Documentation and description of

SurveyXact's REST-based API

Last updated on 2018-11-27

Table of Contents

1. About

The API provides access to automatically upload of respondents and retrieval of datasets from own surveys in SurveyXact, as well as view a range of other information as can be done through the normal SurveyXact UI.

The solution is based on a RESTful architecture (http://en.wikipedia.org/wiki/RESTful) and is accessed via HTTPS, which provides a number of benefits:
- HTTPS is a secure protocol with encrypted data transfer.
- As the HTTPS port is open in most firewalls, this avoids problems concerning "permission" to contact our servers from the customer's own IT environment.

The solution uses SurveyXact's built-in access control to ensure that users gain access to only their own data.

Retrieved data is the most recent available from SurveyXact without any form of caching.

1.1 Authentication

All requests must contain a valid username and password for a SurveyXact user who has access to the requested action and data. The user name and password must be transferred via Basic HTTP authentication (http://en.wikipedia.org/wiki/Basic_access_authentication).

2. Limitations of use

The customer has unlimited access to retrieve information on all available entities in SurveyXact.

However, datasets must not be downloaded very frequently. Once an hour is acceptable but once a minute is too often.
The acceptable frequency is assessed individually, and it will become a problem if SurveyXact becomes overloaded due to too frequent requests.

3. Test access

Several parts of this documentation contain examples of valid links with IDs rather than template links with xxxx and the corresponding output.

Please contact SurveyXact for test user credentials.

4. Uploading respondents

Respondents may be uploaded via REST as a POST request with respondent data as attached `multipart/form-data` in the POST.

Only background information on the created respondents can be specified – it is not currently possible to specify any foreground information (i.e. pre-populate parts of the respondent's answers) for the created respondents.

An upload form has been created that accepts a CSV file with respondent data. The form functions in the same way as when using the normal SurveyXact UI to import respondents, and unlike the remainder of the REST API, the Basic HTTP authentication cannot be used here but must instead specify the user name and password as a part of the form.

The file that is uploaded is expected to have the same structure as the template file, which can be downloaded via SurveyXact's normal UI in a browser.

Deviations from this template – e.g. missing/extra columns – will produce errors.

The address of the form (which is also visible in a browser) is:
https://rest.survey-xact.dk/uploadrespondents

As a minimum a user name (in the "`username`" field), the password (in the "`password`" field), the survey ID (in the "`surveyId`" field) and the file with data (in the "`dataFile`" field) must be supplied when posting the form.

It is also possible to specify whether or not SurveyXact should send out distribution e-mails 10 minutes after upload by putting a tick (or specifying "`sendMailCheckbox=true`" in the POST request) in "Send mail". This requires that the distribution e-mail template already is created as desired, and that no incorrect merge fields are used in the template.

Reminder e-mails can also be scheduled to be sent out a specified number of whole days after upload by stating a numeric value in the form fields "`daysUntilReminder`" and "`daysUntilSecondReminder`". This requires that the reminder e-mail template already is created as desired and that no incorrect merge fields are used in the template.

Finally, E-boks distribution and reminders can also be scheduled in the same manner as e-mails. Set a tick in "Send E-boks letter" or specify "`sendEboksCheckbox=true`" in the post request. Reminders can be scheduled by stating numeric values in "`daysUntilEboksReminder`" and "`daysUntilSecondEboksReminder`". Note that this require the not only that the necessary templates have been created and edited as desired, but also that the additional service for sending e-boks messages has been purchased and setup.

If the respondents have been successfully uploaded and created, the server will return an "`OK`" message. All other messages returned should be considered errors.

It is possible to receive a list of the uploaded respondents by return in XML format by adding the parameter "format=xml" to the POST URL. If the format parameter is defined, the server will no longer return an "OK" message, but will return an XML formatted respondent list (as can be seen in the example in section 4.1).

It is recommended that respondent data is UTF-8 encoded, as otherwise only texts in the US-ASCII character set can be uploaded correctly.

Note, that the Windows platform uses UTF-16 as Unicode, which is not supported.

4.1 Example of uploading respondents from command line

A number of new respondents can be created in the demo survey, which is used in this documentation, by using e.g. curl like this:

```
curl –k -F username=REST-test -F password=hoThoneda4 -F sur-
veyId=321104 -F dataFile=@data.csv https://rest.survey-xact.dk/upload-
respondents
```

To send out distribution mails in 10 minutes' time, add an additional form field and the command will look like this:

```
curl –k -F username=REST-test -F password=hoThoneda4 -F sur-
veyId=321104 -F dataFile=@data.csv –F sendMailCheckbox=true
https://rest.survey-xact.dk/uploadrespondents
```

The procedure is the same for sending reminder mails, but simply add "-F daysUntilReminder=5" to the example in order to send out reminders in 5 days' time.

Note that copying the above examples can cause problems as Word (in which this document is written) uses an "en"-dash (http://en.wikipedia.org/wiki/Dash).
This means that curl does not perceive the "–k" and "–F" arguments as proper arguments but as one of several different URLs to be contacted.
Please replace them manually with the US-ASCII Hyphen / Minus Sign or equivalent to prevent the problem.

A list of newly created respondents will be returned if the parameter "format=xml" is added to the URL:

```
curl –k -F username=REST-test -F password=hoThoneda4 -F sur-
veyId=321104 -F dataFile=@data.csv https://rest.survey-xact.dk/upload-
respondents?format=xml
```

In this case, the following XML is returned instead of the "OK" message:

```
<respondents>
   <respondent>
      <id>126478324</id>
      <externalkey>A7RVUZQM3CYN</externalkey>
      <collectstatus>no answers</collectstatus>
```

```xml
        <collecturl>http://www.survey-xact.dk/an-
swer?key=A7RVUZQM3CYN</collecturl>
        <createts>2014-03-12 11:11:50</createts>
        <closets/>
        <startts/>
        <modifyts>2014-03-12 11:11:50</modifyts>
        <sessioncount>0</sessioncount>
        <link rel="collect" href="http://www.survey-xact.dk/an-
swer?key=A7RVUZQM3CYN"/>
        <link rel="self" href="https://rest.survey-xact.dk/rest/respond-
ents/A7RVUZQM3CYN"/>
        <li nk rel="survey" href="https://rest.survey-xact.dk/rest/sur-
veys/321104"/>
        <link rel="answer" href="https://rest.survey-xact.dk/rest/re-
spondents/A7RVUZQM3CYN/answer"/>
    </respondent>
    <respondent>
        <id>126478325</id>
        <externalkey>KQZUSUQ49HW1</externalkey>
        <collectstatus>no answers</collectstatus>
        <collecturl>http://www.survey-xact.dk/an-
swer?key=KQZUSUQ49HW1</collecturl>
        <createts>2014-03-12 11:11:50</createts>
        <closets/>
        <startts/>
        <modifyts>2014-03-12 11:11:50</modifyts>
        <sessioncount>0</sessioncount>
        <link rel="collect" href="http://www.survey-xact.dk/an-
swer?key=KQZUSUQ49HW1"/>
        <link rel="self" href="https://rest.survey-xact.dk/rest/respond-
ents/KQZUSUQ49HW1"/>
        <link rel="survey" href="https://rest.survey-xact.dk/rest/sur-
veys/321104"/>
        <link rel="answer" href="https://rest.survey-xact.dk/rest/re-
spondents/KQZUSUQ49HW1/answer"/>
    </respondent>
</respondents>
```

See below in section 6.3 for a complete description of the format.

5. Creating respondents

Respondents can be created directly on this link: https://rest.survey-xact.dk/rest/surveys/xxxxx/respondents
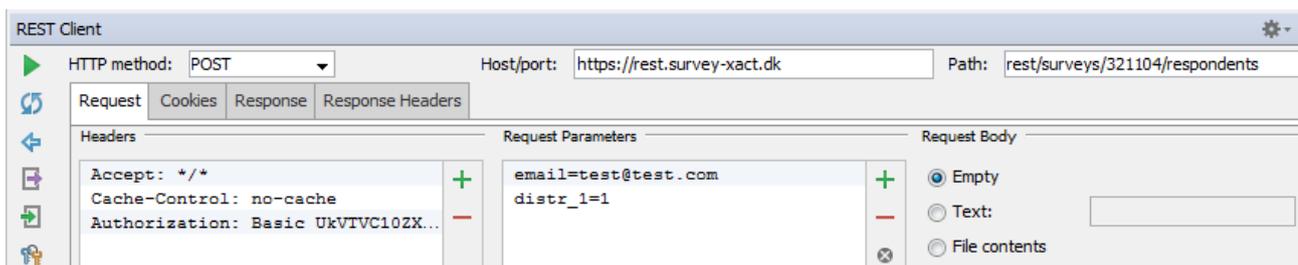
There are two different access methods: GET and POST.

GET returns the list of respondents.

POST creates a new respondent and returns the respondent as a result.

This request:

Results in the following response:
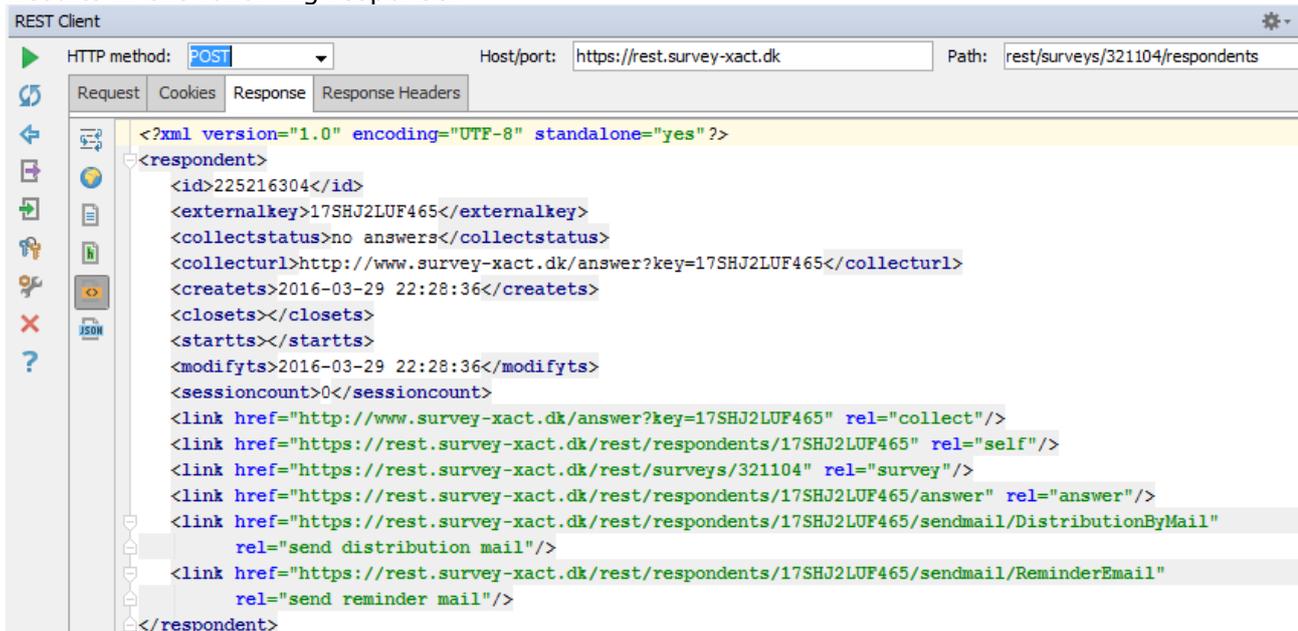
Please note that in this example, two background variables were transferred when creating the respondent. In this case the email address and the distribution type.

5.1 Sending mails

Afterwards the respondent can have two different e-mails send via the API, distribution and remindermail. The sendmail links must be accessed via POST.

A single respondent cannot be included in a scheduled reminder job.

6. Looking up and optionally creating respondents with external ID

An existing respondent can be found based on an external ID, or if no respondent exists, a new one can be created where the external ID provided is included as part of the respondent's background information.

One unique, matching respondent is returned – if several respondents exist with the same external ID, the oldest respondent (and thereby the one created first) is returned and the others are deleted.

In order for this to work, one – and only one – open text variable must be created in the background questionnaire with the annotation `lookupid = true` (see the user manual for guidance on and about annotations), in which the specified external ID is looked up.

Make sure that the variable name for holding the external ID is in lower case.

Attempts to locate an existing respondent with a specified external ID are done without case sensitivity – there is no difference between "abc" and "ABC".

It is recommended that only US-ASCII characters are used for the specified ID. Tests show that UTF-8 characters also work, however this can easily cause problems unless total control of the encoding used or structure of the URL and parameters can be exercised. If special characters such as " " (whitespace) are used, these must be URL encoded in the "`lookupid`" parameter.

Looking up and/or creation occurs by using the following URL:

https://rest.survey-xact.dk/rest/surveys/xxxxx/lookuporcreaterespondent – where xxxxx is the ID of the survey in which respondents are to be created.

A required parameter for the URL is "`lookupid`", which specifies the external ID of the respondent to be found or created.

The result of a call to https://rest.survey-xact.dk/rest/surveys/321104/lookuporcreaterespondent?lookupid=abc123 returns the following XML representation (described below in section 6.3) of the found or created respondent:

```
<respondent>
  <id>111892496</id>
  <externalkey>9811F8F8GEYP</externalkey>
  <collectstatus>no answers</collectstatus>
  <collecturl>http://www.survey-xact.dk/answer?key=9811F8F8GEYP</col-
lecturl>
  <createts>2013-10-10 15:18:31</createts>
  <closets/>
  <startts/>
  <modifyts>2013-10-10 15:18:31</modifyts>
  <sessioncount>0</sessioncount>
  <link rel="collect" href="http://www.survey-xact.dk/an-
swer?key=9811F8F8GEYP"/>
  <link rel="self" href="https:// rest.survey-xact.dk/rest/respond-
ents/9811F8F8GEYP"/>
  <link rel="survey" href="https:// rest.survey-xact.dk/rest/sur-
veys/321104"/>
  <link rel="answer" href="https:// rest.survey-xact.dk/rest/respond-
ents/9811F8F8GEYP/answer"/>
</respondent>
```

6.1 Looking up without creating

It is also possible to perform a simple lookup without creating a new respondent.

The requirements and prerequisites for this are the same as with requests to `lookuporcreaterespondent`.

A required parameter for the URL is "`lookupid`", which specifies the external ID of the respondent to be found.

The result of a call to https://rest.survey-xact.dk/rest/surveys/321104/lookupre-spondent?lookupid=abc123 returns the following XML representation (described below in section 6.3) of the found or created respondent:

```
<respondent>
  <id>253726674</id>
  <externalkey>GM8VYNRVURZJ</externalkey>
  <collectstatus>no answers</collectstatus>
  <collecturl>http://www.survey-xact.dk/answer?key=GM8VYNRVURZJ</col-
lecturl>
  <createts>2016-08-01 15:01:40</createts>
  <closets/>
  <startts/>
  <modifyts>2016-08-01 15:01:40</modifyts>
  <sessioncount>0</sessioncount>
  <link rel="collect" href="http://www.survey-xact.dk/an-
swer?key=GM8VYNRVURZJ"/>
  <link rel="self" href="https:// rest.survey-xact.dk/rest/respond-
ents/GM8VYNRVURZJ"/>
  <link rel="survey" href="https:// rest.survey-xact.dk/rest/sur-
veys/321104"/>
  <link rel="answer" href="https:// rest.survey-xact.dk/rest/respond-
ents/GM8VYNRVURZJ/answer"/>
</respondent>
```

If a respondent with a specified external ID is not found, a HTTP 404 status code is returned.

6.2 Formatting of the result

By default, an XML representation of the found and/or created respondent is returned. However, it is possible to modify this and receive information on only either the collectURL or externalKey, both of which are used to submit answers.

Modifying the format causes the returned content type to change from `application/xml` to `text/plain`.

This is achieved by adding the parameter `format=ffff` to the URL, where `ffff` is one of the following case-insensitive values:

Values of `ffff`	Result
collectURL	http://www.survey-xact.dk/answer?key=9811F8F8GEYP
externalKey	9811F8F8GEYP

If an unknown format is specified, the default XML representation will apply.

7. Available entities in the API

Information and attributes about the following can be retrieved:

- Organizations
- Surveys
- Respondents

Each result contains a number of attributes for the required entity as well as a number of links that can be used to run through the model from a given point.
It is therefore easy to traverse the hierarchy and go from a respondent to a survey to an organization etc.

7.1 Organizations

Information on organizations can be retrieved via the following URL:
https://rest.survey-xact.dk/rest/organizations/xxxxx – where xxxxx is the ID of the organization about which information is required.

An organization contains information about

- ID
- Name
- Link to itself
- Link to the organization's surveys
- Link to the organization's parent

Note that access to the parent may not be available – it depends on the user's permissions in SurveyXact.

7.1.1 Example of XML for an organization

Example of the output from https://rest.survey-xact.dk/rest/organizations/59143

```
<organization>
  <id>59143</id>
  <name>REST test-area</name>
  <link rel="self" href="https://rest.survey-xact.dk/rest/organiza-
tions/59143" />
  <link rel="surveys" href="https://rest.survey-xact.dk/rest/organiza-
tions/59143/surveys" />
  <link rel="parent" href="https://rest.survey-xact.dk/rest/organiza-
tions/5110" />
</organization>
```

7.2 Surveys

Information on surveys can be retrieved via the following URL:
https://rest.survey-xact.dk/rest/surveys/xxxxx – where xxxxx is the ID of the survey about which information is required.

A survey contains information about

- External key – used for self-creation of respondents if this is activated in the survey
- ID
- Name
- Link to itself

- Link to a list of all respondents (incl. some basic information on them – see the section on respondents for information on what data is shown)
- Link to export of dataset
- Link to export of labels
- Link to export of structure
- Link to export of variables
- Link to the survey's organization
- Link to the survey's questionnaire in XML format

7.2.1 Example of XML for a survey

Example of the output from https://rest.survey-xact.dk/rest/surveys/321104

```
<survey>
  <externalkey>135QJCSF9296</externalkey>
  <id>321104</id>
  <name>REST test-survey</name>
  <link rel="self" href="https://rest.survey-xact.dk/rest/sur-
veys/321104" />
  <link rel="respondents" href="https://rest.survey-xact.dk/rest/sur-
veys/321104/respondents" />
  <link rel="export-dataset" href="https://rest.survey-
xact.dk/rest/surveys/321104/export/dataset" />
  <link rel="export-labels" href="https://rest.survey-
xact.dk/rest/surveys/321104/export/labels" />
  <link rel="export-structure" href="https://rest.survey-
xact.dk/rest/surveys/321104/export/structure" />
  <link rel="export-variables" href="https://rest.survey-
xact.dk/rest/surveys/321104/export/variables" />
  <link rel="organization" href="https://rest.survey-xact.dk/rest/or-
ganizations/59143" />
  <link rel="questionnaire" href="https://rest.survey-
xact.dk/rest/surveys/321104/questionnaire" />
</survey>
```

7.3 Respondents

Information about respondents can be retrieved via the following URL:
https://rest.survey-xact.dk/rest/respondents/xxxxxxxxxxxx – where xxxxxxxxxxxx is the key for the respondent about which information is required.

A respondent contains information about
- ID
- External key – the respondent's key
- Collectstatus – Collection status
- CollectURL – URL where the respondent's answer can be given
- CreateTS – when the respondent was created
- CloseTS – when the respondent was closed
- StartTS – when the respondent began submitting answers
- ModifyTS – when the respondent was last modified
- SessionCount – number of collection sessions where the respondent submitted answers
- Link to collect URL
- Link to itself

- Link to the respondent's survey
- Link to the respondent's answers in XML format
- Link to send the respondent a distribution email with the surveys current distribution mail template. URL must be used with a POST request.
- Link to send the respondent a reminder email with the surveys current reminder mail template. URL must be used with a POST request.

7.3.1 Example of XML for a respondent
Example of the output from https://rest.survey-xact.dk/rest/respondents/581NFJQN8R72

```
<respondent>
  <id>90282002</id>
  <externalkey>581NFJQN8R72</externalkey>
  <collectstatus>completed</collectstatus>
  <collecturl>http://www.survey-xact.dk/answer?key=581NFJQN8R72</col-
lecturl>
  <createts>2012-11-08 15:54:10</createts>
  <closets>2012-11-08 16:00:58</closets>
  <startts>2012-11-08 16:00:27</startts>
  <modifyts>2014-04-17 11:45:56</modifyts>
  <sessioncount>2</sessioncount>
  <link rel="collect" href="http://www.survey-xact.dk/an-
swer?key=581NFJQN8R72" />
  <link rel="self" href="https://rest.survey-xact.dk/rest/respond-
ents/581NFJQN8R72" />
  <link rel="survey" href="https://rest.survey-xact.dk/rest/sur-
veys/321104" />
  <link rel="answer" href="https://rest.survey-xact.dk/rest/respond-
ents/581NFJQN8R72/answer" />
  <link rel="send distribution mail" href="https://rest.survey-
xact.dk/rest/respondents/581NFJQN8R72/sendmail/DistributionByMail"/>
  <link rel="send reminder mail" href="https://rest.survey-
xact.dk/rest/respondents/581NFJQN8R72/sendmail/ReminderEmail"/>
</respondent>
```

8. Export of data

8.1 Questionnaire

The questionnaires – both foreground and background – can be retrieved in an XML format with the structure described below in the section **Description of The XML Section <questionnaire>**.

The questionnaire is retrieved via the following URL https://rest.survey-xact.dk/rest/surveys/xxxxxxx/questionnaire – where xxxxxxx is the ID of the survey.

The texts in this exported XML file are generally in the survey's default language. If texts are required in another language in the survey, this can be specified by adding the parameter "lang=xx" to the URL. xx is the 2-letter code for the language in ISO-639-1 format (http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes). If a language is specified that is not in the survey, an error will occur.

If you wish to retrieve a questionnaire with the texts in English, you must use the following URL:
https://rest.survey-xact.dk/rest/surveys/xxxxxxx/questionnaire?lang=en

8.1.1 Description of the XML Section <questionnaire>

The <questionnaire> section contains a description of all variables in the questionnaire. The questionnaire is divided into a <background> section containing all background information and a <foreground> section containing all the questions. All background information and all questions are contained in their own <variable> section.

The questionnaire XML has the following structure:

```
<questionnaire id="123">
  <background>
    <variable>
    …
  </background>
  <foreground>
    <variable>
    …
  </foreground>
</questionnaire>
```

All variable tags have the following attributes:
- *reference* - identifies the variable with a (technical) numeric-based notation.
- *name* - identifies the variable by name. The name is the variable's name as defined in the questionnaire.
- *type* – specifies which type of values the variable can assume.
  Possible types are:
  - *double* - can assume numeric values.
  - *string* - can assume text values.
  - *single* - assumes one specific value from a number of possible values.

o   *multiple* - assumes one or more values from a number of possible values.

Variables of the type *double* and *string* have the following structure:

```
<variable reference="{*1/1/1212*}" name="s_1" type="string">
        <text lang="en">What is your name?</text>
</variable>
```

The <text> tag is the question text from the questionnaire – unless it is changed in the analysis via an analysis label. The attribute *lang* specifies the language in which the text is written.

Variables of the type *single* and *multiple* have the following structure:

```
<variable reference="{*1/1/1313*}" name="s_2" type="single">
        <text lang="en">What is your gender?</text>
    <varChoice reference="{*1/1/1313:1.0*}" value="1" id="2323">
        <text lang="en">Male</text>
    </varChoice>
    <varChoice reference="{*1/1/1313:2.0*}" value="2" id="2324">
        <text lang="en">Female</text>
    </varChoice>
</variable>
```

For every possible value, there is a <varChoice> section that describes the choices available.
The <varChoice> tag has the following attributes:
- *reference* – uniquely identifies the choice with a (technical) numeric-based notation.
- *value* – a numeric value that is associated with the choice.
- *id* – identifies the choice. Choices have different IDs within each individual variable. Different variables can have choices with the same ID.

The *<text>* tag contains the choice's name from the questionnaire. The attribute *lang* specifies the language of the text.

8.2   Answers

Individual respondent's answers can also be retrieved in an XML format with the structure described below in the section **Description of the XML Section <respondentanswer>**.

This can be used rather than downloading the dataset for all the respondents in the survey if e.g. access to other than the selected respondents is not available.

Individual respondent's answers do not contain information on the questionnaire's structure as in the dataset but contain all the background information and all the answers submitted.

An individual respondent's answers are retrieved via the following URL

https://rest.survey-xact.dk/rest/respondents/xxxxxxx/answer – where `xxxxxxx` is the external key for the respondent whose answers you wish to retrieve.

8.2.1 Description of the XML Section <respondentanswer>
The <respondentanswer> section contains the answers for all the variables for an individual respondent.

The respondentanswer XML has the following overall structure:

```
<respondentanswer key="A1B2C3D4E5F6">
  <link rel="respondent"
href="https://rest.survey-xact.dk/rest/respondents/A1B2C3D4E5F6"/>
  <background>
    <valueNnnnn>
    …
  </background>
  <answer>
    <valueNnnnn>
    …
  </answer>
</respondentanswer>
```

The respondentanswer tag has the attribute *key,* which is the respondent's unique external key in SurveyXact, as well as a link to itself where further information and relations can be found.

In addition, the respondent has a number of <valueNnnnn> sections. Each one describes the value of an individual variable. The different types of variables have different structures.

The following types of <valueNnnnn> tags exist:
- o *valueSingle* – assumes one specific value from a number of possible values.
- o *valueMultiple* – assumes one or more values from a number of possible values.
- o *valueText* – can assume text values.
- o *valueDouble* – can assume numeric values.

The *valueSingle* variable has the following structure:

```
<valueSingle name="s_4">
  <choice value="1" id="2323"/>
</valueSingle>
```

- *name* is the variable's name as described in the variable section
- *the <choice>* tag identifies the choice selected. *value* and *id* are the values described in the variable section in the <varChoice> tag above.

The *valueMultiple* variable has the following structure:

```
<valueMultiple name="s_5">
      <choice value="1" id="2324"/>
      <choice value="2" id="2325"/>
```

```
              …
</valueMultiple>
```

- *name* is the variable's name as described in the variable section.
- the *<choice>* tags identify the choices selected. *value* and *id* are the values described in the variable section in the <varChoice> tag.
  Note that there can be from 0 to *n* <choice> tags depending on how many selected choices the respondent has chosen.

The *valueText* variable has the following structure:

```
<valueText name="s_6">Hello world</valueText>
```

- *name* is the variable's name as described in the variable section
- The tag contains the text value of the variable.

The *valueDouble* variable has the following structure:

```
<valueDouble name="s_2">2.4</valueDouble>
```

- *name* is the variable's name as described in the variable section
- The tag contains the numeric value of the variable with "." as decimal mark and without thousands separator.

8.3 About the dataset in general
Instead of retrieving individual answers as well as the questionnaire, the whole dataset can be downloaded. The following formats and options can be used to affect the output.

8.3.1 Formatting files
The default format for the exported files is always `INTL_EU`. If another format is required, this can be specified by adding the parameter `format=ffff` to the URL, where `ffff` is one of the following:

Values of `ffff`	Description of the format
EU	CSV format European: list separator=";" and decimal separator=","
US	CSV format US: list separator="," and decimal separator="."
INTL_EU	CSV format European Unicode: list separator="tab" and decimal separator=","
INTL_US	CSV format US Unicode: list separator="tab" and decimal separator="."
XML	XML format (described below)

8.3.2 Choice of language
The texts in the exported file are in the survey's default language. If texts in another language are required in the survey, this can be specified by adding the parameter `lang=xx` to the URL. `xx` is the 2-letter code for the language in ISO-639-1 format (http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes).

Do not specify a language code for a language that is not in the survey. SurveyXact will attempt to honor the request, but the result is undefined and may contain a mix of the requested language, English, the survey's default language as well as marking all texts as being in the requested language even if they are not.

8.3.3   Export of selected variables only
By default, all variables in the survey are exported. This includes foreground and background variables as well as a number of system variables (e.g. time of completion).

If only a limited list of variables for export is required, this is possible by selecting the visible variables shown in the analysis in the SurveyXact UI (Analysis -> Variables).

If only selected variables should be included in a dataset, this can be specified by adding the parameter `selected=true` to the URL.

Note that if the format is specified as XML, the `selected=true` *parameter will be ignored. The XML format will always contain all available variables.*

8.3.4   Export of modifications since a certain date and time
By default, all the answers in the dataset are exported. If the dataset is large, part of the full dataset can be exported with only the respondents who are modified since a known time.

Using this parameter corresponds to applying a filter (e.g. `[respondent/modified] > datetime("2011-08-22 16:42:42")`) in the analysis, after which only the respondents who have been modified since the specified date and time are visible.

Add the parameter `modifiedSince=xxxx` to the URL. Here, `xxxx` must be specified in one of two different syntaxes:

Syntax for `xxxx`	Description of syntax
`yyyyMMdd`	Year with 4 digits, month with 2 digits and date with 2 digits – e.g. `20130527` for 27 May 2013. The time automatically assumes 00:00:00 CET/CEST
`yyyyMMdd_HHmmss`	Year with 4 digits, month with 2 digits and date with 2 digits separated by an underscore followed by hour, minute and second – e.g. `20130317_133742` for 17 March 2013 at 13:37:42 CET/CEST

The parameter can be used to export all mentioned dataset formats.

8.3.5   Export of XML as an attached file
If XML is selected as the export format, the returned data can be relatively extensive – so extensive that most browsers have difficulty displaying it (they hang or even crash) if the dataset is large enough.

During development or system integration in relation to SurveyXact, manual verification of the content may be necessary. Therefore it is possible to specify that the XML export should be delivered to the client as an attached file (and thereby being able to save it directly to a file) by adding the parameter `asAttachment=true` to the URL.

Note that this parameter affects only how an XML export of the dataset is delivered to the client. The parameter is ignored if other formats are chosen or exporting anything else than the dataset.

8.3.6   Description of the XML format
The XML format of the dataset closely resembles the descriptions of <questionnaire> and <respondentanswer> above, but it is not a 1:1 reproduction.

The dataset XML has the following overall structure:

```
<dataset analysisid="654" surveyid="123">
  <variables>
    <variable> … </variable>
    <variable> … </variable>
  </variables>
  <respondents>
    <respondent externKey="A1B2C3D4E5F6" id="98765">
      <valueNnnnn>
      …
    </respondent>
    <respondent externKey="B3C4D5E6F7G8" id="78923">
      <valueNnnnn>
      …
    </respondent>
    …
  </respondents>
</dataset>
```

The different <variable> tags contained within the <variables> tag contain the same information as described in "**Description of the XML Section <questionnaire>**", with the following two additional types as well as the existing *single*, *multiple*, *string* and *double* types:

- o *dateTime* - can assume dates and times as values.
- o *unknown* – variable type for advanced calculated variables that cannot be mapped to either the *single*, *multiple*, *string* or *double* variable types.

Variables of the type `dateTime` have the following structure:

```
<variable reference="{*2/10*}" name="respondent/cre-
ated" type="dateTime">
  <text lang="en">Created</text>
</variable>
```

The type dateTime is automatically set by the system for variables containing a time. As a question with the type dateTime cannot be created, the type is included only in the overall dataset.

Variables of the type `unknown` have the following structure:

```
<variable reference="{*3/104243566*}" name="calculated/list_id"
type="unknown">
  <text lang="en">List of IDs for lookup</text>
</variable>
```

The type `unknown` is automatically set by the system for variables that uses an advanced function from SurveyXact's expression language, which does not have an appropriate XML representation. For the same reason, only the description of the variable is included in a <text> tag, and not the definition itself.

Variables of the type `unknown` are listed only in the <variables> section, and are not repeated under each individual respondent's answer.

The <respondents> tag contains a <respondent> section for each respondent in the dataset.

Each <respondent> contains a number of <valueNnnnn> tags as described in "**Description of the XML Section <respondentanswer>**", with the following additional type as well as the existing *valueSingle*, *valueMultiple*, *valueText* and *valueDouble* variables:

o *valueDateTime* – can assume dates and times as values

The *valueDateTime* variables have the following structure:

```
<valueDateTime name="respondent/modified">2010-08-31T15:00:03</val-
ueDateTime>
```

- *name* is the variable's name as described in the variable section
- The tag contains the timestamp value of the variable in ISO format (yyyy-MM-ddTHH:mm:ss), and is always specified in the Danish time zone (CET / CEST) for when the timestamp was registered.

8.4 Dataset
The dataset is downloaded via the following URL
https://rest.survey-xact.dk/rest/surveys/xxxxxxx/export/dataset – where
xxxxxxx is the ID of the survey for which the dataset is required.

8.5 Labels
Contains all answer categories and their values.

Labels are downloaded via the following URL

https://rest.survey-xact.dk/rest/surveys/xxxxxxx/export/labels – where xxxxxxx is the ID of the survey for which labels are required.

The same parameters in relation to the choice of language and selected variables as described above can be specified, but no other parameters are applicable.

Note that the XML format may not be used to export labels.

8.6 Structure description
Contains the correlation between the variables and their choices.

The structure description is downloaded via the following URL https://rest.survey-xact.dk/rest/surveys/xxxxxxx/export/structure – where xxxxxxx is the ID of the survey for which the description is required.

The same parameters in relation to the choice of language and selected variables as described above can be specified, but no other parameters are applicable.

Note that the XML format cannot be used to export structure descriptions.

8.7 Variable list
Contains variable names and their questions.

The list of variables is do downloaded via the following URL https://rest.survey-xact.dk/rest/surveys/xxxxxxx/export/variables – where xxxxxxx is the ID of the survey for which the variables are required.

The same parameters in relation to the choice of language and selected variables as described above can be specified, but no other parameters are applicable.

Note that the XML format cannot be used to export variable lists.

8.8 Examples of dataset exports
The examples below show combinations of different options for exporting datasets.

Download the dataset in XML format from survey 321104:
https://rest.survey-xact.dk/rest/surveys/321104/export/dataset?format=XML

Download the dataset in XML format with the texts in English from survey 321104:
https://rest.survey-xact.dk/rest/surveys/321104/export/dataset?format=XML&lang=en

Download the dataset in XML format with the texts in English from survey 321104 as an attached file:
https://rest.survey-xact.dk/rest/surveys/321104/export/dataset?format=XML&lang=en&asAttachment=true

Download the dataset in EU format with texts in Danish and only selected variables from survey 321104: https://rest.survey-xact.dk/rest/surveys/321104/export/dataset?format=EU&lang=da&selected=true

Download the dataset in EU format with texts in English and only selected variables from survey 321104:

https://rest.survey-xact.dk/rest/surveys/321104/export/labels?format=EU&lang=en&selected=true

Download the structure description in US format with texts in English and only selected variables from survey 321104:

https://rest.survey-xact.dk/rest/surveys/321104/export/structure?format=US&lang=en&selected=true

Download the variables in EU format with texts in English and only selected variables from survey 321104:

https://rest.survey-xact.dk/rest/surveys/321104/export/variables?format=EU&lang=en&selected=true

Download the dataset in XML format with only the modified respondents since 27 December 2012 from survey 321104:

https://rest.survey-xact.dk/rest/surveys/321104/export/dataset?format=XML&modifiedSince=20121227

9. Maintaining respondent data

9.1 Anonymizing a survey

It is possible to anonymize a survey by blanking individual variables for several respondents.

Anonymizing the survey can be achieved by sending a POST request to the following url (where XXXXX is the survey id):

https://rest.survey-xact.dk/rest/surveys/XXXXX/anonymize

The request must contain the form-parameters:

filter	An expression filter. The filter is applied to each respondent if it evaluates to true the respondent will be blanked on the submitted variables. E.g., `[respondent/created] > datetime("2011-08-22 00:00:00")` will blank all respondents created after 2011-08-22
Variables	A comma separated list of surveys variables to blank. E.g., [respondent/email], [respondent/cpr] will blank the email and cpr variables.

If everything went okay the server will respond with 202 accepted - Your anonymisation is queued
This means the server has started processing the request.

9.2 Deleting a respondent

It is possible to delete a single respondent by sending a POST request to the following url (where XXXXX is either a respondent id or a respondent key):

https://rest.survey-xact.dk/rest/respondents/XXXXX/delete

9.3 Deleting all returned mails

It is possible to delete all returned mails in one go using the API. Send a POST request to the following url (where XXXXXX is the survey id):

https://rest.survey-xact.dk/rest/surveys/XXXXX/deleteReturnMails