Integration Guide
SAP Hybris Marketing On Premise
Document Version: 1702 – 2017-01-30

CUSTOMER

Integrating SAP Hybris Cloud for Customer with SAP Hybris Marketing using SAP Process Integration

Content

1 Integrating SAP Hybris Cloud for Customer with SAP Hybris Marketing using SAP Process Integration ... 4

2 Connect Phase: Check and Prepare PI System ... 8

2.1 Access PI System ... 8

2.2 Create SLD Configuration ... 8

2.3 Software Components ... 9

2.4 Import TPZ Package in ESR ... 9

2.5 Import Business System ... 10

3 Connect Phase: Set Up Secure Connection between Systems ... 11

3.1 Communication between SAP Hybris Marketing and PI ... 11

3.2 Communication from PI to Cloud Solution ... 11

3.3 Communication from Cloud Solution to PI ... 12

4 Configure Phase: Configure Integration in Cloud Solution ... 13

4.1 Activate SAP Hybris Marketing Integration in Scoping ... 13

4.2 Set Up Communication System ... 14

4.3 Configure Communication Arrangements (PI) ... 16

4.4 Export the Certificate ... 18

4.5 Change the Assignment of Categories ... 19

4.6 Determine Short Tenant ID ... 19

4.7 Perform Code List Mapping ... 20

5 Configure Phase: Configure Integration in SAP Hybris Marketing ... 22

5.1 Inbound: Assigning Role SAP_CEI_C4C_INTEGRATION to Technical User for OData Call ... 22

5.2 Outbound: Configuring Logical Ports ... 23

5.3 Configuring SSL for UI Navigation from SAP Hybris Marketing to SAP Hybris Cloud for Customer ... 23

6 Configure Phase: Configure Integration in PI System ... 24

6.1 Create View in Key Storage and Load Certificate into View ... 24

6.2 Import Root Certificate used to sign SAP Cloud for Customer Certificate ... 25

6.3 Create Configuration Scenarios ... 26

6.4 Configure Interfaces for SAP Hybris Integration ... 26

6.5 Maintain Communication Channel ... 28

6.6 Maintain Value Mapping ... 29

6.7 Activate Changes in Change List ... 32

7 Initial Load of Data ... 33

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

8 Monitor Phase: Monitor Message Flow Across Systems 34

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

1 Integrating SAP Hybris Cloud for Customer with SAP Hybris Marketing using SAP Process Integration

About this Document

This document describes how to integrateSAP Hybris Cloud for Customer with SAP Hybris Marketing using SAP Process Integration or Process Orchestration (PI/PO). The document is intended only as a guide to help you prepare and apply the steps necessary for successful integration. Before you start working through this document, ensure that you have downloaded the most recent version of this document available on SAP Service Marketplace.

> **Note**
>
> In this document, SAP Hybris Marketing system is represented as the SAP on-premise system.

For information on how to set up SAP Hybris Cloud for Customer, review the IT Setup Guide on SAP Service Marketplace. You can access any presentations, demos, YouTube videos, and how-to guides containing information on SAP Hybris Cloud for Customer on SAP Community Network (SCN).

What's New in SAP Hybris Marketing Integration

No significant changes to the solution in the current release.

Integration Scenario Overview

Master Data and Basic Replication

The accounts, contacts, and individual customers are replicated from SAP Hybris Cloud for Customer to SAP Hybris Marketing. Also, the leads activities and opportunities are replicated from SAP Hybris Cloud for Customer

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

to SAP Hybris Marketing.

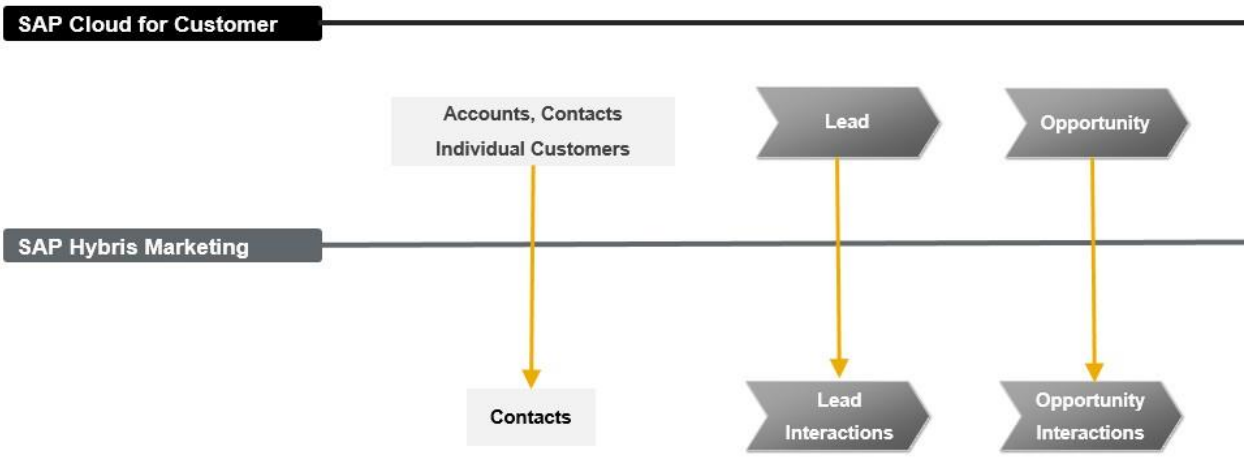


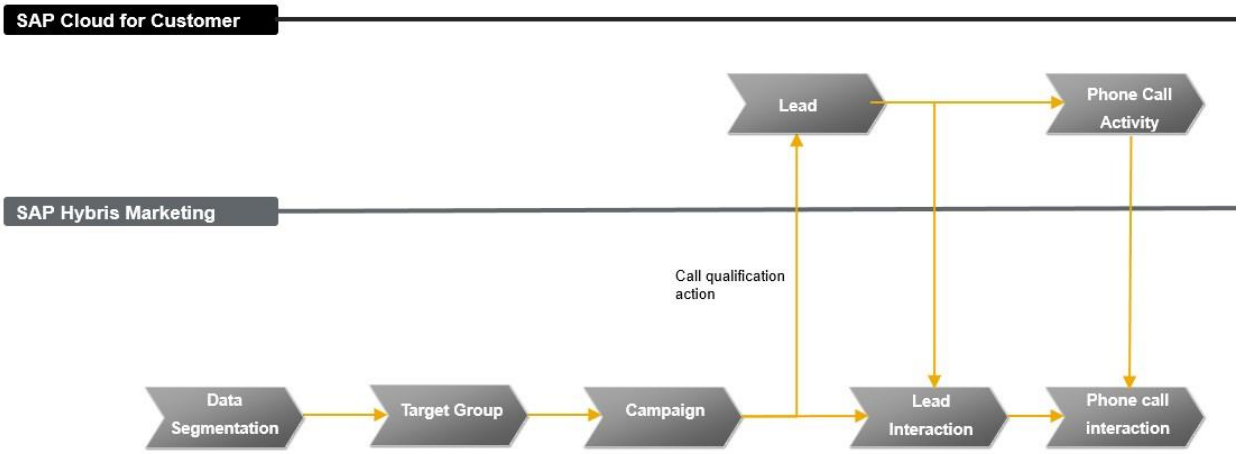
Table 1:

If you have replicated the following in SAP Hybris Cloud for Customer:	You can view them under Data Management work center, as the following in SAP Hybris Marketing:
Customer	Corporate account
Contact individual	Contact
Customer	Consumer

All the leads, opportunities, and activities created in SAP Hybris Cloud for Customer are replicated as interactions in SAP Hybris Marketing. These interactions can be used in segmentation. Both initial load and delta load is supported for business partners, whereas only delta load is supported for leads and opportunities.

Call Center Scenario

The scope of the scenario is to create a call center campaign in SAP Hybris Marketing, and execute the campaign in SAP Hybris Cloud for Customer.



© 2016 SAP SE or an SAP affiliate company. All rights reserved.

1. In SAP Hybris Marketing, create a target group of business partners for whom you want to run a campaign.
2. Create a campaign for the target group, and add an action, to trigger leads in SAP Hybris Cloud for Customer.
3. Release the campaign.
4. The system triggers the creation of leads in SAP Hybris Cloud for Customer. You can filter for the leads with the name of the campaign.
5. These leads are replicated as lead interactions in SAP Hybris Marketing.

> **Note**
>
> If there are any changes to these leads in SAP Hybris Cloud for Customer, then these changes are replicated back to SAP Hybris Marketing. The lead ID in SAP Hybris Cloud for Customer is sent to SAP Hybris Marketing system. Any status change to a lead in SAP Hybris Cloud for Customer is also replicated in SAP Hybris Marketing.

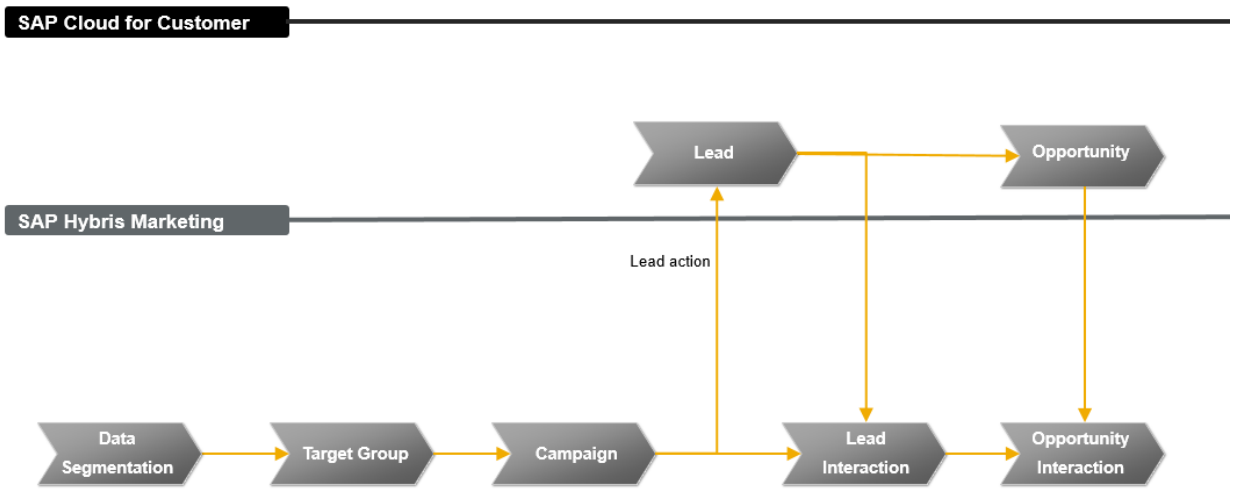
6. For each of the leads replicated in SAP Hybris Cloud for Customer, a phone call activity is manually created in SAP Hybris Cloud for Customer, and the system saves it as phone call interaction in SAP Hybris Marketing.

Lead Management Scenario

The scope of the scenario is similar to that of the call center scenario. Any lead that is converted into an opportunity further creates an opportunity interaction in SAP Hybris Marketing. These leads and opportunities in SAP Hybris Cloud for Customer additionally has information about the corresponding campaign from Hybris Marketing.

It is possible to use a campaign (Category “Automated Campaign”) or to use app *Transfer Leads*:

1. Go to app *Transfer Leads* and create a new lead transfer.
2. Enter a target group for which you want to create leads and an execution pattern.
3. Release and activate the lead transfer.



PUBLIC
© 2016 SAP SE or an SAP affiliate company. All rights reserved.

Target Audience

Typically, several functional/configuration experts are involved in the integration process. The following table outlines the roles and responsibilities during a standard integration.

Recommendation

SAP recommends that the integration team includes functional and configuration experts, integration developers (middleware resource), and administrator and networking expert for security and technical connectivity between the cloud and SAP Hybris Marketing landscape.

Table 2:

Role	Activity
SAP Hybris Marketing Consultant	Configuration activities in the SAP Hybris Marketing system
SAP Process Orchestration Consultant	Configuration activities in the SAP PI/PO
Cloud Administrator	Configuration activities in SAP Hybris Cloud for Customer.
System Administrator	Establishing a secure network connection between the SAP Hybris Marketing and SAP Hybris Cloud for Customer systems

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

2 Connect Phase: Check and Prepare PI System

Follow the instructions in this chapter only if you use SAP PI as the middleware to integrate SAP Hybris Cloud for Customer with SAP Hybris Marketing.

Prerequisites

You are using SAP Process Integration 7.30 or a higher release. To check the PI release, go to *System* > *Status* under SAP System Data, check the component version.

To use OData adapter in PI, see SAP Note 1964868.

2.1 Access PI System

In the likely case that your PI system resides in a demilitarized zone (DMZ), ask your IT department how to access the SAP Logon for the PI system. An example is via Windows Terminal Services (WTS). To access Java Swing client of the PI system, please follow the steps below:

1. Log on to your SAP PI system.
2. Go to transaction *SXMB_IFR*.
3. Here, you can access the PI clients for *Enterprise Service Repository*, *Integration Directory*, and *System Landscape Directory*.

2.2 Create SLD Configuration

Register the on-premise system in the System Landscape Directory. Systems are typically registered in SLD when they are initially configured. To check if your system is registered in SLD, do the following:

1. Login to the PI system.
2. Go to transaction *SXMB_IFR*. This opens the Integration directory in your web browser.
3. Click System > *Landscape Directory* > *Technical Systems*.
4. Register your on-premise system in PI, by creating a technical system of type AS ABAP for your on-premise system.For more information, see Creating New Web AS ABAP Technical Systems.
5. Under *ABAP System Details*, in the *Business Systems* tab, create the corresponding business system for the technical system. For more information, see Creating and Removing Business Systems.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

6. Register your Cloud solution in PI.
   1. Click *Home* > *Technical Systems*, and create a technical system of type Third Party.
   2. Create a corresponding business system for the Cloud solution.

2.3 Software Components

Download the listed components and the support packages from SAP Service Marketplace.

1. Go to SAP Service Marketplace.
2. Choose *Browse Download Catalog* > *SAP Cloud Solutions* > *SAP CLOUD CUSTOMER YMKT INT* > *SAP CLOUD CUST YMKT INT 1.0* > *Comprised Software Component Versions*.
3. Download the following components. Always ensure that you install the latest version and all the available support packages.

   Table 3:

Component	Description
XI Content SAP BYD > *XI Content SAP_BYD 2.40*	PI content that includes the interface definitions from SAP Hybris Cloud for Customer
XI Content C4CYMKT_IC > *XI Content C4CYMKT_IC 100*	PI content that includes the interface definitions for SAP Hybris Marketing
XI Content SAP Hybris Marketing > *XI Content SAP HYBRIS MARKETING 1.2*	PI content that includes the interface definitions for SAP Hybris Marketing

2.4 Import TPZ Package in ESR

1. There are software components that need to be imported into ESR. These packages contain all design objects required for PI configuration.
2. Save the TPZ files that are downloaded from SAP Service Marketplace to your local system.
3. From the PI homepage, open the **Enterprise Service Repository (ESR)**.
4. From ESR, choose *Tools* > *Import Design Objects*.
5. Select *Import from client*, as you are importing the package from your local machine.
6. Browse to the location where the TPZ file is saved on your local system, and upload this to ESR.
7. Repeat the steps from 4 – 6 and import all the software components
8. The imported software components become visible under *Design Objects* in ESR.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

2.5 Import Business System

1. On the PI browser page, open **Integration Builder**.
2. In the left-pane switch to *Object View*
3. In the left-hand frame, follow the path *Communication Component without Party* > *Business System* and from the context menu, select *Assign Business System*.
4. In the *Assign Business System* dialog box, click *Continue*.
5. Select the business system you registered in SLD. If you have not registered the SAP Hybris Cloud for Customer and SAP Hybris Marketing systems in SLD, then you can define them as business components in the Integration builder.
6. Ensure that the checkbox *Create Communication Channels for Following Adapters* is not selected.
7. Select *Finish*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

3 Connect Phase: Set Up Secure Connection between Systems

This chapter covers the requirements for configuring secure connection between SAP Hybris Cloud for Customer and SAP Hybris Marketing. In addition to the information in this chapter, you can refer to the Technical Connectivity guide for generic connectivity issues. Communication between the two systems must be secured by transport layer security (TLS) in both directions using the https protocol.

3.1 Communication between SAP Hybris Marketing and PI

The communication between the systems is through SOAP and ODATA services. OData services are used to communicate from SAP Middleware to SAP Hybris Marketing, and the rest of the communication is through SOAP services.

3.2 Communication from PI to Cloud Solution

As a prerequisite for communication from the SAP PI to the SAP Cloud solution, the SAP PI system must be able to connect to SAP Cloud via https protocol. In order to establish this https connection the following root certificates have to be installed in SAP PI:

1. Verizon Public SureServer CA G14-SHA2
2. Baltimore CyberTrust Root

Since we are using SOAP Adapter on SAP PI, these certificates should be imported by an administrator into *SAP NetWeaver Administrator (NWA)* > *Configuration* > *Folder "Trusted CA's"*

Procedure

1. Download the certificates:
   1. Go to the logon screen of your Cloud solution.
   2. Click on the security icon on the web browser s > *View certificate*
   3. Download the following certificates:
      - Verizon Public SureServer CA G14-SHA2
      - Baltimore CyberTrust Root
2. Import the downloaded certificates into the SAP PI JAVA Keystore.

PUBLIC
© 2016 SAP SE or an SAP affiliate company. All rights reserved.

.

1. Open up the SAP NetWeaver Administrator (NWA) on SAP PI.
2. Under the *Configuration* tab, click on *Certificates and Keys*
3. Select the view for Trusted CA's
4. Import the root certificates, using the entry type *X.509*.

3.3 Communication from Cloud Solution to PI

Access to your SAP NW PI system from the public Internet and from the hosted network, in which your SAP Hybris Cloud for Customer tenant is situated, must be secured by means of an application-level gateway in the corporate network DMZ, as described in the *SAP NetWeaver Security Guide*, under the section *Network and Communication Security*.

For more information, see the documentation about Network and Communication Security in the SAP Help Portal.

Path: *Help.sap.com* > *SAP NetWeaver* > *SAP NetWeaver Platform* > *SAP NetWeaver 7.3 including Enhancement Package 1* > *Security Information* > *English* > *Network and Communication Security*

The relevant subsections are as follows:

- *Using Firewall Systems for Access Control* > *Application-Level Gateways Provided by SAP* > *Web Dispatcher*
- Using Multiple Network Zones

> **Note**
>
> In the following sections of this guide, the application-level gateway is referred to as reverse proxy.

The server certificate used by the reverse proxy must be trusted by the Cloud tenant. Therefore, it must be signed by one of the certification authorities listed in the previous section.

> **Note**
>
> In the Cloud system, you can click the *Test Connection* in the *Communication Arrangement* wizard to check if the data is successfully reaching the SAP PI system.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

4 Configure Phase: Configure Integration in Cloud Solution

This chapter covers the requirements for setting up the communication system, configuring the communication arrangements, and exporting the certificate.

4.1 Activate SAP Hybris Marketing Integration in Scoping

Purpose

You must check the scope of your SAP Hybris Cloud for Customer tenant, and ensure that the required integration is active.

Prerequisites

You have:

- Received the e-mail notification from SAP Hybris Cloud for Customer with the logon details
- Created an administrator user for your SAP Hybris Cloud for Customer tenant.

Procedure

1. Logon to the Cloud solution as a system administrator in the Silverlight UI.
2. In the *Business Configuration* work center, choose the *Implementation Projects* view.
3. Select your implementation project and click *Edit Project Scope*.
4. In the scoping wizard, choose *Next* until the Scoping screen appears.
5. Expand the *Communication and Information Exchange* > *Integration with External Applications and Solutions* > select *Integration into Sales, Service, and Marketing Processes* nodes, and *Integration of Master Data* and click *Next*.
   The *Questions* screen displays only the selected scoping options.
6. Expand *Communication and Information Exchange* > *Integration with External Applications and Solutions* > *Integration of Master Data s* >

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

In the Group: Business Partner, select the following scoping option:
   - Do you want to replicate business partner data from your cloud solution to an external application or solution?
7. Now, select *Integration into Sales, Service, and Marketing Processes*.
   In the *Group: Activities* select the following scoping options:
   - Do you want to replicate activities from your cloud solution to an external application or solution?

   In the *Group: Leads* select the following scoping options:
   - Do you want to replicate leads from an external application or solution to your Cloud solution?
   - Do you want to replicate leads from your Cloud solution to an external system?
   - Do you want to replicate marketing leads from your cloud solution to an external system?

   In the *Group: Opportunities* select the following scoping options:
   - Do you want to replicate opportunities from your cloud solution to an external application or solution?
8. Click *Next*.
9. After you have carefully reviewed and confirmed your entries, click *Finish*.

> **Caution**
>
> Although you have now defined the scoping of the solution, you have not yet deployed it. To do so, confirm the milestone *Design Accepted* in the activity list of the project.
>
> 1. Go to *Business Configuration view* > *Open Activity List*.
> 2. Select *Confirm Milestone: Design Accepted*.
> 3. Select *Design Accepted* and click *Confirm*.

4.2 Set Up Communication System

Purpose

A communication system represents an external system for communication. A communication system is also the reference for ID mapping maintained within your Cloud solution. It must be representative of the on-premise client, even if the technical communication occurs using an SAP middleware.

To integrate your Cloud solution and an on-premise using an SAP middleware, you define the on-premise SAP Hybris Marketing client as the communication system. Note that all information except the host name is that of the on-premise system. Before a communication system can be used for data exchange, communication arrangements must be maintained.

Procedure

1. In the *Administrator* work center choose *Communication Systems*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

2. Click *New*.
3. On the *New Communication System* screen, in the *Basic Information* section, enter the following information.

Table 4:

Field	Entry
ID	ID or name of the on-premise system to be connected
SAP Business Suite	Select the checkbox.
Host Name	Host name of the SAP Middleware system.
System Access Type	Internet

4. (Optional): In the *Technical Contact* section, you can enter data of the contact person for this system.
5. Save your data.
6. In the *System Instances* section, enter the following data:

Table 5:

Field	Entry
ID	Displays the ID or name of your business instance of the on-premise system
Business System ID	Business System ID of the on-premise system, as described below
IDoc Logical System ID	IDoc logical system ID, as described below
SAP Client	Client of the on-premise system
Preferred Application Protocol	Web Service or Soap

> **Note**
>
> Ensure the on-premise system is registered in the SLD and ensure you have a business system defined for on-premise system. To determine the Business System ID and the IDoc Logical System ID values, proceed as follows:
>
> 1. In on-premise system, execute transaction *SE37*.
> 2. To determine the *Business System ID* and the *IDoc Logical System ID*, run the function modules LCR_GET_OWN_BUSINESS_SYSTEM and OWN_LOGICAL_SYSTEM_GET respectively.

7. Click *Actions* > *Set to Active*
8. Click *Save and Close*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

4.3 Configure Communication Arrangements (PI)

Purpose

You need to configure and activate the communication arrangements to enable the integration between an on-premise system and the Cloud solution. .

> **Note**
>
> The number of communication scenarios to be defined depends on the scoping you have performed.

Prerequisites

You know the following:

- Communication system ID as maintained in the *Set up Communication System* .
- Business system name for SAP Hybris Cloud for Customer.
- Service Interface path for each of the following communication scenarios:
  - Opportunity Replication to SAP Business Suite
  - Lead Replication from Business Suite
  - Lead Replication to Business Suite
  - Business Partner Replication to SAP Business Suite
  - Business Activity Replication to SAP Business Suite

  You can find the service interface paths in the INTEGRATION: Integration Flows spreadsheet on SAP Service Marketplace. You can filter on the source and target system combination of SAP Hybris Cloud for Customer and SAP Hybris Marketing.

Procedure

1. Go to *Administrator work center*. under *Integration*, click *Communication Arrangements*.
2. In the Communication Arrangements view, click *New*.
3. In the *Select Scenario* step, select the *You can find the service interface paths in the INTEGRATION: Integrationcommunication scenario Lead Replication from SAP Business Suite* and click *Next*.
4. In the *Define Business Data* step, do the following and click *Next*:
   1. Choose the system instance ID of the SAP Hybris Marketing system.
   2. Choose code list mapping as SAP On-Premise Integration. To create multiple communication arrangements go to *Administrator* > *Communication Arrangement for On-Premise Integration* common task.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

5. In the *Define Technical Data* step, under *Inbound Communication*: *Basic Settings*, do the following:
    1. Select the *Application Protocol* as *Web Service*.
    2. Select *Authentication Method* as *SSL Client Certificate*.
    3. Click *Edit Credentials*.
    4. On the *Certificate* tab, do one of the following: *Select Communication System* step, enter *business data*.
        - Upload the public key certificate that has been provided by your communication partner as part of provisioning. You can also receive it on creating an incident in the component LOD-PI. To upload a *PKCS#12* file:
            1. Choose *Certificate*.
            2. Click *Upload Certificate* and choose the relevant certificate.
            3. Click *OK*.
        - If the communication partner cannot provide a certificate, then create a *PKCS#12* key pair file, which is password encrypted and contains a public key certificate and a private key, and provide the credentials to your communication partner. To create a *PKCS#12* key pair file:
            1. Choose *Certificate*.
            2. Click *Create Download Key Pair*.
            3. Enter a name for the *PKCS#12* file and save it.
            4. Define a password for the *PKCS#12* file and click *OK*. The certificate details will be displayed.
            5. Click *OK*.
6. In the *Define Technical Data* step, under *Outbound Communication*: *Basic Settings*, do the following:
    1. Select the *Application Protocol* as *Web Service*.
    2. Select *Authentication Method* as *SSL Client Certificate*
    3. In the *Certificate Download*.
    4. Choose a location to save the certificate, enter a file name, and click *Save*.

    > **Note**
    >
    > The certificate will be downloaded with the specified name and in the chosen folder. You need to export this certificate that signs the SAP Hybris Cloud for Customer x.509 certificate.

7. Click *Edit Advanced Settings*.
8. Select the *Confirm Lead Replication to SAP Business Suite service* and enter the service path.
9. Uncheck the service *Notify Lead Status Change to the SAP Business Suite*.
10. Click *Next*. Review the content and click *Finish*.

Repeat the steps for all the communication scenarios listed below and select/unselect the checkbox for the services as described:

- Communication Scenario Business Partner Replication to SAP Business Suite
    - Select Replicate Business Partner to SAP Business Suite
    - Select Replicate Business Partner Relationship to SAP Business Suite
    - Unselect Replicate Business Partner Direct Responsibility to SAP Business Suite
    - Unselect Confirm Business Partner Relationship Replication from SAP Business Suite
    - Unselect Confirm Business Partner Replication from SAP Business Suite
- Communication scenario Lead Replication from SAP Business Suite
    - Select Replicate Lead with Business Partner Address Information from SAP Business Suite
    - Select Confirm Lead Replication to SAP Business Suite
    - Unselect Replicate Lead Attachment from SAP Business Suite

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

    - Unselect Replicate Leads from the SAP Business Suite
    - Unselect Notify Lead Status Change to the SAP Business Suite
- Communication scenario Lead Replication to SAP Business Suite
    - Select Replicate Marketing Lead to SAP Business Suite
    - Unselect Replicate Lead Attachment to SAP Business Suite
    - Unselect Replicate Lead to SAP Business Suite
    - Unselect Confirm Lead Replication from SAP Business Suite
- Communication scenario Opportunity Replication to SAP Business Suite
  With 1608, a new, bulk enabled interface was introduced. New customers are recommended to use this interface. Existing customers should consider switching to the new interface, especially if they are performing an initial load or other mass operation, as this should improve the performance over single message processing. You should only have one of the interfaces activated.
    - Select Replicate Bulk Opportunity to SAP Business Suite
    - **OR** Select Replicate Opportunity to SAP Business Suite
    - Unselect the other Opportunity Interface
    - Unselect Replicate Opportunity Attachment Folder from SAP Business Suite
- Communication scenario Business Activity Replication to SAP Business Suite
    - Select Replicate Business Activity to SAP Business Suite
    - Unselect Confirm Business Activity Replication from SAP Business Suite
- Communication scenario Business Activity Replication from SAP Business Suite
    - Select Replicate Business Activity from SAP Business Suite

4.4 Export the Certificate

While configuring outbound communication credentials in a communication arrangement, you have downloaded the x.509 certificate that is used to sign the SAP Hybris Cloud for Customer x.509 certificate.

1. Go to the folder that has the downloaded certificate.
2. Double-click on it to open the certificate.
3. In the *Certification Path* tab, select the root certificate.
4. Click *View Certificate* to view the certificate.
5. In the *Details* tab, click *Copy to File*, and click *Next*.
6. Select the option *Base-64 encoded X.509 (.CER)* and click *Next*.
7. Specify the location to save the file and click *Next*.
8. Click *Finish*.

This file needs to be imported into the middleware.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

4.5 Change the Assignment of Categories

1. In the *Business Configuration* work center, choose the *Implementation Projects* view.
2. Select the project and click *Open Activity List*.
3. Choose *Fine-tune* tab.
4. Search for the *activity Leads* and click on it.

   > **Note**
   >
   > If you do not find the activity, choose *filter All Activities*, search for activity Leads, mark the corresponding line and click on *Add to Project*.

5. Click *Assign Categories*
6. Click *Add* to add the category *0002 – Telephone Call*
7. Save your entries.

4.6 Determine Short Tenant ID

Purpose

The tenant ID is required for several upcoming configuration steps in both SAP Hybris Marketing system and the SAP middleware such as NetWeaver Process Integration. We recommend that you note it at this point in your configuration.

Procedure

1. In the *Administrator* work center, choose *Communication Arrangements*.
2. Select a communication arrangement that you have created in, for example, *Business Partner Replication from External System*.
3. Under the *My Communication Data* section, note the ID under *My System*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

4.7 Perform Code List Mapping

Purpose

The codes used in Hybris Marketing and Cloud for Customer are not always the same. Therefore, they have to be mapped in Cloud for Customer using the Code List Mapping Tool.

Upload Code List Mapping

1. Go to 2356022 in the SAP Service Marketplace.
2. Download the code list mapping file attached in the note to your local computer.
3. Upload the file to SAP Hybris Cloud for Customer in the next steps. To do this, login to the SAP Hybris Cloud for Customer solution and perform the following steps:
   1. Under *Business Configuration* > *Upload Code List* > , select *Upload Code List*.
   2. Select the code list mapping group `OnPremise Integration`.
   3. Choose *Upload* and select the file that you have downloaded under step and modified.

   Check the status of the code list mapping in the Application Log

   1. Under *Business Configuration* > *Upload Code List* > *Application Log* , click on the required Application Log ID. The log displays information under the following tabs:
      - **General**: Displays a high-level summary and administrative data for the job
      - **Settings**: Displays settings selected during an upload
      - **Results**: Displays the detailed results of the job including a list of detailed message descriptions, and the nature of the message

> **Note**
>
> You can also export the information on the tabs to Microsoft Excel®. To do this, click on *Export to Microsoft Excel*, and select the tab from which you want to export the data.

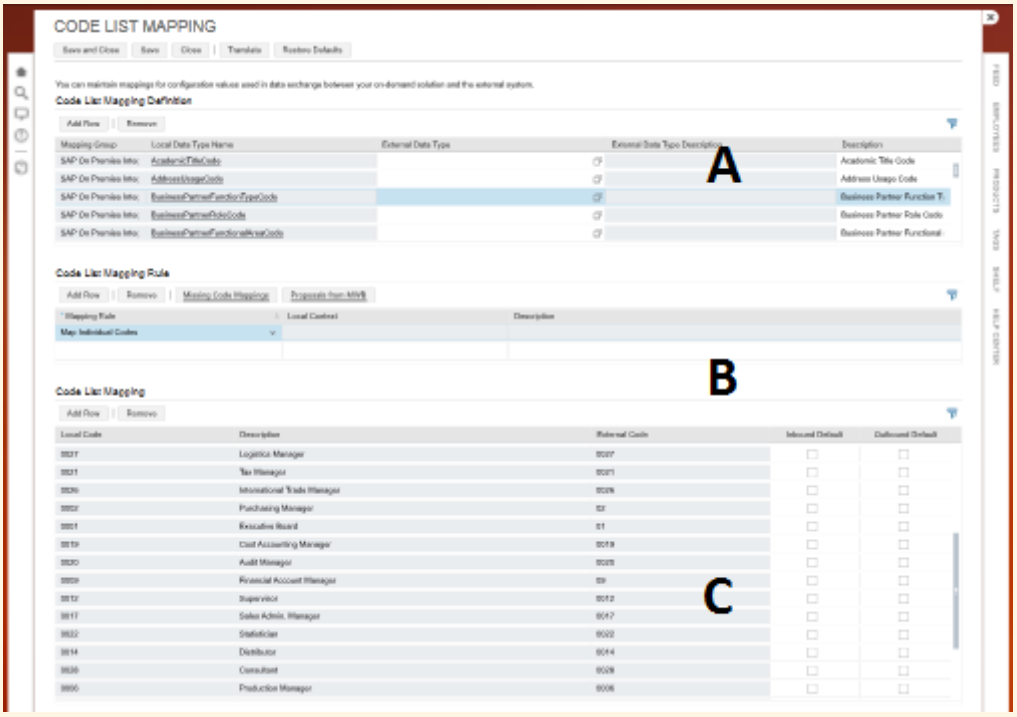
View Code List Mapping

1. In the *Business Configuration* work center, choose the *Implementation Projects* view.
2. Select the project and click *Open Activity List*.
3. Choose tab *Fine-Tune* and search for the activity *Code List Mapping for Integration with External Applications and Solutions* and double click on it.
4. Choose *Maintain Code List Mapping*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

Note

The code list mapping UI contains the following three tables, which are hierarchical:



1. **Local Data Type**: This shows the data types available in the Cloud for Customer system relevant for Code List Mapping. Select the data type for which you want to view the Code List Mapping.
2. **Code List Mapping Rule**: Here we set the code list mapping rules for the data type selected in the above table. There are two possible rules:
   - **Local and Remote codes are equal**: This rule can be used when the values in the Cloud for Customer system and the ones in the Hybris Marketing system are the same. If this rule is selected, there is no need to do any mapping for the code values.
   - **Map Individual values**: This rule can be used when the codes in the Cloud for Customer system and the ones in the S/4 HANA system are different. If this rule is selected, the individual code values have to be mapped.

Code List mapping: Map each code value (only the required ones) for the local data type from Cloud for Customer system with the corresponding values in the Hybris Marketing system.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

5 Configure Phase: Configure Integration in SAP Hybris Marketing

Prerequisites

You have:

- Performed all steps outlined in the Installation Guide.
- Execute scenario *Essentials* in the `Technical Configuration Cockpit` as described in the Installation Guide.
- Setup SSL Connection between SAP Hybris Marketing and SAP Middleware

To perform all the configuration activities in SAP Hybris Marketing, login with the technical user. For more information, see *User for Application Setup* in the Installation Guide.

> **Note**
>
> The communication between PI and SAP Hybris Marketing described in this document is based on Basic Authorization. To setup certificate-based authorization, please refer to SAP NetWeaver Security Guide.

5.2 Inbound: Assigning Role SAP_CEI_C4C_INTEGRATION to Technical User for OData Call

For Inbound calls, the OData Service *CUAN_BUSINESS_DOCUMENT_IMP_SRV* and *CUAN_BUSINESS_PARTNER_IMP_SRV* are called from the respective middleware system (SAP PI or SAP HCI as the case may be) system. These OData services require a technical user C4CIMPORT in SAP Hybris Marketing with the corresponding authorization.

> **Note**
>
> Note this user name and password as they are later needed for setting up your SAP Middleware system (PI or HCI) – note user name and password.

1. Create user *C4CIMPORT* using transaction *SU01* (user type SYSTEM) and maintain a password.
2. Copy the single role *SAP_CEI_C4C_INTEGRATION* using transaction *PFCG*.
3. Assign the newly copied role to user C4CIMPORT.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

5.3 Outbound: Configuring Logical Ports

The logical ports for the Outbound Web Services are configured via the technical configuration in SAP Hybris Marketing. This is done by executing the scenario *Lead Management with SAP Hybris Cloud for Customer Integration* in the Technical Configuration Cockpit. See Installation Guide for more information.

To check if the logical ports have been successfully created, please go to transaction SOAMANAGER and check Consumer proxys CO_CUAN_PRX_ACTIVITY_REPL_OUT and CO_CUAN_PRX_LEAD_REPL_REQUEST.

To create the logical ports with scenario *Lead Management with Cloud for Customer Integration*, you need to specify the technical user of your PI Or HCI system, if you are using

- SAP PI system as the middleware, then use the PI system user ID and password for this configuration.
- SAP HCI system as the middleware, then specify a technical user for your HCI system. This is typically, the p-user (SCN user) or s-user (SMP user). The role `ESBmessaging.send` should be assigned to this user. See the **Overview of Authorization Groups in SAP HCI**.

See Configure Phase: Configure Integration in SAP Hybris Marketing [page 22]

> **Note**
>
> Scenario *Lead Management with Cloud for Customer Integration* needs the URL Access Paths of the following services:
>
> - `LeadReplicationRequest_Out`
> - `ActivityReplicationOut`
>
> **PI system**: The URL parameter can be retrieved from the Web Services Description Language (WSDL) of the Sender Agreement, which is configured in the PI system.
>
> **HCI system**: In the HCI Web UI, navigate to *Monitor* and click on the *Started* tile. Search for the integration flow e.g. **Replicate Lead with Business Partner Address Information from SAP Business Suite**. Click on status *Started*. The second part of the listed endpoint starting with /cxf/ is the required service endpoint.
> Example: **/cxf/yMKT/C4C/LeadReplicationRequest_Out** For the parameter "Host Name of HCI" you need to use the HCI runtime URL (Chapter 5.1).

5.4 Configuring SSL for UI Navigation from SAP Hybris Marketing to SAP Hybris Cloud for Customer

To set up SSL, you need the server root certificate from your SAP Hybris Cloud for Customer system and have to import it.

1. In your SAP Hybris Marketing system, call up transaction *STRUST*. In the navigation section, go to folder *PSE SSL client SSL Client (Anonymous)*.
2. From the *Certificate* menu, choose *Import* (or choose the corresponding push button in the Certificate section).
3. Import the server root certificate and press "*add to the certificate list*".

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

6 Configure Phase: Configure Integration in PI System

Purpose

Configure integration between SAP Hybris Marketing and SAP Hybris Cloud for Customer using SAP PI as the middleware:

- *SAP Hybris Marketing* > *Cloud for Customer*
  - Replication of Lean Leads from Hybris Marketing into Cloud4Customer
- *Cloud for Customer* > *SAP Hybris Marketing*
  - Replicate Activities from C4C to yMKT
  - Replicate Opportunities from C4C to yMKT
  - Replicate Business Partner from C4C to yMKT
  - Replicate Business Partner Relationship from C4C to yMKT
  - Replicate Lean Leads from C4C to yMKT

6.1 Create View in Key Storage and Load Certificate into View

Purpose

In case you exchange a certificate with the Cloud solution, this certificate must be signed by one of the certification authorities listed in the section *Secure Connection: Supported Certification Authorities* under Set Up Secure Connection Between Systems [page 11].

If you generated the certificate, while specifying inbound communication credentials in a communication arrangement, this should be imported into a view in a key storage.

Prerequisites

The certificate file is in the Base64 format.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

> **Note**
>
> Outbound communication from PI is always managed by a PI administration in NetWeaver Administrator.

Procedure

1. Logon to NetWeaver Administrator (NWA) of the SAP PI system.
2. In the *Configuration* tab, click *Certificate and Keys*.
3. In the *Key Storage* tab, click *Add View*.
4. Enter a name and description, and click *Create*.
5. Select the view you just created, and click *Import Entry*.
6. In the Entry Import dialog, do the following:
   1. Select the entry type as *PKCS#12 Key Pair*.
   2. Select the file that you created as the key pair in SAP Cloud for Customer.
   3. Enter the corresponding password.
   4. Click *Import*.

6.2 Import Root Certificate used to sign SAP Cloud for Customer Certificate

Depending of the configuration of the PI system and which is the PSE provider, the location on where the root certificate has to be imported change. This is determined by the parameter ssl/pse_provider.

If the parameter ssl/pse_provider is:

- ABAP, load the certificate into SSL Server standard for ABAP
- JAVA or SAP PI AEX (JAVA only), load certificate in ICM_SSL_<instanceID>_<port> view for JAVA

Prerequisites

You know the path to the root certificate file that was exported. For more information, see Export the Certificate [page 18].

Procedure

Load certificate into SSL Server standard for ABAP stack

1. Using SAPGUI, logon to the ABAP stack of the SAP PI system, and open transaction *STRUST*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

2. Open *SSL server standard*, and click the import button under *Certificate*.
3. Select the location of the root certificate and click *Continue*.
4. Under *Certificate*, click *Add to certificate List* and click *Save*.

Load certificate in ICM_SSL_<instanceID>_<port> view for JAVA-only stack

1. Logon to NetWeaver Administrator (NWA) of the SAP PI system.
2. In the *Configuration* tab, click *Certificate and Keys*.
3. Under *Key Storage Views*, check if the root certificate, say SAPPassportCA, used to sign the SAP Hybris Cloud for Customer x.509 certificate is already imported into the ICM_SSL_<instanceID>_<port> view within the key storage.
4. If the root certificate is not there, it can be imported by clicking *Import Entry* from the *View Entries* tab.
5. Select the entry type as *X.509 Certificate*, and then the location of the saved file and click *Import*.
6. Set the value for VCLIENT to 1 on the profile parameter icm/server_port_<xx> for the corresponding SSL port used. For example: icm/server_port_5 = PROT-

6.3 Create Configuration Scenarios

You have imported the software component C4CYMKT_IC 100 into the *Enterprise Service Repository* (Integration Repository) of your PI system (refer to section Import TPZ Package in ESR).

Procedure

1. On the PI browser page, open *Integration Builder*.
2. Switch to *Configuration Scenario View*.
3. From the menu, select *Object* > *New* , to pop-up a dialog box containing the list of Integration Builder objects
4. On the left side of the dialog box select *Configuration Scenario* under the section *Administration*
5. Enter the *Configuration Scenario* as name as <prefix>_COD_CUAN_MarketingDataSync. Prefix e.g. C4C_CRD800_COD_CRM_MasterdataReplication, whereas C4C is the Cloud solution and CRD800 is the SAP Hybris Marketing system.
6. Click *Create* and *Save* to save the configuration.

6.4 Configure Interfaces for SAP Hybris Integration

Procedure

1. On the PI browser page, open *Integration Builder*.
2. Switch to *Configuration Scenario* View

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

3. On the left pane double click and open the configuration scenario *<Prefix>_ COD_CUAN_MarketingDataSync* and switch to the edit mode.
4. On the *ES Repository Model* tab click on the button *Model Configurator*. The *Model Configurator* with create all configuration objects that are required to establish the connection between the Cloud solution and SAP Hybris Marketing.
5. Click on the button *Select Component View*to list all the available component view and then apply the component view *COD_CUAN_MarketingDataSync*.
6. Select the swim lane SAP Hybris Cloud for Customer, or select *Assign Component*.
7. In the lower part of the screen, on the *Business System Components* for *A2A* tab, use the input help of the *Communication Component* field to add the Cloud solution you previously defined (Use the business system you defined while creating an SLD configuration).

> **Note**
>
> While selecting the *Communication Component* from the input help, set the *Communication Component Selection* option as *All Business System Components* under the *Search Criteria*.

8. Repeat steps 6 and 7 for the SAP Hybris swim lane to add *SAP Hybris* system as the *Communication Component*.
9. Select *Configure Connections*.
10. In the lower part of the screen, on the *Connections* from *Component Assignment* tab, highlight the *Communication Channel* field for the *Sender Business System Components*.
11. Select *Create Communication Channel with Template*.
12. In the *Create Communication Channe*l dialog box, select *Continue* to go to the next screen that shows the pre-populated communication channel template. Click *Continue* to proceed to the next step.
13. The system proposes a name for the *Communication Channel* and shows the respective *Communication Component*. To confirm the proposal and create the communication channel click *Finish* button.
14. A confirmation will be displayed informing the successfully creation of the communication channel, click *Close* button to proceed further.
15. Highlight the *Communication Channel* field for the *Receiver Business System Components* and repeat the steps 11 to 14 to create the receiver communication channel.
16. Repeat the steps 10 to 15 for all other connections. (Select *Next Connection* to proceed from one connection to the next until communication channels are created for all the connections.)

> **Note**
>
> If a communication channel has already been created and is used a second time, then you can use the input help to select the communication channel.

17. Select *Create Configuration Objects*.
18. In the *Create Configuration Objects* dialog box, select the *Generation* radio button, then de-select the *Activate Changes* checkbox.
19. Select *Start*.
20. Close the log dialog box.
21. In the *Model Configurator*, select *Apply*.

> **Note**
>
> On the configuration scenario screen select *Objects* tab to view the list of objects that are generated.

PUBLIC
© 2016 SAP SE or an SAP affiliate company. All rights reserved.

22. Save the configuration scenario.

6.5 Maintain Communication Channel

Procedure

1. On the PI browser page, open *Integration Builder*.
2. In the left-hand frame switch to *Object View*.
3. In the left-hand frame, follow the path *Communication Component without Party* > *Business System* > *<Cloud Solution Business System (COD)>* > *Communication Channel*, to display the communication channel list.
4. Double click and open the receiver SOAP communication channel (normally receiver communication channel ends with suffix _Receive) one after the other to maintain the Target URL
5. On the *Display Communication Channel* screen, switch to *Edit* mode.
6. For SOAP Adapter, the Target URL will be pre-populated, however the hostname and port needs to be adjusted to the hostname and port of your cloud solution. Refer to the Appendix section for the list of communication channels and their respective Target URL.

   > **Note**
   >
   > The target end points must be maintained the following format:
   >
   > For Cloud solution https://<Cloud system host>:<port>/sap/bc/srt/scs/sap/<service>
   >
   > For an on-premise system https://<on-premise system host>:<port>/sap/bc/srt/scs/sap/<service> ?sap-client=<client>

7. To configure either user or certificate authentication, select one of the following checkboxes:
   - Configure User Authentication
   - Configure Certificate Authentication. Maintain the following:
     - Keystore Entry – Select the keypair that was created while .
     - Keystore View – Select the view that you created in NWA key store.

   > **Note**
   >
   > For user authentication, enter the user from the Cloud solution. While creating an inbound communication arrangement the cloud solution provides the communication user. If the communication arrangement is not done yet, the communication channel can be modified later after completing the communication arrangement in the cloud solution.

8. To configure proxy select the checkbox Configure Proxy and enter the proxy host and the port. Select the *Configure Proxy User Authentication* if required and maintain the user name and password.
9. Save the changes and close the communication channel
10. Repeat the steps 4 – 9 to configure the Target URL for all receiver SOAP communication channel..
11. In the left-hand frame, follow the path *Communication Component without Party* > *Business System* > *<on-premise system>* > *Communication Channel*, to display the communication channel list.
12. If there are any receiver SOAP communication channels, then repeat steps 4 to 9.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

Table 6: Example of Receiver SOAP communication channel configuration

	User Entry	Example
For SOAP Receiver Channel	Add the HTTP connection to the reverse proxy that is installed by the Cloud solution provider and the pertaining port in front of the default entry. Do not delete the default entry of this path.	The URL for the Communication Channel HYS_SOAP_CallQualification_Recieve should conform to the following format: https://<hostname>:<port > /sap/bc/srt/scs/sap/leanleadreplicationinitiatedby?MessageId

6.6 Maintain Value Mapping

The value mappings listed in the table below needs to be created in the Integration Builder of the PI system to enable integration between SAP Hybris Cloud for Customer and SAP Hybris Marketing using SAP PI.

Procedure

1. On the PI browser page, open Integration Builder.
2. Go to menu path *Tools* > *Value Mapping*.
3. Enter the *Source Agency*, *Source Schema*, *Target Agency* and *Target Schema*.
4. Click on the *Display* button to open up the *Value Mapping* maintenance screen.
5. Switch to *Edit* mode to maintain the following value mapping.

   Mapping CUAN-Sender System > *COD-BusinessSystem (Tenant ID)*

   Table 7:

CUAN-LogicalSystemID	COD-BusinessSystemID
This is the Logical System ID of your SAP Hybris Marketing system in the Communication System in SAP Hybris Cloud for Customer. It can also be derived by executing the function module OWN_LOGICAL_SYSTEM_GET in the SAP Hybris Marketing system.	This is the short tenant ID of the SAP Hybris Cloud for Customer system. For more information, see Determine Short Tenant ID [page 19].

   Mapping COD Business System > *CUAN System ID*

   Table 8:

COD-BusinessSystemID	CUAN-SystemID

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

This is the short tenant ID of the SAP Hybris Cloud for Customer system. For more information, see Determine Short Tenant ID [page 19]	This is a system ID that is used as a namespace inside of the SAP Hybris Marketing System for ID originating from external systems.

Mapping CUAN Origin > COD Scheme ID

Table 9:

CUAN-Origin	COD-SchemeID
This is an identifier describing the root origin of an ID. Values are for example SAP_ERP_CUSTOMER or SAP_CRM_BUPA. This value is set/provided by SAP Hybris Marketing depending on the system from which Business Partners are loaded.	This is the number identifying the entity represented by the given ID (for example, 888 representing "Business Partner"). By default, it is set to 888.

Mapping CUAN Origin > COD External System ID

Table 10:

CUAN-Origin	COD-ExternalSystemID
This is an identifier describing the root origin of an ID. Values are for example SAP_ERP_CUSTOMER or SAP_CRM_BUPA. This value is set/provided by SAP Hybris Marketing depending on the system from which Business Partners are loaded.	This is the system ID from which the ID originated. This must be identical to what is configured in the Communication Arrangement for the given system.

Mapping CUAN Origin > COD Communicaiton Language

Table 11:

CUAN-LogicalSystem	COD-CommunicationLanguage
This is the Logical System ID of your SAP Hybris Marketing system in the Communication System in SAP Hybris Cloud for Customer. It can also be derived by executing the function module OWN_LOGICAL_SYSTEM_GET in the SAP Hybris Marketing system.	This is the communication language used in SAP Hybris Cloud for Customer. Whatever language is given in this Value Mapping also needs to be added in the fine tuning for Communication Language for Data Replication. By default, it is set to EN.

Default Mappings

Table 12:

CUAN-Origin_Account	COD-Origin_Account

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

This is the indicator whether the value in COD_DEFAULTS-Origin_Account should be used as primary or secondary choice to pass on the ID. Two values must be defined: First_Origin and Second_Origin.	Defines the origin from which the ID is passed on from SAP Hybris Marketing to SAP Hybris Cloud for Customer. If no value is given for First_Origin, the ID of Second_Origin will be used. If this is also not given, origin SAP_HYB-RIS_MKT_IC (SAP Hybris Marketing ID) will be used. Default values: First_Origin: SAP_CRM_BUPA Second_Origin: SAP_ERP_COMPANY

Table 13:

CUAN-Origin_Contact	COD-Origin_Contact
This is the indicator whether the value in COD_DEFAULTS-Origin_Contact should be used as primary or secondary choice to pass on the ID. Two values must be defined: First_Origin and Second_Origin.	Defines the origin from which the ID is passed on from SAP Hybris Marketing to SAP Hybris Cloud for Customer. If no value is given for First_Origin, the ID of Second_Origin will be used. If this is also not given, origin SAP_HYB-RIS_MKT_IC (SAP Hybris Marketing ID) will be used. Default values: First_Origin: SAP_CRM_BUPA Second_Origin: SAP_ERP_CONTACT

Table 14:

CUAN-Origin_Individual_Customer	COD-Origin_Individual_Customer
This is the indicator whether the value in COD_DEFAULTS-Origin_Individual_Customer should be used as primary or secondary choice to pass on the ID. Two values must be defined: First_Origin and Second_Origin.	Defines the origin from which the ID is passed on from SAP Hybris Marketing to SAP Hybris Cloud for Customer. If no value is given for First_Origin, the ID of Second_Origin will be used. If this is also not given, origin SAP_HYB-RIS_MKT_IC (SAP Hybris Marketing ID) will be used. Default values: First_Origin: SAP_CRM_BUPA Second_Origin: SAP_ERP_CUSTOMER

Mapping CUAN > CustomerTransactionDocumentOriginTypeCode > CustomerTransactionDocumentOriginTypeCode

Table 15:

CUAN-CustomerTransactionDocumentOriginTypeCode	COD-CustomerTransactionDocumentOriginTypeCode
This is set to CALLQUAL in the PI mapping.	This is defaulted to 003 campaign. You can map any value that has been defined in the BC fine tuning for Leads in Cloud.

Mapping CUAN > COD- LeadGroupCode

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

Table 16:

CUAN-LeadGroupCode	COD-LeadGroupCode
This is set to CALLQUAL in the PI mapping.	You can map any value that has been defined in the BC fine tuning for Leads in Cloud.

6. Save the value mapping.
7. Repeat steps 2 – 6 for all the agencies and schemes.

6.7 Activate Changes in Change List

Procedure

1. In the **Integration Builder**, select *Change Lists* tab.
2. Select your change list. From the context menu choose *Activate*.

> **Note**
>
> If you want to test the end-to-end communication of a selected scenario, do the following during the configure phase:

1. Activate the scoping
2. Create a communication system
3. Configure the selected communication arrangement
4. Export the certificate used to sign the SAP Hybris Cloud for Customer x.509 certificate
5. Import the root certificate used to sign the SAP Hybris Cloud for Customer certificate
6. Load certificate in ICM_SSL_<instanceID>_<port> view for JAVA
7. Maintain communication channel
8. Adjust routing conditions
9. Maintain value mapping
10. Activate changes in change list
11. Perform code list mapping

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

7 Initial Load of Data

You can load Business Partners and Business Partner Relationships, Opportunities, Leads and Activities from SAP Hybris Cloud for Customer to. You can view these business partners in SAP Hybris Marketing system under the Data Management work center. You must load business partners before you load the business partner relationships, Opportunities, Leads and Activities

Table 17:

SAP Hybris Cloud for Customer	Is visible in the Data Management work center as
Customer	Corporate Account
Contact	Contact
Individual Customer	Consumer
Opportunities	Contact Factsheet of Contact/Corporate Account - Interactions
Leads	Contact Factsheet of Contact/Corporate Account - Interactions
Activities	Contact Factsheet of Contact/Corporate Account - Interactions

Note

Only specific activities (visits and phone calls) are replicated to SAP S/4 HANA.

1. In the Administrator work center, choose Extract Data to External System.
2. Click on the object you want to load.
3. Specify the selection criteria of the object you want to load to SAP S/4 HANA system.

   Table 18:

Business System ID	Select the business system ID of the SAP S/4 HANA system
Package Size	Represents the number of business partners that will be transferred in one bulk message. 100 is the default for optimal performance

4. If you want to check the number of object instances that will be loaded to the target system, before triggering the data load, click Test Run. No messages will be initiated to transfer data. Once you decide to initiate the transfer, uncheck the option.
5. Click *Execute*.

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

8 Monitor Phase: Monitor Message Flow Across Systems

Messages are exchanged between the SAP on-premise, SAP Middleware and SAP Hybris Cloud for Customer systems, during data load and go-live phases. These messages need to be monitored for following reasons:

- Identify incorrect data in messages
- Narrow down on the component where the message has failed
- Check connectivity issues between the components

For detailed information on how to monitor data across these systems, see Monitoring Guide.For information on how to monitor messages in SAP Hybris Marketing, see Managing Integration Errors

PUBLIC
© 2016 SAP SE or an SAP affiliate company. All rights reserved.

Important Disclaimers and Legal Information

Coding Samples

Any software coding and/or code lines / strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, unless damages were caused by SAP intentionally or by SAP's gross negligence.

Accessibility

The information contained in the SAP documentation represents SAP's current view of accessibility criteria as of the date of publication; it is in no way intended to be a binding guideline on how to ensure accessibility of software products. SAP in particular disclaims any liability in relation to this document. This disclaimer, however, does not apply in cases of wilful misconduct or gross negligence of SAP. Furthermore, this document does not result in any direct or indirect contractual obligations of SAP.

Gender-Neutral Language

As far as possible, SAP documentation is gender neutral. Depending on the context, the reader is addressed directly with "you", or a gender-neutral noun (such as "sales person" or "working days") is used. If when referring to members of both sexes, however, the third-person singular cannot be avoided or a gender-neutral noun does not exist, SAP reserves the right to use the masculine form of the noun and pronoun. This is to ensure that the documentation remains comprehensible.

Internet Hyperlinks

The SAP documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. SAP does not warrant the availability and correctness of this related information or the ability of this information to serve a particular purpose. SAP shall not be liable for any damages caused by the use of related information unless damages have been caused by SAP's gross negligence or willful misconduct. All links are categorized for transparency (see: http://help.sap.com/disclaimer).

PUBLIC
© 2016 SAP SE or an SAP affiliate company. All rights reserved.

go.sap.com/registration/contact.html

© 2016 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 http://www.sap.com/corporate-en/legal/copyright/index.epx for additional trademark information and notices.