

QOLTech Web Service for access to Internet questionnaires.

QOLTech supply a Web Service which provides a way to integrate an interface for patients to complete QOLTech questionnaires into third party websites.

Overview

For clarity we will refer to the third party website as the Clinical Trial Website (CTW) in this section. The CTW provider will be supplied a unique passcode by QoITech which is used to verify them when they use the service. The provider also supplies a primary and a backup callback URL to which the results data are returned.

The CTW callback URLs must be running under SSL as is the QOLTech Web Service. This keeps the communication secure.

The CTW will call the QOLTech Web Service passing in the passcode, details of the questionnaire and language required and a patient identity string to obtain the questionnaire link information. With this information the CTW can create a button which will make a call (GET) to the QOLtech Website that will display the relevant questionnaire to the patient.

*(The link used to GET the questionnaire is valid for 12 hours and can only be submitted once.)
(The patient identity is a free format string allowing you to store as many Id's as you need in a comma separated list.)*

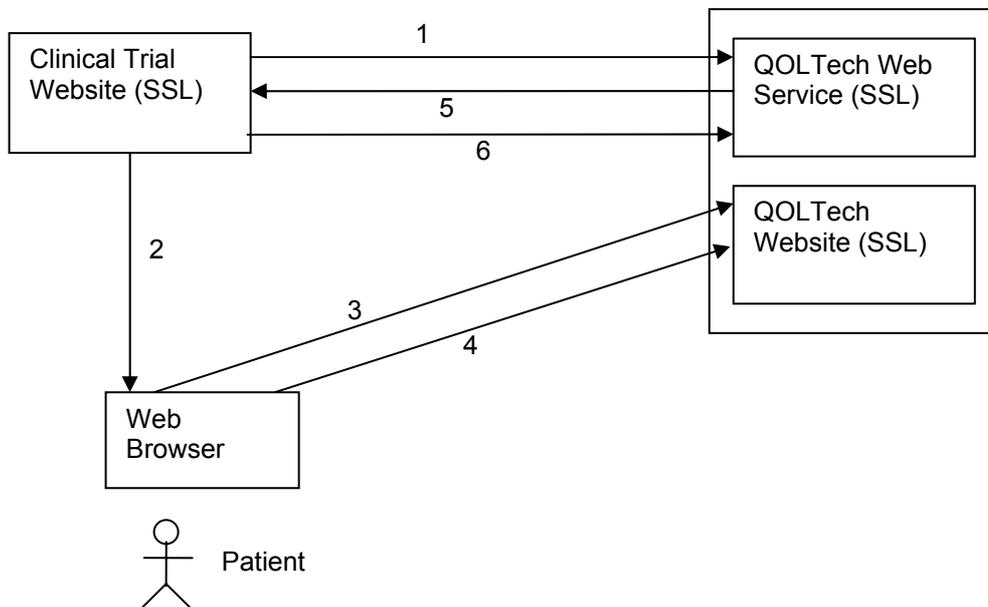
Once the patient has completed the questionnaire they will be asked to enter their password. This will be their password to the CTW and is passed with their results back to the CTW to allow the result data to be validated against the original identity for which the questionnaire was requested.

Once the patient has completed the questionnaire and submitted it, QOLTech's Web Service will call the primary callback URL passing the initial identity submitted, the users password, the questionnaire identifier and the questionnaire results in a CSV format. If required a key can also be provided to enable the results to be requested in XML format via a separate call to the Web Service.

Results data is not stored by QOLTech. It is passed to the callback URL and it is the responsibility of the CTW to store it accordingly. QOLTech will only store a log of times at which questionnaires are completed and can optionally store the patient identity supplied in this log for audit trail purposes.

If the primary callback URL is unobtainable the secondary callback URL is tried, if this is also unobtainable an error URL is called.

This diagram shows the information flow between the CTW, the QOLTech Web Service and the users web browser.



1. Request questionnaire link supplying product and authorisation details
2. Provide a hyperlink to user that will display the questionnaire when selected.
3. Request the questionnaire from the QOLTech Website, the questionnaire is displayed to the patient.
4. Submit the completed questionnaire including confirmation of the patient's password
5. Call the callback URL passing the identity, patient's password, questionnaire ID and results in CSV format with optional XML key.
6. (optional) Request the results in XML format using the key supplied.

WEB SERVICE

The web service supports the following operations:

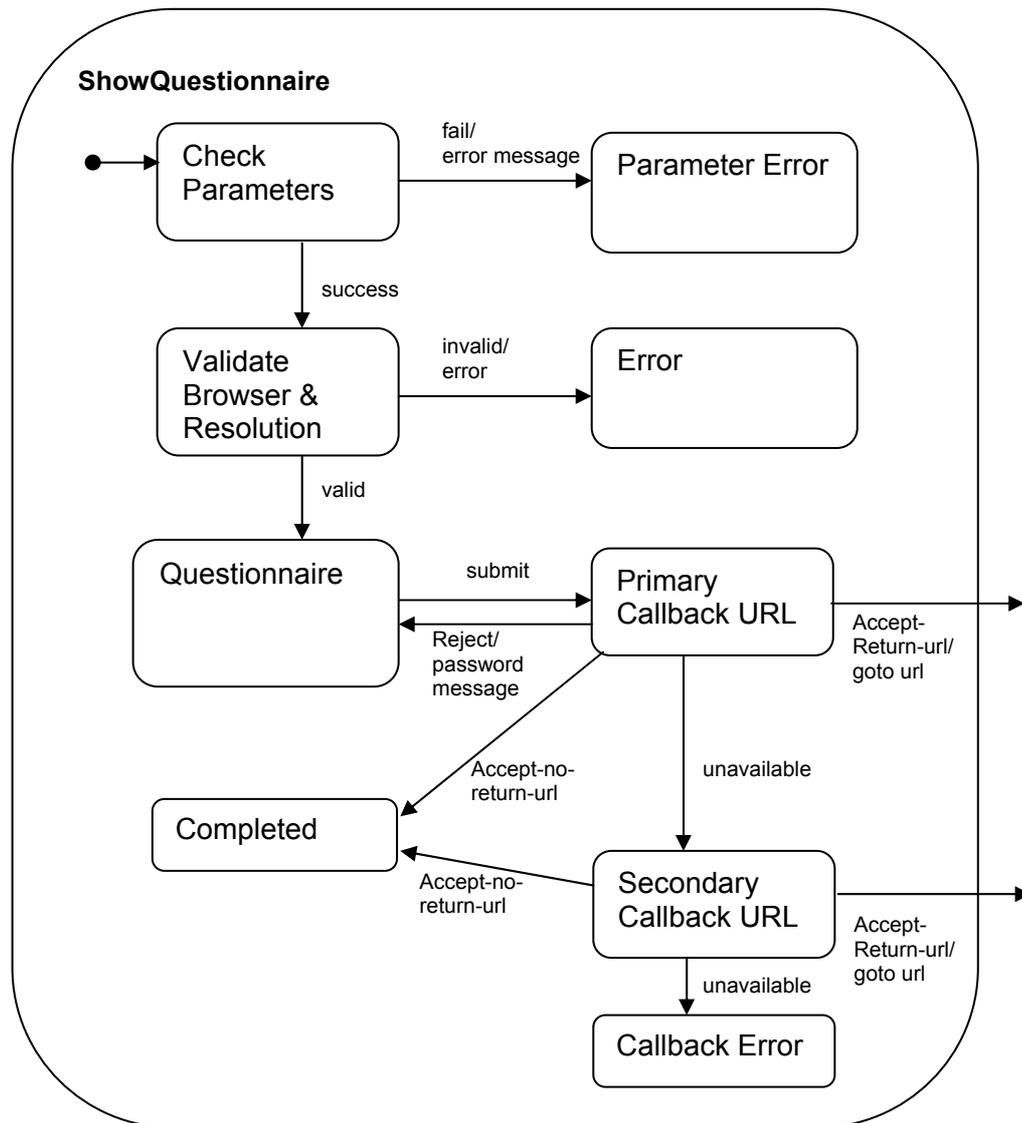
1. GetQuestionnaireLink

This operation takes the following parameters:

- CTW reference – supplied by QOLTech
- Passcode – supplied by QOLTech
- QuestionnaireCode – Indicating which questionnaire to display
- LanguageCode – Indicating which language to display
- CustomID - custom patient identity string

It returns XML data defining a link code and hyperlink to use to provide a link to the questionnaire to the user.

When the hyperlink is clicked on it calls the ShowQuestionnaire function on the QOLTech website. The diagram below shows the behaviour of this operation:



Triggers (events):

success	::=/* successful parameter validation */
fail	::=/* unsuccessful parameter validation */
valid	::=/* successful browser / operating system validation */
invalid	::=/* unsuccessful browser / operating system validation */
submit	::=/* user command to submit the data */
reject	::=/* CTW callback URL returned fail, invalid customer password */
accept-no-return-url	::=/* CTW callback URL returned success and no return url is given */
accept-return-url	::=/* CTW callback URL returned success and return url is given */
unavailable	::=/* CTW callback URL could not be contacted */

Actions (responses):

error message	::=/* display Parameter Error screen, unsuccessful login*/
error	::=/* display Error screen with required minimum spec for browser / screen resolution */
password message	::=/* display Error message 'Password is incorrect, please re-enter it.' */
password message	::=/* display Callback Error Screen */
goto url	::=/* navigate to the return url */

Check Parameter

This step checks the link used against the CTW's valid links and that the CTW Provider has purchased a licence to use the questionnaire and language combination requested.

Each questionnaire link obtained expired after 12 hours can only be used to submit one questionnaire.

Parameter Error

This step returns a screen with the following error message:

'Unfortunately we have been unable to authorise your access to this questionnaire at this time. Please try again later. If the problem persists please contact the website administrator.'

Validate Browser

This step checks the browser and screen resolution being used to access the web service against the list of tested browsers and screen resolutions.

Browser Error

This step returns a screen with the following error message:

'Sorry your browser cannot be verified or does not meet the minimum specification.'

Or

'Sorry your Screen Resolution is below 640x480'

Questionnaire

This step returns a set of screens displaying the requested questionnaire in the requested language for the user to complete. At the end of the questionnaire there is a box for the user to enter their password to the trial website with the following message.

'When you have completed your questionnaire please enter your password'

This data is not validated but it simply passed to the trial website with their data via the call back URL.

Primary Callback URL

This step calls the primary callback URL passing the questionnaire data, date and time of completion, the CustomID passed in at the beginning and the password the user entered.

The questionnaire data will be passed in a CSV format, and if XML data is indicated in your web service settings, a key is provide to access the results in XML format.

The callback URL must supply a return code that indicates if it succeeded or failed. If it failed is it assumed to have failed due to the user entering an incorrect password. In addition the callback URL can return a 'Return URL'. If it does the user is directed to this URL next.

Completed

This step returns a screen to the user indicating that they have successfully completed the questionnaire. The following message is displayed:

'Thank you for completing the <questionnaire title>. Your data has been submitted successfully. Click here to close this window'

This page is only displayed if no Return URL is supplied by the callback URL.

Secondary Callback URL

This step calls the secondary callback URL passing the questionnaire data, date and time of completion, the CustomID passed in at the beginning and the password the user entered.

The callback URL must supply a return code that indicates if it succeeded or failed. If it failed is it assumed to have failed due to the user entering an incorrect password. In addition the callback URL can return a 'Return URL'. If it does the user is directed to this URL next.

Callback Error

This step sends an email to the CTW Provider informing them of the callback error. The customer is redirected to a callback error URL.

2. GetQuestionnaireXmlResult

This operation takes the following parameters:

- LinkCode – provided as part of the results set from the call to GetQuestionnaireLink
- ResultsKey – provided in the POST to the callback URL

It returns the results of the questionnaire in XML format.

3. GetQuestionnaireXmlResultDocument

This is an alternative to the GetQuestionnaireXmlResult method. It takes the same parameters but returns an XmlDocument object containing the results.