



Integration Guide | PUBLIC

2021-12-17

Integrating SAP Qualtrics Surveys with SAP Marketing

Content

- 1 Integrating SAP Qualtrics Surveys with SAP Marketing. 3**
- 2 Prerequisites. 5**
- 3 Setting up SAP Qualtrics Surveys 6**
- 4 Setting up SAP Cloud Platform Integration. 7**
 - 4.1 Create and Deploy Technical Communication User Data with a Credential Artifact. 7
 - 4.2 Register Qualtrics API Key. 8
 - 4.3 Copy Integration Package to Customer Workspace. 9
 - 4.4 Configure and Deploy 'Create Survey Data in SAP Marketing Cloud' Integration Flow. 10
 - 4.5 Prerequisites for SAP Qualtrics Surveys Subscription. 13
 - 4.6 Configure and Deploy 'Create Survey Subscription in Qualtrics' Integration Flow. 14
 - 4.7 Configure and Deploy 'Mapping Qualtrics Surveys Data for SAP Marketing Cloud' Integration Flow
. 15
- 5 Troubleshooting and Support. 18**
 - 5.1 Monitor Integration Flow Status Messages. 18
 - 5.2 Errors While Posting Data into SAP Marketing. 18
 - 5.3 Test Run the Qualtrics iFlow. 19

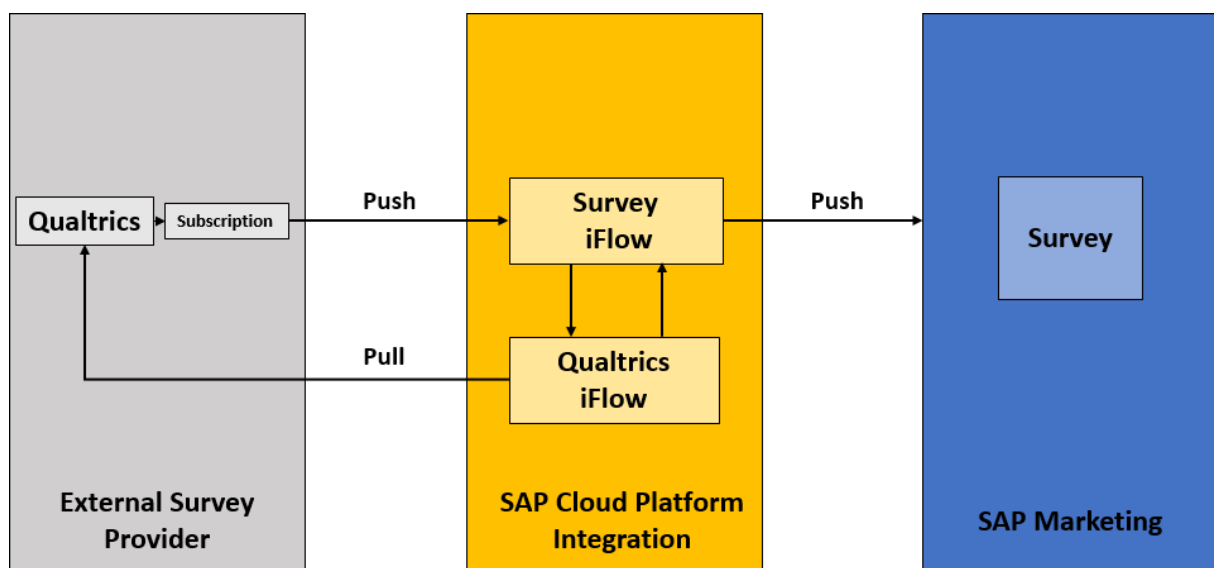
1 Integrating SAP Qualtrics Surveys with SAP Marketing

Integrating SAP Qualtrics Surveys with SAP Marketing enables the customers to enjoy the privileges of SAP Qualtrics Surveys features. This integration fetches and stores the data easily from SAP Qualtrics Surveys to an SAP Marketing system.

The purpose of this document is to describe the general configuration steps required to manually set up the configuration within the system landscape that has already been installed using the corresponding installation or configuration guides for installation.

Disclaimer: The use of information originating from social networks and other data sources must be checked in the individual case against the background of all applicable laws and regulations (for example, on data protection) and individual rules (for example, for the relevant source). SAP doesn't accept any liability for the use of the application by its customers.

The integration package runs on the SAP Cloud Platform Integration (former name: HCI) tenant and creates a survey subscription in SAP Qualtrics Suveys and transforms the survey response data into SAP Marketing format. The network security team is responsible for ensuring the network environment preparedness across different systems and related security aspects.



On publishing a survey, the Qualtrics subscription (webhook) sends data in an ID format for the subscribed event `activateSurvey`. This payload is passed from the survey iFlow (*Create Survey Data in SAP Marketing Cloud*) to Qualtrics iFlow (*Mapping SAP Qualtrics Surveys Data in SAP Marketing Cloud*), which uses this data and then calls the Qualtrics API to fetch the survey details.

On submitting the survey response, the Qualtrics subscription (webhook) sends data in an ID format for the subscribed event `completedResponse`. `{SurveyID}`. This payload is passed from survey iFlow to the Qualtrics iFlow, which uses the data and calls the Qualtrics response API to fetch the survey response details.

The Qualtrics iFlow also transforms the received survey data into SAP Marketing format and sends it back to survey iFlow. In turn, the survey iFlow imports SAP Qualtrics Surveys data into SAP Marketing system.

2 Prerequisites

To integrate SAP Qualtrics Surveys with SAP Marketing, you must use the survey iFlow to configure the parameter `PostProcessing=SubscribeSurveyResponse=true` for the integration.

With this configuration, on successful submission of survey metadata into SAP Marketing, you're automatically subscribed to the Qualtrics event `completedResponse`. As a result, whenever a user submits a response for the survey, the response details are automatically sent from SAP Qualtrics Surveys to the survey iFlow.

For more information, see [Integrating Survey Data with SAP Marketing](#).

3 Setting up SAP Qualtrics Surveys

To create a new survey in SAP Qualtrics Surveys, complete the following steps to configure and integrate survey into system.

1. Log on to *SAP Qualtrics Surveys* system, and click *Create Project*.
2. Click *Blank Survey Project*, and enter a project name.

i Note

Currently, only the *Research Core* type of survey to integrate with SAP Marketing is supported.

3. Add questions and answers to create your survey.
4. In the *Survey* tab page, click *Survey Flow*.
5. Click *Add a New Element Here*.
6. Choose *Embedded Data* block.
7. Enter the value **sap-outbound-id**.

i Note

This step is a mandatory to integrate survey with SAP Marketing. If you don't add the value **sap-outbound-id**, an error appears stating you to enter an ID Origin. For more information, see [Troubleshooting and Support \[page 18\]](#).

8. Click *Save Flow* and publish the survey.
Copy the survey link.
9. Navigate to SAP Marketing, and design the email content, and embed the survey link.
10. Trigger the Campaign Automation flow to send survey Email and collect responses.
11. Use the survey response data, available in segmentation, for creating specific target groups.

4 Setting up SAP Cloud Platform Integration

To work with the integration flows of this package, the prepackaged integration flow scenario must be copied to your workspace. In the next step, the integration flows must be configured. Finally, to activate the integration flows, they must be deployed.

How to Get the SAP Cloud Platform Integration Runtime URL

You get the SAP Cloud Platform Integration Runtime URL once *SAP Qualtrics Surveys Integration with SAP Marketing Cloud iFlow* is deployed, see [Configure and Deploy 'Create Survey Data in SAP Marketing Cloud' Integration Flow \[page 10\]](#), [Configure and Deploy 'Create Survey Subscription in Qualtrics' Integration Flow \[page 14\]](#), and [Configure and Deploy 'Mapping Qualtrics Surveys Data for SAP Marketing Cloud' Integration Flow \[page 15\]](#) sections.

In the SAP Cloud Platform Integration WEB UI, do the following:

1. Navigate to *Monitor*.
2. Select the *Manage Integration Content-Started* tile.
3. Search for the *Qualtrics Survey Data Integration* integration flow.
4. Choose *Started* status.

The first part of the listed endpoint is the SAP Cloud Platform Integration tenant runtime URL. This URL is what you need. For example: `https://<tenant>iflmap.hana.ondemand.com`.

4.1 Create and Deploy Technical Communication User Data with a Credential Artifact

i Note

This step is only relevant for user-based authentication.

For security reasons, user- or password-based authentication isn't recommended. If you use certificate-based authentication for the SAP Marketing system, this section can be skipped.

Prerequisites

You've already created a technical user in your SAP Marketing system as described in [Create Technical Communication User](#). This user's credentials must be stored in your SAP Cloud Platform Integration tenant as User Credentials.

Procedure

1. Log on as an SAP Cloud Platform Integration Administrator on your SAP Cloud Platform Integration Tenant WEB UI (for example, <https://<your SAP Cloud Platform Integration tenant URL>/itspaces>).
2. On the tenant menu, choose [Monitor](#).
3. Choose the [Security Material](#) tile in the [Manage Security](#) section.
4. Choose [Add](#).
5. Select [User Credentials](#).
6. Enter the following values in the [Add User Credentials](#) dialog box:

Field Name	Entry Value
Name	For example, MKT_CPI_USER
Description	Optional
User*	<User alias name of your technical user>
Password	<Password of your technical user>

Enter the user name for the technical user you created as per the prerequisites.

7. Choose [Deploy](#) to save and deploy the user credentials.

4.2 Register Qualtrics API Key

To register the Qualtrics API key in SAP Cloud Platform Integration, proceed as follows:

1. Log on as an SAP Cloud Platform Integration Developer on your SAP Cloud Platform Integration Tenant WEB UI (for example, <https://<your SAP Cloud Platform Integration tenant URL>/itspaces>).
2. Navigate to Security Material and add a Secure Parameter with the following details:

Field Name	Entry Value
Name	Qualtrics Integration Token
Description	Description of the API key

Field Name	Entry Value
Secure Parameter	Qualtrics Token (follow the steps in the https://www.qualtrics.com/support/integrations/api-integration/overview/ to generate the Qualtrics token).
Repeat Secure Parameter	Qualtrics Token This token is used by the Qualtrics iFlow to retrieve the Qualtrics specific details like metadata, response, subscription, and so on, using Qualtrics API.

i Note

For this integration, we've used the Qualtrics v3 API (<https://api.qualtrics.com/>). For more details on the API, choose Home > API reference.

4.3 Copy Integration Package to Customer Workspace

To copy the integration package to the customer workspace, proceed as follows:

1. Log on as an SAP Cloud Platform Integration developer on your SAP Cloud Platform Integration Tenant WEB UI (for example, <https://<your SAP Cloud Platform Integration tenant URL>/itspaces>).
2. On the tenant menu, choose *Discover*.
3. Select *All* to see all published integration packages.
4. Enter *Third-party Survey Data Integration with SAP Marketing Cloud* in the *Search* field.
5. To copy the integration package from the catalog to your customer workspace, select the package to open and choose *Copy* on the top-right section of the screen.
6. Enter *SAP Qualtrics Surveys Integration with SAP Marketing Cloud* in the *Search* field.
7. To copy the integration package from the catalog to your customer workspace, select the package to open and choose *Copy* on the top-right section of the screen.
8. On the target menu, choose *Design*.
9. On the *Design* tab page, open the integration package *Third-party Survey Data Integration with SAP Marketing Cloud*.
10. Select the *Artifacts* tab, and configure the integration flow: [Configure and Deploy 'Create Survey Data in SAP Marketing Cloud' Integration Flow \[page 10\]](#).
11. Navigate to the *Design* tab page, and open *SAP Qualtrics Surveys Integration with SAP Marketing Cloud* integration package.
12. Select the *Artifacts* tab, and configure the following integration flows:
 - Create Survey Data in SAP Marketing Cloud
 - Create Survey Subscription in Qualtrics
 - Mapping Qualtrics Survey Data for SAP Marketing Cloud

4.4 Configure and Deploy 'Create Survey Data in SAP Marketing Cloud' Integration Flow

To configure the Create Contact and Permissions artifact, choose *Configure* in the *Actions* column for this artifact and enter following specifications:

1. Configure the *Sender Tab* as follows:

Field Name	Entry Value
Adapter	HTTPS
Address	/survey/v1
Authorization	User Role or Client Certificate
User Role	ESBMessaging.send An appropriate user must be assigned on the corresponding SAP Cloud Platform account. For more information, see: Assign User Authorizations for Basic Authentication to Access SAP Cloud Platform Integration in SAP Cloud Platform Cockpit.
CSRF Protected	<Check/Unchecked> This field can remain unchecked to facilitate the communication and eliminate extra implementation in the third-party system.

2. Configure *Receiver* tab.

Field Name	Entry Value
Receiver	SAP_MKT_Survey_API
Adapter Type	HCIODATA
Proxy Type	On-Premise for SAP Marketing edition.
Authentication	Basic or Certificate Based
Credential Name (only for Basic Authentication)	Points to the defined values in the Security Materials of the SAP CPI Tenant
Timeout (in min)	For a single survey submission, the default value is 1 minute.

3. Configure *Receiver* tab for the ExtensibilityFlow as follows:

Field Name	Entry Value
Receiver	ExtensibilityFlow
Adapter Type	ProcessDirect

Field Name	Entry Value
Address	/EXTENSIBILITY If you want to use a separate iFlow, you must change the address to the respective endpoint of the iFlow of your choice.

4. Configure the settings needed for data buffering storage in the [More](#) tab as follows:

Field Name	Entry Value
Type	All Parameters
Batch_Payload_Extensibility	Parameter to enable (1) or disable (0) the extensibility iFlow to adjust batch payload. The default value is 0.
Data_Store_Name	Data storage name under which the request is buffered. <div data-bbox="829 840 1394 1025" style="background-color: #f0f0f0; padding: 5px;"> <p>i Note</p> <p>The name must be identical to the name that is defined in the <i>Retry Loading Buffered Survey Data to SAP Marketing Cloud</i> Integration Flow.</p> </div>
Expiration_Period (in days)	Number of days after which the stored messages are deleted. The minimum must be at least twice that of Retention Threshold. The default value 7 days.
PostProcessing	User-defined <code><post-processing-value></code> . This value can be used to call another user-defined iFlow. <div data-bbox="829 1328 1394 1615" style="background-color: #f0f0f0; padding: 5px;"> <p>i Note</p> <p>Post processing is an exit after you've submitted the survey metadata successfully to SAP Marketing. You can provide the respective value to perform post-processing tasks like subscribing to the 'survey response completed' event of that survey or call on another iFlow and so .</p> </div>

Field Name	Entry Value
Pre-Processing	<p>This parameter contains the default entry:</p> <pre data-bbox="826 392 1332 481">SurveyIDFieldName=<survey-id-field-name>&ResponseIDFieldName=<response-id-field-name>.</pre> <p>In the field <i>survey-id-field-name</i>, enter the field name, which contains the 'Survey ID' value in the survey provider's webhook data. This data is used in PostProcessing analysis.</p> <div data-bbox="826 660 1396 896" style="border: 1px solid #ccc; padding: 5px;"> <p>≡, Sample Code</p> <p>Qualtrics Webhook or Subscription Example Data for Event 'activateSurvey'</p> <pre>Topic=*****&Status=***&SurveyID=***&BrandID=***</pre> </div> <p>According to this example, the field SurveyID contains the value of the Survey ID. Therefore, the pre-processing parameter value is 'SurveyIDFieldName=SurveyID'.</p> <p>In the field <i>survey-id-field-name</i>, enter the field name, which contains 'Response ID' value in the survey provider's webhook data. This data is used in PostProcessing analysis.</p> <div data-bbox="826 1187 1396 1467" style="border: 1px solid #ccc; padding: 5px;"> <p>≡, Sample Code</p> <p>Qualtrics Webhook or Subscription Example Data for Event 'completedResponse'</p> <pre>Topic=*****&Status=Complete&SurveyID=***&RecipientID=***&ResponseID=***&CompletedDate=***&BrandID=***</pre> </div> <p>According to this example, the field ResponseID contains the value of the Response ID.</p> <p>Therefore, the Preprocessing parameter value is ResponseIDFieldName=ResponseID.</p> <p>As a result, a Preprocessing parameter contains the value:</p> <pre data-bbox="826 1713 1396 1780">SurveyIDFieldName=SurveyID&ResponseIDFieldName=ResponseID</pre>
Retention_Threshold (in days)	<p>Timeframe in which the messages must be fetched before an alert is raised. The default value is 2 days.</p>

Field Name	Entry Value
ServiceBaseURL	https://%3Chostname%3E-api.s4hana.ondemand.com/sap/opu/odata/sap/

i Note

The closing forward slashes (/) are mandatory in the URL.

For example, `https://<hostname>-api.s4hana.ondemand.com/sap/opu/odata/sap/`.

5. Press *Save* and then *Deploy*.

4.5 Prerequisites for SAP Qualtrics Surveys Subscription

Configure the API Management to create a proxy URL (without any authentication) for the iFlow endpoint. This step is required to register webhook to the third-party survey provider.

i Note

As a prerequisite, you must have the subscription available for the SAP Cloud Platform API management. For more information, see [SAP Cloud Platform API Management](#).

Procedure

To configure the SAP Cloud Platform API management, perform the following:

1. In your web browser, open the SAP Cloud Platform cockpit.
2. In the provider account, select the *Services* section from the left-hand pane.
3. Select the *API Management Service*.
4. Select *Enable* option.
5. Choose *Access API Portal* link.
6. Choose *Develop*, and choose *Create*.
7. In the *Create API* dialog box, select *URL*, and enter the survey iFlow endpoint URL as follows:
[<https://%3Csurvey-iflow-url%3E?surveyprovider=%3Cqualtrics-mapping-iflow-endpoint>]
 To get the value of 'qualtrics-mapping-iflow-endpoint', see [Configure and Deploy 'Mapping Qualtrics Surveys Data for SAP Marketing Cloud' Integration Flow \[page 15\]](#).
8. Enter the *name*, *description*, and the *API base path*.
9. Click *Create*.
10. Save your API project.

11. Click *Policies* and choose *Edit*.
12. In the *Policy Editor*, select the *PreFlow* section from the left-hand pane.
13. To create a policy, click *Add for Basic Authentication* from the right-hand pane.
14. Enter a policy name and choose *Add*.
15. Follow the steps mentioned in *Basic Authentication* to enable the basic authentication to access the SAP Cloud Platform Integration HTTP survey iFlow endpoint.
16. Save and deploy the API.

4.6 Configure and Deploy 'Create Survey Subscription in Qualtrics' Integration Flow

You can use this integration flow to subscribe to the Qualtrics event 'activateSurvey.' This subscription establishes a connection between SAP Qualtrics and survey iFlow deployed on SAP Cloud Platform Integration.

Procedure

To configure the Create Survey Subscription in Qualtrics artifact, choose *Configure* in the *Actions* column for this artifact, and enter the following specifications:

1. Configure the *Receiver* tab as follows to get Qualtrics subscription:

Field Name	Entry Value
Receiver	GetQualtricsSubscription
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics--id>.qualtrics.com/API/v3/

2. Configure the *Receiver* tab as follows to post SAP Qualtrics subscription:

Field Name	Entry Value
Receiver	PostQualtricsSubscription
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

3. Configure the *More* tab as follows:

Field Name	Entry Value
Type	All Parameters

Field Name	Entry Value
PublicationURL	<pre><survey-iflow-url-for-qualtrics-event-subscription></pre> <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px; margin-top: 10px;"> <p>i Note</p> <p>Example</p> <pre><survey-iflow-url>?surveyprovider=<qualtrics-mapping-iflow-endpoint></pre> </div> <p>For the parameter <code><qualtrics-mapping-iflow-endpoint></code>, maintain the Qualtrics mapping iFlow endpoint, see the section. Configure and Deploy 'Mapping Qualtrics Surveys Data for SAP Marketing Cloud' Integration Flow [page 15]</p> <p>If Webhook accepts the publication URL with credentials, then you can directly use survey iFlow URL as mentioned in the preceding example.</p> <p>Otherwise, you can use the public iFlow URL that you created in SAP API Management (without authentication).</p> <p>For more information on creating a public iFlow URL, see Prerequisites for SAP Qualtrics Surveys Subscription [page 13].</p>

4. Press *Save* and then *Deploy*.

4.7 Configure and Deploy 'Mapping Qualtrics Surveys Data for SAP Marketing Cloud' Integration Flow

Use this integration flow to fetch the SAP Qualtrics Surveys metadata and response from the SAP Qualtrics Surveys system and transform it into SAP Marketing format. It also allows you to subscribe to the Qualtrics event 'completedResponse' after successful creation of the SAP Qualtrics Surveys metadata in SAP Marketing system.

How to get 'Mapping Qualtrics Survey Data for SAP Marketing' iFlow endpoint?

In the SAP Cloud Platform WEB UI, do the following:

1. Go to 'Mapping SAP Qualtrics Surveys Data for SAP Marketing' iFlow.
2. Click *ProcessDirect* of system Sender.
3. Go to the *Connection* tab page.
4. Copy the value of the field *Address* and use it as Qualtrics mapping iFlow endpoint.

Procedure

1. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	QualtricsMetadata
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

2. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	QualtricsResponse
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

3. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	QualtricsSurveyLanguages
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

4. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	QualtricsMetadataForResponse
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

5. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	PostQualtricsSubscription
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

6. Configure the *Receiver Tab* as follows:

Field Name	Entry Value
Receiver	PostQualtricsSubscription
Adapter Type	HTTP
QualtricsBaseURL	https://<your-qualtrics-account-id>.qualtrics.com/API/v3/

7. Configure the *More Tab* as follows:

Field Name	Entry Value
Type	All Parameters
Publication URL	<survey-iflow-url-for-qualtrics-event-subscription>

i Note

Example

```
https://<survey-iflow-url>?
surveyprovider=<qualtrics-mapping-
iflow-endpoint>
```

In the parameter <qualtrics-mapping-iflow-endpoint>, enter the Qualtrics mapping iFlow endpoint. For more information, see How to get 'Mapping SAP Qualtrics Surveys Data for SAP Marketing iFlow' endpoint section.

If Webhook accepts the publication URL with credentials, then you can directly use survey iFlow URL as mentioned in the preceding example.

Otherwise, you can use the public iFlow URL that at you created in SAP API Management (without authentication).

For more information on creating public iFlow URL, see [Prerequisites for SAP Qualtrics Surveys Subscription \[page 13\]](#).

8. Press *Save* and then *Deploy*.

5 Troubleshooting and Support

Should you encounter problems with the integration flow, there are several troubleshooting approaches you can take.

If the troubleshooting suggestions in the following topics don't help resolve your issues, you can open a customer ticket under the CEC-MKT-INT-SI component.

[Monitor Integration Flow Status Messages \[page 18\]](#)

View integration flow messages according to status.

[Errors While Posting Data into SAP Marketing \[page 18\]](#)

Find out what you can do when you come across errors while posting data into SAP Marketing system.

[Test Run the Qualtrics iFlow \[page 19\]](#)

Find out how you can test your iFlow after deployment of the Survey iFlow and Qualtrics iFlow.

5.1 Monitor Integration Flow Status Messages

View integration flow messages according to status.

Procedure

1. Launch the SAP Cloud Platform Integration tenant Web UI. For example, <https://your_SAP_Cloud_Integration_tenant_URL/itspaces>.
2. From the left-hand menu, select *Operations view*.
3. Under *Monitor Message Processing*, choose the tile with the message status that you want to analyze.
4. Select the integration flow you want to analyze.
5. In the *Log* tab, access the *Message Processing Log*.

5.2 Errors While Posting Data into SAP Marketing

Find out what you can do when you come across one of the following errors while posting data into SAP Marketing system:

- **Error:** Enter the ID or ID Origin for a survey response.

Reason: By default, ID or ID Origin is empty while posting survey data into SAP Marketing. This error appears when you're posting the survey response without *sap-outbound-id* value.

Solution: The value of *sap-outbound-id* is mandatory for this integration. While creating a survey in SAP Qualtrics, you must configure your survey by adding the value *sap-outbound-id*. To know how to configure this ID, see [Setting up SAP Qualtrics Surveys \[page 6\]](#).

- **Error:** 403 Forbidden

Reason: For your target SAP Marketing system, a cloud connector doesn't exist.

Solution: To resolve this error, perform the following:

1. Go to the iFlow *Create Survey Data in SAP Marketing Cloud* in SAP Cloud Platform Integration.
2. Navigate to Local Integration Process -> HTTP Request Sender-> OData Connector.
3. Choose the *Connection* tab page.
4. Enter the *Proxy Type* as internet.

5.3 Test Run the Qualtrics iFlow

Find out how you can test your iFlow after deploying the Survey iFlow and Qualtrics iFlow.

Ensure that either Webhook or event subscription is working while publishing the survey and responses from SAP Qualtrics Surveys are received.

To test your integration based on ID or ID Origin, perform the following steps:



1. Go to the *Mapping SAP Qualtrics Surveys Data in SAP Marketing Cloud* iFlow.
2. Go to the script `MapResponseToMktFormat.groovy` in Survey Response local integration process.
3. In line numbers 44 and 45, provide the value of ID (e-mail ID) and ID Origin (EMAIL).
4. Open a SAP Qualtrics Surveys web link in the browser, and submit a survey.
Verify if the response is submitted to SAP Marketing with the above ID and ID Origin.

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.

About the icons:

- Links with the icon : You are entering a Web site that is not hosted by SAP. By using such links, you agree (unless expressly stated otherwise in your agreements with SAP) to this:
 - The content of the linked-to site is not SAP documentation. You may not infer any product claims against SAP based on this information.
 - SAP does not agree or disagree with the content on the linked-to site, nor does SAP warrant the availability and correctness. SAP shall not be liable for any damages caused by the use of such content unless damages have been caused by SAP's gross negligence or willful misconduct.
- Links with the icon : You are leaving the documentation for that particular SAP product or service and are entering a SAP-hosted Web site. By using such links, you agree that (unless expressly stated otherwise in your agreements with SAP) you may not infer any product claims against SAP based on this information.

Videos Hosted on External Platforms

Some videos may point to third-party video hosting platforms. SAP cannot guarantee the future availability of videos stored on these platforms. Furthermore, any advertisements or other content hosted on these platforms (for example, suggested videos or by navigating to other videos hosted on the same site), are not within the control or responsibility of SAP.

Beta and Other Experimental Features

Experimental features are not part of the officially delivered scope that SAP guarantees for future releases. This means that experimental features may be changed by SAP at any time for any reason without notice. Experimental features are not for productive use. You may not demonstrate, test, examine, evaluate or otherwise use the experimental features in a live operating environment or with data that has not been sufficiently backed up.

The purpose of experimental features is to get feedback early on, allowing customers and partners to influence the future product accordingly. By providing your feedback (e.g. in the SAP Community), you accept that intellectual property rights of the contributions or derivative works shall remain the exclusive property of SAP.

Example Code

Any software coding and/or code snippets are examples. They are not for productive use. The example code is only intended to better explain and visualize the syntax and phrasing rules. SAP does not warrant the correctness and completeness of the example code. SAP shall not be liable for errors or damages caused by the use of example code unless damages have been caused by SAP's gross negligence or willful misconduct.

Bias-Free Language

SAP supports a culture of diversity and inclusion. Whenever possible, we use unbiased language in our documentation to refer to people of all cultures, ethnicities, genders, and abilities.

© 2021 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. The information contained herein may be changed without prior notice.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

Please see <https://www.sap.com/about/legal/trademark.html> for additional trademark information and notices.