

REPORT IT

Integration with Works
Management systems

Version 1.2

YOUR
LONDON



Integrating ReportIt with CRM or Works Management systems

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1. Introduction

This document is intended as guide to downloading report details from the ReportIt server using the Data Exchange Agent. When a report is submitted on the ReportIt server, the details can be downloaded into another system to be processed.

The DEA can be configured to submit the details in one of four ways, over three separate transfer methods. The DEA can send to a web service, an HTTP page or an FTP site, the fourth situation being a special case in which the details are sent to an iCasework system via web services that the DEA is preconfigured to recognise.

The intention of providing this functionality is to allow reports to be submitted on the central ReportIt system but all form processing and work flow to take place on a separate system. When the DEA sends a report submission to the second system, if that system indicates that the details have been successfully received, the DEA then calls back to the ReportIt system to indicate that the report can be closed on that system.

The Data Exchange Agent is a tool entirely separate from the main body of ReportIt and it can be run on a machine separate from either the ReportIt system from which form submissions are to be pulled from or the systems to which the details would be submitted.

However the web service calls to ReportIt and the web service calls, HTTP post or FTP upload to the receiving system may need special firewall or proxy permissions on certain networks and, to help avoid these problems, it is also possible to run the DEA locally to either the originating or receiving systems. The DEA will run on any Servlet Container that supports the Java Servlet Specification 2.0.

2. Downloading report details

There are two main steps to configuring the DEA, firstly configuring the details of the system from which form details will be pulled and secondly configuring the details of the system to which the details will be sent. All of the steps involved are covered in a set-up wizard included with the DEA GUI.

2a. Collecting reports from ReportIt

On the first page of the set-up wizard you will be asked to give a name and id to the upload you are configuring and then to enter the details of the ReportIt system from which form submission details will be pulled. The name and id of an upload are used only to identify the upload from the GUI page so that you can easily manage and distinguish between several upload categories which may be set-up to pick up different form submissions from ReportIt and transmit them to different receiving systems. Both the id and name values can be any text string you wish to use.

The details of the ReportIt system are next. Because the DEA is closely integrated with ReportIt, there is only a minimal amount of information needed to properly link the tool into the ReportIt system. The first piece of information needed is a path pointing to a ReportIt system. The path should be a URL fragment which could be added to to invoke the various parts of ReportIt used to pull out the form details. To connect to the live ReportIt system, this value should be set to

<http://eforms.yourlondon.gov.uk/pub>

The only other details needed for the DEA to access ReportIt are an access key and secret key. These details should be created in the ReportIt system you are trying to access and then provided to you by a system administrator. As well as ensuring that only authorised users are able to access report submissions, each user id can be configured to only collect submissions on a sub-set of report types, so that submissions on each report type on a system can be treated differently if needed.

The final field on the first page of the wizard is the Status field. As mentioned above, when a report record is successfully pulled from ReportIt and submitted to a receiving system, the Data Exchange Agent calls back to ReportIt to mark the record closed. If the Status field is set, the report record will be updated with the given status label as well as being closed.

2b. Sending reports to the receiving system

Downloads of report details are configured by creating what are known as download categories. To cater for the four different approaches to transmitting report details, there are four separate types of download category that can be configured. Each type (for transmitting to an iCasework system, a web service, an HTTP page or an FTP site) is configured via a set-up wizard and all share a common first page for setting the details of the originating ReportIt system as described above. However, the

second page of the wizard varies depending on which type of download category is being configured.

2b i. Sending reports to an iCasework system

When the receiving system is an iCasework system then the details required to configure the link are similar to those required for the link to the originating ReportIt system as described above. The user should set the base URL of the iCasework channel as the Path value, and an access key and secret key pair to authorise the submission.

2b ii. Sending reports to a web service

When the receiving system accepts report details via a web service there are four pieces of information required. The first is a URL which points at a live WSDL document describing the web service to which the details should be sent. The second is the name of the operation of the web service to be invoked. It is important that the operation name is entered exactly as it appears in the WSDL document. If the web service being used does not accept input in the same format as the report details are pulled from ReportIt, an input style-sheet must also be configured. This should be an XSL style-sheet which, when applied to the ReportIt report XML format (see appendixes for ReportIt formats) produces the complete XML document that the receiving web service will accept as input. The style-sheet should be saved as an XSL file in the XSL directory of the dea webapp in the Servlet Container file directory system and the name of the file, including file extension, should be set as the value of the Input Stylesheet field of the wizard. In a similar vein, the DEA also requires that the output document of the web service be transformed into a standard format to determine if each submission of report details is successful (see appendixes for details of the standard success format). This style-sheet should also be saved in the XSL subdirectory of the dea webapp and its name given in the Output Stylesheet field of the wizard.

2b iii. Posting reports over HTTP

When posting report details over HTTP, the URL field in the wizard should be set to the URL to which the details will be posted. The report XML will be posted directly to this URL as an unnamed parameter (the only parameter sent). If the HTTP page expects input in a format other than the ReportIt report XML format, or returns a response in a format other than the standard success XML format then input and output style-sheets should be used in the same way as described above.

2b iv. Uploading reports over FTP

When uploading details via FTP, the URL field should be set to the FTP location at which report XML files will be placed. The URL should consist of an FTP server host name, followed by any subdirectories on the server in which the details will be stored, e.g.

ftp.icasework.com/forms

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The URL need not be prefixed with 'ftp://'. If a login is required to send files to the FTP server, a user id and password should be given in the relevant fields in the set-up wizard. If the XML files sent to the server should be in format other than the ReportIt report XML format, an input style-sheet can also be configured as described above. Since FTP includes automatic success or failure response messages for each upload, no output style-sheet is required.

2b v. Saving reports to the file system

When downloading report details to the local file system, the location of the folder to which the files will be saved should be entered. Each report record will be saved as a separate XML file, named for the report id. If the files should be created in an XML format other than the standard ReportIt format, an input style-sheet can also be configured as described above.

3. Amending report details

When report details have been downloaded to another system, those report records will also remain in place on the ReportIt system. If work is done on the reports in the outside system, the uploads described below, found under the 'Update cases' menu heading in the Data Exchange Agent, can be used to keep the records on ReportIt up to date.

Each upload is designed to pull data from a local data source, such as a database or formatted file, and send that data back to ReportIt where it will be processed and the relevant reports updated appropriately.

3a. Update external id

This upload can be used to link report details in ReportIt with details of the same report that have been downloaded to another system. The upload identifies the report using the ReportIt report id and sends a second id, the id of that report in the other system. The upload can also optionally send a status field to amend the status displayed on the report in ReportIt.

To set-up an external id upload, choose 'Update external id' from the DEA menu and click on 'Click here to add a new category.' This will launch a three page wizard similar to those used to configure report downloads (described above). When filling in the options in these wizards, refer to the help text given for each field for a full description of what is expected.

The first page of the wizard asks for an ID value, this ID should identify the ReportIt access portal on which the reports are logged. On the live ReportIt system, this is 'INTER'. The Display Name field is used just to identify the upload category and distinguish it from other uploads, it is not sent along with the uploaded data. The data source type field is used to indicate what type of data source the new external id data will be pulled from, the DEA can connect to several types of RDBMS, CSV files or any format of XML file.

The destination resource is the address to which the upload will be sent. This should be the full address of the ReportIt system on which the reports reside, pointing specifically at the receiving servlet 'soapserver.httpReceive'. For the live ReportIt system, the destination resource would be

<http://eforms.yourlondon.gov.uk/pub/servlet/soapserver.httpReceive>

The access key and secret key fields are used to authenticate the upload with the receiving server; these credentials again have to be created on ReportIt. A default destination, access key and secret key can be set on the Destination page of the DEA, these defaults will be used for any upload without an individual destination and key pair configured.

The second page of the wizard requires the user to specify where in the data source each piece of information to be uploaded can be found. For example, if the data source is an SQL based data base,

column names and a table name should be given, if the data source is an XML file, XML elements are specified using X-Path syntax.

The third page of the wizard asks for the details of how to connect to the chosen data source, e.g. a database connect string, or the location of a file. This page of the wizard also has options to allow the upload to be scheduled to run automatically at set times of the day or week.

3b. Update case status

This upload is used to update various aspects of a report's status while it is being processed. As the report is worked on in the system it has been downloaded to, so the report record can be kept up to date in ReportIt. The upload sends data such as the acceptance state of the report (accepted, returned or unchecked) and the date a decision on the acceptance state was made. If the report was returned, a reason for doing so can also be sent. If the report was withdrawn, the date that decision was made and the reason for doing so can be updated. If the report has been closed, the closure date can be sent. Finally, as with the external id upload, a free text description of the status of the report can also be sent with this upload.

As above, report status uploads are configured through a three page wizard, see the help text for each field in the wizard for a full description of how each should be used.

3c. Update case outcome

Reports in ReportIt can go through up to four stages of workflow, with an outcome registered for each stage. This upload allows details of those outcomes to be sent back to ReportIt when the workflow is completed in another system. For each stage, specified by stage number 1-4, an outcome code, outcome details, outcome date and the time period over which the outcome is effective (given as date from and date until) can be set.

As above, outcome uploads are configured through a three page wizard, see the help text for each field in the wizard for a full description of how each should be used.

4. Using a proxy server

Some network configurations may make it necessary for the Data Exchange Agent to make requests or upload information via a proxy server. The DEA supports proxy use on all its connections, settings for the proxy to be used should be entered on the destination page of the tool. Once proxy settings have been entered on the destination page, all uploads in the 'Update cases' categories will be sent via the proxy server. Because Transaction data exports connect to two systems (the originating ReportIt system and the receiving system), further control is possible over proxy usage. When the proxy settings are entered, they will automatically be used for all connections to the originating ReportIt system. However, connections to the receiving system will only be made via the proxy if the 'Use proxy' tick box on the second page of the export category wizard is selected. This covers the situation in which the DEA is installed locally to the receiving system inside an organisation's network so connections out of the network to the ReportIt system require use of the proxy but local connections to the receiving system do not.

5. Appendix A: ReportIt XML formats

The ReportIt report format is the XML format used to transmit details of a single report submission. Because the XML documents represent report submissions and the values of fields on a report, the exact format varies per report and, if the report has optional sections for example, per submission. However, each report XML document conforms to a general schema available on request.

The standard success XML format referred to throughout this document is as follows

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

```
<AuthenticationResult>
```

```
    <Success>true</Success>
```

```
</AuthenticationResult>
```

The above example shows the response to a successful submission. The 'Success' element is a Boolean element which should have a value of true for successful submissions or false for failed submissions.