



ONC
TEFCA
RECOGNIZED
COORDINATING
ENTITY

QHIN Conformance Testing Process: User Guide

For the Sequoia Interoperability Testing Platform

Version History

Version	Description of Change	Version Date
1.0	Initial Publication	May 31, 2023
1.1	Update for QTF 1.1	March 18, 2024

TABLE OF CONTENTS

1	Introduction	4
1.1	Purpose of Document	4
1.2	Prerequisites – Getting Started	5
1.2.1	Applying to the Conformance Testing Process	5
1.2.2	Activating User Accounts	5
1.2.3	Password Resets	5
2	Gazelle Security Suite	7
3	PATIENT DISCOVERY TOOL	10
3.1	As an Initiating Gateway	10
3.2	As a Responding Gateway	13
4	NIST Toolkit	16
4.1	XDS Toolkit Test Session Setup	16
4.2	Responding Gateway Tests	19
4.3	Initiating Gateway Tests.....	21
5	Finishing Up	24

1 INTRODUCTION

1.1 Purpose of Document

This document describes how to use the Sequoia Interoperability Testing Platform (ITP) tools and run the test cases for the Qualified Health Information Network (QHIN) Conformance Testing Process. This is limited to the QHIN Technical Framework (QTF) Version 1.1; the information outlined in the Common Agreement, and related QHIN Testing Process document(s).

Changes to the QHIN Testing Process documents may be updated in accordance with the QTF, which may be updated in accordance with changes to industry standards and specifications.

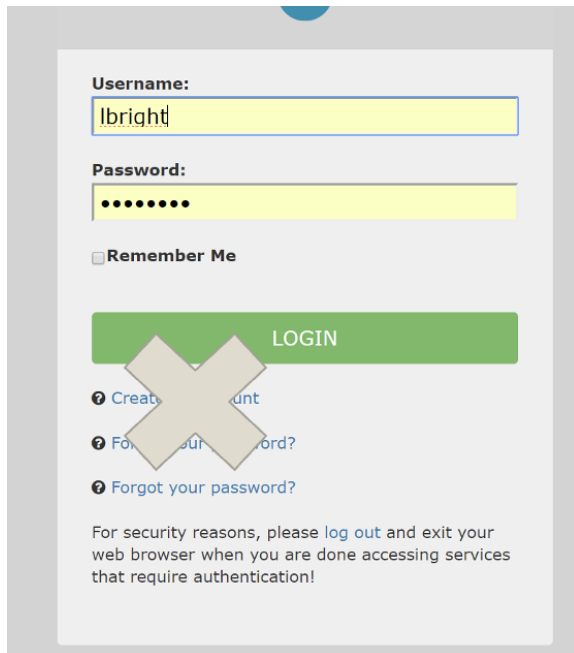
1.2 Prerequisites – Getting Started

1.2.1 Applying to the Conformance Testing Process

To begin the QHIN Conformance Testing Process you will be required to complete the [QHIN Application Materials](#). Once your application has been approved, your organization will be referred to testing and users will be provisioned to the tooling. The Sequoia Project testing team will schedule a testing kick off call to orient your users on how to navigate the tooling components to complete testing.

If additional users need to be added, please send their name, email, and phone number to qhintesting@sequoiaproject.org.

DO NOT USE THE “CREATE AN ACCOUNT” FEATURE TO ADD NEW USERS!



The image shows a login form with the following elements:

- Username:** A text input field containing "lbright".
- Password:** A password input field with seven dots.
- Remember Me**
- LOGIN** button (green)
- Three links: "Create an account", "Forgot your username or email?", and "Forgot your password?". A large grey 'X' is overlaid on the "Create an account" link.
- Text at the bottom: "For security reasons, please log out and exit your web browser when you are done accessing services that require authentication!"

1.2.2 Activating User Accounts

Sequoia staff will create your organization’s accounts and the tooling will send automated activation emails to new users. Their user ID will be contained in the email. New Users must validate their email address by clicking the link in the activation email.

1.2.3 Password Resets

Passwords can be reset by clicking the “Forgot your password?” link on the login page.

The image shows a login form with the following elements:

- Username:** A text input field containing the text "lbright".
- Password:** A password input field with seven dots representing the masked password.
- Remember Me**
- LOGIN** button (green background, white text)
- Three links, each preceded by a question mark icon:
 - [Create an account](#)
 - [Forgot your password?](#) (This link is circled in red in the original image)
 - [Forgot your password?](#)
- Text at the bottom: "For security reasons, please [log out](#) and exit your web browser when you are done accessing services that require authentication!"

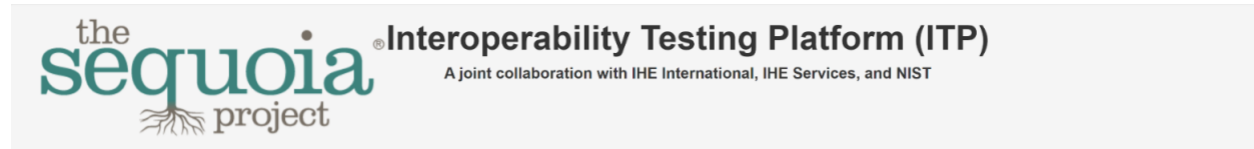
An email will be sent to the users registered email address from no-reply@validation.sequoiaproject.org with the subject "Gazelle-Password assistance". Click on the link in the email to complete the password reset process.

The following browsers are supported for use of Gazelle:

- Firefox
- Chrome
- Safari

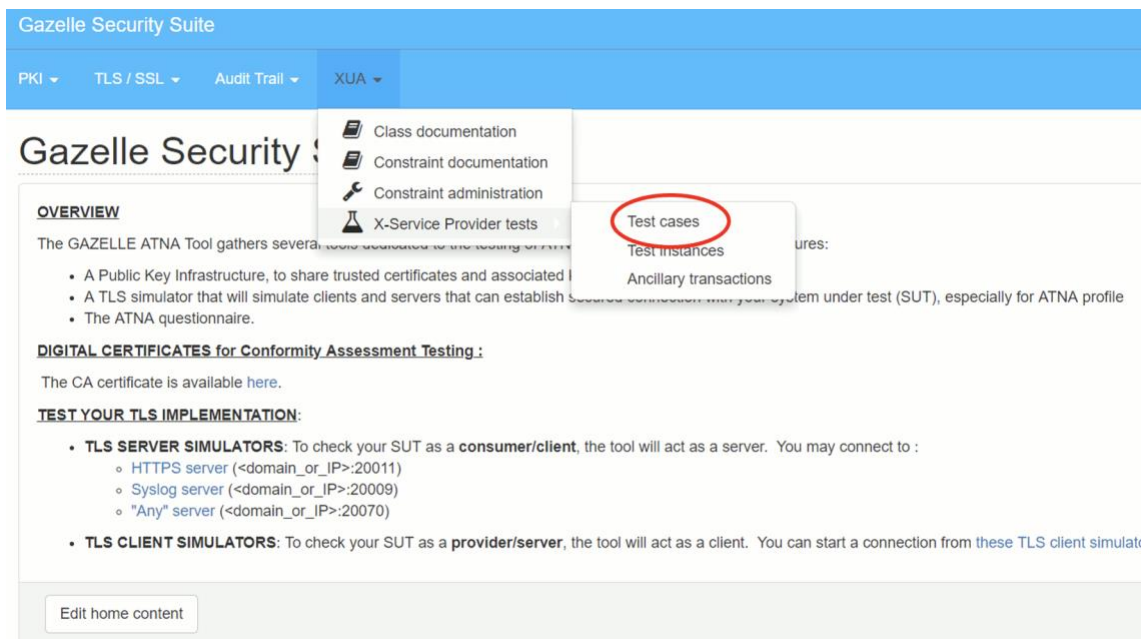
2 GAZELLE SECURITY SUITE

Security tests are done using a tool called the Gazelle Security Suite, which can be accessed by going to <https://validation.sequoiaproject.org/> and selecting the Gazelle Security Suite link.

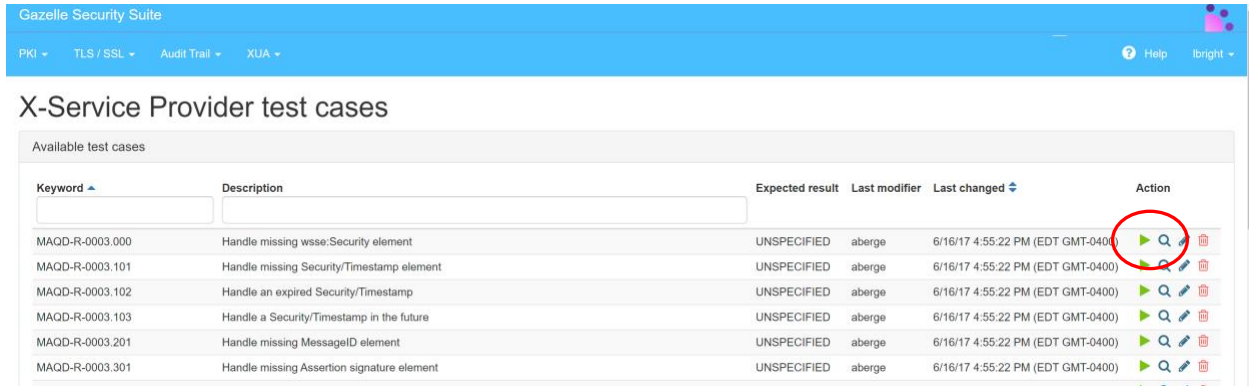


Test tools	Version	Description
Gazelle Security Suite	6.3.1	TLS/Certificate debugging, Security Tests, PKI, TLS Simulators, syslog, and ATNA Questionnaire
PatientManager	9.16.3	Tools for QHIN Patient Discovery (ITI-55)
NIST Toolkit	7.7.10a	Tools for QHIN Document Query (ITI-38), Document Retrieve (ITI-39), and Message Delivery (ITI-80)
EVS Client	5.14.4	External Validation tool services
Support Tools	Version	Description
Gazelle Test Management	6.2.3	The Gazelle Test Management Test Bed: Administrative Use Only
Assertion Manager Gui	4.2.2	Assertion coverage management: Administrative Use Only
Utilities	Version	Description
SSO login		SSO login

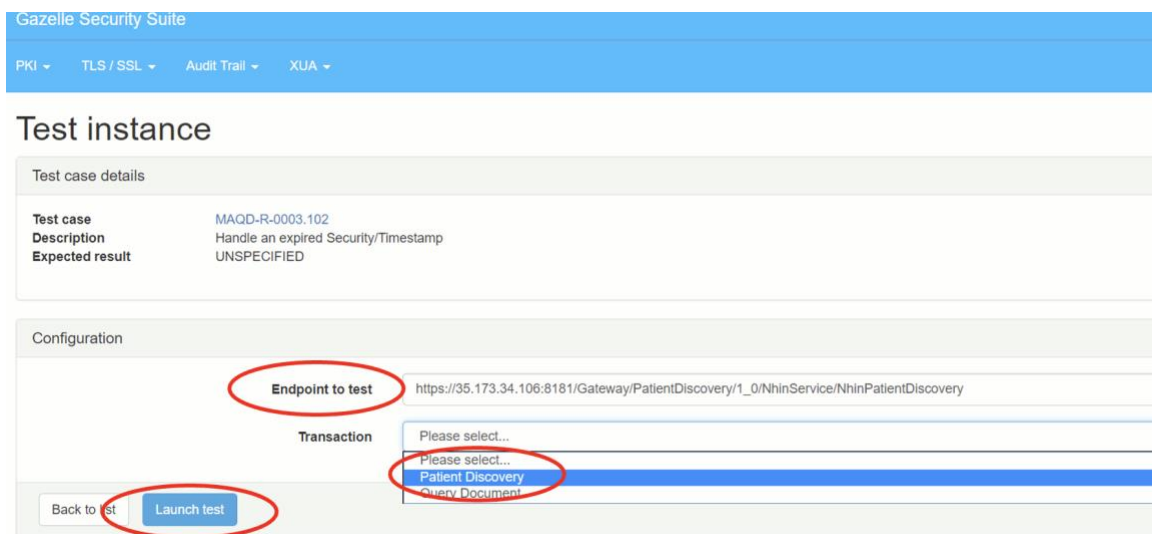
The list of tests that can be run is accessed through the menu items XUA -> X-Service Provider tests -> Test Cases.



From the list of test cases, find the test you want to run and click the green arrow to the right of the screen to create an instance of that test.



Inside the test instance, type your system’s Patient Discovery endpoint address into the text box labeled “Endpoint to test”. Select Patient Discovery from the Transaction drop-down menu, and click “Launch Test” to run the test.



The Gazelle Security Suite will send a test message to your system and display the message that was sent and the response.

Gazelle Security Suite

PKI | TLS / SSL | Audit Trail | XUA | Help | lbright

Test instance #5128

Test metadata

Test case	MACJAH-0003.000
Permanent Link	#5128
Tested endpoint	https://validation.sequoiaproject.org:14430/PAMSimulator-ebj/RespondingGateway_Service/RespondingGateway_PortType?wsdl
Ancillary transaction	PD - Patient Discovery
Execution date	5/2/23 11:09:29 AM (EDT GMT-0400)
Username	lbright

Status: UNKNOWN

[Back to list](#)

Exchanged messages

Message sent by the tool | Message received from SUT

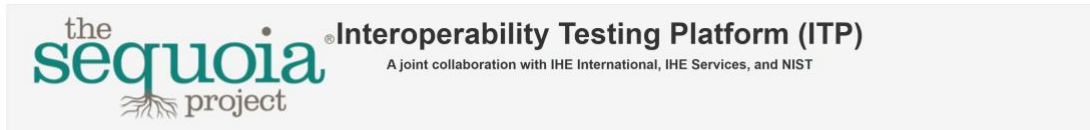
```
<?xml version="1.0" encoding="UTF-8"?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
<env:Header>
<MessageID xmlns="http://www.w3.org/2005/08/addressing">um:uuid:0d5a930f-587f-4012-8c30-1bade3102d83</MessageID>
<To xmlns="http://www.w3.org/2005/08/addressing"> https://validation.sequoiaproject.org:14430/PAMSimulator-ebj/RespondingGateway_Service/RespondingGateway_PortType?wsdl</To>
<Action xmlns="http://www.w3.org/2005/08/addressing" env:mustUnderstand="true">urn:h17-org:v3:PRPA_IN201305UV02:CrossGatewayPatientDiscovery</Action>
<ReplyTo xmlns="http://www.w3.org/2005/08/addressing">
<Address>http://www.w3.org/2005/08/addressing/anonymous</Address>
```

[About](#) | [Contact us](#) | [Issue Tracker](#) | Copyright 2022 IHE International | English

Record the permanent link to the test to submit as your test result to your Test Manager. Remember to also record your ATNA audit log for this test to be submitted to your Test Manager by email at qhintesting@sequoiaproject.org.

3 PATIENT DISCOVERY TOOL

Patient Discovery tests are done using a tool called the Patient Manager, which can be accessed by going to <https://validation.sequoiaproject.org/> and selecting the Patient Manager link.



Test tools	Version	Description
Gazelle Security Suite	6.3.1	TLS/Certificate debugging, Security Tests, PKI, TLS Simulators, syslog, and ATNA Questionnaire
PatientManager	9.16.3	Tools for QHIN Patient Discovery (ITI-55)
NIST Toolkit	7.7.10a	Tools for QHIN Document Query (ITI-38), Document Retrieve (ITI-39), and Message Delivery (ITI-80)
EVS Client	5.14.4	External Validation tool services
Support Tools	Version	Description
Gazelle Test Management	6.2.3	The Gazelle Test Management Test Bed: Administrative Use Only
Assertion Manager Gui	4.2.2	Assertion coverage management: Administrative Use Only
Utilities	Version	Description
SSO login		SSO login

3.1 As an Initiating Gateway

To run Patient Discovery tests as an Initiating Gateway, configure your system to send a PD message to the Patient Manager tool, using the endpoint and Home Community ID found on the XCPD Responding Gateway page. The endpoint information can be found under the menu option XCPD -> Responding Gateway.

XCPD Responding Gateway

Endpoint
 https://validation.sequoiaproject.org:14430/PAMSimulator-
 ejb/RespondingGateway_Service/RespondingGateway_PortType?wsdl
 Receiver device.id root OID
 2.16.840.1.113883.3.7204.1.3.1.2
 Receiver organization OID
 2.16.840.1.113883.3.7204.1.3.1.2
 Home Community ID
 2.16.840.1.113883.3.7204.1.3.1.2

Send a Patient Discovery Message with the Patient Demographics required in the test to the Gateway. The Gateway will respond with information about the matching patient. You can find the results of the test under the HL7 Messages link at the top of the screen. Click on the magnifying glass icon to see the messages for that test instance.

Messages browser

The administrator has restricted the access to the messages. You are only seeing the messages sent by anonymous users.

Timestamp	Transaction	Initiator	Responder	Request	Response	Action
8/14/20 8:24:27 AM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	ADVault (RESP_GW)	▶ PRPA_IN201305UV02	▶ PRPA_IN201306UV02	🔍 ▶ ⌂
8/13/20 11:47:52 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ PRPA_IN201306UV02	🔍 ▶ ⌂
8/13/20 11:47:30 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ PRPA_IN201306UV02	🔍 ▶ ⌂
8/13/20 11:14:10 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ PRPA_IN201306UV02	🔍 ▶ ⌂
8/13/20 11:12:57 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ SOAP Fault	🔍 ▶ ⌂
8/13/20 11:12:29 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ SOAP Fault	🔍 ▶ ⌂
8/13/20 11:11:49 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ SOAP Fault	🔍 ▶ ⌂
8/13/20 10:49:26 PM (CEST GMT+0200)	ITI-55	PatientManager (INIT_GW)	BSCC (RESP_GW)	▶ PRPA_IN201305UV02	▶ PRPA_IN201306UV02	🔍 ▶ ⌂

Each will have information about that instance including timestamp, initiating and responding systems, and a permanent link to the test instance and test report, as well as the request and response messages

Patient Manager

XCPD XUA All patients SUT Configurations Connection HL7 messages Value Sets

fbright/SEQUOIA

Transaction instance details (#1619)

Metadata

Timestamp: 5/2/23 1:37:50 PM (EDT GMT-0400)
Simulated actor: Responding Gateway
Domain: IT-Infrastructure
Transaction: ITI-55
Initiator: 20.120.103.48 (Initiating Gateway)
Responder: Patient Manager (Responding Gateway)
Permanent link: <https://validation.sequoiaproject.org/PatientManager/messages/messageDisplay.seam?id=1619>
Permanent link to test report: <https://validation.sequoiaproject.org/PatientManager/rest/GetReport?id=1619>

Request: PRPA_IN201305UV02 Response: PRPA_IN201306UV02

Message metadata

Message ID 1.3.6.1.4.1.12559.11.24.4.1.17.1:9220e89f-69b0-4d4f-b033-001eca88171d

XML

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

At the bottom of the request and response messages, there is a button to validate the messages. Click this to get a report on your message conformance to the standards, including any errors that will need to be remediated.

```
<?xml extension="99" root="1.3.6.1.4.1.12559.11.24.4.1.17.1:9220e89f-69b0-4d4f-b033-001eca88171d" status="new" responseMessageCode="R" responsePriorityCode="T" parameterList="livingSubjectAdministrativeGender" value="F" semanticsText="LivingSubject administrativeGender" livingSubjectAdministrativeGender="LivingSubjectAdministrativeGender" livingSubjectBirthTime="19831017" semanticsText="LivingSubject birthTime" livingSubjectBirthTime="LivingSubjectBirthTime" livingSubjectName="Amy" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi-type="PN" given="Amy" family="Giverson" given+Civile="Mrs" semanticsText="LivingSubject name" patientAddress="Springfield" city="Springfield" state="MO" streetAddressLine="809 First Ave" country="USA" postalCode="65801" semanticsText="Patient address" patientAddress="Springfield" patientTelecom="tel:+1417-989-3300" value="tel:+1417-989-3300" semanticsText="Patient telecom" parameterList="quantityParameter" quantityParameter="PRPA_IN201305UV02" env:Body" env:Envelope"/>
```

Validation result (Status:)

Validation of this request has not been performed yet or is not available

[Validate again](#)

About Contact us Issue Tracker Copyright 2021 IHE International Back to top English

The screenshot displays an external validation report for an XML document. The report title is "External Validation Report" and it shows a "Validation result (Status: FAILED)".

General Information:
 Validation Date: 2023, 03 23 - 02:19:22
 Validation Service: QHIN HL7v3 Validator (ITI-55) Cross Gateway Patient Discovery Request
 Validation Test Status: **Failed**

Result Overview:
 XML: **Failed**
 ModelBased Validation: **Failed**

XML Validation Report:
 The document you have validated is supposed to be an XML document. The validator has checked if it is well-formed, results of this validation are gathered in this part.

- error: cvc-datatype-valid.1.2.3: 'urn:oid:1.3.6.1.4.1.22812.40.62020.1' is not a valid value of union type 'uid' (see line 21, column 62)
- error: cvc-attribute.3: The value 'urn:oid:1.3.6.1.4.1.22812.40.62020.1' of attribute 'root' on element 'NF' is not valid with respect to its type, 'uid' (see line 21, column 62)
- error: cvc-datatype-valid.1.2.3: 'urn:oid:1.3.6.1.4.1.22812.40.62020.1' is not a valid value of union type 'uid' (see line 24, column 70)
- error: cvc-attribute.3: The value 'urn:oid:1.3.6.1.4.1.22812.40.62020.1' of attribute 'root' on element 'NF' is not valid with respect to its type, 'uid' (see line 24, column 70)
- error: cvc-complex-type.4: Attribute 'classCode' must appear on element 'assignedDevice' (see line 32, column 28)
- error: cvc-complex-type.2.4.a: Invalid content was found starting with element 'semanticText'. One of [{"urn:hl7-org:v3":realmCode, "urn:hl7-org:v3":typeId, "urn:hl7-org:v3":templateId, "urn:hl7-org:v3":value}] is expected. (see line 44, column 36)
- error: cvc-complex-type.2.4.b: The content of element 'patientTelecom' is not complete. One of [{"urn:hl7-org:v3":value, "urn:hl7-org:v3":semanticText}] is expected. (see line 77, column 34)

Model Based Validation details:
 Result: **Failed**
 Summary: 59 checks, 4 errors, 1 warning, 0 infos

Errors:
 Test Location: constraint_mccim000100UV01_deviceId
 Description: IPRPA_IN201305UV02/sendToDevice
 IHE restriction: id.root SHALL be an ISO OID, and id extension SHALL not have a value (Table O.1.1-1: Model Attributes) [Assertion...]

When a passing validation is achieved for both request and response, send the permanent link to your Test Manager. Remember to also record your ATNA audit log for this test. Submit results to your Test Manager by email at qhintesting@sequoiaproject.org.

3.2 As a Responding Gateway

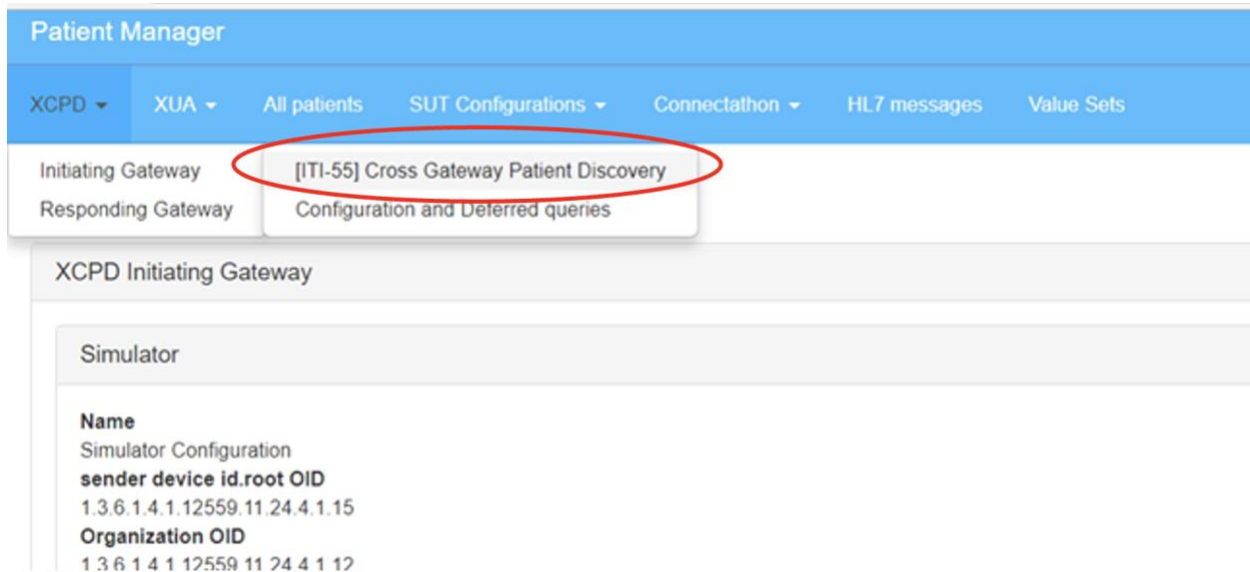
The test patient data will need to be pre-loaded into your system and can be found on the RCE website [here](#).

Go to the SUT Configurations and make sure that your system has been set up as a known HL7v3 Responder and that the endpoint is correct. If the information is not correct, contact your Test Manager for assistance via an email to qhintesting@sequoiaproject.org.

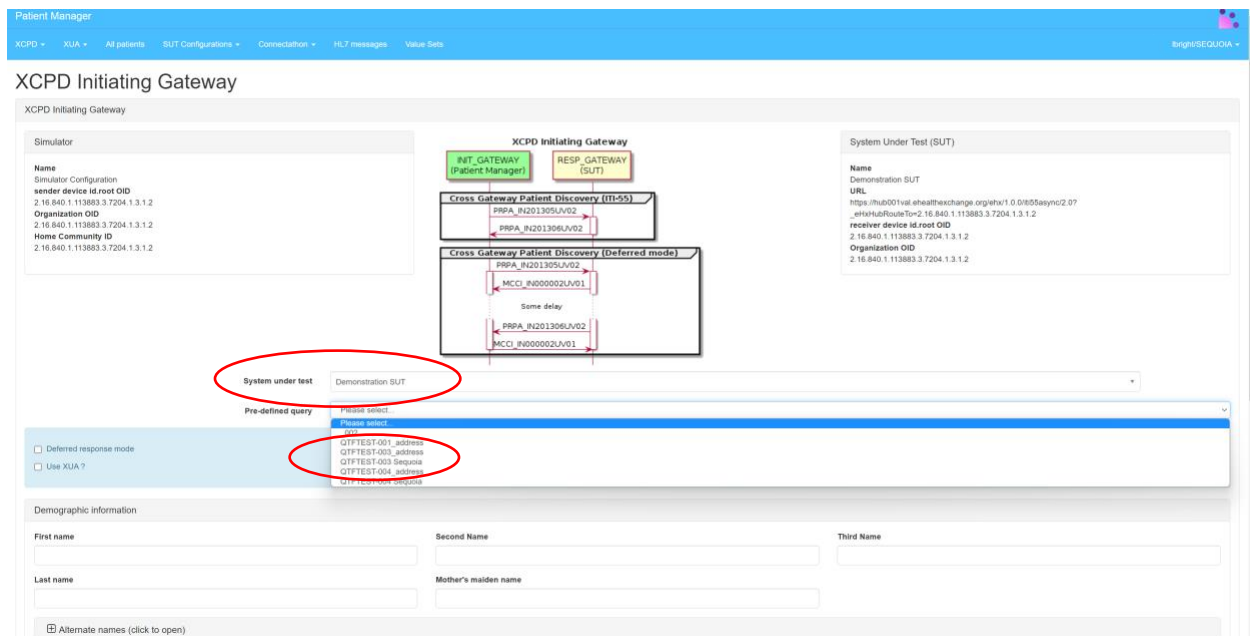
The screenshot shows the "Patient Manager" interface. The "SUT Configurations" menu item is circled in red. Below it, the "HL7v3 Responders" section is visible, containing a table of systems under test.

Name	System name	Endpoint
Epic	Epic	https://open-ic.epic.com/interconnect-ce-2015/wcf/epic.community.hie/xcpdrespondinggatewaysync.svc
SIMULATOR - PDQV3 Supplier	Patient Manager - PDQV3 Supplier	http://localhost:8060/FAMSimulator-epb-PLQ3Supplier_Service/PLQ3Supplier_PortType?wsdl
SIMULATOR - PIXV3 Manager	Patient Manager - PIXV3 Manager	http://localhost:8060/FAMSimulator-epb-PIX3Manager_Service/PIX3Manager_PortType?wsdl

Go to the XCPD Initiating Gateway menu and select [ITI-55] Cross-Gateway Patient Discovery.



Select your system from the System under test list and then select the pre-defined query for the test you are running. The Patient Manager will populate the patient demographics needed. Click “Send Message” to run the test and send the message to your System.



The system will display the test results, including the message sent, and the response.

The screenshot displays the Patient Manager web application interface. The top navigation bar includes links for XCPD, XUA, All patients, SUT Configurations, Connectathon, HL7 messages, and Value Sets. The main content area is titled "Transaction instance details (#18537)".

Metadata

- Timestamp: 8/13/20 11:47:52 PM (CEST GMT+0200)
- Simulated actor: Initiating Gateway
- Domain: IT-Infrastructure
- Transaction: ITI-55
- Initiator: PatientManager (Initiating Gateway)
- Responder: BSCC (Responding Gateway)
- Permanent link: <https://validation.sequoiaproject.org/PatientManager/messages/messageDisplay.seam?id=18537>
- Permanent link to test report: <https://validation.sequoiaproject.org/PatientManager/rest/GetReport?id=18537>

Request: PRPA_IN201305UV02 Response: PRPA_IN201306UV02

Message metadata

- Message ID: 1.3.6.1.4.1.12559.11.24.4.1.17.1:7568

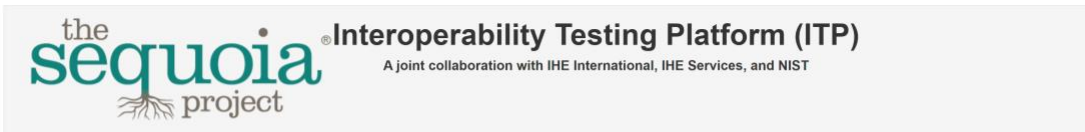
XML

```
<?xml version="1.0" encoding="UTF8" standalone="yes"?>
<PRPA_IN201305UV02 ITSVersion="XML_1.0" xmlns="urn:hl7-org:v3">
<id extension="7568" root="1.3.6.1.4.1.12559.11.24.4.1.17.1">
<sequenceNumber value="500084924748"/>
</id>
</PRPA_IN201305UV02>
</?xml>
```

As for the Initiating Gateway tests, validate the messages, and report your permanent link for your passing test to your Test Manager. Remember to also record your ATNA audit log for this test. Submit results to your Test Manager by email at qhintesting@sequoiaproject.org.

4 NIST TOOLKIT

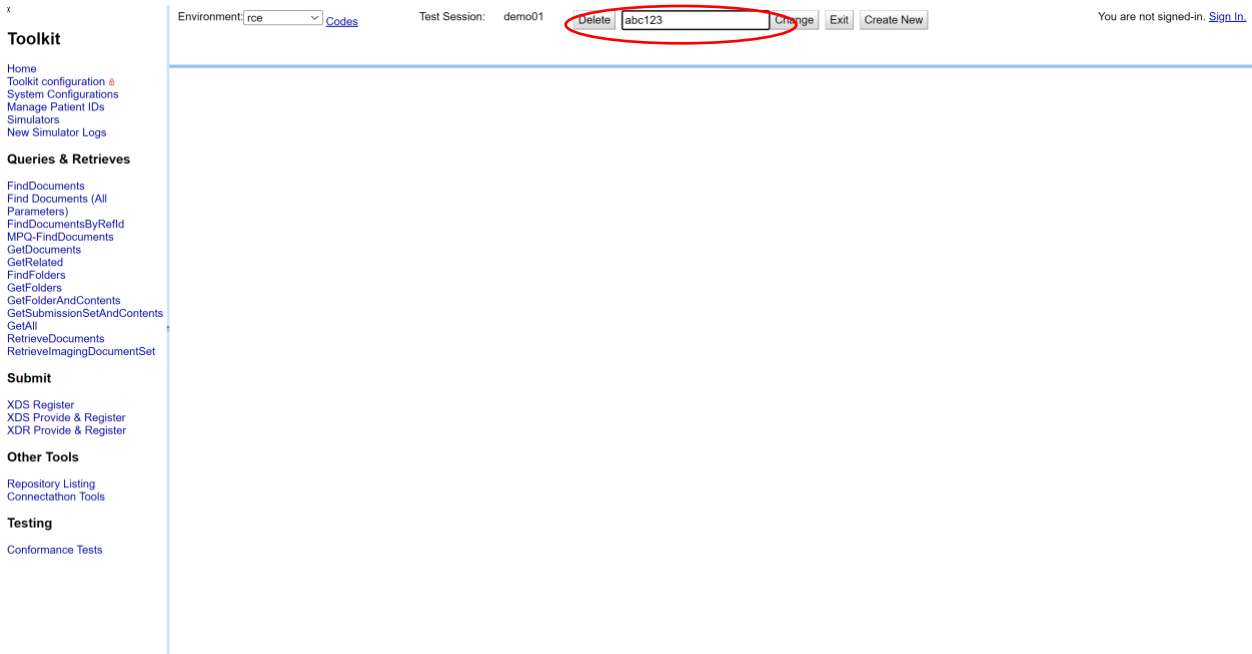
Query for Documents, Retrieve Documents, Message Delivery, and Alternate Purpose of Use Tests are done using the NIST Toolkit which can be found by going to <https://validation.sequoiaproject.org> and selecting the “NIST Toolkit” link.



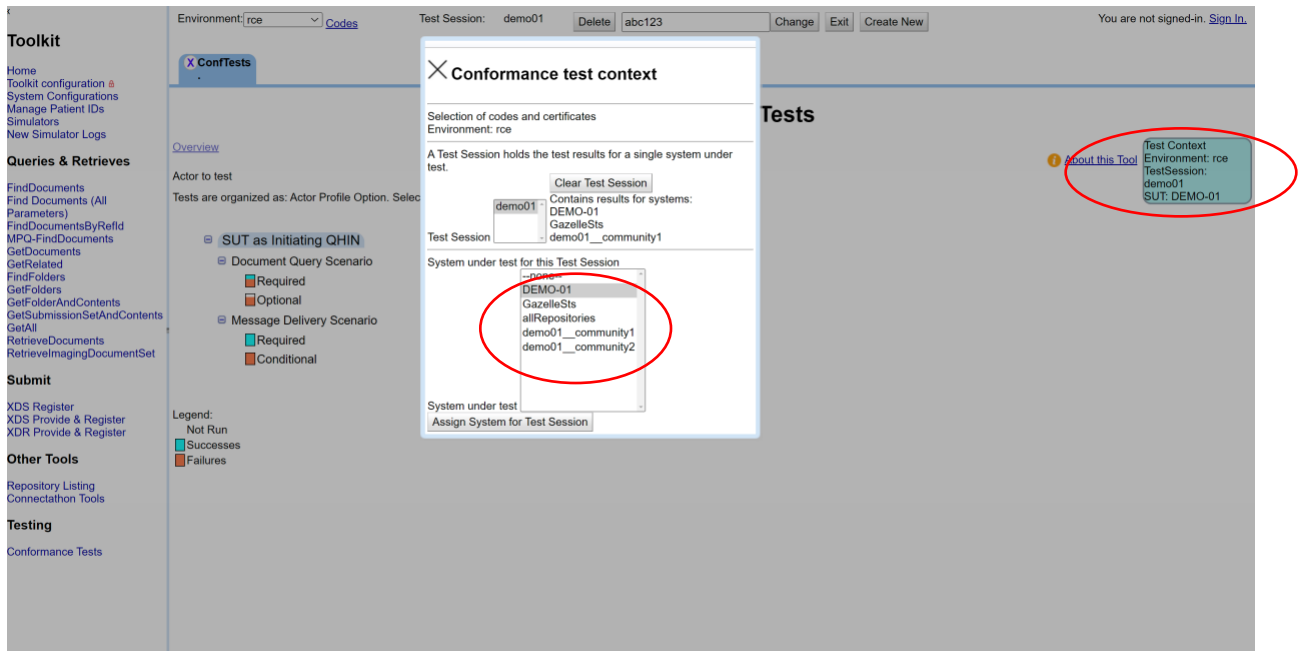
Test tools	Version	Description
Gazelle Security Suite	6.3.1	TLS/Certificate debugging, Security Tests, PKI, TLS Simulators, syslog, and ATNA Questionnaire
PatientManager	9.16.3	Tools for QHIN Patient Discovery (ITI-55)
NIST Toolkit	7.7.10a	Tools for QHIN Document Query (ITI-38), Document Retrieve (ITI-39), and Message Delivery (ITI-80)
EVS Client	5.14.4	External Validation tool services
Support Tools	Version	Description
Gazelle Test Management	6.2.3	The Gazelle Test Management Test Bed: Administrative Use Only
Assertion Manager Gui	4.2.2	Assertion coverage management: Administrative Use Only
Utilities	Version	Description
SSO login		SSO login

4.1 XDS Toolkit Test Session Setup

Your Sequoia Project Test Manager will create a Test Session for you. The Test Session ID will be assigned by your Test Manager. Select your test session by typing the name in the text box at the top of the screen.



Your Sequoia Project Test Manager will create all the systems and simulators you will need. Select the system you want to test by clicking the blue Test Context button on the right and selecting the system from the list.



Select "Conformance Tests" from the menu on the right. This will bring up the groups of tests available. Tests are categorized as being: for an Initiating or Responding Gateway; for the

Document Query (QD) Document Retrieve (RD) or Message Delivery (MD) scenarios; and as Required, Optional, or Conditional. Select the tests you want to run by clicking on the name

The screenshot displays the 'Conformance Tests' web application interface. At the top, there is a navigation bar with 'Environment: rce', 'Test Session: demo01', and buttons for 'Delete', 'Change', 'Exit', and 'Create New'. A 'Sign In' link is present in the top right corner. The left sidebar contains a 'Toolkit' menu with options like 'Home', 'Toolkit configuration', 'System Configurations', 'Manage Patient IDs', 'Simulators', and 'New Simulator Logs'. Below this is a 'Queries & Retrieves' section with various document-related actions. The 'Submit' section includes 'XDS Register', 'XDS Provide & Register', and 'XDR Provide & Register'. The 'Other Tools' section has 'Repository Listing' and 'Connection Tools'. The 'Testing' section is circled in red and contains 'Conformance Tests'. The main content area is titled 'Conformance Tests' and shows two columns of test scenarios: 'SUT as Initiating QHIN' and 'SUT as Responding QHIN'. Each column has sub-sections for 'Document Query Scenario' and 'Message Delivery Scenario', with checkboxes for 'Required', 'Optional', and 'Conditional'. A legend at the bottom left explains the status indicators: 'Not Run' (grey), 'Successes' (green), and 'Failures' (red). A 'Test Context' box in the top right corner displays 'Environment: rce', 'TestSession: demo01', and 'SUT: DEMO-01'.

4.2 Responding Gateway Tests

Make sure the endpoints listed under System Under Test Configuration are correct. If you are doing the tests with TLS, make sure the SAML and TLS boxes are checked. You do not need to initialize the testing environment.

The first test listed, RG.Init, must be run first, and must be successful before any other Responding Gateway tests will work. This test sends a PD request to your system and retrieves your internal ID for the test patients, which it stores and uses to populate future the QD, RD, and MD tests.

The screenshot displays the 'Conformance Tests' page in the XDS Toolkit. At the top, there's a navigation bar with 'Conformance Tests' selected. Below this, there are tabs for 'Required', 'Conditional', and 'Optional'. The main content area is divided into three sections:

- Testing Environment:** Contains instructions on how to initialize the Responding Gateway and select the Test Context. It includes a 'Reset' checkbox and checkboxes for 'SAML' and 'TLS'. A button labeled 'Initialize Testing Environment' is present.
- System Under Test Configuration:** A table with columns for 'Endpoints and IDs', 'Secure', and 'Non-secure'. It lists various endpoints like 'Cross-Community Query', 'Cross-Community Retrieve', 'XCPD Query', and 'HomeCommunityId'.
- Supporting Environment Configuration:** Shows the system name as 'None' and a list of utilities to run to initialize the environment. A specific test entry is highlighted: 'Test: RG.Init - RG.Init' with a timestamp of 'May 01, 2023' and a 'TLS' icon.

Scroll down to the bottom of the page to see the test list. You can click on the arrow beside the Test Group name to run all of the tests in the group, or you can click on the individual tests to run just that one.

For Responding Gateway tests, the running test will send messages to your system and wait for a response. Tests that have passed will turn blue, failed test will be red.

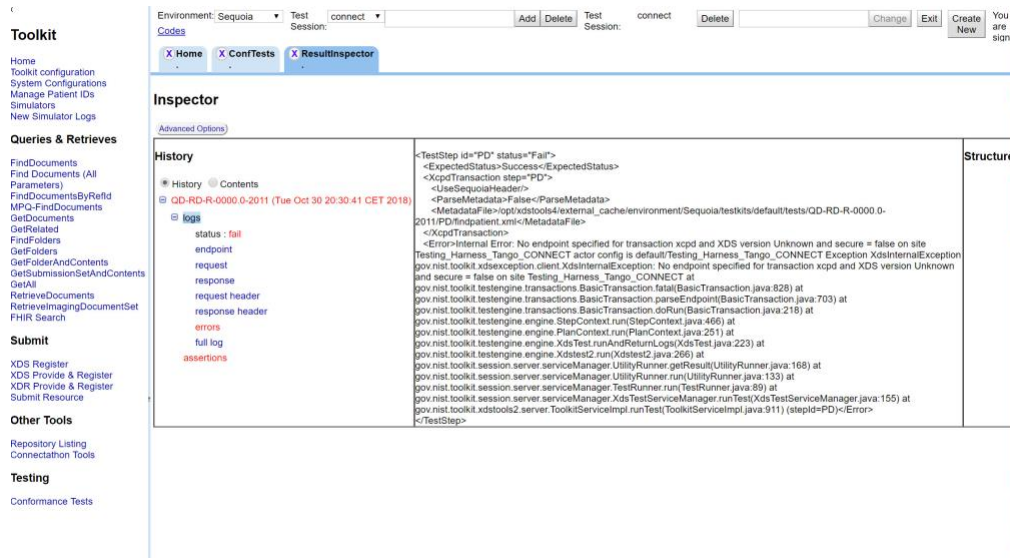
The screenshot shows the 'Conformance Tests' interface. At the top, there's a navigation menu with 'Toolkit', 'Queries & Retrieves', 'Submit', 'Other Tools', and 'Testing'. The main area displays a list of tests under the heading 'Supporting Environment Configuration'. A table shows test statistics: 12 Tests, 2 Successes, 1 Failure, and 9 Not Run. Below this is a list of tests, each with a title, date, and icons for viewing, deleting, and refreshing. Two tests are circled in red: 'Test: RG.Init - RG.Init' and 'Test: RG.Basic.PatientsDiscovery - XCPD Find Patient QTFTEST-004'.

Clicking on the test and then the test step name will show you the results of the test. To see the logs, click on the eye symbol to bring up the Results Inspector tab. Clicking on the garbage can symbol will erase the test results and let you try again.

The screenshot shows the 'Results Inspector' for the test 'Test: RG.Basic.Retrieve - Gateway responds to request to retrieve single document'. It displays the test description, assertions, and a table of use reports. The use reports table has columns for Name, UseAs, Value, Test, Section, and Step.

Name	UseAs	Value	Test	Section	Step
\$document01_uniquelid\$	\$docuid\$	1.2.42.2022110204919.68	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved
\$document01_home\$	\$home\$	urn:oid:1.1.4567334.1.1	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved
\$document01_repository\$	\$repositoryurl\$	1.1.4567332.1.15	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved
\$document01_uniquelid\$	\$docuid\$	1.2.42.2022110204919.68	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved
\$document01_home\$	\$home\$	urn:oid:1.1.4567334.1.1	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved
\$document01_repository\$	\$repositoryurl\$	1.1.4567332.1.15	RG.Query.FindDocuments.Minimal	02a-leaf-class-approved	02a-leaf-class-approved

In the Results Inspector you can view the request and response messages for each test step, as well as full logs and error messages.



When all of the tests you need to run are colored blue, you can notify your Test Manager that your tests are ready to be evaluated. Remember to also record your ATNA audit log for your tests. Submit results to your Test Manager by email at qhintesting@sequoiaproject.org.

4.3 Initiating Gateway Tests

Take note of the endpoints and Home Community ID listed under Supporting Environment Configuration. These are the endpoints you will send your test messages to. If you are doing the tests with TLS, make sure the SAML and TLS boxes are checked. You do not need to initialize the testing environment.

QHIN Conformance Testing Process: User Guide

The screenshot shows the 'Conformance Tests' section of the tool. In the left-hand 'ToolKit' sidebar, under 'Queries & Retrieves', the 'Initiate Testing Environment' button is circled in red. The main area displays a table of tests under 'System Under Test Configuration' and 'Supporting Environment Configuration'. The first two tests in the 'Supporting Environment Configuration' section are circled in red: 'IG.Init.Community1' and 'IG.Init.Community2'.

The first tests listed, IG.Init.Community1 and IG.Init.Community2, must be run first, and must be successful before other Initiating Gateway tests will work. These tests submit documents to the simulator repositories for you to query.

This screenshot shows the test execution results. The test 'IG.Init.Community2 - Submit second set of documents for QTFTST-002' is circled in red. Below the test list, there is a summary table for 'Initiating Gateway X - Required Tests' and a list of test results.

Tests	0
Successes	11
Failures	2
Not Run	0

Below the table, the following test results are listed:

- Test: IG.Readme QueryRetrieve - Readme file for Initiating Gateway testing
- Test: IG.Query/FindDocuments.Minimal - IG generates OD request satisfying minimum requirements 2:29 Feb 25, 2023
- Test: IG.Retrieve Community 1 - Initiating Gateway retrieves document from Community 1 2:29 Feb 25, 2023

To run the Initiating Gateway tests, send the appropriate message from your system to the simulator endpoints listed. When the simulator has sent back a response run the test in the tool by clicking the arrow by the test name. The tool will search the simulator logs for a transaction



that matches the test requirements. When it finds an appropriate response, the test will be marked “passed”.

The screenshot displays the XDS Conformance Testing interface. At the top, there's a navigation bar with 'Home', 'ToolKit', 'Queries & Retrieves', 'Submit', and 'Other Tools'. The main area is titled 'Conformance Tests' and shows a table of test results. A red banner indicates 'Initiating Gateway X - Required Tests' with a warning icon. Below this, a test titled 'IG.Query.FindDocuments.Minimal - IG generates QD Request satisfying minimum requirements' is highlighted in red, indicating a failure. The test details show a 'Message' box with the text: 'No Cross-Community Query transactions found in simlog for demo03_community1'. A red circle highlights the test title in the table.

Test Name	URL	Status
ACRNU	https://validation.sequoiaproject.org/8760nciam/demo03_community2/reg-nu	Passed
Register	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-b	Passed
Register On-Demand Document Entry	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-oda	Passed
Stored Query	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-qs	Passed
Multi-Patient Query	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-mpq	Passed
Update	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-update	Passed
RMU	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-um	Passed
Remove Metadata	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-um	Passed
Provide and Register	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-prb	Passed
Remove Documents	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-rd	Passed
Repository (1.1.4567332.1.14)	https://validation.sequoiaproject.org/14430nciam/demo03_community2/reg-rp	Passed
Demographics	https://validation.sequoiaproject.org/8760nciam/demo03_community2/reg-rp	Passed

Test: IG.Query.FindDocuments.Minimal - IG generates QD Request satisfying minimum requirements 21:29 Feb 25, 2023

This test searches the Responding Gateway logs for at least one query that meets this criteria:

- Query sent XDC interface of the Community 1 Responding Gateway simulator and not the XDS Registry that is behind the Responding Gateway.
- Query specifies the Patient ID: PID-COMMUNITY1-QTFTEST-002-1.3.6.1.4.1.3107.1.3.20.2006850.
- Query contains a filter for documents with availabilityStatus in Approved. May include Deprecated, but must include Approved.
- Query specifies returnType = LastClass.

Queries that omit the availabilityStatus filter altogether will not pass this test.

Section: query_approved 21:29 Feb 25, 2023

View Testplan

No Cross-Community Query transactions found in simlog for demo03_community1 (plep4query_001-approved)

See: query_001-approved

No Metadata

Okcs:

Endpoint: null

Expected Status: Success

Errors:

Message:

No Cross-Community Query transactions found in simlog for demo03_community1

5 FINISHING UP

When you are finished testing and are ready to have your tests validated, send an email with the permanent links for all the testing completed and all of your ATNA logs to be evaluated by email your Sequoia Project Test Manager to ghintesting@sequoiaproject.org.

Remember to log out of all of the systems and shut down all of the windows that have been opened!

Our standard business workflow is to return your report within 5 business days of your submission of testing results. Please ensure someone from your organization is available to redo any failed or partially verified tests.