESB Hub, CTODS Lab Viewer, and the Cancer Center Hub Client (CCHC). Each of these components (and their associated documentation) are called out below.

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Description

The Cancer Data Exchange (caXchange) system is part of the caBIG Clinical Trials Suite (CCTS), an integrated, stable, and secure collection of interoperable software tools that support the management of study participant information through the clinical trial lifecycle. Version 1.0 of the suite enables management of tasks such as: screening and registering patients for accrual to clinical trials; scheduling and tracking of patient encounters during the course of a study; integrating laboratory results with the patient record; tracking and managing adverse events; capturing, storing, analyzing and routing clinical data in a meaningful manner.

caXchange is the clinical data exchange component of CCTS, providing a configurable hub for exchanging clinical trial information between applications and systems. For instance, caXchange can be used to map and transfer laboratory data from non-standard clinical care systems into a standard format suitable for receipt by clinical trials databases. Contractually, caXchange is comprised of three projects: the caXchange HUB, Lab Viewer and the Cancer Center Hub Client (CCHC).

caXchange Hub

caXchange Hub provides the CCTS suite of applications with the ability to exchange clinical trials information in an audited and controlled manner. The caXchange Hub uses standard service hub protocols and messaging formats to receive, route, log, and send messages and data between applications.

Lab Viewer

Lab Viewer is a web based application developed by leveraging the SDK generated APIs of the CTODS Lab Domain UML model. Lab Viewer allows users to view laboratory activities that are stored in the CTODS Lab Domain database. Users are allowed to search the laboratory activity records by Patient Id, Study Id, Lab Start Date, and Lab End Date. Lab Viewer also allows users to send lab data in the form of XML messages via caXchange. The message type that can be sent is a Load Lab Data message to the local CDMS application (C3D) application. CTODS Lab Viewer interface allows the user to select which labs should be loaded into the CDMS.

Cancer Center Hub Client

The Cancer Center Hub Client (CCHC) is a stand-alone desktop application. It is used to transform the lab data in the form of .CSV files and HL7V2 messages to HL7V3 message format. These HL7V3 messages are saved in the CTODS database using the Grid Services.

Documentation

Some documents are maintained as stand alone word documents, some are maintained as editable wiki pages. Select the links below to access both documentation types. For more information on caXchange, please consult our [GForge Project Site](#).

CCTS 1.1 Release (September 2008)

Component	Document	Task No.	Location / URL
caXchange ESB Hub v1.5	Use Cases	2.1	[caXchange Configure New Message Type Use Case.doc] [caXchange Routing Metadata Service Use Case.doc] [caXchange Validation Framework Use Case.doc]
caXchange ESB Hub v1.5	Requirements Specification	2.1	placeholder
caXchange ESB Hub v1.5	Master Design Document	2.2	[caXchange ESB Design Document.doc]
caXchange ESB Hub v1.5	API Documentation & Code	2.4	Source Code in CVS
caXchange ESB Hub v1.5	Test Plan	2.3	placeholder
caXchange ESB Hub v1.5	Source Code	2.5	Source Code in CVS
caXchange ESB Hub v1.5	User Guide	2.6	See Administration Guide.
caXchange ESB Hub v1.5	Administration Guide	2.6	caXchange Administration Guide
caXchange ESB Hub v1.5	Installation Guide	2.7	caXchange Installation Guide.doc
caXchange ESB Hub v1.5	Release Notes	2.7	placeholder
CTODS Lab Viewer v1.5	Use Cases	2.1	placeholder
CTODS Lab Viewer v1.5	Requirements Specification	2.1	placeholder
CTODS Lab Viewer v1.5	Master Design Document	2.2	CTODS Lab Viewer Technical Architecture Guide.doc
CTODS Lab Viewer v1.5	API Documentation & Code	2.4	Source Code in CVS
CTODS Lab Viewer v1.5	Test Plan	2.3	placeholder
CTODS Lab Viewer v1.5	Source Code	2.5	Source Code in CVS
CTODS Lab Viewer v1.5	User Guide	2.6	[CTODS Lab Viewer User Guide v1.1.doc]

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CTODS Lab Viewer v1.5	Administration Guide	2.6	[See Installation Guide.]
CTODS Lab Viewer v1.5	Installation Guide	2.7	[CTODS Lab Viewer Installation Guide v1.1.doc]
CTODS Lab Viewer v1.5	Release Notes	2.7	placeholder
Cancer Center Hub Client (CCHC) v1.5	Use Cases	2.1	placeholder
Cancer Center Hub Client (CCHC) v1.5	Requirements Specification	2.1	placeholder
Cancer Center Hub Client (CCHC) v1.5	Master Design Document	2.2	[CCHC Technical Architecture Guide.doc]
Cancer Center Hub Client (CCHC) v1.5	API Documentation & Code	2.4	<u>Source Code in CVS</u>
Cancer Center Hub Client (CCHC) v1.5	Test Plan	2.3	placeholder
Cancer Center Hub Client (CCHC) v1.5	Source Code	2.5	<u>Source Code in CVS</u>
Cancer Center Hub Client (CCHC) v1.5	User Guide	2.6	[CCHC Installation and User Guide v1.1.doc]
Cancer Center Hub Client (CCHC) v1.5	Administration Guide	2.6	placeholder
Cancer Center Hub Client (CCHC) v1.5	Installation Guide	2.7	[CCHC Installation and User Guide v1.1.doc]
Cancer Center Hub Client (CCHC) v1.5	Release Notes	2.7	placeholder

CCTS DEMO Release (May 2008)

Component	Document	Task No.	Location / URL
caXchange ESB Hub v1.1	Use Cases		caXchange Add Routing Use Case.doc caXchange Alter Routing Use Case.doc caXchange Configure Routing Use Case.doc
caXchange ESB Hub v1.1	Requirements Specification	2.1	ALL Software Requirements Specification.doc
caXchange ESB Hub v1.1	Master Design Document	2.2	caXchange ESB Design Document.doc
caXchange ESB Hub v1.1	API Documentation & Code	2.4	Source Code in CVS
caXchange ESB Hub v1.1	Test Plan	2.3	caXchange Test Plans ALL.zip
caXchange ESB Hub v1.1	Source Code	2.5	Source Code in CVS

CaXchange

caXchange ESB Hub v1.1	User Guide	2.6	See Administration Guide.
caXchange ESB Hub v1.1	Administration Guide	2.6	caXchange Administration Guide.doc
caXchange ESB Hub v1.1	Installation Guide	2.7	caXchange Installation Guide.doc
caXchange ESB Hub v1.1	Release Notes	2.7	caXchange Release Notes.doc
CTODS Lab Viewer v1.1	Use Cases	2.1	CTODS Lab Viewer Use Cases.doc
CTODS Lab Viewer v1.1	Requirements Specification	2.1	ALL Software Requirements Specification.doc
CTODS Lab Viewer v1.1	Master Design Document	2.2	CTODS Lab Viewer Technical Architecture Guide.doc
CTODS Lab Viewer v1.1	API Documentation & Code	2.4	Source Code in CVS
CTODS Lab Viewer v1.1	Test Plan	2.3	caXchange Test Plans ALL.zip
CTODS Lab Viewer v1.1	Source Code	2.5	Source Code in CVS
CTODS Lab Viewer v1.1	User Guide	2.6	CTODS Lab Viewer User Guide v1.1.doc
CTODS Lab Viewer v1.1	Administration Guide	2.6	See Installation Guide
CTODS Lab Viewer v1.1	Installation Guide	2.7	CTODS Lab Viewer Installation Guide v1.1.doc
CTODS Lab Viewer v1.1	Release Notes	2.7	CTODS Lab Viewer Release Notes.doc
Cancer Center Hub Client (CCHC) v1.1	Use Cases	2.1	None for this release.
Cancer Center Hub Client (CCHC) v1.1	Requirements Specification	2.1	ALL Software Requirements Specification.doc
Cancer Center Hub Client (CCHC) v1.1	Master Design Document	2.2	CCHC Technical Architecture Guide.doc
Cancer Center Hub Client (CCHC) v1.1	API Documentation & Code	2.4	Source Code in CVS
Cancer Center Hub Client (CCHC) v1.1	Test Plan	2.3	None for this release.
Cancer Center Hub Client (CCHC) v1.1	Source Code	2.5	Source Code in CVS
Cancer Center Hub Client (CCHC) v1.1	User Guide	2.6	CCHC Installation and End User Guide v1.1.doc
Cancer Center Hub Client (CCHC) v1.1	Administration Guide	2.6	None for this release.
Cancer Center Hub Client (CCHC) v1.1	Installation Guide	2.7	CCHC Installation and End User Guide v1.1.doc
Cancer Center Hub Client (CCHC) v1.1	Release Notes	2.7	None for this release.

Project Team

caXhchange is a collaborative project made up of domain and technical experts from NCI-CBIIT, SAIC, ScenPro and Ekagra.

Team	Members
SAIC	<ul style="list-style-type: none"> • Nancy Roche (COTR) rochenv@mail.nih.gov • Peter Yan (Technical COTR) peter.g.yan@saic.com • Jennifer Thomas (Subcontract Specialist)
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Demonstrations

- [caXchange v1.0 Demonstration](#) - given at the April 29-30, 2008 CTMS Face to Face meeting. (**Note:** this file is interactive and uses Adobe Flash)
- [caXchange v1.0 Demonstration](#) - MS Powerpoint only
- [caXchange Brochure](#)

Project Management

The [caXchange Project Management](#) page contains information about regular project status meetings (including teleconference and webconference information), and upcoming events, links to project management related documents.

caXchange Knowledge Base

The Knowledge Base was created to address questions and issues related to the CTMS Knowledge Center as they arise as well as to provide a historical reference of questions and issues that have previously been addressed. For the caXchange project, this knowledge base includes a set of articles that answer related questions and issues that users encounter. Topic areas include:

- *Using Tool in Research* - Ask questions or provide examples of real-life applications. How has the tool contributed to real-life problem solving in biomedicine?
- *Installation and Configuration* - Questions, tips, and lessons learned related to the set-up, installation, and configuration of the tool; Include the environment/operating system you were working with, the problem or situation you encountered, and any build/install/run tip and/or work-around that might benefit others.
- *Architecture and Integration* - Questions, tips, and lessons learned related to interoperability with other systems and tools, including caGrid. Include an overview of the architecture being worked with, and your questions or advice to others working with the same tool or dependent software, including any step-by-step instructions useful to people integrating similar tools and systems.
- *Data Migration* - Questions, tips, and lessons learned related to migrating data from a legacy system or tool to this tool.
- *Workflow* - Observations or questions about the tool in actual use, introducing end users to the tool, integrating the tool into existing workflows, or using it with other applications.
- *Data Sharing and Security* - Questions, tips, and lessons learned related to data sharing or security specifically with respect to this tool.
- *Documentation* - Post comments to existing documentation and/or provide input for new documentation. If you are commenting on existing documentation, please reference document you are commenting on.
- *Other Questions and Comments* - If your question or observation doesn't fit elsewhere, put it here!

The Knowledge Base can be browsed by article (below) or searched on through the search box (left).

Using Tool In Research

Installation and Configuration

Architecture and Integration

Data Migration

Workflow

Data Sharing and Security

Documentation

For more information related to the caXchange project, please consult the documentation below listed below:

CCTS Release 1.0 (Feb 2008)

- End User Guide
- Requirements Specification
- Use Cases
- [caXchange Installation Guide.doc](#)
- Installation Guide
- Administration Guide
- Architecture Guide

Other Questions and Comments