

SAP CPQ
June 2019
English

**SAP CPQ Integration with
SAP S/4HANA: Basic
Integration setup using
Cloud Integration (3ZQ)**
Configuration Guide

SAP SE
Dietmar-Hopp-Allee 16
69190 Walldorf
Germany

Copyright

© 2019 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. 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 and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group 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 in Germany and other countries. Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx#trademark> for additional trademark information and notices.

Revision	Change Date	Description
0	June,2019	

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, titles of graphics and tables.
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, source code, names of variables and parameters as well as names of installation, upgrade and database tools.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.

Content

1	Purpose	6
2	Preparation	6
2.1	Required Information	6
2.2	Prerequisites	6
3	Configuration	7
3.1	Configuration in SAP S/4HANA	7
3.1.1	Create User	7
3.1.2	Certificate Management in SAP S/4HANA	8
3.1.3	Release Inbound Interfaces	14
3.1.4	Create Business System for SAP S/4HANA	16
3.1.5	Define Logical System	17
3.1.6	Business Partner Replication from SAP S/4HANA to SAP CPQ	18
3.1.7	Material Replication from SAP S/4HANA to SAP CPQ using SOAP	22
3.1.8	Configuration for Filter Values.....	25
3.1.9	Business Configuration Set.....	26
3.1.10	Automatically Generate Integration Settings for Data Exchange	30
3.1.11	Pricing Condition Filter.....	35
3.2	Configuration in SAP Cloud Integration	36
3.2.1	How to get the SAP CPI client certificate.....	36
3.2.2	View prepackaged iFlows using SAP CPI Web UI	36
3.2.3	Creating User Credentials in CPI System.....	37
3.2.4	Configure and Deploy the iFlows Using Web UI	39
3.2.5	Value Mapping for CPQ integration with SAP S/4HANA	41
3.3	Configuration in SAP CPQ	43
3.3.1	Define Provider settings	43
3.3.2	Create CPQ Communication User	45
3.3.3	Product Replication Setup	46
3.3.4	Customer Replication Setup	48
3.3.5	Pricing/ Discounting Setup	50
3.3.6	Sales Quote to Order Setup	54
3.4	Data Loading	56
3.4.1	Initial Data Load	56
4	Manual Build Steps	60
4.1	Ticket Component	60
4.2	Appendix	60
4.2.1	How to find CPQ API URL	60
4.2.2	How to setup Cloud Connector	61
4.2.3	Troubleshooting.....	62

SAP CPQ Integration with SAP S/4HANA: Basic Integration setup using Cloud Integration: Configuration Guide (3ZQ)

1 Purpose

The purpose of this document is to describe the procedure to configure the Basic Integration between SAP S/4HANA and SAP CPQ using SAP Cloud Integration (CPI).

Network Security team takes the responsibility of preparing the network environment across different systems and its security aspects.

Important:

If you have any queries or feedback on this document, please create a ticket for the CSN component SV-RDS-CFC

2 Preparation

2.1 Required Information

We recommend that the consultant performing the implementation has the following implementation and configuration knowledge:

- SAP S/4HANA
- SAP Cloud Integration (CPI)
- SAP CPQ
- SAP CPS (optional)

2.2 Prerequisites

Before you set up SAP CPQ Integration with SAP S/4HANA, ensure that you have:

1. SAP CPQ instance.

Ensure that your SAP CPQ instance is in place before you start implementing SAP CPQ integration with SAP S/4HANA.

2. SAP S/4HANA System.

Ensure that your S/4HANA system is of 1809 release and latest release.

3. SAP Cloud Integration tenant.

The SAP Cloud Integration (CPI) Runtime URL is included in the SAP CPI provisioning e-mail.

URL. Example <https://<tenant>-iflmap.hana.ondemand.com>

4. SAP CPS instance (optional)

Ensure that your SAP CPS instance is integrated to SAP S/4HANA system.
And your configured products are replicated between SAP S/4HANA and SAP CPS.

3 Configuration

The following sections describes all the settings required for this scope item. These can be divided into below groups:

- Configuration in SAP S/4HANA
- Configuration in SAP Cloud Integration (CPI)
- Configuration in SAP CPQ

3.1 Configuration in SAP S/4HANA

3.1.1 Create User

1. Access the following transaction:

Transaction Code	SU01
------------------	------

2. On the *User Maintenance: Initial screen*, enter the following values:

Field Name	Value
User	CPQS4HINTEG

3. Choose *Create*.



4. On the *Maintain User screen*, maintain the following values and Choose Save.

Address tab page

Last Name	<user name> example: CPQS4HINTEG
E-Mail	<valid E-Mail Address to send Request for Quotations and Orders>
Comm.Meth	Remote Mail

5. Logon data tab page

User Type	Communication Data
Password	<password>

 Note

Ensure the user is assigned relevant authorizations to execute Idoc, web service messaging calls like external pricing and print preview.

- Click [Save](#).

3.1.2 Certificate Management in SAP S/4HANA

Prerequisite

- The customer network environment should be prepared. The SSL should be enabled on SAP S/4HANA ABAP Server. SAP S/4HANA Server/Client Certificates should be signed by the supported CA which is trusted by SAP Cloud Solution and SAP Cloud Managed Services.
- For preparing the network environment, network security team that takes care of the customer network is responsible.
- SSL needs to be enabled on SAP ABAP server by SAP Basis Consultant.

 Note

Ensure all the certificates used are valid and are not expired.

 Note

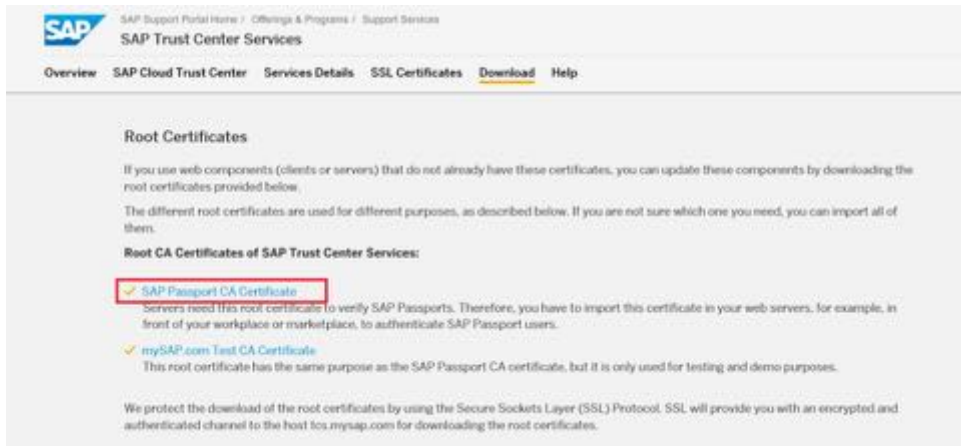
For details refer to Note 510007 - Setting up SSL on Web Application Server ABAP

For requesting signed certificates by SAP, go to <https://support.sap.com/tcs>

- There are mainly two partners in the landscape, SAP side and Customer side.
- SAP Cloud Solution certificates are signed by SAP `Passport CA` or `TC Trust Center`.

3.1.2.1 Download ROOT CA Certificates

- Go to <https://support.sap.com/en/offerings-programs/support-services/trust-center-services.html> web site.
- Navigate to [Download](#) → [Root Certificates](#),
- Download the `SAP Passport CA Certificates` and [Save](#).



1 Note

Save the certificates in .cer format

4. Go to Cloud Integration URL Ex: <https://xxx-tmn.hci.int.sap.hana.ondemand.com/itspaces/> and Login with admin user. Navigate using the following path.
Monitor → *Keystore* under *Manage Security*



5. Download the ROOT Certificates of CPI with following names:
 - *Baltimore CyberTrust Root*
 - *Verizon Public SureServer CA G14-SHA2*

1 Note

In case of error downloading certificates, go to Internet explorer ->Tools->Internet options->content -> Certificates -> Trusted Root Certification authorities). Export the relevant certificate from the list.

3.1.2.2 Maintain SSL Server Standard Trusted Cert List

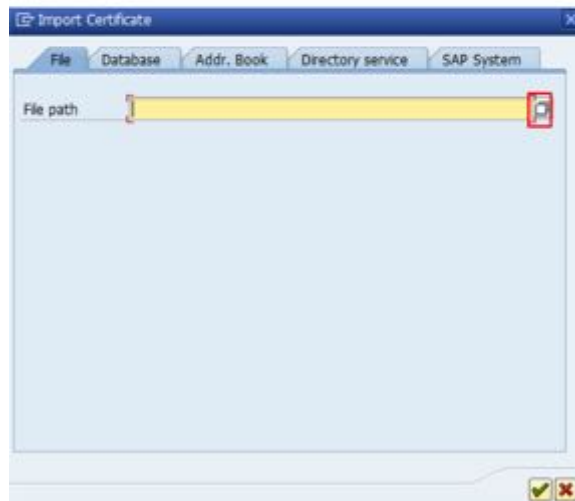
1. In the SAP S/4HANA system access the following transaction:

Transaction Code	STRUST
------------------	--------

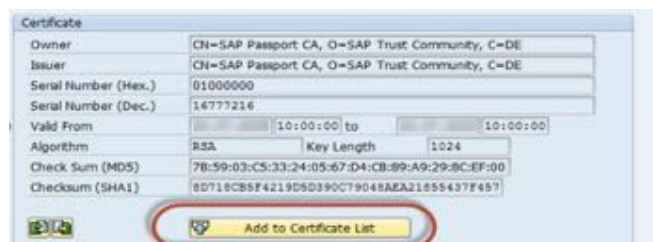
2. Double-click *SSL server standard* PSE folder.



3. In the *Certificate* area, click the *Import Certificate* button to add the SAP Passport CA.



4. Add the imported certificate to the certificate list by clicking *Add to Certificate List*.

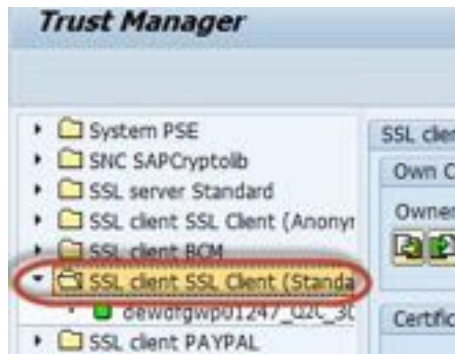


5. Choose *Save*.



3.1.2.3 Maintain SSL System Client Cert and Trusted Cert List

1. Choose *SSL client SSL Client(Standard)* PSE folder



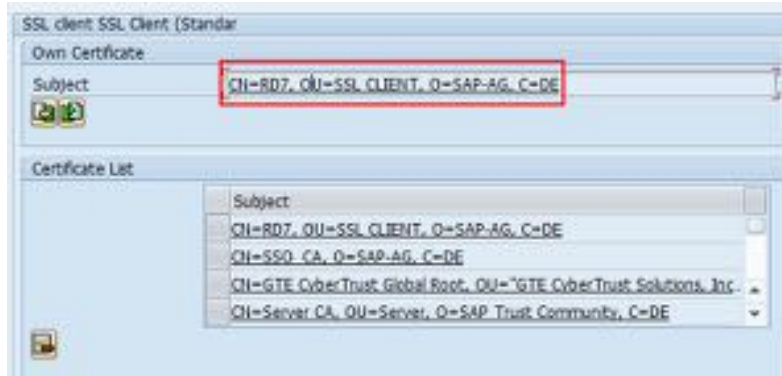
2. From Menu Path choose *Certificate* → *Import* to import the *SAP Passport CA* certificate
3. Switch from *Display* to *Change* mode.
4. From Menu Path choose *Edit* → *Add Certificate* to add the imported certificate to the chosen certification list.
5. Repeat previous 2 steps for Cloud Integration Trust Root CA Certificates.
6. Choose *Save* on the standard tool bar

 **Note**

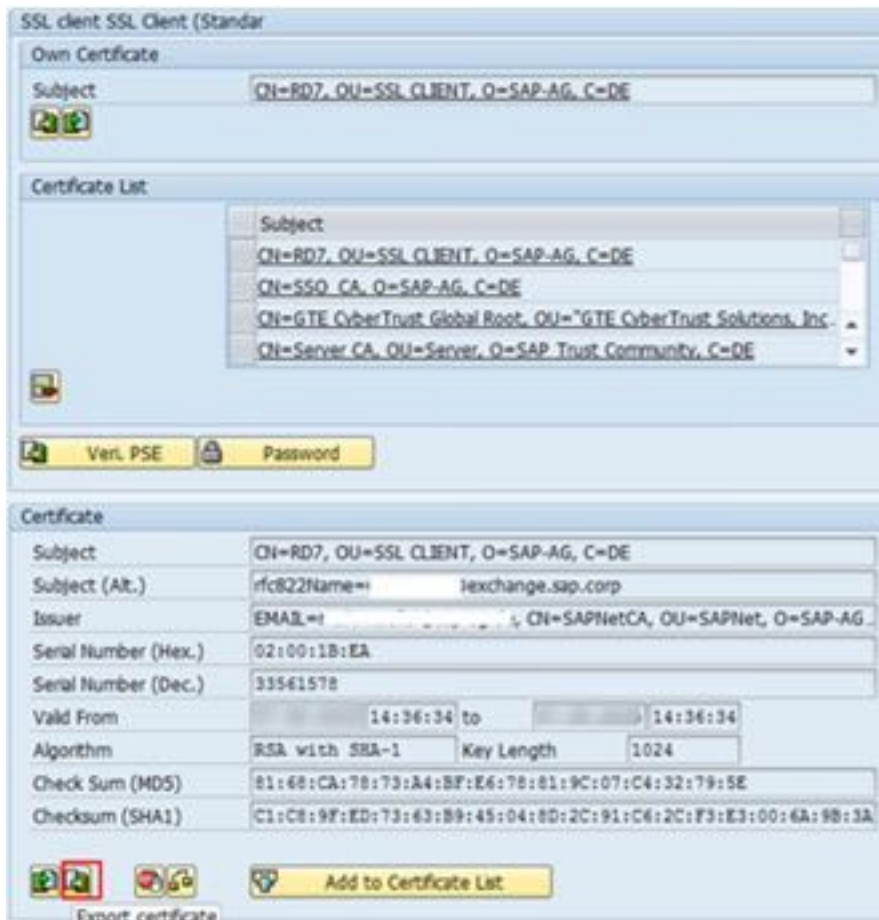
In case no supported CA signed client certificates for SAP S/4HANA is available, it could be downloaded from the SAP CPI Certificate store, and then imported into SAP Trust Manager for use.

3.1.2.4 Export SAP S/4HANA Client Certificate

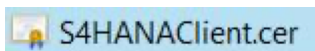
1. Expand *SSL client SSL Client (Standard)* PSE folder.
 - a. Double-click target instance in the folder.
2. Select the field *Owner*, in the *Own Certificate* section by double clicking.



3. Click the *Export* button.



4. Save the certificate into a file with format Base64. For example, and named with S4HANAClient.cer.



i Note

This exported client cert should be uploaded while configuring IFlow in CPI system.

3.1.2.5 Mapping Cloud Connector Certificate to Integration User in SAP S/4HANA

Prerequisite

Obtain the SAP CPI client certificate from your administrator. The certificate is available when the tenant is provisioned by SAP. You can also receive it on creating an incident in the component for your respective SAP Middleware (LOD-CPI/LOD-PI).

Procedure

1. Access the transaction using one of the following navigation options:

Transaction Code	SM30
------------------	------

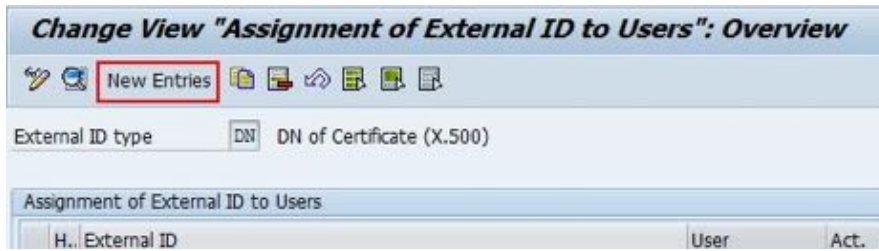
2. In the *Maintain Table Views* screen, enter `VUSREXTID` in the *Table/View* field.
3. Choose *Maintain*.



4. In the *External ID* type field, enter `DN`.



5. Choose *New Entries*.



6. Next to the *External ID* field, choose *Import*.
7. Import the Cloud Connector certificate obtained from your administrator.



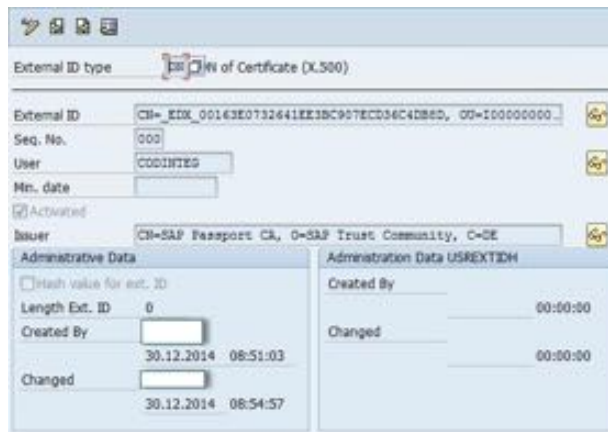
Example

cloudconnectorclient.cer

8. Enter the sequence number, by example 000.
9. In the *User* field, enter the technical S/4HANA user you have created in the S/4HANA system.

For example: CPQINTEG

10. Activate the user by checking the *Activated* field.



11. Click *Save*.



3.1.3 Release Inbound Interfaces

3.1.3.1 Activate Inbound SOAP for IDoc

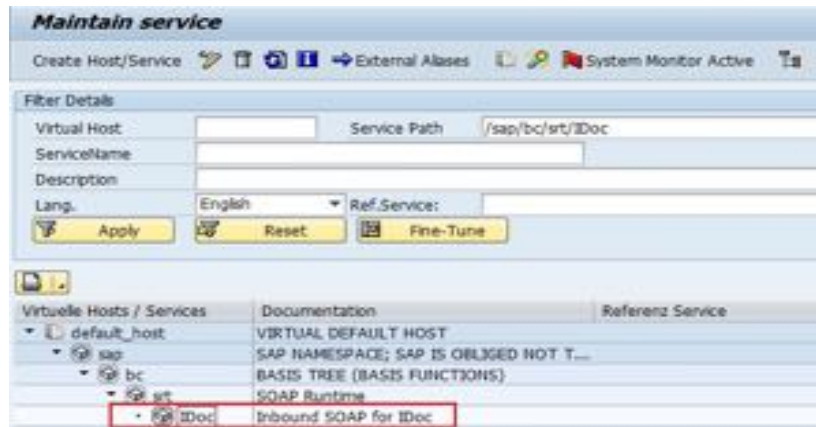
1. Access the following transaction:

Transaction Code	SICF
------------------	------

2. In the Service Path field enter */sap/bc/srt/IDoc*.



3. Choose *Execute*.
4. Check if the Service is Active; If not then right click the IDoc service and select *Activate Service*.



5. If it has been activated, it will be like below:



6. Otherwise you need to *Activate Service*.

3.1.3.2 Register Service for IDoc Inbound

1. Access the following transaction:

Transaction Code	SRTIDOC
------------------	---------

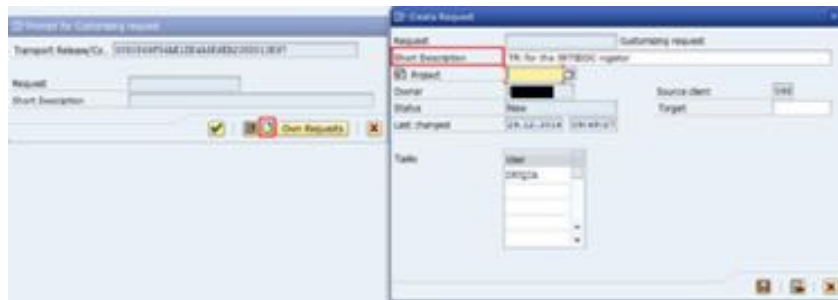
2. Select the *Register Service* radio button.
3. In the *Service Attributes* section, enter the following parameters:

Parameter	Value
URI SOAP Application	urn:sap-com:soap:runtime:application:idoc
Name of Web Service Definition	GENERIC
Call Address (ICF Path)	/sap/bc/srt/idoc

4. Choose *Execute*.



5. Create a new Request for this action and input the short description with meaningful value.



6. Click *Ok*.



3.1.4 Create Business System for SAP S/4HANA

Purpose

This chapter describes the procedure to create a Business system that represents the SAP S/4HANA system.

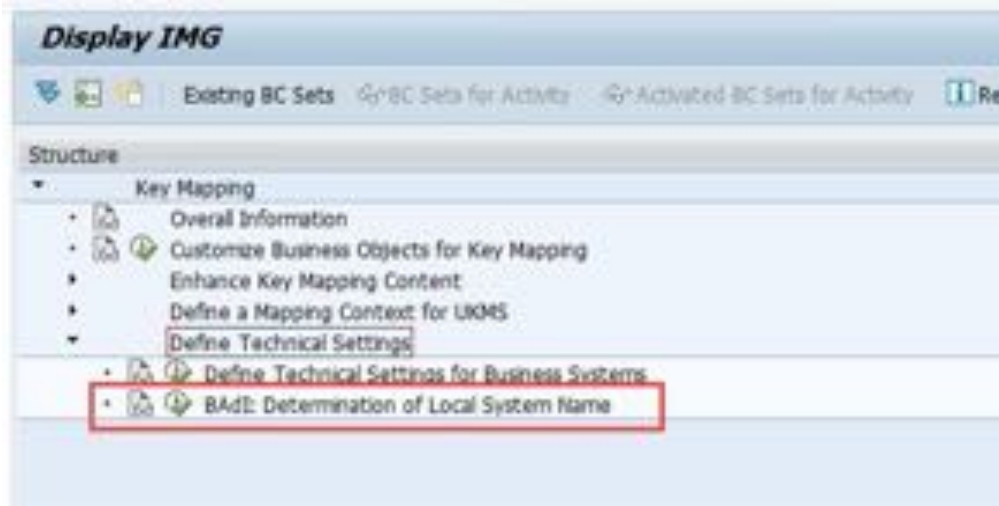
We can perform this task in following way.

Procedure

1. Access the following transaction:

Transaction Code	IDMIMG
------------------	--------

2. Navigate to [BAAdI, Determination of Local System Name](#) from [Define Technical Settings](#).
3. Execute the [BAAdI, Determination of Local System Name](#) to create a Local Business System.



1 Note

Check IMG Activity Documentation for more detail how to perform this task.

3.1.5 Define Logical System

Purpose

This describes the procedure to create a logical system that represents the SAP CPQ system in SAP S/4HANA system. Logical systems are defined as cross-client systems.

Procedure

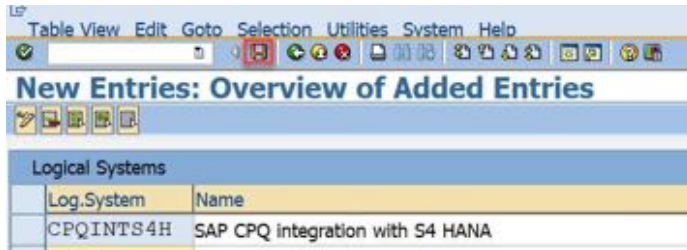
1. Access the following transaction:

Transaction Code	BD54
------------------	------

2. Choose [New Entries](#).
3. Create a logical system that identifies the on-demand system, as given in the table below: following:

Field	Entry
Logical System*	<logical system name of SAP CPQ tenant> Ex: CPQINTS4H

Name	<Description> for example: SAP CPQ integration with S/4HANA.
------	--



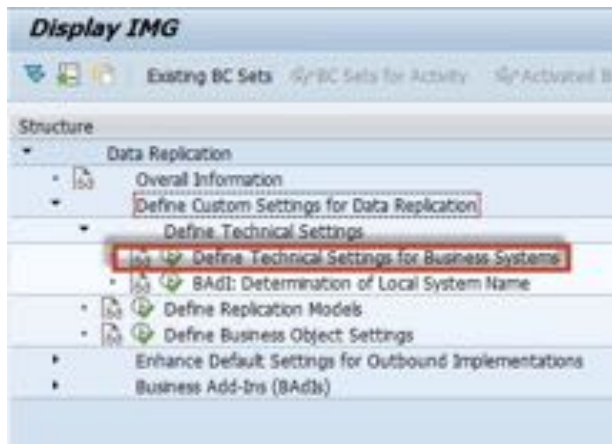
4. Choose *Save*
5. Choose *Ok* to confirm the pop-up for saving the details in the transport request.

3.1.6 Business Partner Replication from SAP S/4HANA to SAP CPQ

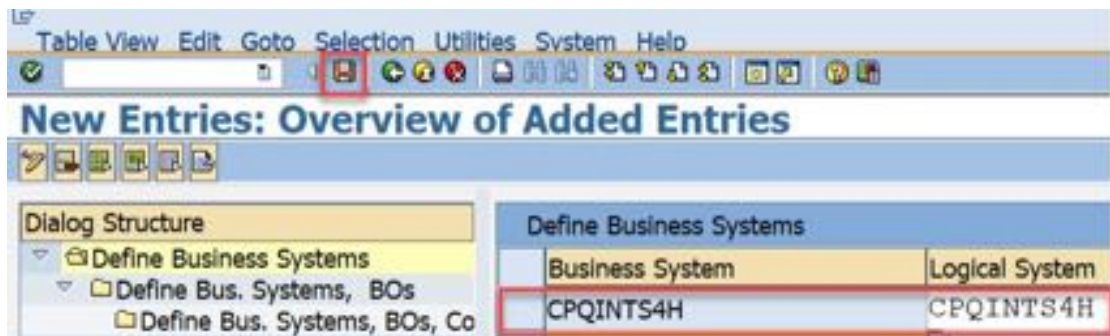
3.1.6.1 Configure Data Replication Framework

Procedure

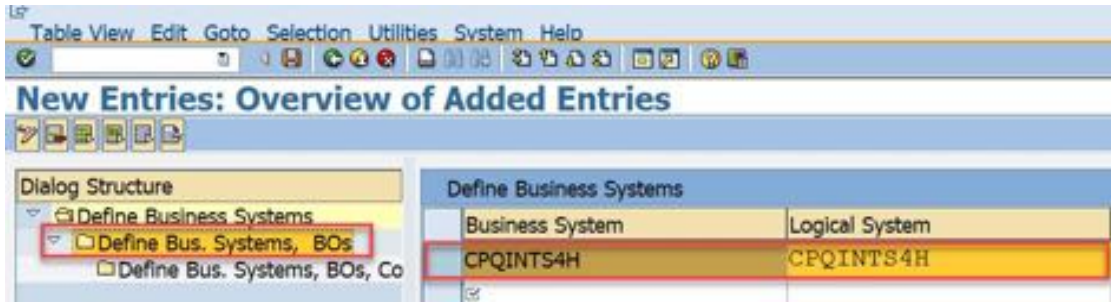
1. Open transaction DRFIMG.
2. Navigate to *Define Custom Settings for Data Replication* → *Define Technical Settings* → *Define Technical Systems for Business Systems*.



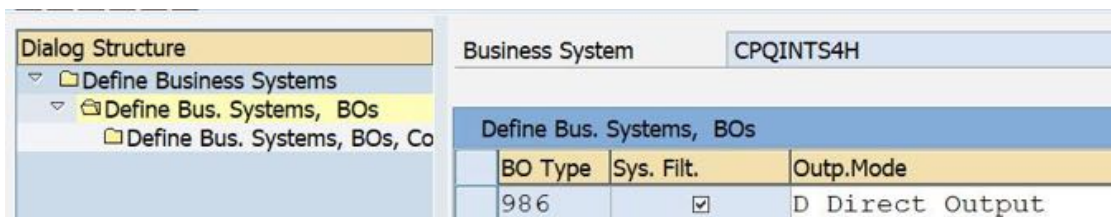
3. Choose *New Entries* to add *Business System* for SAP CPQ. Add *Business System* name as *logical system* and *Logical System* name using input help. Choose *Save*,



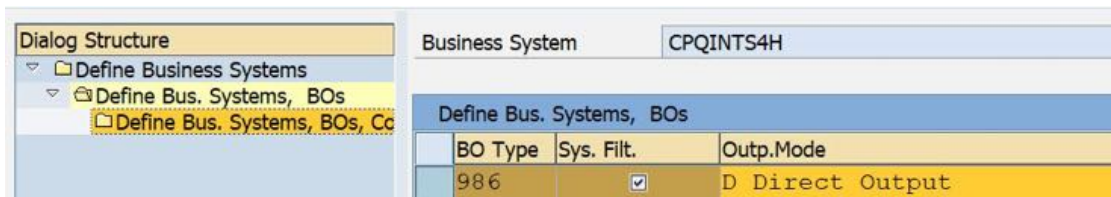
4. Select the *Business System* and double click on *Define Bus. Systems, BOs* in the Dialog structure.



5. Choose *New Entries* and add BO Type 986 (Business Partner including relationships) using input help and check field *Sys. Filt.* In case this entry exists, skip the step.



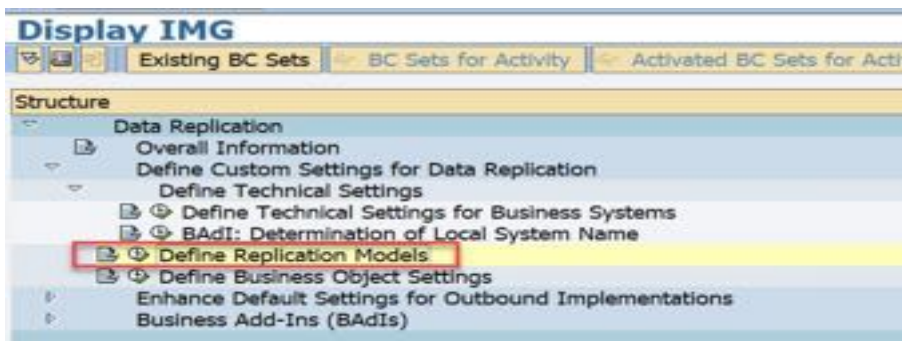
6. Select the entry BO type and double click on *Define Bus. Systems, BOs, Communication Channel* in the left dialog structure.



7. Choose *New Entries* to add the *Communication Channel* as 1 Replication via Services. In case the entry exists, skip this step.



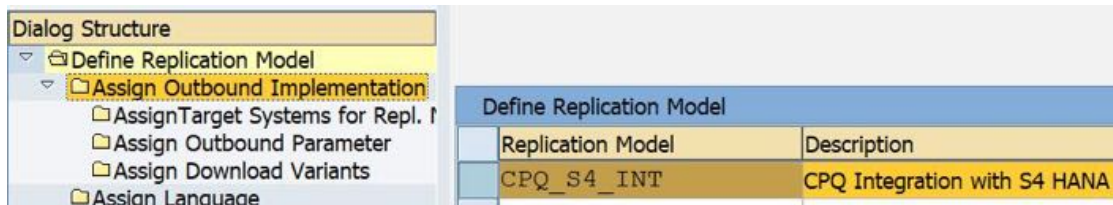
8. Choose *Save*.
9. Navigate back.
10. Select the IMG activity *Define Replication Models*.



- Choose *New Entries* and define *Replication Model Name* and *Description* and *Log days* as 50.

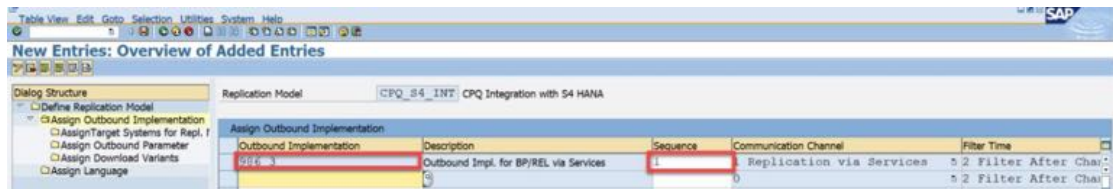
Define Replication Model				
Replication Model	Description	Log Days	Data Model	Active
CPQ_S4_INT	CPQ Integration with S4 HANA	50		<input type="checkbox"/>

- Choose *Enter*.
- Select the entry created and double click on *Assign Outbound Implementation*.



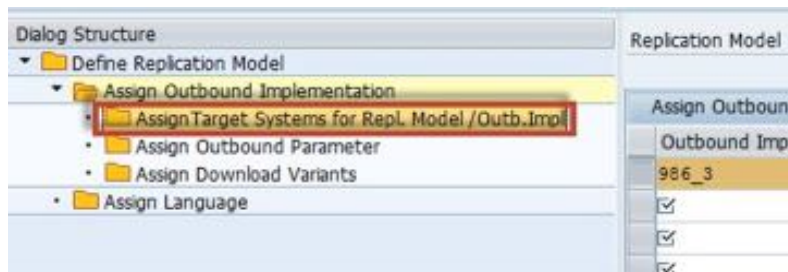
Define Replication Model	
Replication Model	Description
CPQ_S4_INT	CPQ Integration with S4 HANA

- Choose *New Entries*.
- Select *Outbound Implementation* as Outbound Impl. for BP/REL via Services (986_3) using the input help and choose Enter.
- Enter Sequence as 1.

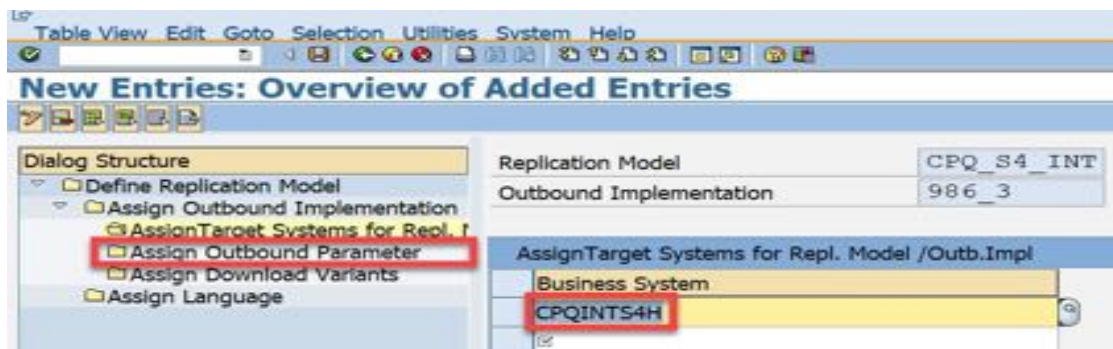


Assign Outbound Implementation	Description	Sequence	Communication Channel	Filter Time
986_3	Outbound Impl. for BP/REL via Services	1	Replication via Services	Filter After Char...

- Select the row added and double click on *Assign Target Systems for Repl. Model/Outb.Impl* in dialog structure.

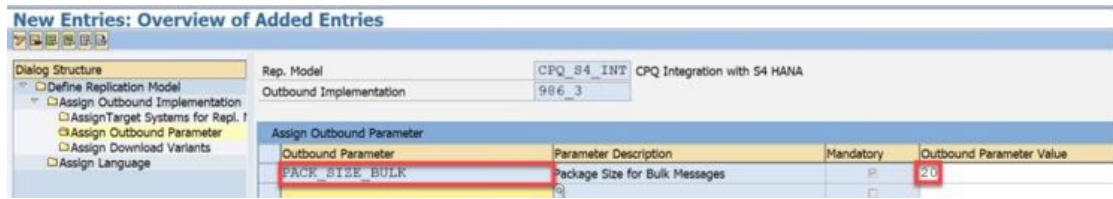


- Choose *New Entries* and add the Business system created above using the input help.
- Select the Business system row and double click on the node *Assign Outbound Parameter* in the dialog structure.



AssignTarget Systems for Repl. Model /Outb.Impl	
Business System	
CPQINTS4H	

- Choose *New Entries* to add the Outbound parameter PACK_SIZE_BULK using the input help, check field *Mandatory* and enter outbound parameter value as 20.



1 Note

Outbound Parameter value for PACK_SIZE_BULK can be set as per most efficient package size, which will differ from system to system.

21. Choose *Save*, details will be saved in the transport request.
22. Click *Activate* to activate the replication model after selecting the folder Define Replication Model.



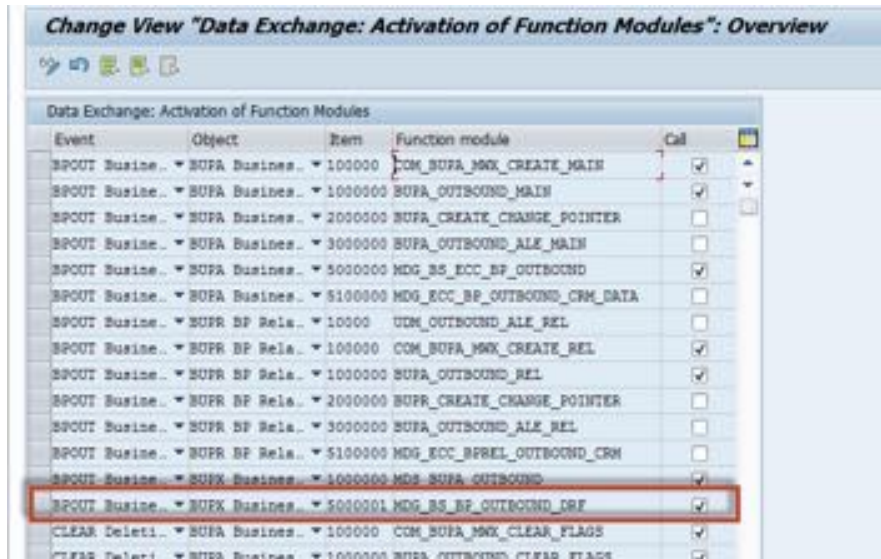
3.1.6.2 Activate Function Modules

Procedure

1. Open transaction SPRO.
2. In IMG menu structure, navigate to *Cross-Application Components* → *SAP Business Partner* → *Data Distribution* → *Activate Function Modules*.



3. Activate the function module MDG_BS_BP_OUTBOUND_DRF by checking the field *Call* as shown below.



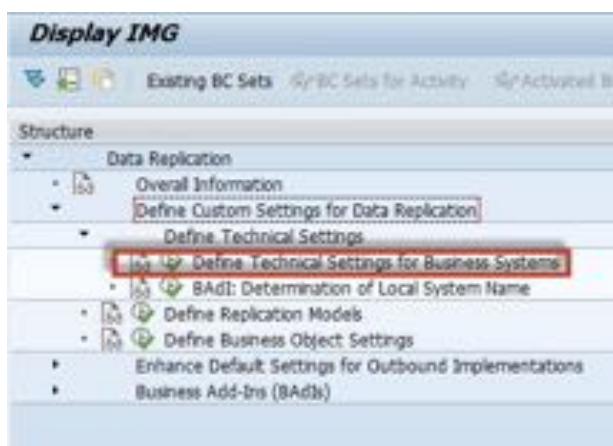
4. Choose *Save*

3.1.7 Material Replication from SAP S/4HANA to SAP CPQ using SOAP

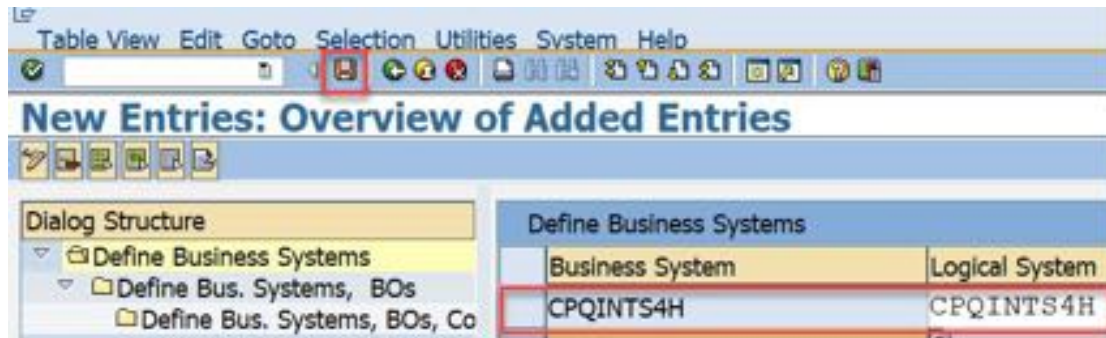
3.1.7.1 Configure Data Replication Framework

Procedure

1. Open transaction DRFIMG.
2. Navigate to *Define Custom Settings for Data Replication* → *Define Technical Settings* → *Define Technical Settings for Business Systems*.



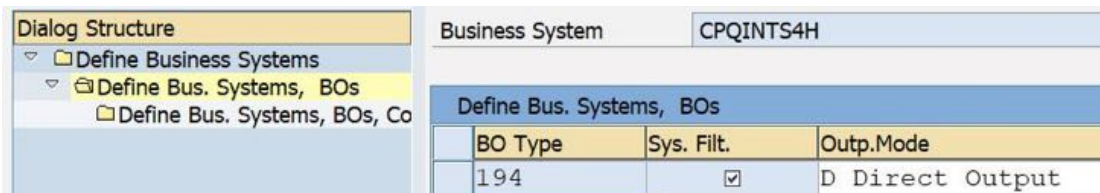
3. Choose *New Entries* to add *Business System* for SAP CPQ. If the Business system is already created, Select *Business System* and *Logical System* name using input help. Choose *Save*,
4. Select the *Business System* and double click on *Define Bus. Systems, BOs* in the Dialog structure.



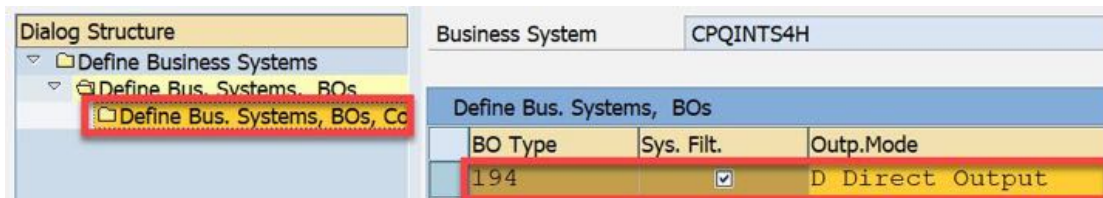
- Choose *New Entries* and add BO Type 194 (Material) using input help and check field Sys. Filtr. Select *Outp.Mode* as *Direct Output*. In case this entry exists, skip the

step.  Note

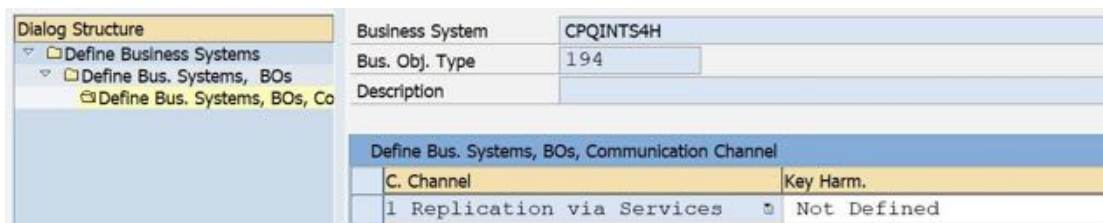
If Output Mode is selected as Direct Output, idocs will be triggered immediately on Save. In this case, DRFOUT is not required to replicate changes to customer hierarchy. If Output Mode is selected as Pooled Output, idocs are sent using DRF change pointers and DRFOUT has to be executed or scheduled to create and send the Idoc.



- Select the entry BO type and double click on Define Bus. Systems, BOs, Communication Channel in the left dialog structure.



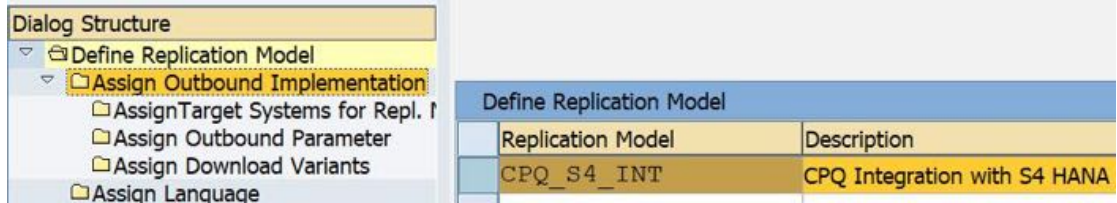
- Choose *New Entries* to add the *Communication Channel* as Replication via Services. In case the entry exists, skip this step.



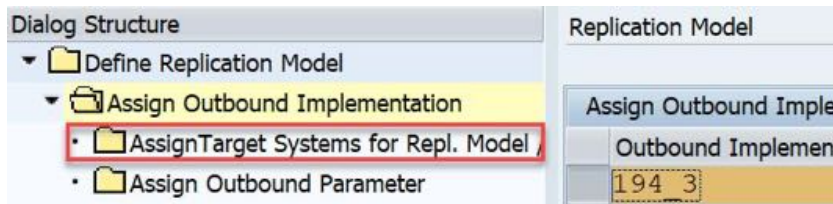
- Choose *Save*,
- Navigate back.
- Select the IMG activity Define Replication Models.
- Choose *New Entries* and define Replication Model Name and Description and Log days as 50.

Replication Model	Description	Log Days	Data Model	Active
CPQ_S4_INT	CPQ Integration with S4 HANA	50		<input type="checkbox"/>

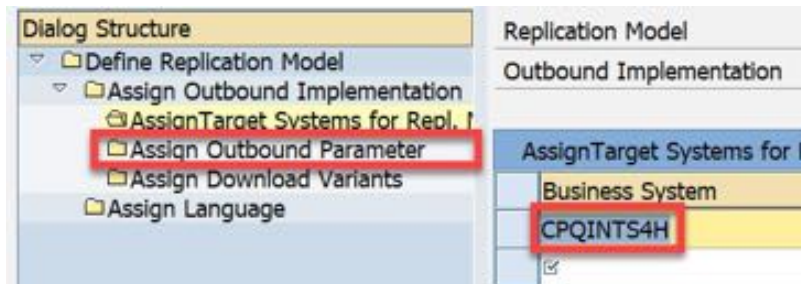
- Choose *Enter*.
- Select the entry created and double click on *Assign Outbound Implementation*.



14. Choose *New Entries*.
15. Select *Outbound Implementation* as Outbound Impl. for Product via Services (194_3) using the input help and choose Enter.
16. Select the row added and double click on *Assign Target Systems for Repl. Model/Outb.Impl* in dialog structure.



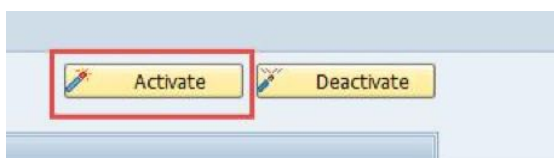
17. Choose *New Entries* and add the Business system created above using the input help.
18. Select the Business system row and double click on the node *Assign Outbound Parameter* in the dialog structure.



19. Choose *New Entries* to add the Outbound parameter PACK_SIZE_BULK using the input help. Enter outbound parameter value as 20 and click enter to check field *Mandatory*.



20. Choose *Save*.
21. Go back to *Define Replication Model* Screen and Select the row for Define Replication Model.
22. Click *Activate* to activate the replication model.



3.1.8 Configuration for Filter Values

3.1.8.1 Filter Code Values

Purpose

Filter objects is used to remove the S/4HANA outbound processing code values which are not supported by the receiver system. During S/4HANA inbound processing these code values are added again.

These below steps are optional and should be performed based on your requirement.

Procedure

1. To setup Filter Objects for Code value, navigate to below path.

Transaction Code	DRFF
-------------------------	------



2. Execute [Replication Model Filters](#) Activity, it will open a pop up screen.
3. Enter the Login credential for your S/4HANA system.
4. Select the relevant Replication Model and choose display. It will open a different window to [Display Filter Criteria](#).



5. Click on Edit and Choose the [Filter Criteria to Include Business Objects](#).
6. Select the BP role to be Include in your business Partner replication to SAP CPQ.
For Example: FLCU01
7. Click on Show Segment filter and choose the Filter Object [Business Partner Role-98601](#).
8. Click on Edit and Choose the [Filter Criteria to Include Business Objects](#).
9. Select the BP role to be Include in your business Partner replication to SAP CPQ.

For Example: 'FLCU01'



10. Choose *Save*.

3.1.9 Business Configuration Set

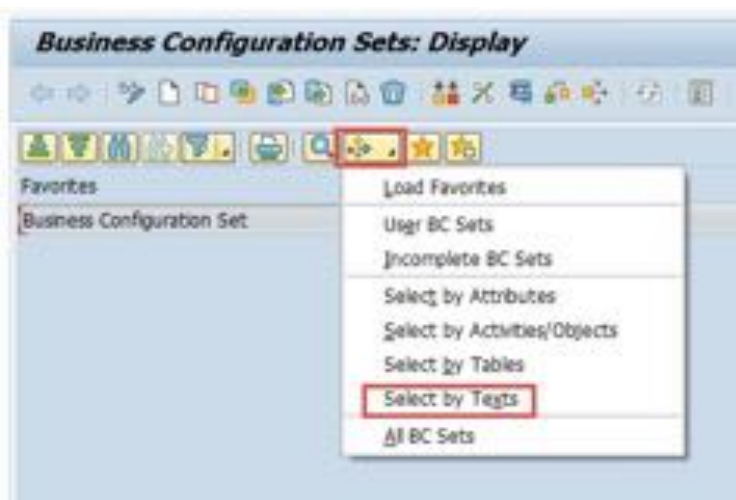
Purpose

Business Configuration Set C4C_INTEGRATION_CS and C4C_INTEGRATION_CC contains additional customizing setting for SAP CPQ and SAP S/4HANA integration.

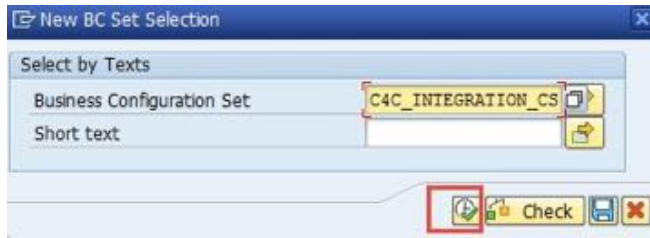
BC set C4C_INTEGRATION_CC contains client-independent customizing entries for the ALE message types. Activate this BC set in the SAP S/4HANA client you use for cross-client customizing.

3.1.9.1 Procedure to activate Client Specific BC SET

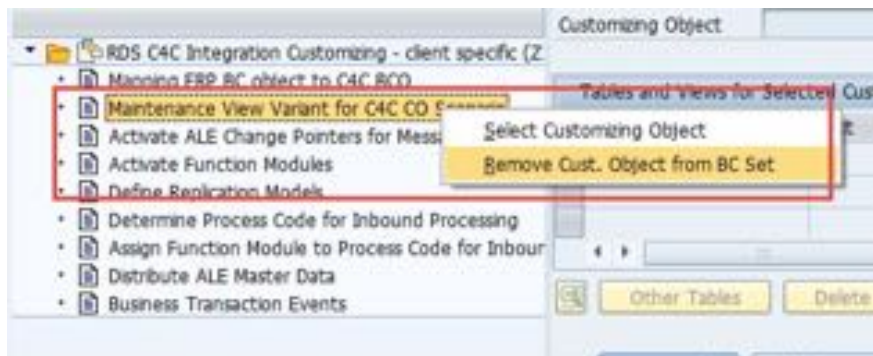
1. Open transaction SCPR3
2. Choose *New BC Set Selection* → *Select by Texts*.



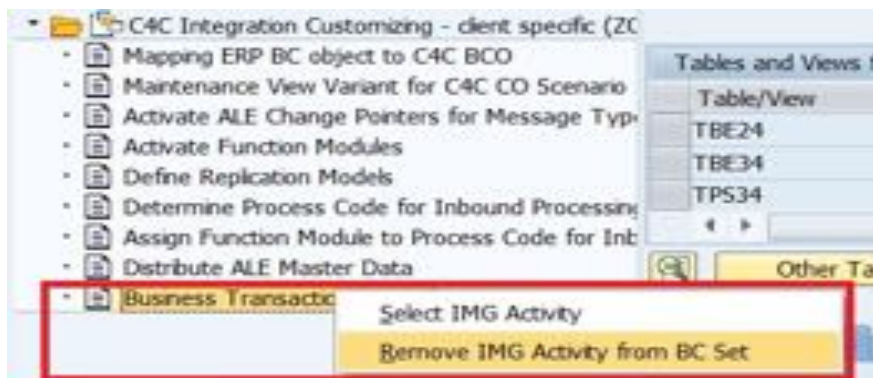
3. In the dialog box enter BC Set name C4C_INTEGRATION_CS and choose *Execute*.



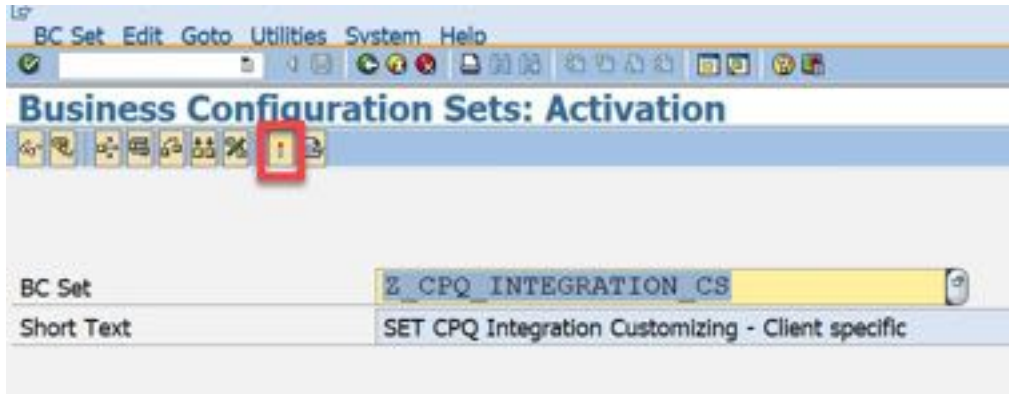
4. Double click on the BC Set ID and choose *Continue* in the *BC Set Consistency Check* pop-up window.
5. Choose *Copy BC Set*
6. In the following dialog box, enter the new *BC Set name* and *short text*. Example `z_CPQ_INTEGRATION_CS` and `SET CPQ Integration Customizing - client specific`.
7. Choose *Local Object* or select a transport request if required.
8. Choose *Define Favorites*
9. Choose *Change* mode and choose *Continue* in the *BC Set Consistency Check* dialog box.
10. Right click on the node *Maintenance View Variant for C4C CO Scenario* in the structure and choose *Remove Cust. Object from BC Set*.



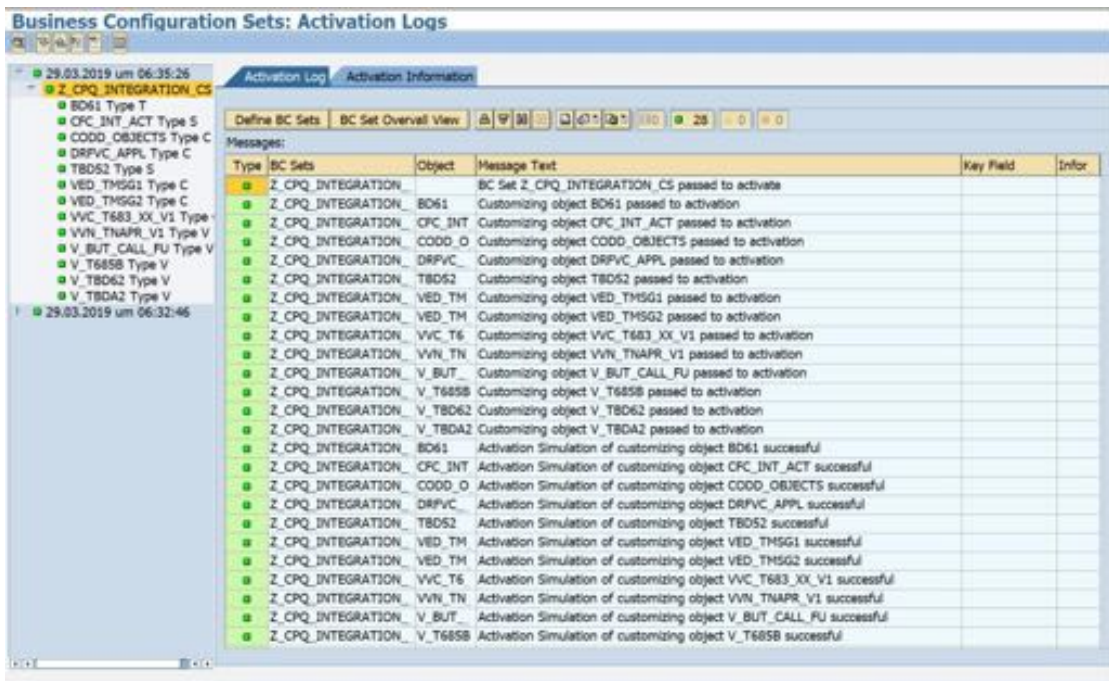
11. Right click on the node *Business Transaction Events* in the structure and choose *Remove IMG Activity from BC Set*.



12. Choose *Save*.
13. Open transaction SCPR20
14. In the field BC Set, input the BC Set Name `z_CPQ_INTEGRATION_CS`.
15. Choose *Activate BC Set* (F7) on the application tool bar



16. Save it in a customizing request if there is a dialog box
17. In the next pop-up, choose *Continue Activation* with default value.

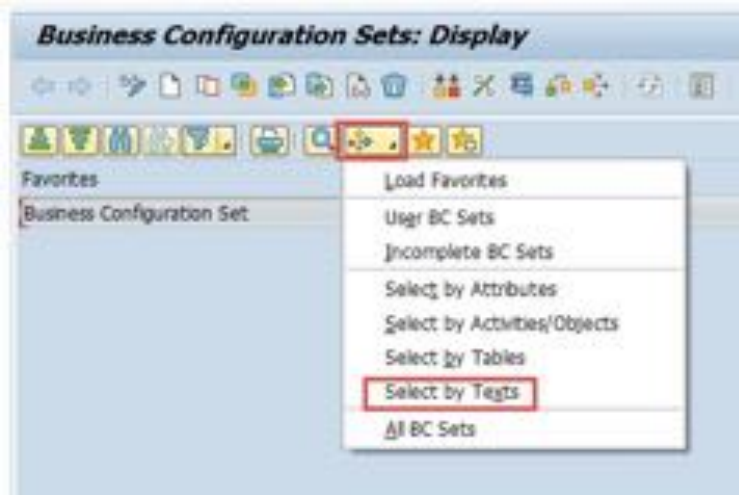


1 Note

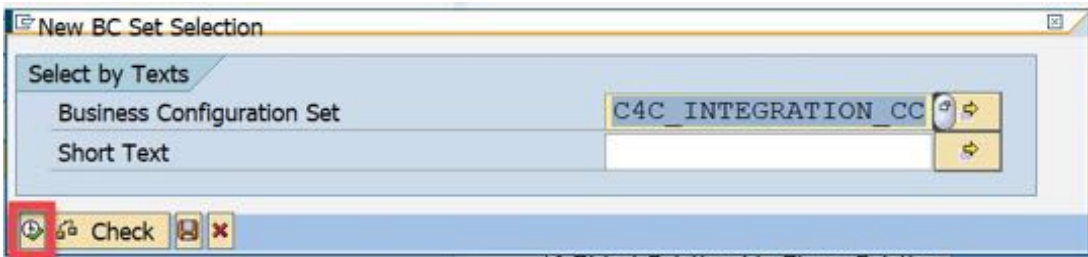
Ignore if there are any warning messages during the activation of the BC set.

3.1.9.2 Procedure to Activate Cross Client BC SET

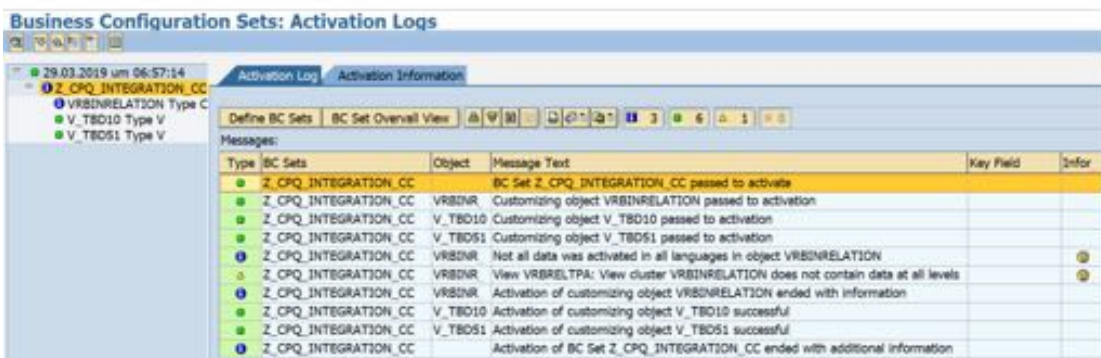
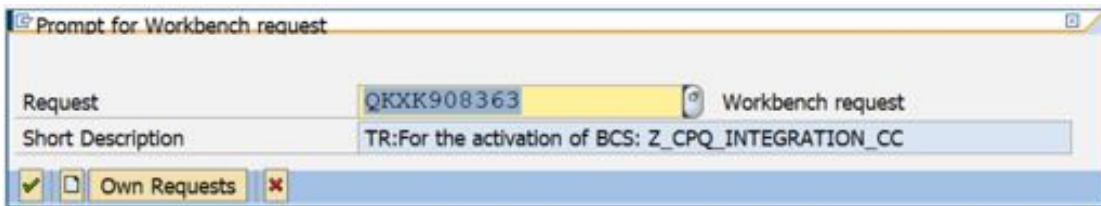
1. Open transaction SCPR3
2. Choose *New BC Set Selection*→*Select by Texts*.



3. In the dialog box enter BC Set name C4C_INTEGRATION_CC and choose *Execute*.



4. Double click on the BC Set ID and choose *Continue* in the *BC Set Consistency Check* pop-up window.
5. Choose *Copy BC Set*
6. In the following dialog box, enter the new *BC Set name* and *short text*. Example *Z_CPQ_INTEGRATION_CC* and *SET CPQ Integration Customizing - cross client*.
7. Choose *Local Object* or select a transport request if required.
8. Open transaction SCPR20
9. In the field *BC Set*, input the BC Set name *Z_CPQ_INTEGRATION_CC*.
10. Choose *Activate BC Set (F7)* on the application tool bar, and create a new request for this.





Note

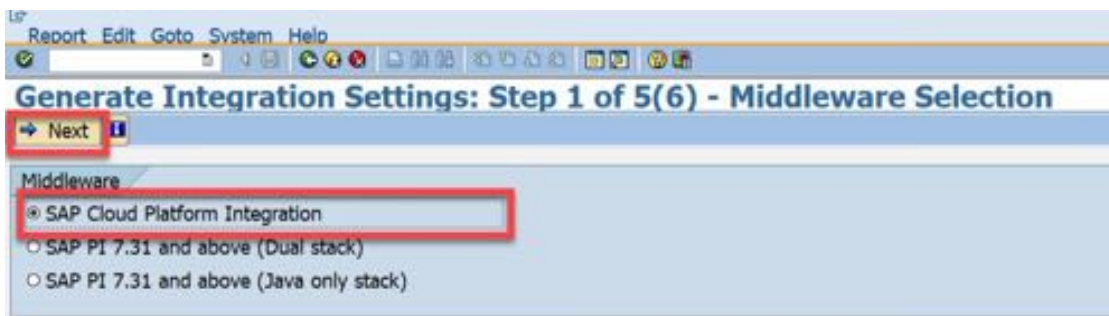
Ignore if there are any warning messages during the activation of the BC set.

3.1.10 Automatically Generate Integration Settings for Data Exchange

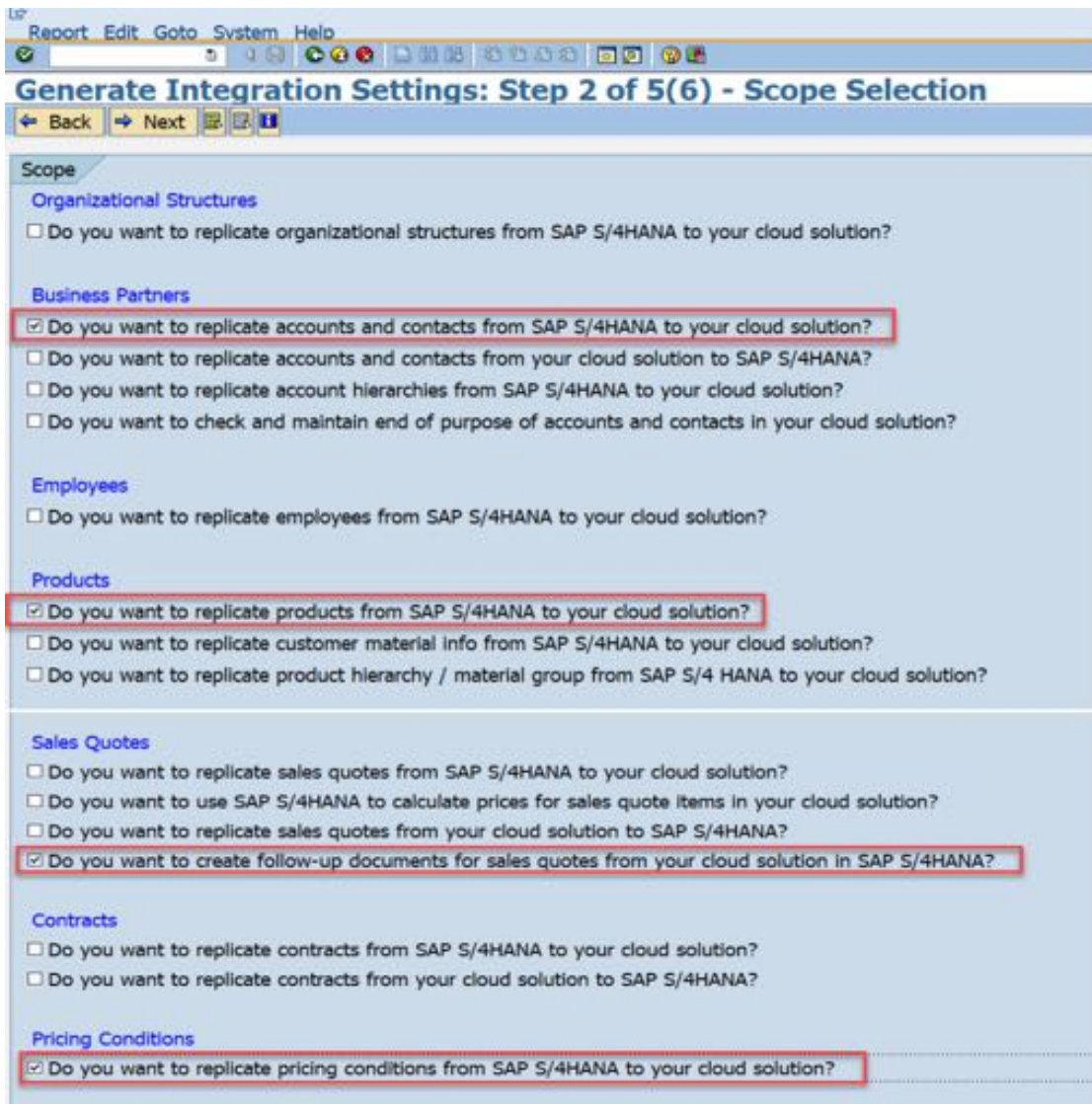
- To Automatically Generate Connectivity settings for Data Exchange navigate using one of the following paths.

Transaction code	RCOD_CONNECTIVITY
------------------	-------------------

- Generate Integration Settings: Step 1:* Select *SAP Cloud Integration* as the middleware and click *Next*.

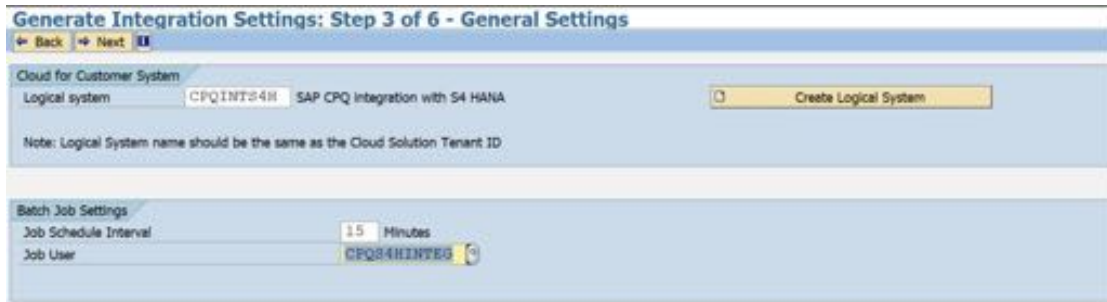


- Generate Integration Settings: Step 2:* Select the scope of Integration exactly as scoped in the SAP CPQ Solution and choose Next.
 - Business Partners
 - Products
 - Sales Quotes
 - Pricing Conditions



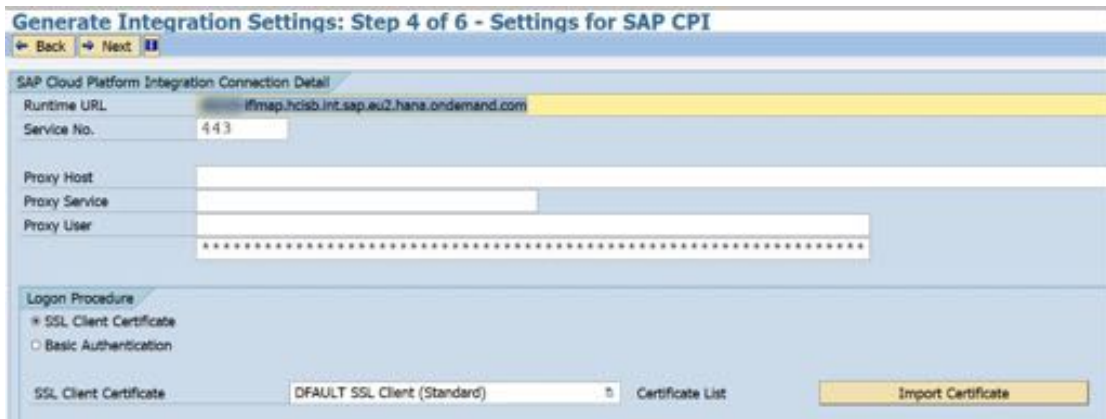
4. *Generate Integration Settings: Step 3:* Maintain the following and choose Next

Field	Entry
Logical System	Do one of the following: <ul style="list-style-type: none"> • Enter the logical system of the CPQ system or • Click Create Logical System to create new logical system.
Job Schedule Interval	Enter the frequency with which the inbound and outbound IDocs should be processed in the S/4HANA system.
Job User	Enter the user using which batch jobs are scheduled.



5. *Generate Integration Settings: Step 4:* Enter the connection information about the CPI system to generate the RFC destinations. Choose Next

Field	Entry
Runtime URL	Worker node URL of the SAP Cloud Integration tenant (without HTTPS ://)
Proxy details (Optional)	Host name, service name, and the access details of the forward or reverse proxy?
Authentication (basic or certificate)	Either import the certificate or enter the user credentials.



6. In *Generate Integration Settings: Step 5 of 6-Consumer Proxy Settings* screen, enter the URL Access path for *Business Partner* and *Product Replication*. Enter the CPI system details in Connection Parameters and choose Certificate based authentication of CPI system.

i Note

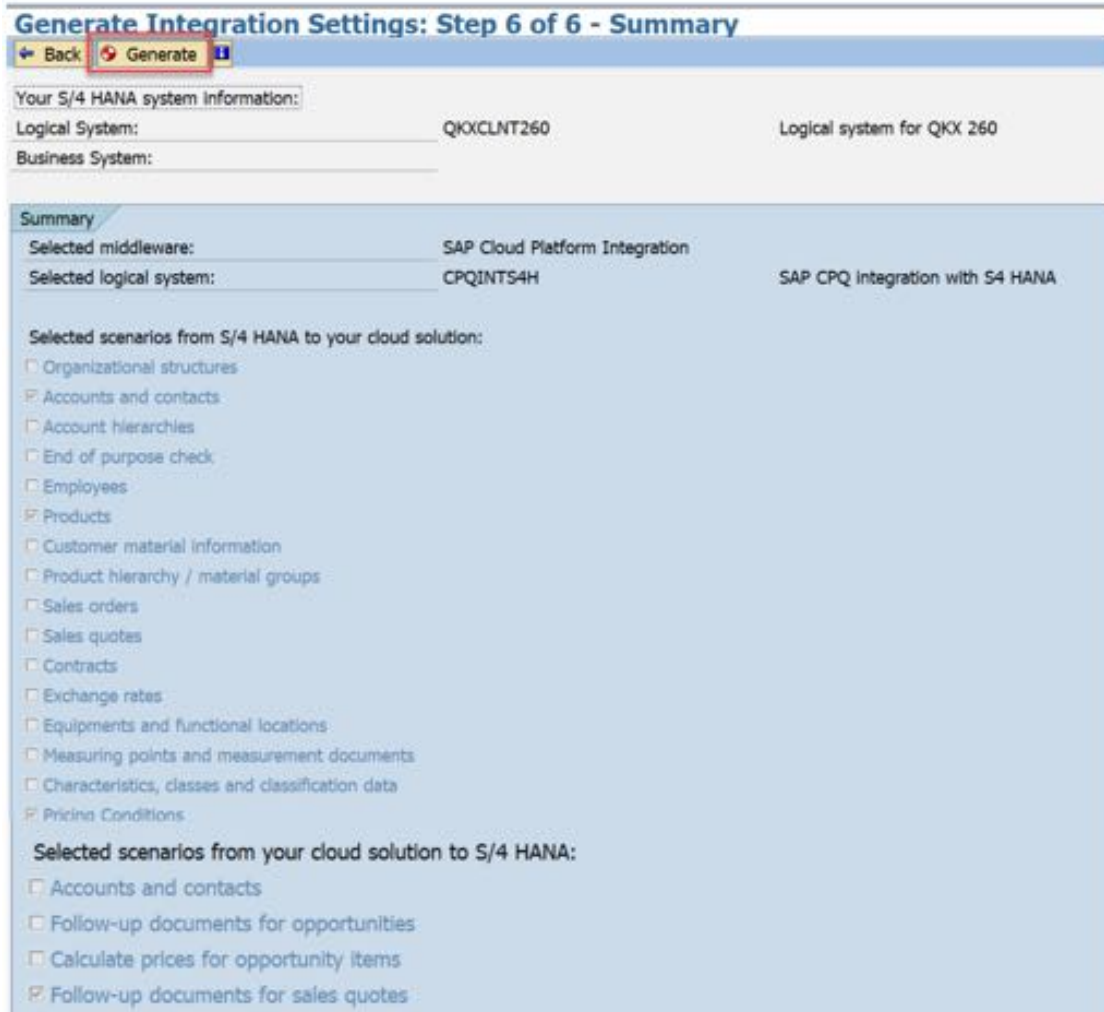
You can take the URL Access Path from relevant IFlow of your CPI Web UI and for that service path add /cxf and maintain against the respective service.



The screenshot shows the 'Generate Integration Settings: Step 5 of 6 - Consumer Proxy Settings' configuration screen. It is divided into several sections:

- System Path:** Contains fields for 'Business Partner' (with a dropdown menu), 'Business Partner Addressing', 'Product Replication', and 'Attachment Replication'.
- Gateway Services:** Contains fields for 'Login Path', 'Instance Name', 'URL Path', 'URL Protocol', 'Proxy Path', 'Proxy Port', 'Proxy User', and 'Proxy Password'.
- Agent Provision:** Contains a section for 'SSO Client Certificate' with a dropdown menu and a 'Generate Certificate' button.

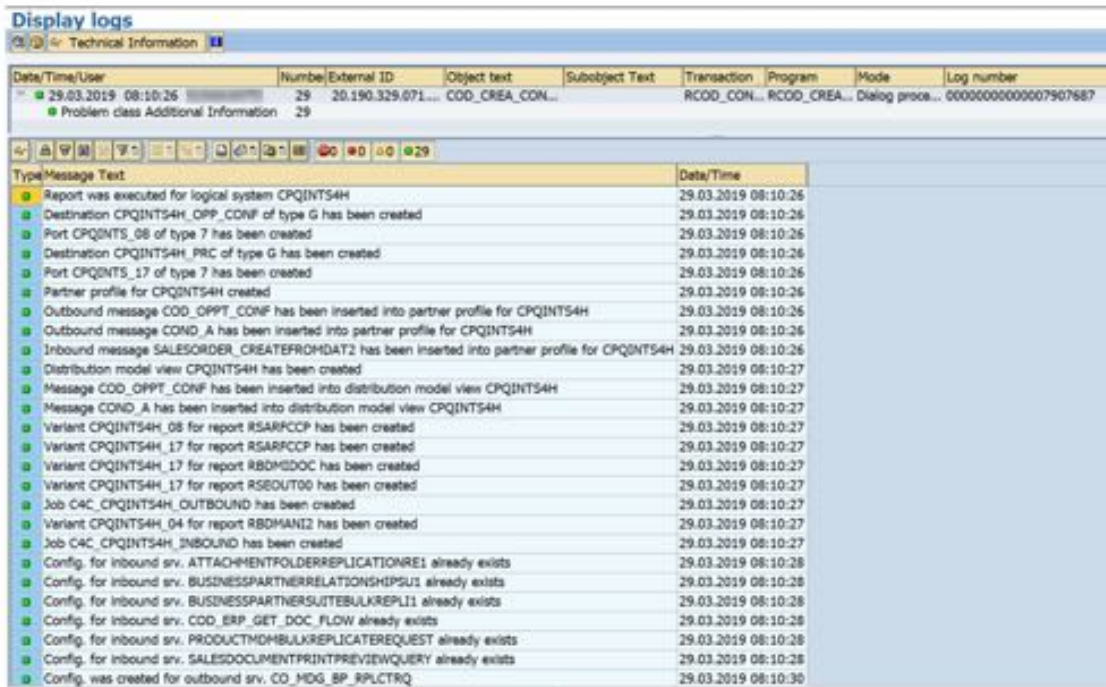
7. Choose *Next*.
8. In the *Summary* screen, select the *Generate* button to generate the configuration entities.



9. In the confirm pop-up screen choose *Yes*



10. In the log you can check which entities were created



3.1.11 Pricing Condition Filter

Purpose

This describes the procedure to create an IDoc filter in SAP S/4HANA system. To allow only PPR0 Pricing Condition data to flow to SAP CPQ system.

Procedure

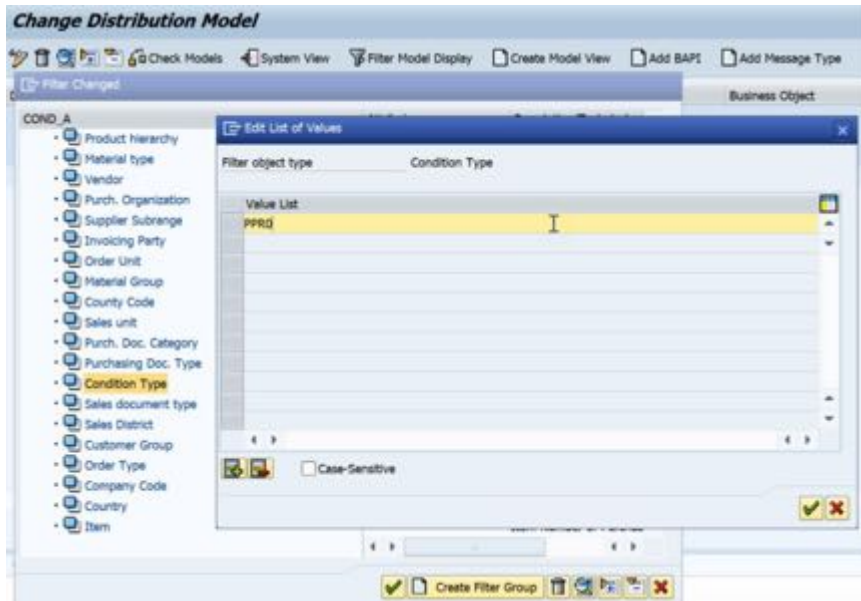
1. Access the following transaction:

Transaction Code	BD64
------------------	------

2. The Distribution Model for CPQ will be created by connectivity report, Search and Expand the Distribution Model 'SAP CPQ Integration with S/4HANA'.



3. Expand the COND_A message type and double click on No filter set.
4. In a Change Filter popup, click on Create Filter Group button.
5. Expand the Filter Group and select the field Condition Type,
6. Click on Add button to add a value to filter field PPR0.



7. Click Ok button in popup windows and Save the Distribution Model.

3.2 Configuration in SAP Cloud Integration



SAP provides prepackaged, generic integration content called integration flows (iFlows) for the integration of SAP CPQ with SAP S/4HANA using SAP Cloud Integration(CPI).

Prerequisites

To be able to import and deploy iFlows, you need the AuthGroup.IntegrationDeveloper role assigned in your tenant.

Upload SAP CPQ SSL Certificates in SAP Cloud Integration.

3.2.1 How to get the SAP CPI client certificate

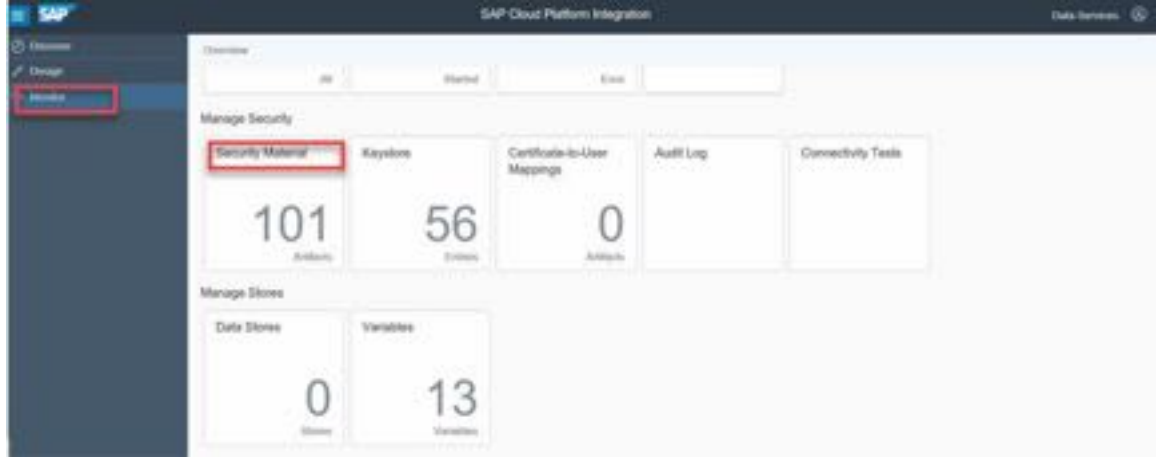
In the SAP CPI provisioning e-mail follow the link under Certificate Information. In the resulting screen choose X509 Certificate with option Binary CER. Download it to your local machine.

3.2.2 View prepackaged iFlows using SAP CPI Web UI

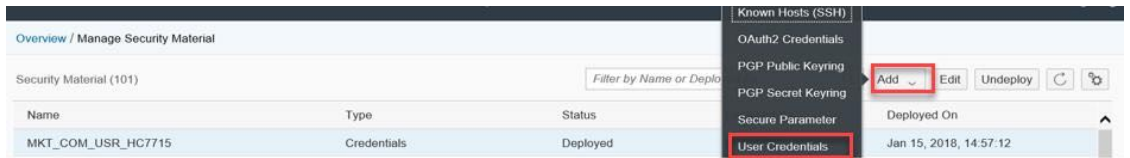
1. Access the web UI URL from the provisioning e-mail. It should be in the format: `https://<hctenant>.hana.ondemand.com/itspaces.`
2. View all pre-packaged integration flows delivered by SAP in the *Discover* tab.
3. Click on the package SAP CPQ Integration with SAP S/4HANA
4. You can see all the artifacts for this Integration Package.

3.2.3 Creating User Credentials in CPI System

1. Connect to the tenant management node of the SAP CPI system with the URL <http://<tenant management node URL>/itspaces>
2. Go to the *Monitor* tab, then Click on *Security Material* under *Manage Security*.



3. Click *Add* and select *User Credentials*.



4. Enter the User detail for SAP CPQ.

Field	Value
<i>Name</i>	COM_USER_CPQ
<i>User</i>	COM_USER_CPQ#{DOMAIN of CPQ System}
<i>Password</i>	Enter the password maintained for Communication User in SAP CPQ

Add User Credentials

*Name:

Description:

*Type:

*User:

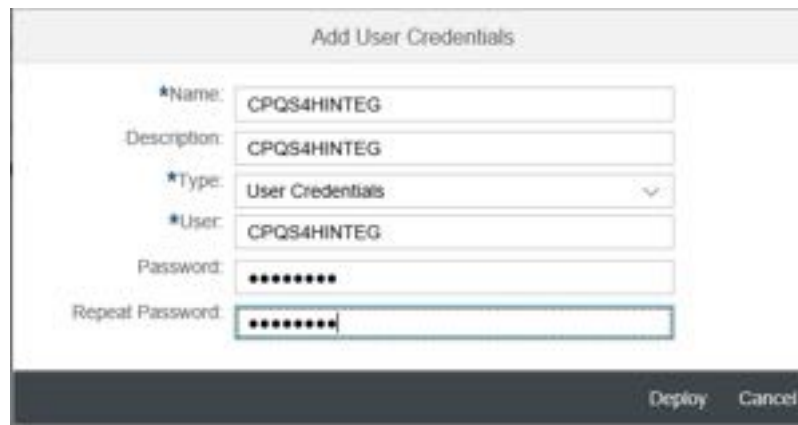
Password:

Repeat Password:

5. Click *Deploy*.
6. Click *Add* and select *User Credentials*.

7. Enter details for user of SAP S/4HANA.

Field	Value
Name	CPQS4HINTEG
User	CPQS4HINTEG
Password	Enter the password of User CPQS4HINTEG



8. Click *Deploy*.

i Note

In case you have SAP CPS Integrated with SAP S/4HANA, then

1. Click *Add* and select *OAuth2 Credentials*
2. Enter details for OAuth2 Credentials of SAP CPS.

Field	Value
Name	CPSSERVICE
Grant Type	Client Credentials
Description	CPSSERVICE
Authentication URL	Maintain CPS authentication URL e.g. https://cpservices.authentication.eu10.hana.ondemand.com/oauth/token
Client ID	Client ID of CPS system e.g. sb-cpservices-cpscalliduscloud!t0001
Client Secret	Enter the password of the client
Client Authentication	Send as Body Parameter
Include Scope	Should be ticked
Scope	Maintain the scope e.g. uaa.resource
Content Type	Application/x-www-form-urlencoded

3. Click *Deploy*.

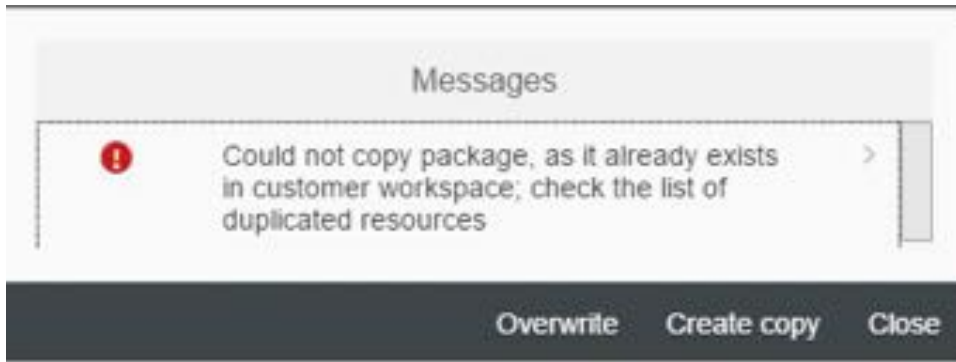
3.2.4 Configure and Deploy the iFlows Using Web UI



If you have re-deployed key store (system.jks) in your SAP CPI tenant, you need to re-deploy all the iFlows to avoid the caching issues or re-start them to avoid caching related issues.

Procedure

1. Connect to the tenant management node of the SAP CPI system with the URL `http://<tenant management node URL>/itspaces`
2. Under the *Discover* tab, Click on the package *SAP CPQ Integration with SAP S/4HANA*.
3. Choose *Copy* on the top-right corner of the package overview page.
4. If the Integration package were being created for the first time, then you would see the message 'Integration Package Created'. If not, you will see the below dialog box asking to either create a new copy of the package or to overwrite the existing integration package content. Choose *Overwrite*.

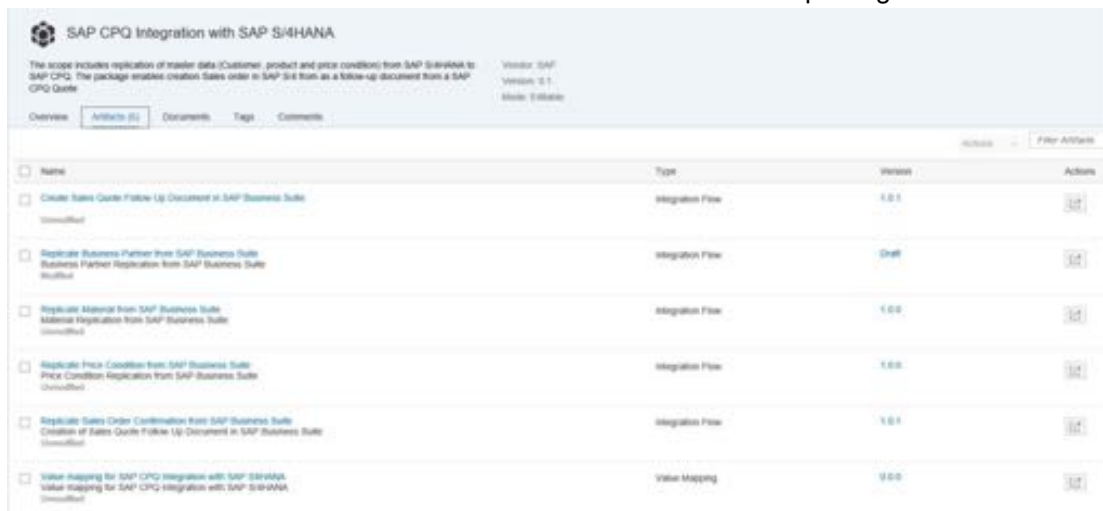


5. Select the *Design* mode to configure the iFlows.



6. Select the Integration Package copied


7. All the iFlows will be shown/ listed under the **ARTIFACTS** tab of the package



Name	Type	Version	Actions
Create Sales Quote Follow Up Document in SAP Business Suite	Integration Flow	1.0.1	
Replicate Business Partner from SAP Business Suite	Integration Flow	DRP	
Replicate Material from SAP Business Suite	Integration Flow	1.0.0	
Replicate Price Condition from SAP Business Suite	Integration Flow	1.0.0	
Replicate Sales Order Confirmation from SAP Business Suite	Integration Flow	1.0.1	
Value Mapping for SAP CPQ Integration with SAP S/4HANA	Value Mapping	1.0.0	

8. Choose the iFlows mentioned in the table below (one after the other) by choosing **Actions** → **Configure** option.
9. Configure the **sender system** (in this example S/4HANA) and **receiver system** (in this example CPQ) details as explained below:
 - a. Choose **Sender Tab**: Choose **Authentication Method** as **Client Certificate**
 - b. **Browse** for the certificate. See chapter: Certificate Management in SAP S/4HANA for the client Certificate.
 - c. Choose **Receiver Tab**: Enter the **Address** as CPQ API URL. Check section [How to find CPQ API URL](#) in appendix.
 - d. Choose the **Authentication** as **Basic**
 - e. Enter the Communication User Credential in **Credential Name**.
 - f. Choose **Save** and Choose **Deploy**
 - g. Repeat the same procedure for all the iFlows that have the same sender system as S/4HANA and Receiver System as CPQ.
10. Choose iFlow to configure the **sender system** (in this example CPQ) and **receiver system** (in this example S/4HANA) details.
 - a. Choose **Sender Tab**: Choose **Authorization** as **User Role**.
 - b. Add **Address** as **/CPQ/S4/Quote2Order**.
 - c. Choose **Receiver Tab**: Select Receiver as **S/4HANA**.
 - d. Enter the **host** name as Cloud Connector URL, check section [How to setup Cloud Connector](#) or Contact your system administrator for these details.
 - e. Enter **Client** as the SAP S/4HANA system client. **Proxy Type** as On-Premise.
 - f. Choose the **Authentication** as **Basic**
 - g. Enter the S/4HANA User Credential in **Credential Name**.
 - h. Choose **More Tab**: Enter <SID>CLNT<Client> in **Recipient Partner Number**. For Example: QKXCLNT260.
 - i. Enter SAP<SID> in **Recipient Port**. For Example: SAPQKX.
 - j. Enter Logical System you have created in S/4HANA in **Sender Partner Number** and **Sender Port**. For Example: CPQINTS4H.
 - k. Choose **Save** and Choose **Deploy**

iFlows to be configured	
Name of the iFlow	Description of the iFlow
Create Sales Quote Follow Up Document in SAP Business Suite	Creation of Sales Quote Follow Up Document in SAP Business Suite
Replicate Business Partner from SAP Business Suite	Business Partner Replication from SAP Business Suite
Replicate Material from SAP Business Suite	Material Replication from SAP Business Suite
Replicate Price Condition from SAP Business Suite	Price Condition Replication from SAP Business Suite
Replicate Sales Order Confirmation from SAP Business Suite	Creation of Sales Quote Follow Up Document in SAP Business Suite

 Note

In case you have SAP CPS Integrated with SAP S/4HANA, And Product replication done from SAP S/4HANA to SAP CPS. You can configure the Iflow “Create Sales Quote Follow Up Document in SAP Business Suite” for receiver CPS as well to check configurable product characteristics in SAP CPS follow the below steps.


- a. Choose Receiver Tab: Select Receiver as *CPS*.
- b. Enter the *host* name as SAP CPS URL or Contact your system administrator for these details.
- c. Enter *Proxy Type* as Internet and Select *Method* as GET.
- d. Choose the *Authentication* as *OAuth2 Client Credentials*
- e. Enter the CPS OAuth2 Credential in *Credential Name*.

3.2.5 Value Mapping for CPQ integration with SAP S/4HANA

1. Connect to the tenant management node of the CPI system with the url: http://<tenant management node>/itspaces
2. Go to Design view.
3. Select the Integration Package in your workspace.
4. All the iFlows will be shown/ listed under the *Artifacts* section of the page.
5. Select the iFlows with name *Value Mapping for SAP CPQ integration with SAP S4HANA* and choose *Actions* button on the right and select *Configure*.

All the Mapping Values will be shown/ listed.

Design / SAP CPQ integration with SAP S/4HANA / Configure Value mapping for SAP CPQ integration with SAP S/4HANA /

 Configure Value mapping for SAP CPQ Integration with SAP S/4HANA

Bi-Directional Mapping Search

Agency	Identifier	≡	Agency	Identifier
CPQ	AdditionalDiscountAmount	≡	S4	COND_TYPE
CPQ	AdditionalDiscountPercent	≡	S4	COND_TYPE
CPQ	PriceComponentDescription	≡	S4	COND_TYPE
S4	MATKL	≡	CPQ	ProductType
S4	LAND1	≡	CPQ	CountryAbbrev
S4	KSCHL	≡	CPQ	PriceDescription
S4	ProductTypeCode	≡	CPQ	ProductType
S4	ProductHierarchyInternalID	≡	CPQ	ProductCategoryUSEngish
S4	RoleCode	≡	CPQ	RoleCode
S4	RegionCode	≡	CPQ	StateAbbrev

6. Map all the Value mapping fields as per below sections.
7. Choose *Save* and then *Deploy*.

3.2.5.1 Product Type

1. Mention the Material Group in SAP S/4HANA system in left side.
2. Enter the respective Product Type in CPQ system in right side. Maintain the Product Type created in 3.3.3.1 Maintain Product Type section.

Value Mappings Default Values

Value Mappings for Search Add

S4_MATKL	≡	CPQ_ProductType
001	≡	Metal Processing
002	≡	Electronics

Usage:
ValueMap (Source agency, Source identifier, Source value, Target agency, Target identifier) = Target value.
Example:
ValueMap (S4_MATKL, 001, CPQ_ProductType) = ;
ValueMap (CPQ_ProductType, S4_MATKL) = 001;

3.2.5.2 Product Category

1. Mention the Product Hierarchy in SAP S/4HANA system in left side.
2. Enter the respective Product Category in CPQ system in right side. Maintain the Product Category created in 3.3.3.2 Maintain Product Category section

Value Mappings Default Values

Value Mappings for Search Add

S4_ProductHierarchyInternalID	≡	CPQ_ProductCategoryUSEngish
00100	≡	Machines
00105	≡	Vehicles

Usage:
ValueMap (Source agency, Source identifier, Source value, Target agency, Target identifier) = Target value.
Example:
ValueMap (S4_ProductHierarchyInternalID, 00100, CPQ_ProductCategoryUSEngish) = Machines;
ValueMap (CPQ_ProductCategoryUSEngish, Machines, S4_ProductHierarchyInternalID) = 00100;

3.2.5.3 Role Code

1. Mention the Business partner role code in SAP S/4HANA system in left side.
 2. Enter the respective Business partner role code in CPQ system in right side.
- Maintain the Business partner roles available in CPQ system Customer Role Default under Customer/ Customer Role.



3.2.5.4 Country

1. Mention the Country Code in SAP S/4HANA system on left side. You can check Country Code in S/4HANA in T005 Table.
2. Enter the respective Country Code in CPQ system in right side. Maintain the Countries Abrev3 available in CPQ system under General as Countries.



3.2.5.5 Region

1. Mention the Region Code in SAP S/4HANA system on left side. You can check Region Code in S/4HANA in T005S Table.
2. Enter the respective Region Code in CPQ system in right side. Maintain the States Abrev2 available in CPQ system under General as States.



3.2.5.6 Pricing Condition

1. Mention the Pricing Condition Code in SAP S/4HANA system on left side.
2. Enter the respective Pricing Description to be used in CPQ system in right side.



3.3 Configuration in SAP CPQ

3.3.1 Define Provider settings

Procedure

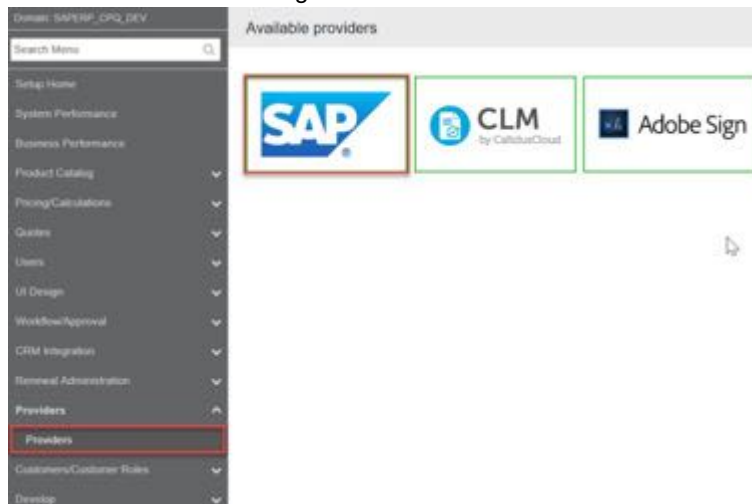
1. Login to your SAP CPQ system using an Administrator User.



2. Click on **SETUP** in menu bar and choose **Setup**.



3. Select **Providers** in left navigation bar and then select **SAP**.



4. Select **SAP Cloud Platform** in Available SAP Providers.
5. In Common Settings tab, Switch on **Enable Integration**.
6. Select **BasicAuth** in Authentication Mode dropdown.
7. Maintain Integration **Username** and **password** as the username and password of Cloud Integration User.

The screenshot shows the 'Hana Cloud Platform Integration - Authentication details' section. It includes a toggle for 'Enable integration' which is turned on. Below it, there are fields for 'Authentication mode' (set to BasicAuth), 'Integration username' (p1792840996), and 'Integration password' (masked with asterisks).

8. Under General Setting, Switch on *Send customers along with quote payload*.
9. Enter the Cloud Platform URL in REST API base URL address and a postfix */http* to connect to http adapter.

The screenshot shows the 'General settings' section with a toggle for 'Send customers along with quote payload' highlighted in red. Below it, there is a dropdown for 'UserZone'. The 'REST API base URL address' section shows a URL with a postfix '/http' highlighted in red and yellow.

10. Click *Save*.
11. Navigate to S/4 ERP Settings tab, maintain the endpoint as */CPQ/S4/Quote2Order*.
12. Click *Save*.
13. Select *SAP ERP* in Available SAP Providers.
14. Select *Connect SAP ERP* as *TRUE*.
15. Click *Save*.

3.3.2 Create CPQ Communication User

Purpose

A Communication user need to be created in SAP CPQ System, which will be used in Cloud Integration for basic authentication to CPQ.

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on *SETUP* in menu bar and choose *Setup*.
3. In left navigation bar, select *Users* under *Users*.
4. Click on *Add New User* Button.
5. Enter the *First Name*, *Last Name* and *Email* Address for Communication User.
6. Enter *Username* as *COM_USER_CPQ* and maintain the *Initial Password*.
7. Choose *User Type* as *Sales*.

8. Select *Administrator*.
9. Select *Company* as *CallidusCloud (CALD)*.
10. Click *Save*.

 **Note**

Login to CPQ system using the above user and reset the password and use same password to be used in CPI at the time of Creating User Credentials.

3.3.3 Product Replication Setup

3.3.3.1 Maintain Product Types

Purpose

Follow below procedure to create Product Type in SAP CPQ. This Product Type is mapped to S/4HANA Material Group in SAP CPI middleware.

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on *SETUP* in menu bar and choose *Setup*.
3. In left navigation bar, select *Product Types* under *Product Catalog*.
4. Click on *Add New* Button.
5. Maintain the *Product Type Name* and *Product Type Rank*.

Example:

Product Type	Product Type Rank
Metal Processing	10
Electronics	11

Product Types Administration » New

Product Type Name:

Product Type System Id:

Product Type Icon:

Product Type Rank:

6. Click *Save*.

3.3.3.2 Maintain Product Categories

Purpose

In below steps, product catalog is created, which will help user to differentiate the product based on their category. If product doesn't have any Product Category, it is considered as DRAFT. The Product Category is mapped with S/4HANA Product Hierarchy in CPI middleware.

Procedure

1. In left navigation bar, select *Categories* under *Product Catalog*.
2. Click on *Add New* Button.
3. Maintain the Product Category by giving *Category Name*, *Category Description*, *Rank* and check the *Active* checkbox.

Example:

Category Name	Category Description	Rank	Active
Machines	Machines	10	X
Vehicles	Vehicles	11	X

Categories Administration » New

Category Data

Parent category: Select Clear

*Category Name:

*System ID:

Category Description:

*Rank:

Active:

4. Click *Save*.

3.3.3.3 Maintain Unit of Measurement

Procedure

1. In left navigation bar, select *Unit of Measurement* under *Product Catalog*.
2. Click on *Add New* Button.
3. Enter the Description as *Measurement Name* and Code as *Unit of Measurement*.
4. Click on *Add New* Button.

Unit of measurement

*Measurement Name


Measurement System Id

Add Units of Measurement

*Units of Measurement

Unit of Measurement System Id

Add New

Unit Of Measurement	System Id	Delete	Default	Export Conversions
EA	EA_Each_cpq	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Save

5. Click **Save**.

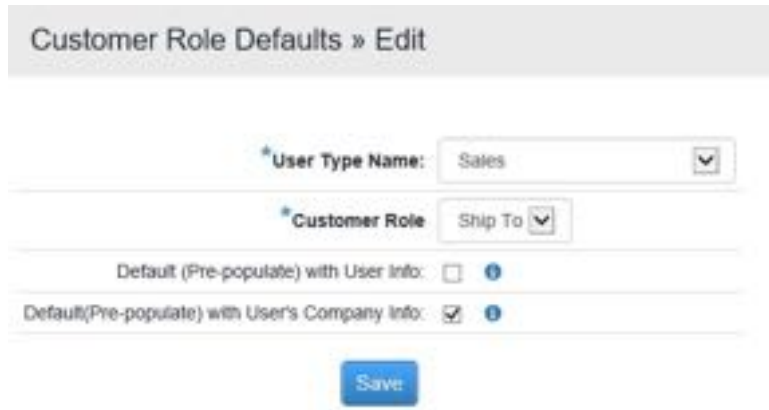
3.3.4 Customer Replication Setup

3.3.4.1 Maintain Customer Role

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on **SETUP** in menu bar and choose **Setup**.
3. In left navigation bar, select **Customer Role Defaults** under **Customers/ Customer Roles**.
4. Click on **Add New** Button.
5. Select the **User Type** and **Customer Role**.
Example:

User Type	Customer Role	User Info	User's Company Info
Partner	Bill To	X	
Sales	Ship To		X



Customer Role Defaults » Edit

*User Type Name: Sales

*Customer Role: Ship To

Default (Pre-populate) with User Info:

Default(Pre-populate) with User's Company Info:

Save

6. Click *Save*.

i Note

Customer Role Defaults settings has a significance in maintaining the Bill To and Ship To in the Customer Info tab of the CPQ quote hence maintain this setting as the User Type used for creating the quote.

3.3.4.2 Maintain Customer Field Permissions

Purpose

Business can define which fields of customer to be made mandatory and which should be read only. Below steps deals with minimum fields needed for customer replication from SAP S/4HANA system.

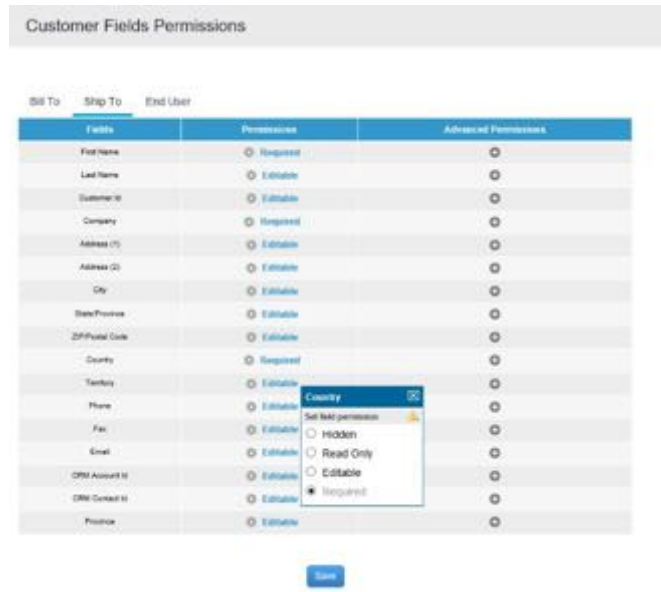
Procedure

1. In left navigation bar, select *Customer Field Permissions* under *Customers/Custom Roles*.
2. Go to *Ship To* tab, click on the *permission* field and Select *Required* for below fields:

Fields
First Name
Company
Country

i Note

Maintain the field permissions as per your business needs, setting field permission as Required will make the field mandatory in the customer master, hence make sure that all the mandatory field values are available while business partner master data replication from S/4HANA system.



3. Click *Save*.
4. In similar way, the mentioned fields can be made mandatory for Bill To and End User.

3.3.5 Pricing/ Discounting Setup

3.3.5.1 Create Markets

Purpose

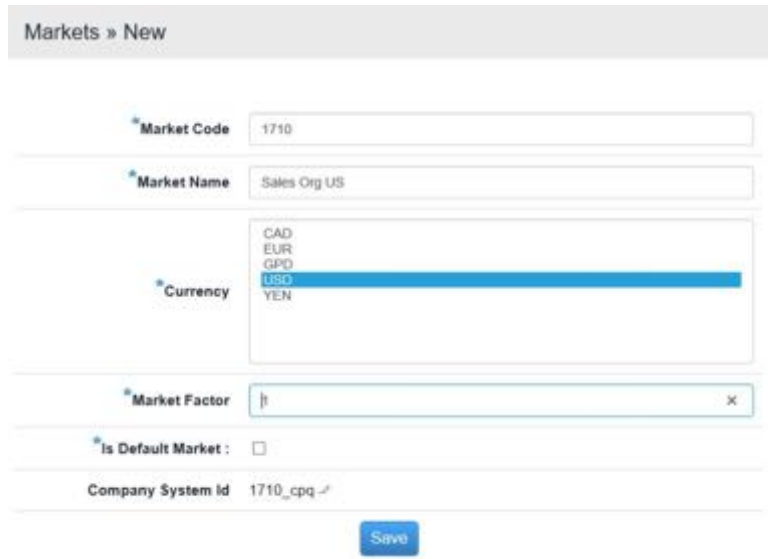
A market is created in SAP CPQ against every Sales Organization of SAP S/4HANA system. This will help in pricing determination in Sales Quote in CPQ system.

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on *SETUP* in menu bar and choose *Setup*.
3. In left navigation bar, select *Markets* under *Pricing/Calculations*.
4. Click on *Add New* Button.
5. Enter the *Market Code* field as a Sales Organization of S/4HANA system.
6. Enter *Marketing Name*, *Currency* and *Market Factor*.

Example:

Market Code	Market Name	Currency	Market Factor
1710	Sales Org US	USD	1
1010	Sales Org DE	EUR	1



Markets » New

Market Code: 1710

Market Name: Sales Org US

Currency: CAD, EUR, GPD, USD, YEN

Market Factor: 1

Is Default Market:

Company System Id: 1710_cpq

Save

7. Click *Save*.
8. In left navigation bar, select *Market Visibility* under *Pricing/Calculations*.
9. Click on *Add New* Button.
10. Select *Market Name* created in above step in Step 2 Section
11. In Step 3 section enter *Visibility Condition* as **1**.
12. Click *Save*.

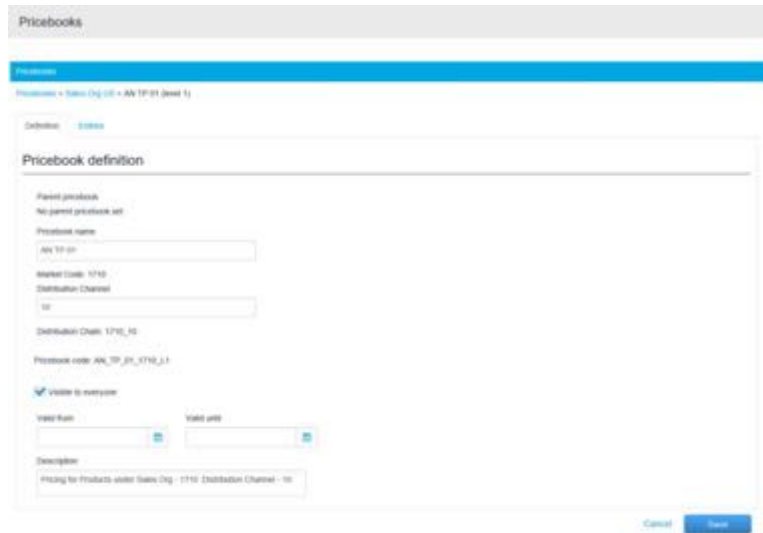
3.3.5.2 Create Pricebooks

Purpose

Pricing in the Sales Quote is determined based on market, pricebook and product in CPQ system. Pricebook comprises of Distribution Channel and Product entries with their respective prices.

Procedure

1. In left navigation bar, select *Pricebooks* under *Pricing/Calculations*.
2. Under *Pricebooks* tab, search for the *Market Name* created in above steps.
3. Click on *Add New Pricebook* button.
4. Enter the *Pricebook name*.
5. Enter the *Distribution Channel* similar to the distribution Channel of S/4HANA system against the Sales Organization. Example: 10
6. Check the *Visible to everyone* checkbox.



7. Click *Save*.
8. Pricing for the products in *Entries* tab will be created by Pricing Replication IDoc from S/4HANA system.

3.3.5.3 Discounting

Purpose

One of the major functionalities of SAP CPQ is on the fly discounts based on products, product types, product categories, users and user types. You can setup discounting in Sales Quote in your SAP CPQ system following below procedure.

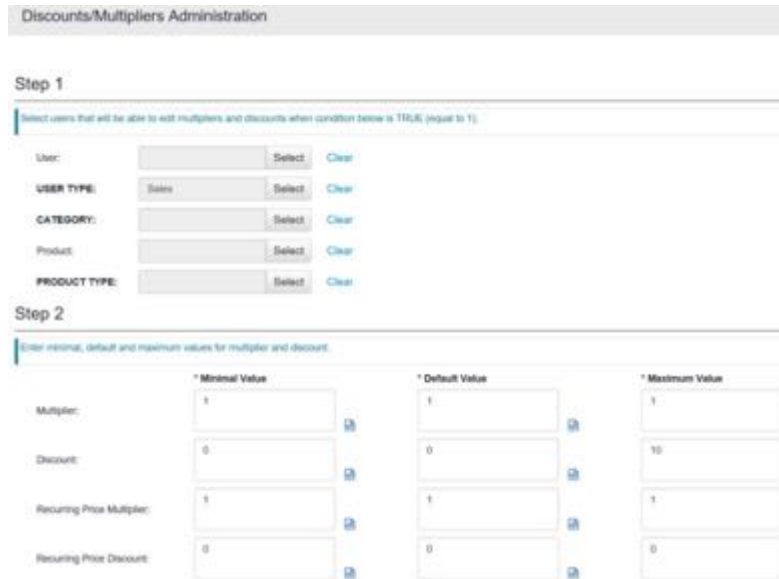
Procedure

1. In left navigation bar, select *Discounts/Multipliers* under *Pricing/Calculations*.
2. Click on *Add New* button.
3. Click on *Select* button to maintain *USER TYPE* as *Sales* in Step 1 section.

Note

The above selection will allow users with user type 'Sales' to give discounts in Sales Quote which we will be defining in next step. You can create any condition for discount selection with User, User Type, Product, Product Type or Category.

4. In Step 2 section, maintain multiplier as **1** for *Minimal Value*, *Default Value* and *Maximum Value*.
5. Maintain *Maximum Value* for Discount as **10**. It will allow your Sales User to give maximum of 10 percent discount. Above 10 percent will be subject to approval.



6. In Step 3 section, maintain *Condition* as 1. You can create conditions using scripting language also.
7. Click *Save*.

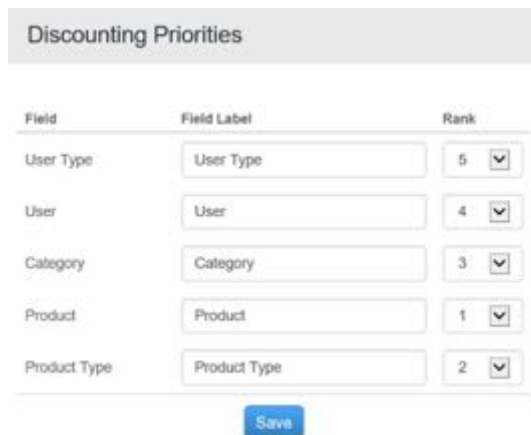
3.3.5.4 Discounting Priorities

Purpose

In SAP CPQ, you can provide discount to customer in Sales Quote based on User, User Type, Product, Product Type or Product Category conditions. There might come a case with two or more valid conditions. In such situation, which condition will take priority.

Procedure

1. In left navigation bar, select *Discounting Priorities* under *Pricing/Calculations*.
2. As we want Product to have highest Priority. Select *Rank* as 1.
3. Further Select *Rank* for Product Type as 2, Category as 3, User as 4 and User Type as 5.



Field	Field Label	Rank
User Type	User Type	5
User	User	4
Category	Category	3
Product	Product	1
Product Type	Product Type	2

4. Click *Save*.

3.3.6 Sales Quote to Order Setup

3.3.6.1 Add Action for External Sales Order in ERP

Purpose


The Action for creating Sales Order in your ERP External System and the same need to be assigned to Sales Quote in SAP CPQ.

Procedure

1. In left navigation bar, select *Workflow* under *Workflow/Approval*.
2. In My Quotes tab, Click on Start Status is Preparing, and End Status is Order Confirmation pending.



Expand All / Collapse All	Preparing	Open	Customer Accepted	Customer Rejected	Awaiting Internal Approval	Approved	Rejected	Expired	Lead	Order FAILED	Order Confirmation Pending	Order Placed
Preparing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Open	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Customer Accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Customer Rejected	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Awaiting Internal Approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Approved	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rejected	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Expired	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lead	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Order FAILED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Order Confirmation Pending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Order Placed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3. Click on  , Scroll to the *Place order to ERP* Action, Click the checkbox *Selected*.
4. Click *Save*.
5. In a similar way configure all the below actions in workflow

Start Status	End Status	Action
Order Confirmation pending	Order Confirmation pending	Edit, Place Order to ERP, Save Quote
Order Confirmation pending	Order Placed	Order Status Update
Order Placed	Order Placed	Edit, History

Workflow Actions

Switch to: List view Copy from: My Quotes Copy Clear Workflow: clear

My Quotes Waiting for Approval Other Quotes

Expand All Close All	Preparing	Open	Customer Accepted	Customer Rejected	Awaiting Internal Approval	Approved	Rejected	Expired	Lost	Order FAILED	Order Confirmation Pending	Order Placed
Preparing	<div style="border: 1px solid red; padding: 2px;"> All New Orders Partner Save Order View Proposal </div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid red; padding: 2px;"> Place order to ERP </div>	<input type="checkbox"/>
Open	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Rejected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Awaiting Internal Approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rejected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expired	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Order FAILED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Order Confirmation Pending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid red; padding: 2px;"> ERP Place order to ERP Save Quote </div>	<div style="border: 1px solid red; padding: 2px;"> Order Status Update </div>
Order Placed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid red; padding: 2px;"> ERP History </div>

1 Note

Copy the same settings from *My Quotes* to *Other Quotes* tab as well. To do this Select *Other Quotes* tab, Select *My Quotes* from the dropdown selection in the Copy from field and click on Copy button.

Workflow Actions

Switch to: List view Copy from: My Quotes Copy Clear Workflow: clear

My Quotes Waiting for Approval Other Quotes

Expand All Close All	Preparing	Open	Customer Accepted	Customer Rejected	Awaiting Internal Approval	Approved	Rejected	Expired	Lost	Order FAILED	Order Confirmation Pending	Order Placed
Preparing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. In left navigation bar, select *Workflow Permissions* under *Workflow/Approval*.
7. Under Action Permissions, search for *Place order to ERP* action.
8. Click on Add button (+). And Select the checkbox for User Type *Sales*.

Workflow Permissions » Edit of Place order to ERP

Actions Permissions

Actions	User Types	
Place order to ERP	CFO	<input type="checkbox"/>
	Customer	<input type="checkbox"/>
	Customer Quote Acceptance	<input type="checkbox"/>
	Partner	<input type="checkbox"/>
	Sales	<input checked="" type="checkbox"/>
Sales Management	<input type="checkbox"/>	

Save Cancel

9. Click *Save*.
10. In a similar way add the User Type *Sales* for all the actions like *Edit*, *Save Quote*, *Order Status Update and History* under Action Permissions.

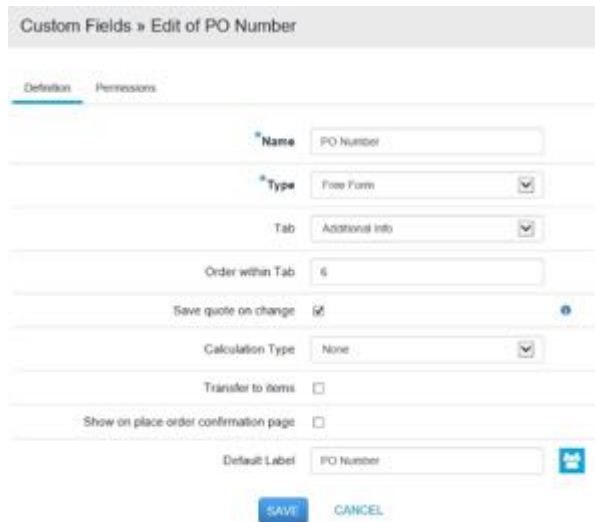
3.3.6.2 Create Custom field in Sales Quote

Purpose

Custom field is needed in SAP CPQ in Sales Quote to capture PO Number in Sales Order.

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on *SETUP* in menu bar and choose *Setup*.
3. In left navigation bar, select *Custom Fields* under *Quotes*.
4. Click on *Add New* Button.
5. In the *Definition* tab, maintain the *Name* as **PO Number** (case sensitive).
6. Choose *Type* as *Free Form* and *Tab* as *Additional Info*.
7. Select *Save quote on change*.
8. Enter *Default Label* as **PO Number**



Custom Fields » Edit of PO Number

Definition Permissions

Name PO Number

Type Free Form

Tab Additional Info

Order within Tab 6

Save quote on change

Calculation Type None

Transfer to items

Show on place order confirmation page

Default Label PO Number

SAVE CANCEL

9. Click *Save*.

3.4 Data Loading

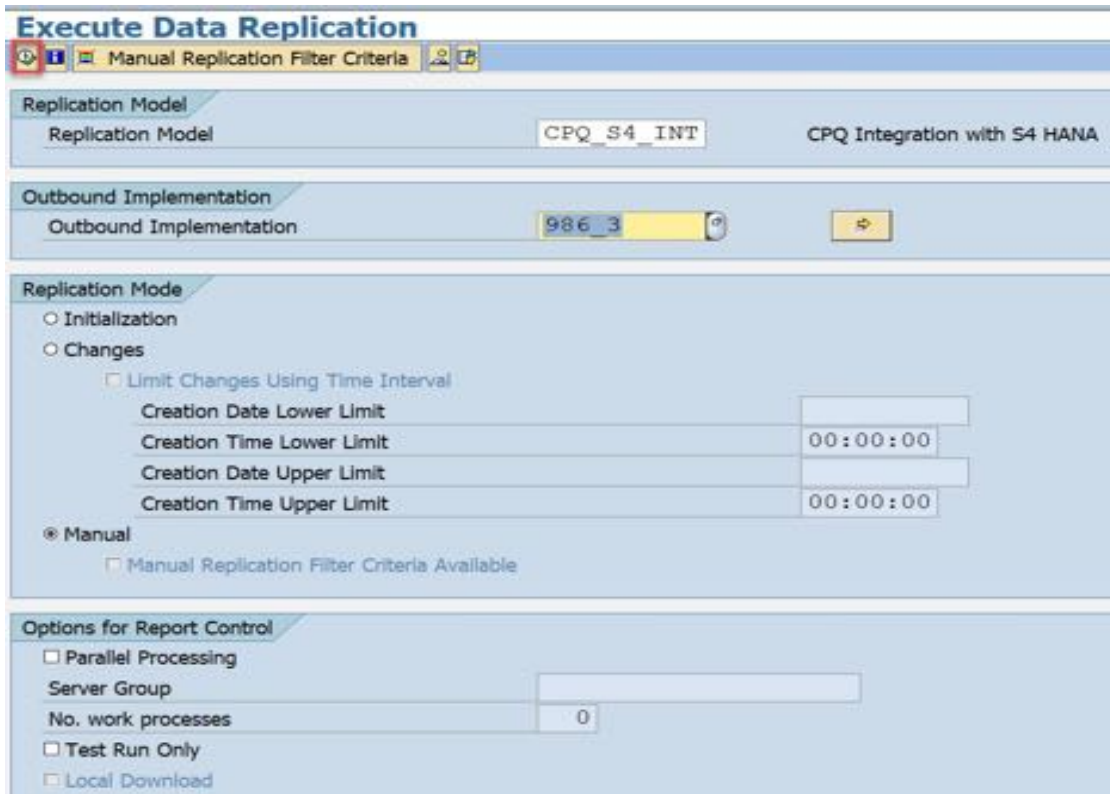
3.4.1 Initial Data Load

Purpose

This section describes how to execute the initial data load of material, customer master and Pricing Condition data from your SAP S/4HANA system to the SAP CPQ system.

3.4.1.1 Business Partner (Customer Master)

1. Open transaction DRFOUT.
2. Select the *Replication Model* and *Outbound Implementation* created in S/4HANA section.
3. Choose *Replication Mode* as *Manual*, in case you want to replicate specific business partners.



4. Click *Manual Replication Filter Criteria* in top menu.
5. Enter the Business Partner ID and choose Back.



6. Choose *Yes* in the following pop-up.



7. Choose *Execute*.

3.4.1.2 Product Master

1. Open transaction DRFOUT.
2. Select the *Replication Model* and *Outbound Implementation* created in S/4HANA section.
3. Choose *Replication Mode* as *Manual*, in case you want to replicate specific Material.

4. Click *Manual Replication Filter Criteria* in top menu.
5. Enter the Material (For example: TG11) and choose Back.

6. Choose *Yes* in the following pop-up.

7. Choose *Execute*.

3.4.1.3 Product Pricing

1. Access the transaction SE38.
2. Enter the report name RCOD_CONDITIONS_EXTRACT and click on *Execute*.

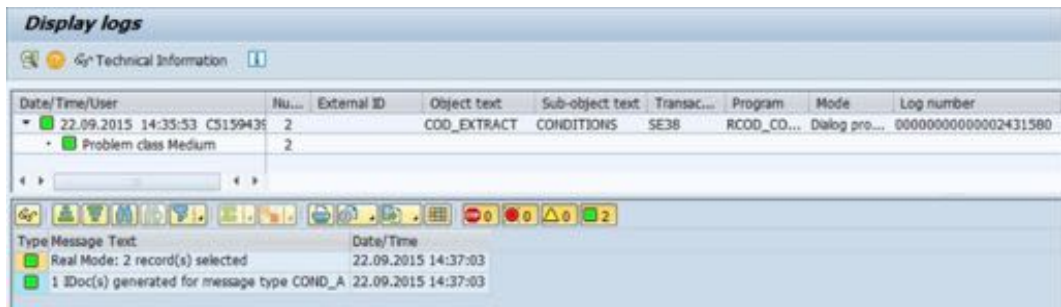


3. Enter the following details and click *Execute*:

4. Enter the following details:

Field	Value
Sales Organization	For example: 1000
Distribution Channel	For example: 10
Valid from	A valid date
	A valid date
Logical System	<Logical system of the SAP CPQ>
Test Mode	Unchecked
Table	304 (Material with release status)

5. The condition records created with the provided data are replicated to SAP CPQ.



- Execute the report by changing the scale type to B (retaining the other inputs) for which lDoc filtering is not maintained.

i Note

Go to Tcode BD87 in SAP S/4HANA system to process the ldoc if it is not triggered automatically.

4 Manual Build Steps

4.1 Ticket Component

Implementation Step	Component	Comment
	SV-RDS-CFC	

4.2 Appendix

4.2.1 How to find CPQ API URL

Purpose

You need to have CPQ API URL, which will be used in Cloud Integration system as address path to call the API's.

Procedure

1. Login to your SAP CPQ system using an Administrator User.
2. Click on **SETUP** in menu bar and choose **Setup**.
3. On the top right corner, click on **Help** icon.
4. On left navigation, click on **CallidusCloud CPQ API**.
5. Check the API Example section.
6. To access CPQ's API, use the following URLs:
 - o `<application root>/wsAPI/CPQAPI.asmx` - this is the set of user level functions like Business Partner Replication and Sales Order Confirmation.
 - o `<application root>/wsAPI/wssrv.asmx` - this is the set of admin level functions like Material Replication and Pricing Condition Replication.

4.2.2 How to setup Cloud Connector

Purpose

You need to have Cloud Connector Virtual Host URL for SAP S/4HANA system, which will be used in Cloud Integration system as address path to call the S/4HANA system.

Procedure

1. Login to your SAP HANA Cloud Connector system using an Administrator User.
2. Select the *Account* of your Cloud Integration system.
3. Click on *Access Control* to add Mapping Virtual to Internal System.
4. Click on *Add* button.
5. Select *ABAP System* in *Back-end Type* and Click *Next*.
6. Select *HTTPS* as *Protocol* and Click *Next*.
7. Enter the *Internal Host* and Click *Next*. You can find HTTPS host and port of your system in SMICM transaction Goto -> Services.

Active Services						
No.	Protocol	Service Name/Port	Host Name	Keep Alive	Proc.Timeo	Actv External Bind
1	HTTP	50008	ldcirt7.wdf.sap.corp	300	300	✓
2	HTTPS	44308	ldcirt7.wdf.sap.corp	300	300	✓
3	SMTP	25008	ldcirt7.wdf.sap.corp	300	300	✓
4	SMTP	25108	ldcirt7.wdf.sap.corp	300	300	✓
5	SMTP	25208	ldcirt7.wdf.sap.corp	300	300	✓
6	SMTP	25328	ldcirt7.wdf.sap.corp	300	300	✓
7	SMTP	25708	ldcirt7.wdf.sap.corp	300	300	✓
8	SMTP	25908	ldcirt7.wdf.sap.corp	300	300	✓
9	SMTP	25808	ldcirt7.wdf.sap.corp	300	300	✓
10	SMTP	25308	ldcirt7.wdf.sap.corp	300	300	✓

8. Enter the *Internal Port* and Click *Next*.
9. Enter the *Virtual Host* which you must maintain in Cloud Platform Iflows and Click *Next*.
10. Enter the *Virtual Port* which you must maintain in Cloud Platform Iflows and Click *Next*.
11. Select *Principal Type* as *none* and Click *Next*.
12. Enter the *Description* and Click *Next*.
13. Click on *Finish* button.

Edit System Mapping

Virtual host cannot be edited

Back-end Type:

Protocol:

Virtual Host:

Virtual Port:

Internal Host:

Internal Port:

SAProuter:

Principal Type:

SNC Partner Name:

Description:

Check availability of internal host (this may take some time)

14. Select the Entry for Virtual Host Mapping created in above steps.
15. Click on *Add* in Resource Accessible and Add / as *URL Path*.

Add Resource

Path must not be empty

Enabled

URL Path: *

Access Policy: Path only (sub-paths are excluded)
 Path and all sub-paths

Description:

16. Click [Save](#).

4.2.3 Troubleshooting