



SAP CPQ Quotes to Sirion CLM - SAP CI Configuration Guide

Version 1.0

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Document History

The following table shows the document history:

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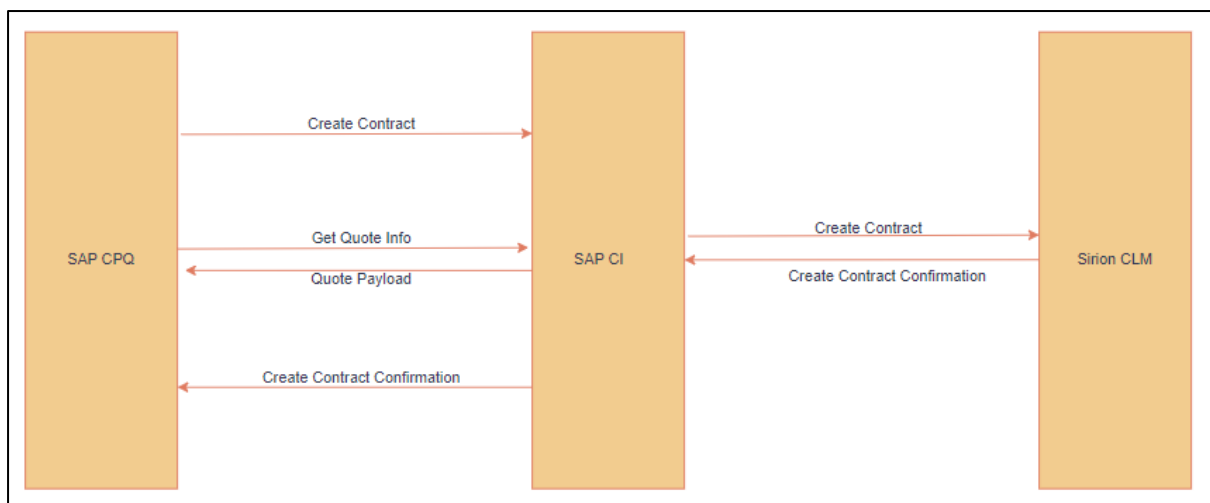
1. Introduction

This document provides an in-depth guide on the essential configuration steps required for the seamless integration of SAP CPQ (Configure, Price, Quote) with Sirion CLM (Contract Lifecycle Management). It covers all the critical aspects to ensure that quotes generated in SAP CPQ are effectively managed and processed within the Sirion CLM system, as follows:

- Pre-requisites
 - Sirion CLM Configuration
 - SAP CPQ Configuration
 - SAP CPQ – Sirion CLM Mapping
- SAP CI configurations
 - Configure & Deploy iFlow on SAP CI
 - Security Artifacts Setup
 - Integration Flow Configuration

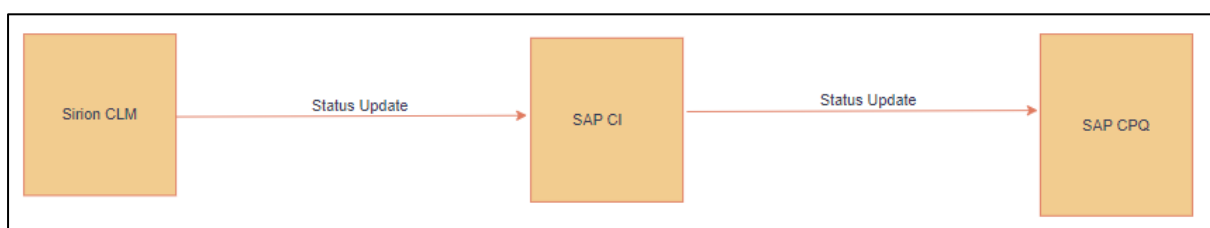
1.1. Data Synchronization from SAP CPQ to Sirion CLM

Initially, SAP CPQ system captures and manages customer requirements, configuring products and pricing based on various parameters and rules. Once a quote is accepted, it seamlessly transitions into the Sirion CLM system.



1.2. Data Synchronization from Sirion CLM to SAP CPQ

Once a Contract is created at Sirion CLM, its status information goes back incrementally and captured at the SAP CPQ via CI.



1.3. Intended Audience

This document is intended for the following teams:

- Engineering
- Integration
- Product Management

2. Pre-requisites

This integration setup requires additional configuration steps on Sirion and SAP CPQ as listed below:

2.1. Sirion CLM Configuration

2.1.1. API OAuth Credentials

Reach out to the Sirion administrator to generate the OAuth Client credentials for APIs. The administrator will share the 'OAuth Client Id' and 'OAuth Client Secret' which will be used in the subsequent configuration steps.

2.1.2. iFlow: Replicate Quote from SAP CPQ to Sirion CLM Contract Draft Request (CDR)

2.1.2.1. Metadata Fields

Below table shows the required metadata fields to be configured in Sirion for this iFlow.

- **Contract Draft Request (CDR):**

S. No.	Sirion CDR Field Name	Field Type
1.	CPQ Quote Number	Text
2.	Currency	Dropdown
3.	Title	Text
4.	Effective Date	Date
5.	Expiration Date	Date
6.	Payment Terms (in Days)	Dropdown
7.	TCV	Number
8.	ID	Text (auto-generated)
9.	Contracting Entity	Dropdown
10.	Contracting Entity Address	Text Area
11.	Agreement Type	Dropdown
12.	Paper Type	Dropdown
13.	Counterparty	Dropdown
14.	Counterparty Address	Text Area

- **Contract Line Items (CLI):**

S. No.	Sirion CLI Field Name	Field Type
1.	Product	Text
2.	Description	Text
3.	Quantity	Text
4.	Price	Text
5.	Currency	Text
6.	Amount	Auto-calculated (Quantity * Price)
7.	Start Date	Text
8.	End Date	Text

2.1.3. iFlow: Replicate Contract Draft Request Status from Sirion CLM to SAP CPQ

2.1.3.1. Metadata Fields

Below table shows the required metadata fields to be configured in Sirion for this iFlow.

- **Contract Draft Request (CDR):**

S. No.	Sirion CDR Field Name	Field Type
1.	Status	Text (auto-generated)

2.1.3.2. Webhook

This iFlow setup requires webhook subscription for 'create' and 'workflow-action' events in Sirion.

2.2. SAP CPQ Configuration

2.2.1. iFlow: Replicate Quote from SAP CPQ to Sirion CLM Contract Draft Request (CDR)

2.2.1.1. Metadata Fields

Below table shows the required metadata fields to be configured in SAP CPQ Quote for this iFlow.

- **Header-Level Fields:**

S. No.	Name	Type
1.	Quote Number	Text (auto-generated)
2.	Market	Dropdown
3.	Contract Title	Text
4.	Contract Start Date	Date
5.	Contract End Date	Date
6.	Contract Payment Term	Dropdown
7.	Quote Total	Number
8.	CDR ID	Text
9.	Involved Parties → Bill-to Party	Collection of fields (Name, Address, etc.)
10.	Involved Parties → Sold-to Party	Collection of fields (Name, Address, etc.)

- **Item-Level Fields:**

S. No.	Name	Type
1.	Product Name	Text
2.	Product Description	Text
3.	Quantity	Integer
4.	List Price (One-time)	Number
5.	Market	Dropdown

2.2.1.2. Custom Actions Setup

For synchronous Contract Draft Request (CDR) creation in Sirion, 'Custom Actions' should be configured at the required workflow step to send the Quote information to SAP CI web-service. On successful creation of CDR and Line Items, SAP CI sends back the generated CDR Entity Id.

Based on the status of CDR creation, the script should also move the Quote to the next workflow step.

Custom Actions can be configured as follows:

1. Configure SAP CI Credentials:

Create a Service Key in the BTP for your SAP CI tenant and configure the generated Client ID/Secret under Security -> Credential Management on the SAP CPQ Setup page.

2. Payload Structure:

The API request to send Quote metadata to the configured SAP CI service should follow below structure:

```
<?xml version="1.0" encoding="utf-16"?>
<Quote>
  <Status>Preparing</Status>
  <QuoteCompositeNumber>01460148</QuoteCompositeNumber>
  <QuoteId>289</QuoteId>
  <User> demo.user@sirion.com</User>
  <TimeStamp>1720620054.4049377</TimeStamp>
</Quote>
```

3. Parse Response:

The request can either succeed or fail due to several reasons. Script should be able to handle both scenarios. Response payload to be expected in either scenario is as follows:

a. Case: Success

```
<response>
<status>Success</status>
<cdrId>&lt;a
href=&quot;https://sap.sirioninc.net/ux/#/show/tblcdr/CDR
012342&quot; target=&quot;_blank&quot;&gt;
CDR012342&lt;/a&gt;</cdrId>
<cdrStatus>Contract Request Initiated</cdrStatus>
</response>
```

b. Case: Failure

```
<response>
<status>Failure</status>
<errorMessage>Item(s) need to be entered before creating
contract in Sirion.</errorMessage>
</response>
```

c. Case: Exception

For other technical errors, appropriate HTTP Response code and text will be returned and should be logged in CPQ.

Brief description of each field expected in XML payload in the first two scenarios above is as follows:

S. No.	Payload Field	Description
1.	status	'Success' or 'Failure'
2.	cdrId	Sirion CDR entity ID (if CDR creation is successful). This updates ' CDR ID ' field on Quote.
3.	cdrStatus	Sirion CDR creation status (if CDR creation is successful). This updates ' CDR Status ' field on Quote.
4.	errorMessage	Reason of failure (if CDR or CLI creation fails due to any reason).

4. Display Status Message:

Success or Failure Message can be displayed on SAP CPQ Quote page once response is received to notify end-user if any correction to the Quote metadata is needed before re-pushing it to Sirion CLM.

2.2.2. iFlow: Replicate Contract Draft Request Status from Sirion CLM to SAP CPQ

2.2.2.1. Metadata Fields

Below table shows the required metadata fields to be configured in SAP CPQ Quote for this iFlow.

- **Header-level Fields:**

S. No.	SAP CPQ Field Name
1.	CDR Status

2.3. Field Mappings

In this section, the field mappings mentioned are customizable and can be enhanced based on the respective Sirion CLM & SAP CPQ metadata configurations.

2.3.1. iFlow: Replicate Quote from SAP CPQ to Sirion CLM Contract Draft Request (CDR)

- **SAP CPQ Quote to Sirion CDR:**

S. No.	SAP CPQ Field Name	Sirion CDR Field Name	Comments
1.	Quote Number	CPQ Quote Number	
2.	Market	Currency	Use value mapping
3.	Contract Title	Title	
4.	Contract Start Date	Effective Date	
5.	Contract End Date	Expiration Date	

6.	Contract Payment Term	Payment Terms (in Days)	Use value mapping
7.	Quote Total	TCV	
8.	CDR ID	ID	
9.	Involved Parties → Bill-to Party → Name	Contracting Entity	
10.	Involved Parties → Bill-to Party → Address Name + Street + City + State + Postal Code	Contracting Entity Address	Concatenate using comma (,)
11.	Involved Parties → Sold-to Party → Name	Counterparty	
12.	Involved Parties → Sold-to Party → Address Name + Street + City + State + Postal Code	Counterparty Address	Concatenate using comma (,)
13.	-	Agreement Type	Default value
14.	-	Paper Type	Default value

NOTE –

- Default values for these can be configured, as mentioned in [Section 3.3.1.1](#).

- **SAP CPQ Quote Items to Sirion CLI:**

S. No.	SAP CPQ Field Name	Sirion CLI Field Name	Comments
1.	Product Name	Product	
2.	Product Description	Description	
3.	Quantity	Quantity	
4.	List Price (One-time)	Price	
5.	Market	Currency	3-letter currency code
6.	Contract Start Date	Start Date	
7.	Contract End Date	End Date	

2.3.2. iFlow: Replicate Contract Draft Request Status from Sirion CLM to SAP CPQ

- **Sirion CDR to SAP CPQ Quote:**

S. No.	Sirion CDR Field Name	SAP CPQ Field Name	Comments
1.	Status	CDR Status	

3. SAP CI Configuration

3.1. Configure and deploy iFlow on your SAP Cloud Integration Tenant

3.1.1. Copy Package

Copy the following package from Discover to the Design section on your tenant:

- **SAP CPQ Integration with Sirion CLM**

NOTE - If the integration package is being created for the first time, you will see the "Integration Package Created" message. Otherwise, you'll be prompted to either create a new copy of the package or overwrite the existing content. Click Overwrite.

3.1.2. Package Artifacts

The packages include the following artifacts:

- **Replicate Contract Draft Request Status from Sirion CLM to SAP CPQ**
iFlow to update the status into CPQ based on the webhook request received from Sirion.
- **Replicate Quote from SAP CPQ to Sirion CLM**
This iFlow enables replication of approved quote and underlying line items in SAP CPQ to contract draft request in Sirion CLM.
- **Value Mapping Between SAP CPQ and Sirion CLM**
This iFlow enables mapping of fields from SAP CPQ to corresponding values in Sirion CLM and vice-versa.

3.1.3. Access Design Mode

In the left navigation bar, select Design mode. The package will now be visible in the design area and ready for configuration.

3.2. Security Artifacts Setup

Following Security Artifacts need to be setup on your SAP CI Tenant:

3.2.1. Sirion CLM Credentials

1. Create Security Material

Create a Security Material of type 'User Credentials' with the Sirion OAuth credentials generated previously ([Section 2.1.1](#)). Provide the below details:

- a. **Name:** <Credential Name>
- b. **Description** <Credential Description>
- c. **Type:** User Credentials
- d. **User:** <Client ID>
- e. **Password:** <Client Secret>

2. Set Credential Name in iFlow

After deployment, set the 'Credential Name' external parameter in the iFlow to the credentials you just created.

3.2.2. Connectivity with SAP CPQ

1. Create Key Pair

To enable OAuth authentication, generate Key Pair from the Keystore page in SAP CPQ, providing the below details:

- a. **Alias**
- b. **Key Type**
- c. **Key Size**
- d. **Signature Algorithm**
- e. **Common Name (CN)**
- f. **Country/Region (C)**
- g. **Valid From**
- h. **Valid Until**

2. Set Credential Name in iFlow

After deployment, set the Credential Name parameter in the iFlow to the credentials you just created.

3. Add Certificate in SAP CPQ

Add the certificate/key generated above in SAP CPQ Setup page under Security -> Certificate Management.

3.3. Integration Flow Configuration

3.3.1. iFlow: Replicate Quote from SAP CPQ to Sirion CLM Contract Draft Request (CDR)

3.3.1.1. Configure Externalized Parameters

S. No.	External Parameter	Description
1.	Agreement Type ID (Sirion)	ID of the required Agreement Type to default to
2.	Authorization	Type of authorization used when receiving request
3.	CSRF Protected	Checkbox; Enables CSRF protection if required
4.	Issuer DN	To be provided if using Certificate-based authentication while receiving request
5.	Service Endpoint Suffix	SAP CI tenant-specific instance URI
6.	CPQ Certificate Auth URI	URI of certificate-based authentication API of SAP CPQ
7.	CPQ Domain	Domain name passed as body parameter while fetching token

8.	CPQ Host	Tenant-specific instance hostname of SAP CPQ
9.	CPQ User Key	Alias of the key-pair in SAP CI used while authenticating with SAP CPQ
10.	Line Item Required Flag	Flag to enable/disable creation of Sirion Contract Draft Request (CDR) if no Items exist on Quote
11.	CPQ Module ID (Sirion)	ID of default value “SAP CPQ”
12.	Sirion URL	Sirion tenant hostname
13.	Sirion OAuth Creds	Name of stored credentials in SAP CI used to consume Sirion APIs
14.	Subject DN	To be provided if using Certificate-based authentication while receiving request
15.	Template ID (Sirion)	ID of Contract Line Item template loaded in Sirion
16.	User Role	To be provided if using User Role based authentication

3.3.1.2. Value Mappings

Certain fields require maintaining reference IDs from Sirion to their corresponding values in SAP CPQ and vice-versa, which utilizes the ‘Value Mapping’ functionality of SAP CI. The following artifact needs to be updated to map these fields as a part of this iFlow configuration.

Value Mapping Between SAP CPQ and Sirion CLM

3.3.2. iFlow: Replicate Contract Draft Request Status from Sirion CLM to SAP CPQ

3.3.2.1. Configure Externalized Parameters

S. No.	External Parameter	Description
1.	Authorization	Type of authorization used when receiving request
2.	CSRF Protected	Checkbox; Enables CSRF protection if required
3.	Issuer DN	To be provided if using Certificate-based authentication while receiving request
4.	CPQ Certificate Auth URI	URI of certificate-based authentication API of SAP CPQ
5.	CPQ Domain	Domain name passed as body parameter while fetching token

6.	CPQ Host	Tenant-specific instance hostname of SAP CPQ
7.	CPQ User Key	Alias of the key-pair in SAP CI used while authenticating with SAP CPQ
8.	Sirion URL	Sirion tenant hostname
9.	Sirion OAuth Creds	Name of stored credentials in SAP CI used to consume Sirion APIs
10.	Subject DN	To be provided if using Certificate-based authentication while receiving request
11.	User Role	To be provided if using User Role based authentication

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