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HEALTHLAB - Project CAS-2.2015

User Manual

XDSTools2

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IHE Integrating
the Healthcare
Enterprise

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

■ KEREVAL Approval

Name	Function	Date	Visa
Eric POISEAU	Project leader		

■ Diffusion

Internal	Recipient	Date	Exemplary
KEREVAL	Healthlab	02/04/2015	Electronic version

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■ Document history

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V1.01	31/03/2015	Raphaëlle BATOGE	Creation from documentation provided through the tool. Adaptation in the context of CAS-2.2015 usage.
V1.02	02/04/2015	Raphaëlle BATOGE	Document reviewed by Abderrazek BOUFAHJA and approved by Eric POISEAU.

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1 Introduction

1.1 About

Per the guidance of the Office of the National Coordinator for Health Information Technology (ONC), NIST has developed this tool to test the transport and content-related standards from the ONC S&CC 2014 certification criteria.



1.2 Scope of the document

This document is an extract from the documentation provided by the NIST, available through the tool.

It is limited to the use of XDS testing simulators, in the scope of CAS-2.2015.

The version used for this scope is the version deployed for NA-CAT 2015 (Connectathon Nord-American).

In that scope, the XDSTools is a testing client built to test servers. It implements the following IHE actors:

- Document Source
- Document Consumer

in such a way that they can be used to test these IHE actors:

- Document Repository
- Document Registry.

The aim of this tool is to:

- Allow vendors to execute the tests written for testing the XDS.b profile
- Allow qualified testing team (monitors) to verify the execution of the tests
- Allow the administrators to manage the tool

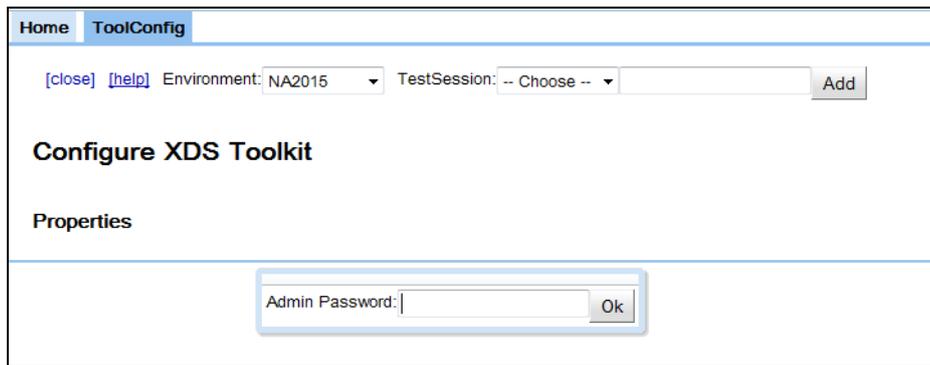
This document is thus split into the following sections:

- Administration part: how to configure the tool once systems are registered into Gazelle TM for a specific test session. This part is intended to laboratories that will use the CAS-2.2015 testing tool package for Conformity Assessment.
- Systems acting as Document Repository and Document Registry. This part is intended to SUT (System Under test) operators and testing team (qualified monitor).
- Systems acting as Document Consumer and Document Source. This part is intended to SUT operators and testing team (qualified monitor).

2 Administration part : Toolkit Configuration

This step is a prerequisite, after systems are registered in a test session, and before running XDS.b tests.

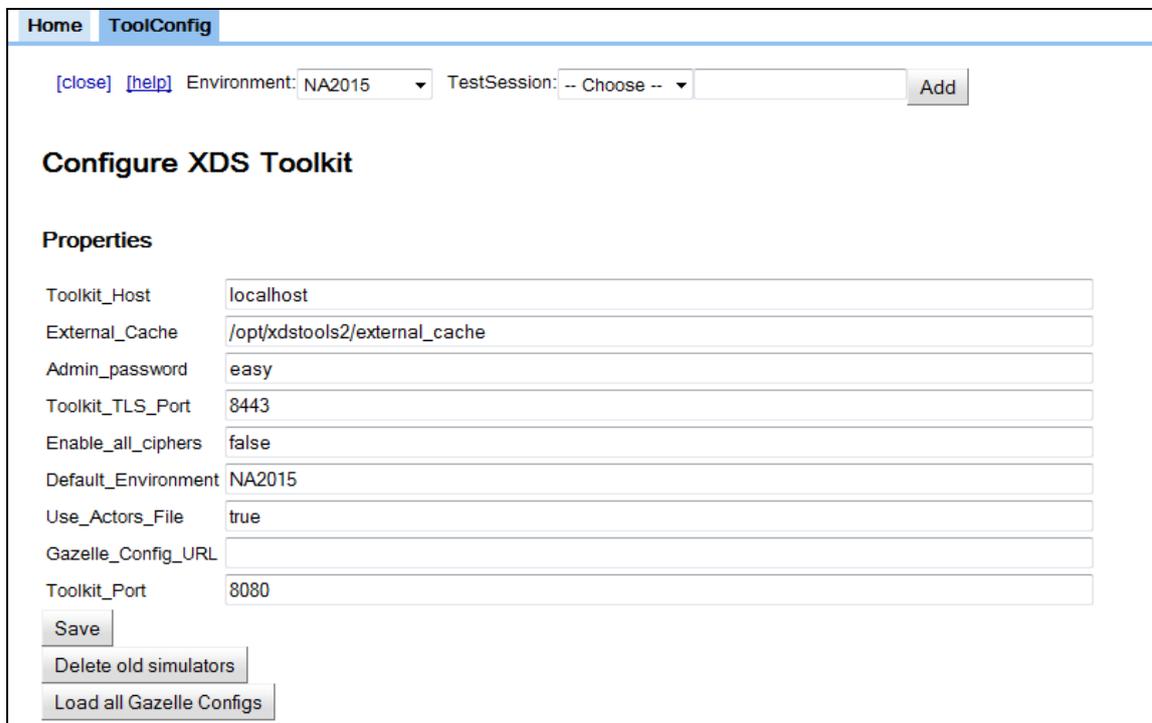
On the home page of the tool, click on “Toolkit Configuration” menu.



A password is required:

easy

The following window appears:



You can now load the Gazelle configurations, registered into Gazelle TM: click on “Load all Gazelle Configs”.

For information, the toolkit has a small number of parameters that must be set after installation to configure for the local site. This panel is used to edit these parameters. The parameters are:

■ Admin_password

This password is needed to update the actors.xml file and to access this panel to configure the tool. When this password is changed, you must reload the window in the browser for the change to take effect.

■ External_Cache

This is a filesystem location external to the toolkit where the toolkit can store information. Being external, it is unaffected by installing a new version of the toolkit. The value of this parameter must be an absolute pathname of an existing, writable, empty directory. The toolkit will store 3 things here: actors.xml file (and/or actors directory) - the default copy is internal to the toolkit. Any edits you make are stored here; TestLogCache directory - for storage of Mesa test log files (log.xml); and the directory simdb were simulators store state.

■ Toolkit_Host and Toolkit_Port

These will be used with the simulator system. Not used at the moment.

■ Enable_all_ciphers

By default the TLS environment only enables two encryption cyphers, one Windows friendly and one Linux Friendly. When set to true, all cyphers available to the Java run time environment are allowed.

■ Use_Actors_File

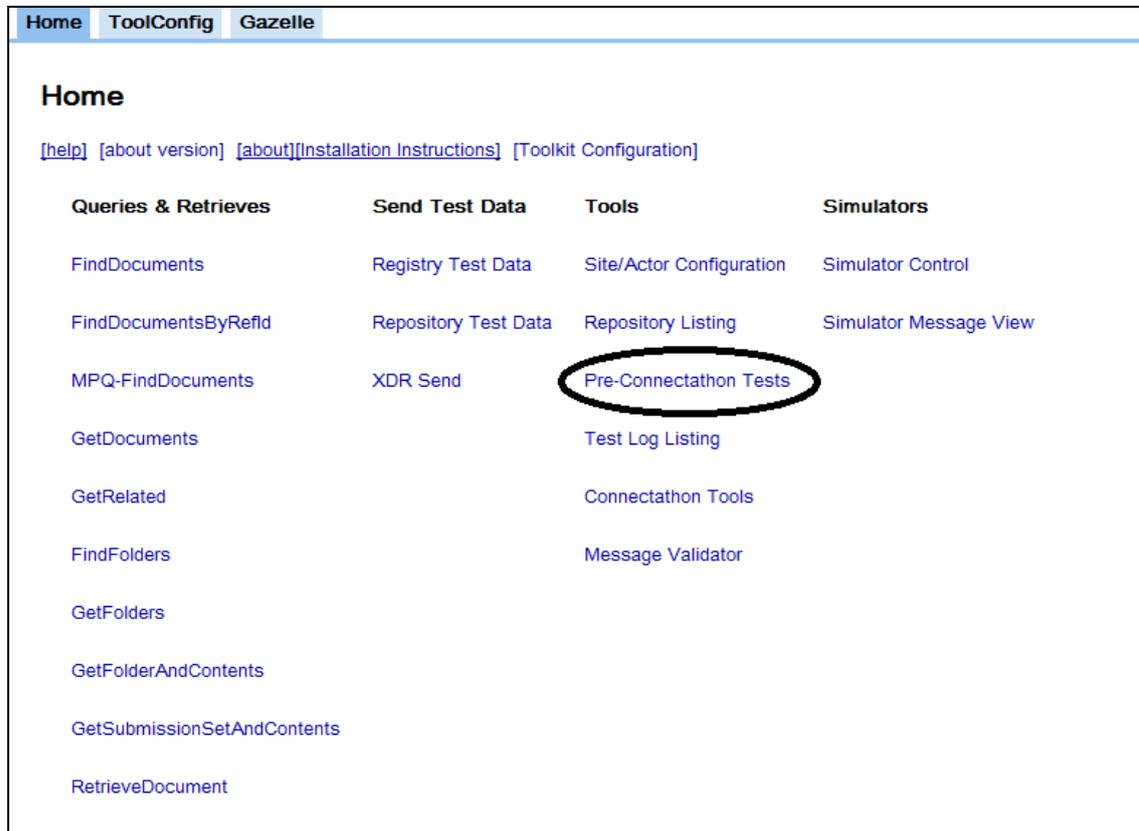
When true, the actors.xml file which is stored in the External Cache (see above) is used to hold the actor configurations. Each system is represented by an XML Site element in the file. When false, the actors directory (in the External Cache directory) is used instead. In this mode, each XML Site element is housed in its own file named by the site name (.xml). This second mode is required when configurations are being downloaded from Gazelle (Gazelle_Config_URL not empty).

■ Gazelle_Config_URL

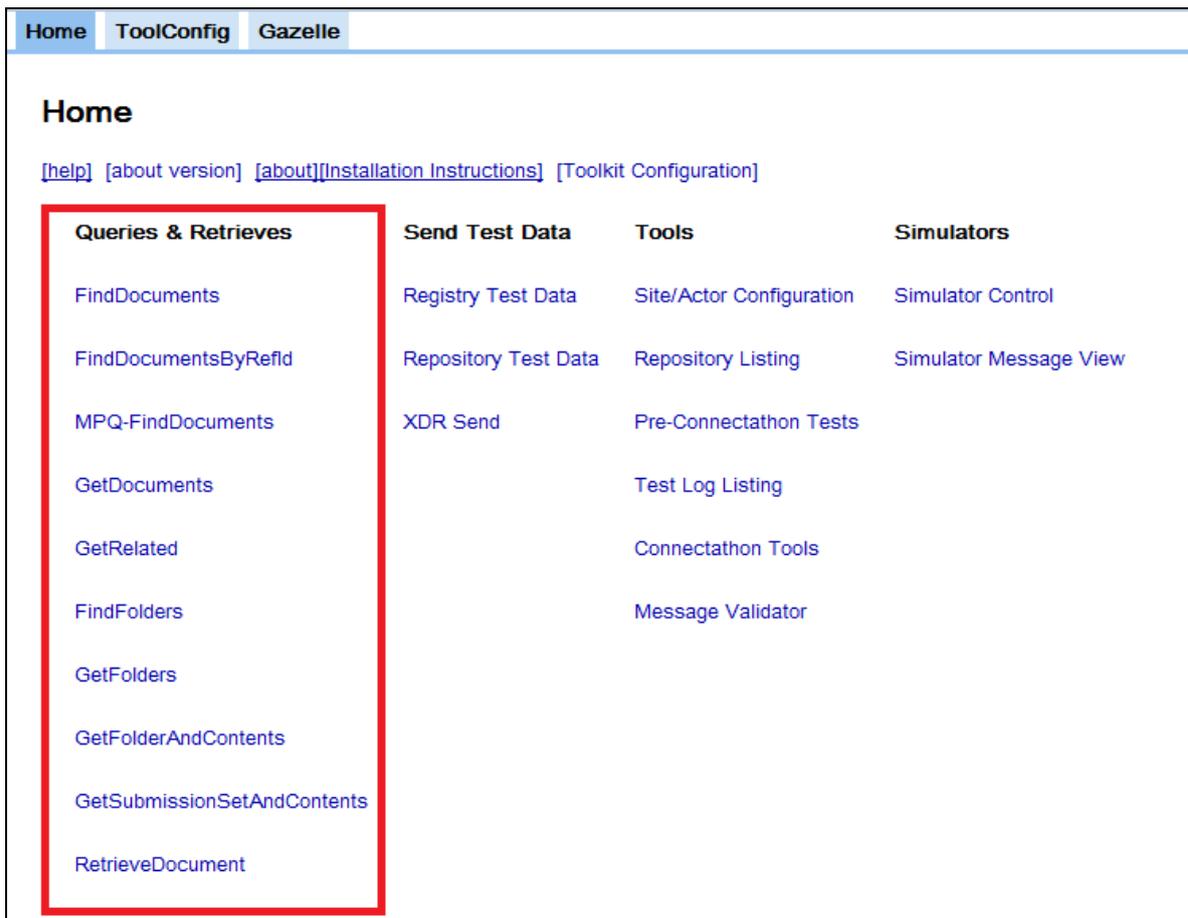
When not empty, this is the REST URL for Gazelle to be used to update the actors directory. This overrides the setting for Use_Actors_File forcing the use of the directory form for Site config storage. When this parameter is empty, the Gazelle linkage is disabled and the Use_Actors_File setting is needed.

3 SUT acting as Document Repository and Document Registry

SUT are expected to run the tests documented in Gazelle TM. For these actors, they are redirected to the “Pre-Connectathon tests”, menu available in the home page of XDSTools.

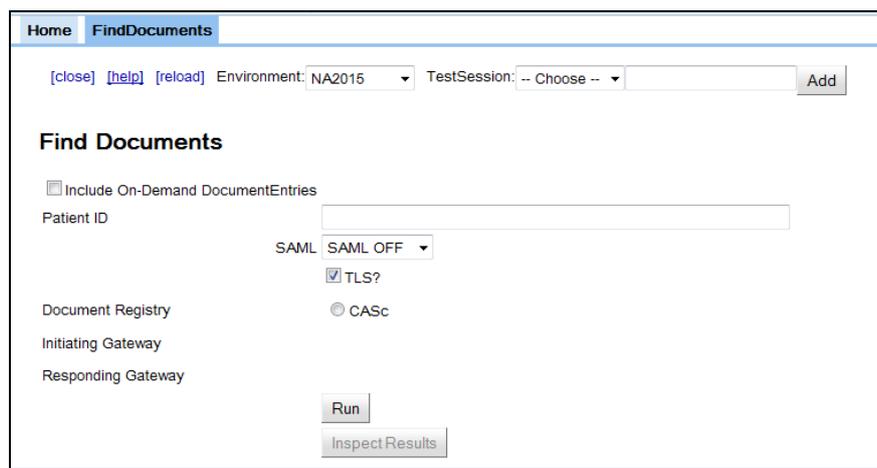


The qualified testing team, to evaluate if the test is passed or failed, will use the functions “Queries & Retrieve” provided by the tool:



Main used functions are described below:

- FindDocuments



The result of the response can be inspected using the button "Inspect Element". It opens a new tab, where you can do some inspection, view, of the XML soap send and received.

■ GetDocuments

This tool initiates the Get Documents Stored Query to the Document Registry of your choice. After running the query, use the Inspect Results button to browse the query response.

The screenshot shows the 'GetDocuments' web interface. At the top, there are navigation tabs for 'Home' and 'GetDocuments'. Below the tabs, there are links for '[close]', '[help]', and '[reload]', followed by 'Environment: NA2015' and 'TestSession: -- Choose --' with an 'Add' button. The main heading is 'Get Documents'. There is a large text input field labeled 'Document Entry UUIDs or UUIDs'. Below this field, there are settings for 'SAML' (set to 'SAML OFF'), a checked checkbox for 'TLS?', and radio buttons for 'Document Registry' (selected), 'Initiating Gateway', and 'Responding Gateway'. At the bottom, there are 'Run' and 'Inspect Results' buttons.

This tool can be used to look for information related to a specific document. For example, when a document is replaced and you want to see the information, the metadatas related to the first document, you can use this tool.

■ GetRelated

This tool initiates the GetRelated Stored Query to the Document Registry of your choice. Given the UUID of a DocumentEntry and the types of Associations of interest, it returns DocumentEntries which are related to our DocumentEntry by Associations of these types. After running the query, use the Inspect Results button to browse the query response.

The screenshot shows the 'GetRelated' web interface. At the top, there are navigation tabs for 'Home' and 'GetRelated'. Below the tabs, there are links for '[close]', '[help]', and '[reload]', followed by 'Environment: NA2015' and 'TestSession: -- Choose --' with an 'Add' button. The main heading is 'Get Related Documents'. There is a text input field labeled 'Document Entry UUID'. Below this field, there are checkboxes for 'Association Types' including 'RPLC', 'APND', 'XFRM', 'XFRM_RPLC', and 'signs'. There are also settings for 'SAML' (set to 'SAML OFF'), a checked checkbox for 'TLS?', and radio buttons for 'Document Registry' (selected), 'Initiating Gateway', and 'Responding Gateway'. At the bottom, there are 'Run' and 'Inspect Results' buttons.

This tool can be used to look for information related to a specific document. For example, when a document is replaced and you want to see the information all the replacements of this document, you can use this tool.

■ **GetSubmissionSetAndContents**

This tool initiates the GetSubmissionSetandContents Stored Query to the Document Registry of your choice. After running the query, use the Inspect Results button to browse the query response.

The screenshot shows a web application interface with a header bar containing 'Home' and 'SubmissionSetAndContents'. Below the header, there are navigation links: [close], [help], [reload]. The 'Environment' is set to 'NA2015' and 'TestSession' is '-- Choose --'. An 'Add' button is present. The main heading is 'Get Submission Set and Contents'. There is a text input field for 'Submission Set Unique ID or UUID'. Below it, 'SAML' is set to 'SAML OFF' and 'TLS?' is checked. Under 'Document Registry', 'CASc' is selected. There are labels for 'Initiating Gateway' and 'Responding Gateway'. At the bottom, there are 'Run' and 'Inspect Results' buttons.

This tool can be used to look for information related to a specific SubmissionSet.

■ **RetrieveDocuments**

This tool initiates the RetrieveDocument Query to the Document Repository of your choice. Then the response is validated by the tool and results can be browsed.

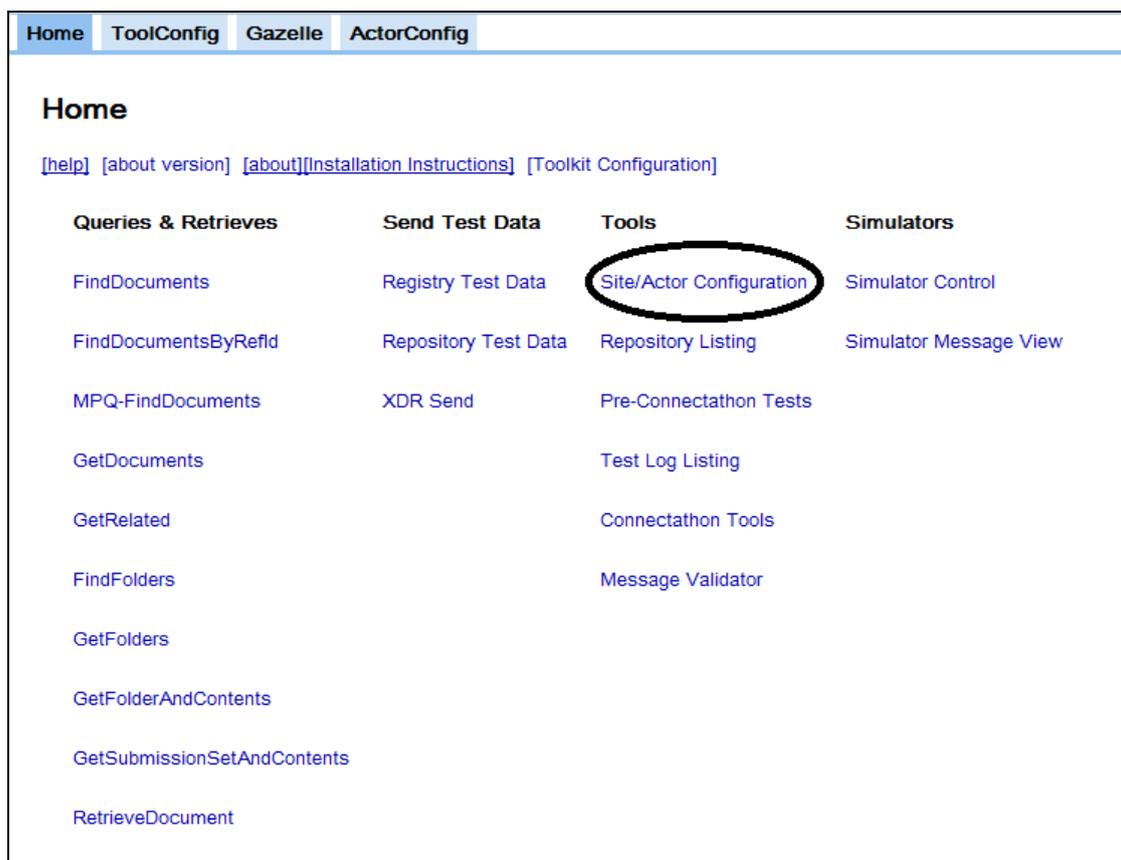
The screenshot shows a web application interface with a header bar containing 'Home' and 'RetrieveDoc'. Below the header, there are navigation links: [close], [help], [reload]. The 'Environment' is set to 'NA2015' and 'TestSession' is '-- Choose --'. An 'Add' button is present. The main heading is 'Retrieve Document'. There is a text input field for 'Document Uniqueid'. Below it, 'SAML' is set to 'SAML OFF' and 'TLS?' is checked. Under 'Document Repository', 'CASc' is selected. At the bottom, there are 'Run' and 'Inspect Results' buttons.

Use the text box to precise the UUID of the document set you want to retrieve. Select desired SAML and TLS options. The listed repositories have an endpoint for the RetrieveDocument transaction. The list depends on the tool configuration and on selected options. After running the query, use the Inspect Results button to browse the query response.

4 SUT acting as Document Consumer and Document Source

SUT are expected to run the tests documented in Gazelle TM. The endpoint of the repository and registry used during the testing are provided during the testing session by the organizers:

Go to the functionality provided by the tool named "Site/Actor Configuration".



Then, select the proposed endpoint named "CASc", you will get all the necessary information:

Configure Sites

Site Name	CASc	
TLS Endpoints		
Document Registry		
Patient Identity Feed	host	port
Register	https://localhost8443/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/reg/rb	http://localhost8180/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/reg/rb
Stored Query	https://localhost8443/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/reg/sq	http://localhost8180/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/reg/sq
Update		
Multi-Patient Query		
repository/Uniqueld	1.3.6.1.4.1.12559.11.20.5	
Retrieve	https://localhost8443/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/rep/ret	http://localhost8180/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/rep/ret
Provide and Register	https://localhost8443/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/rep/prb	http://localhost8180/xdstools2/sim/2ed84028-bc04-4e7e-8fac-d55abd7a21b9/rep/prb
On-Demand Document Source Retrieve		
Integrated Source/Repository		
Integrated Source/Repository Retrieve		
Document Recipient		
XDR Provide and Register		
Responding Gateway		
homeCommunityId		
Signed In[Sign Out]	Cross-Community Query	
<input type="checkbox"/> Show Sims	Cross-Community Retrieve	
	Cross Community Patient Discovery	
Initiating Gateway		
Initiating Gateway Query		
Initiating Gateway Retrieve		
Direct Server		
ONC-DIRECT		
<input type="button" value="Save Changes"/>	<input type="button" value="Forget Changes"/>	<input type="button" value="Reload from Gazelle"/>

The qualified testing team, to evaluate if the test is passed or failed, will use the functions “Queries & Retrieve” provided by the tool:

Home ToolConfig Gazelle

Home

[\[help\]](#) [\[about version\]](#) [\[about\]\[Installation Instructions\]](#) [\[Toolkit Configuration\]](#)

Queries & Retrieves	Send Test Data	Tools	Simulators
FindDocuments	Registry Test Data	Site/Actor Configuration	Simulator Control
FindDocumentsByReflD	Repository Test Data	Repository Listing	Simulator Message View
MPQ-FindDocuments	XDR Send	Pre-Connectathon Tests	
GetDocuments		Test Log Listing	
GetRelated		Connectathon Tools	
FindFolders		Message Validator	
GetFolders			
GetFolderAndContents			
GetSubmissionSetAndContents			
RetrieveDocument			

See previous chapter for the description of main Queries & Retrieves functions.