

# **SAP S/4HANA Cloud Integration with Salesforce Configuration Guide**

For SAP Cloud Platform Integration

Version 1.0 – December 2020

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## 1 Introduction

This is the official guide for the configuration of SAP S/4HANA Cloud Integration with Salesforce for SAP Cloud Platform Integration (SAP CPI). This guide covers relevant information for integration developers to configure and deploy the Integration content.

Read this guide carefully before configuring the integration content.

### 1.1 Coding Samples

Any software coding and/or code lines/strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. We do not warrant the correctness and completeness of the Code given herein.

### 1.2 Internet Hyperlinks

The documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. We do not warrant the availability and the correctness of this related information or the ability of this information to serve a particular purpose.

## 2 Business Scenario

SAP S/4HANA Cloud is a future-ready enterprise resource planning (ERP) system with built-in intelligent technologies. It is a cloud-based system that customers can use to manages various business processes.

Salesforce is a cloud computing service as a software (SaaS) company that specializes in customer relationship management (CRM) and helps your automation of Sales and marketing process in an Enterprise

The Integration content in SAP Cloud Integration for SAP S/4HANA Cloud Integration with Salesforce enables the synchronization of master data like Product, Customer, Pricing, etc. This integration content helps with the automation of some business processes by integrating SAP S/4HANA Cloud to Salesforce through SAP Cloud Platform Integration. Information is retrieved from SAP S/4HANA Cloud with the OData adapter. Data retrieved from SAP S/4Hana is then mapped and transformed to a structure that fits SObjects in Salesforce. Lastly, the data is sent to Salesforce using the Salesforce Adapter. Some integration flows also retrieve data from the Salesforce. In which case the data is transformed and mapped in SAP CPI and later sent to SAP S/4HANA Cloud using the OData adapter.



## 3 Preparing the Systems for Integration

### 3.1 Prerequisites

To configure the integration content using this guide, you would need to have access and authorizations to the systems listed below.

Access required:

- SAP S/4HANA Cloud Tenant Details
- SAP Cloud Platform Integration Tenant Details
- Salesforce Tenant Details

Authorization required:

- SAP S/4HANA Cloud Tenant Details
  - Access to Communication Management Application
  - Access to Master Data Business Partner
  - Access to Master Data Product Master
  - Access to Sales Master Data
  - Access to Sales Order
- SAP Cloud Platform Integration Tenant Details
  - AuthGroup.IntegrationDeveloper
- Salesforce Tenant Details
  - Appropriate authorizations for the use of Tenant Salesforce too, among other things, configure Custom Fields for certain objects that we will detail.

### 3.2 Adapter Installation

For the adapter installation, refer to the *Salesforce Adapter and Plug-in Installation Guide* that is included as part of the Salesforce adapter package.

### 3.3 Plug-in Installation

For the plug-in installation, refer to the *Salesforce Adapter and Plug-in Installation Guide* that is included as part of the Salesforce adapter package.

## 4 Configuration

Some activities need to be performed in SAP S/4HANA Cloud, Salesforce, and SAP Cloud Platform Integration before the integration content package can be configured and deployed.

Follow the steps mentioned in the below sections.



## 4.1 Configuration in SAP S/4HANA Cloud

This section describes the mandatory configurations which need to be performed in the SAP S/4HANA Cloud system before you can start the configuration in Salesforce or Integration content in SAP Cloud Platform Integration.

Follow the steps mentioned in the following sub-sections.

### 4.1.1 Create a Technical Communication User

A Technical Communication User is needed to call OData services in SAP S/4HANA Cloud from SAP CPI(Cloud Platform Integration). Communication Users in SAP S/4HANA Cloud are used for inbound communication and for processing messages in the system. Follow the below steps to create a communication user in SAP S/4HANA.

**Prerequisite:** Administrator user should have the catalog role **ID SAP\_CORE\_BC\_COM** assigned in the SAP S/4HANA Cloud system.

#### Procedure

1. Access the S/4HANA Cloud Fiori UI and log in as SAP S/4HANA Cloud Admin.
2. Under **Communication Management**, choose **Maintain Communication Users**.
3. Choose **New** to create a new user.
4. Enter a description and password for the user and click on Create.  
Example:
  - Username: ODATAUSER
  - Description: S/4HANA Cloud Communication User
  - Password: \*\*\*\*\*

### 4.1.2 Create a Communication System

A communication system is a specification of a system that represents a communication partner and all the necessary technical information needed for the communication, such as hostname/IP-Address, identity, user information, certificates. The communication system will later be used to establish communication arrangements for different communication scenarios.

#### Procedure

1. Log on to the SAP Fiori launchpad in your SAP S/4HANA Cloud system.
2. Under **Communication Management**, choose **Communication Systems**.
3. Choose **New** to create a system.
4. Enter a system ID as required (e.g.: CPI\_INSTANCE) and be descriptive in the System Name field. Click on Create.
5. In the **Host Name** field, enter the SAP Cloud Platform Integration Runtime URL
6. Enter a name in the **Logical System ID** field (e.g.: CPI).



7. Enter a name in the **Business System ID** field (e.g.: CPI).
8. In the User for Inbound Communication section, choose the **+** button, enter the technical communication user you created previously, and save.

### 4.1.3 Create a Communication Arrangement

The communication arrangement in S/4HANA Cloud defines all relevant information for the interface. It contains the communication system, outbound, and inbound authentication.

Communication arrangements need to be activated in SAP S/4HANA Cloud for communication with OData APIs.

The following communication arrangements should be activated based on the requirement:

- SAP\_COM\_0008: Business Partner, Customer and Supplier Integration
- SAP\_COM\_0009: Product Integration
- SAP\_COM\_0109: Sales Order Integration
- SAP\_COM\_0115: Product availability information Integration
- SAP\_COM\_0119: Sales Contract Integration
- SAP\_COM\_0294: Pricing Data Integration

**Prerequisite:** The administrator user should have the catalog role ID **SAP\_CORE\_BC\_COM** assigned in the SAP S/4HANA Cloud system.

### Procedure

1. Log on to the SAP Fiori launchpad in your SAP S/4HANA Cloud system with the required authorization.
2. Under **Communication Management**, choose **Communication Arrangements**.
3. Search for a scenario (E.g.: SAP\_COM\_008), if it does not exist, choose new.
4. Search for the scenario again and click Create.
5. Click on **Communication System** and choose the Communication System that you created in the previous step.
6. Under **Inbound Communication**, in the **Username** field, select the user you created and choose Save.
7. Repeat the steps for all the other communication arrangements mentioned in the previous step.

## 4.2 Configuration in Salesforce.com

This section describes the mandatory configurations which need to be performed in Salesforce. Examples of such configurations include Security Token and OAuth Credentials and the creation of custom fields (external id) in Salesforce to store the SAP S/4HANA Cloud ID before you can start implementing configuration for Integration content in SAP Cloud Platform Integration.



### 4.2.1 Configuration of Security Token and OAuth Credentials

**Security Token** and **OAuth Credentials** are needed for a secure connection to Salesforce, to access them an app needs to be created in the Salesforce tenant. To retrieve the **Security Token** and **OAuth Credentials** follow the below procedure.

#### Procedure

1. Log on to your Salesforce console and select **Setup**.
2. On the left panel in the **Build** overview, select **Create** > **Apps**, then **New** for the **Connected Apps** section.

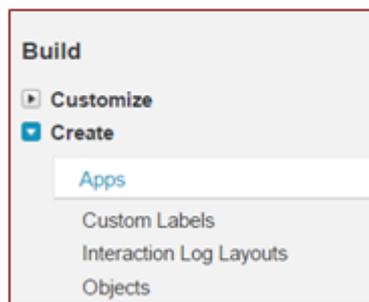


Figure 4.1 Create Salesforce App

3. In the next screen, fill in basic details such as App Name, API Name, and **Contact Email**. In the **API (Enable OAuth Settings)** section, select **Enable OAuth Settings**.

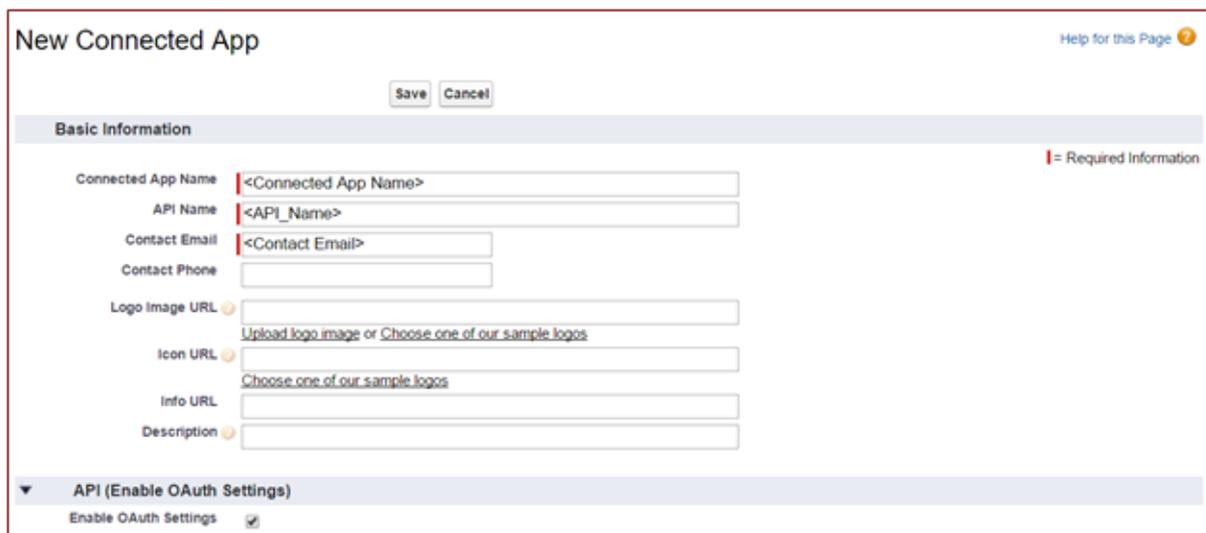
The image shows a screenshot of the 'New Connected App' form in Salesforce. The form has a title 'New Connected App' and a 'Help for this Page' link. There are 'Save' and 'Cancel' buttons at the top. The form is divided into two sections: 'Basic Information' and 'API (Enable OAuth Settings)'. The 'Basic Information' section contains several fields: 'Connected App Name' (required), 'API Name' (required), 'Contact Email' (required), 'Contact Phone', 'Logo Image URL' (with a help icon and a link to 'Upload logo image or Choose one of our sample logos'), 'Icon URL' (with a help icon and a link to 'Choose one of our sample logos'), 'Info URL', and 'Description'. The 'API (Enable OAuth Settings)' section is expanded, showing a checkbox for 'Enable OAuth Settings' which is checked.

Figure 4.2 New Connected App



## 4. Perform the following actions:

- Disable Enable for Device Flow.
- Fill in a Callback URL.
- Disable Use digital signatures.
- Set Selected OAuth Scopes to Full access (full).
- Enable Require Secret for Web Server Flow.
- Disable Include ID Token.
- Disable Enable Asset Tokens. Select Save to complete the creation of the app.

The screenshot shows the 'API (Enable OAuth Settings)' configuration interface. It includes several sections:
 

- Enable OAuth Settings:** A checked checkbox.
- Enable for Device Flow:** An unchecked checkbox.
- Callback URL:** A text input field containing the placeholder '<Callback URL>'. A red vertical bar is visible on the left side of this field.
- Use digital signatures:** An unchecked checkbox.
- Selected OAuth Scopes:** A list box containing 'Full access (full)'. To its left is a list of 'Available OAuth Scopes' with various permissions such as 'Access and manage your Chatter data (chatter\_api)', 'Access and manage your Eclair data (eclair\_api)', etc.
- Require Secret for Web Server Flow:** A checked checkbox.
- Include ID Token:** An unchecked checkbox.
- Enable Asset Tokens:** An unchecked checkbox.

Figure 4.3 Enable OAuth Settings

## 5. In the next overview, select the concerned app. You can find the Client ID and Client Secret in the respective Consumer Key and Consumer Secret fields, see Figure 4.4.

The screenshot shows the 'API (Enable OAuth Settings)' configuration page with a summary of the settings:
 

Consumer Key	[Redacted]	Consumer Secret	<a href="#">Click to reveal</a>
Selected OAuth Scopes	Full access (full)	Callback URL	https://www.rojoconsultancy.com
Enable for Device Flow	<input type="checkbox"/>	Require Secret for Web Server Flow	<input checked="" type="checkbox"/>
Token Valid for	0 Hour(s)	Include Custom Attributes	<input type="checkbox"/>
Include Custom Permissions	<input type="checkbox"/>		

Figure 4.4 Consumer Key and Secret



## 4.2.2 Activate Entitlement Management in Salesforce

Entitlement management is a collection of Salesforce features that help you provide the correct service levels to your customer. It has features that let you define, enforce, and track service levels as part of your support management process

To enable entitlement management modules in your Salesforce instance, follow the guide below:

[https://help.salesforce.com/articleView?id=entitlements\\_enabling.htm&type=5](https://help.salesforce.com/articleView?id=entitlements_enabling.htm&type=5)

### Procedure

1. From Setup, enter *Entitlement Settings* in the **Quick Find** box, then select Entitlement Settings.
2. Select **Enable Entitlement Management**.
3. Click Save. This takes you to a page where you can customize entitlement management settings. You will come back to those settings later on in the entitlement management setup process.

## 4.2.3 Activate Quotes in Salesforce

Quotes in Salesforce represent the proposed prices of your company's products and services. You create a quote from an opportunity and its products. Each opportunity can have multiple associated quotes, and any one of them can be synced with the opportunity.

Follow [the Salesforce guide](#) below to enable quotes modules in your Salesforce instance:

[https://help.salesforce.com/articleView?id=quotes\\_enable.htm&type=5](https://help.salesforce.com/articleView?id=quotes_enable.htm&type=5)

### Procedure

1. From Setup, enter *Quote* in the **Quick Find** box, then select **Quote Settings** (Lightning Experience) or **Quotes Settings** (Salesforce Classic).
2. Select the option for enabling quotes.
3. To display the Quotes related list on the standard opportunity page layout, select **Opportunity Layout**.
4. To add the Quotes related list to all opportunity page layouts that users have customized, select Append to users' personal related list customization.
5. Save your changes.

## 4.2.4 Activate Multiple Currencies

In case support for multiple currencies is required for your scenario, this section gives an overview of how this can be achieved. Before your organization can use multiple



currencies, the feature must be activated in Salesforce. Multiple currencies activation enables selecting multiple currencies throughout Salesforce.

Note: Enabling multiple currencies introduces permanent changes in your Salesforce. Before proceeding, be aware of the implications in the link below:

[https://help.salesforce.com/articleView?id=admin\\_enable\\_multicurrency\\_implications.htm&type=5](https://help.salesforce.com/articleView?id=admin_enable_multicurrency_implications.htm&type=5)

Follow the Salesforce guide to activate multiple currencies in your Salesforce instance:

[https://help.salesforce.com/articleView?id=admin\\_enable\\_multicurrency.htm&type=0](https://help.salesforce.com/articleView?id=admin_enable_multicurrency.htm&type=0)

### Procedure

1. In Setup, enter *Company Information* in the **Quick Find** box.
2. Select **Company Information** and click **Edit**.
3. Ensure that your selected local currency is the default currency that you want to use for current and future records.
4. Enable **Activate Multiple Currencies** and save your changes.

#### 4.2.5 Adding SAP S/4HANA Cloud References

The Integration content synchronizes data between SAP S/4HANA Cloud and Salesforce. For this purpose, an SAP S/4HANA Cloud unique identifier needs to be added in Salesforce which will hold SAP S/4HANA Cloud key value. To achieve that, follow the steps below.

### Procedure

1. Enter the Setup screen.
2. In the **Quick Find** box type *Accounts\** and click on Fields.
3. Scroll down and click **New**.
4. Choose **Text** as **field type** and click on Next.
5. Enter field name: *SAP\_BusinessPartner\_Ref\*\**, enter a Length of 30, and select the **External ID** checkbox.
6. Press next and next and then save.
7. Do the same for the below object types and field names.

The above steps need to be repeated for more Objects. The table below contains a list of fields per object that needs to be added. Perform the above steps for all fields listed in the table below.



Object*	Field Name**
Products	SAP_Material_Ref
Accounts	SAP_BusinessPartner_Ref
Orders	SAP_SalesOrder_Ref
Order Products	SAP_OrderItem_Ref
Service Contracts	SAP_SalesContract_Ref
Contract Line Items	SAP_SalesContractItem_Ref
Price Book Entries	SAP_PriceBookEntry_Ref

Table 1. SAP S/4HANA Cloud references in Salesforce

#### 4.2.6 Adding a Released Custom Field

To have control over the Service Contracts that need to be replicated to SAP S/4HANA Cloud, a custom field needs to be created in Salesforce. Follow the steps below.

##### Procedure

1. Enter the Setup screen.
2. Type *Service Contracts* in the **Quick Find** box and click on Fields.
3. Scroll down and click **New**.
4. Choose **Checkbox** as field data type and click **Next**.
5. Enter field name *Released* and choose **Unchecked** as the default value.
6. Press next and next and then save.
7. Repeat the steps for **Orders**.

#### 4.2.7 Configuration for Order Process Flow

In Salesforce we need to create a record type corresponding to the partner function in SAP S/4HANA Cloud. Record types determine the business processes, page layouts, and picklist values users have access to.

##### Procedure

1. Go to Setup.
2. Type *Record Types* in the **Quick Find** box and select **Record Types** in **Accounts**.



3. Click on **New** and create two new Records:
  - SAP Ship-To
  - SAP Sold-To

Note: These record types are for reference, adjust and fill in as necessary for your organization.

4. Check **Active** and click on **Next**.
5. Select a layout (e.g.: Account Layout) and click on **Save**.
6. Repeat for the other Record.
7. Type *Page Layouts* in the Quick Find box and select **Page Layouts** in Accounts.
8. Edit **Account Layout** (or according to your organization).
9. Select components and drag and drop Orders and Contracts to the layout and click on save.
10. Type *Page Layouts* in the **Quick Find** box and select **Page Layouts** in Opportunities.
11. Edit **Opportunity Layout**.
12. Select **Related Lists** and drag and drop Orders to the layout.
13. Save.

### 4.3 Configuration in SAP Cloud Platform Integration

In this section, the settings of the Integration Flows are discussed, including the prerequisites, parameters of the Sender and Receiver systems, as well as others specific to each iFlow.

#### 4.3.1 Replicate Account from SAP S/4HANA Cloud to Salesforce

##### 4.3.1.1 Business Scenario

This integration flow allows the replication of the customer data by replicating the Customer master data from SAP S/4HANA Cloud to Salesforce as Accounts. Whenever a Customer in SAP S/4HANA Cloud is created or modified, it gets replicated to Salesforce in the next run of the integration flow (if scheduled).

Figure 4.5 depicts the business process to be implemented.



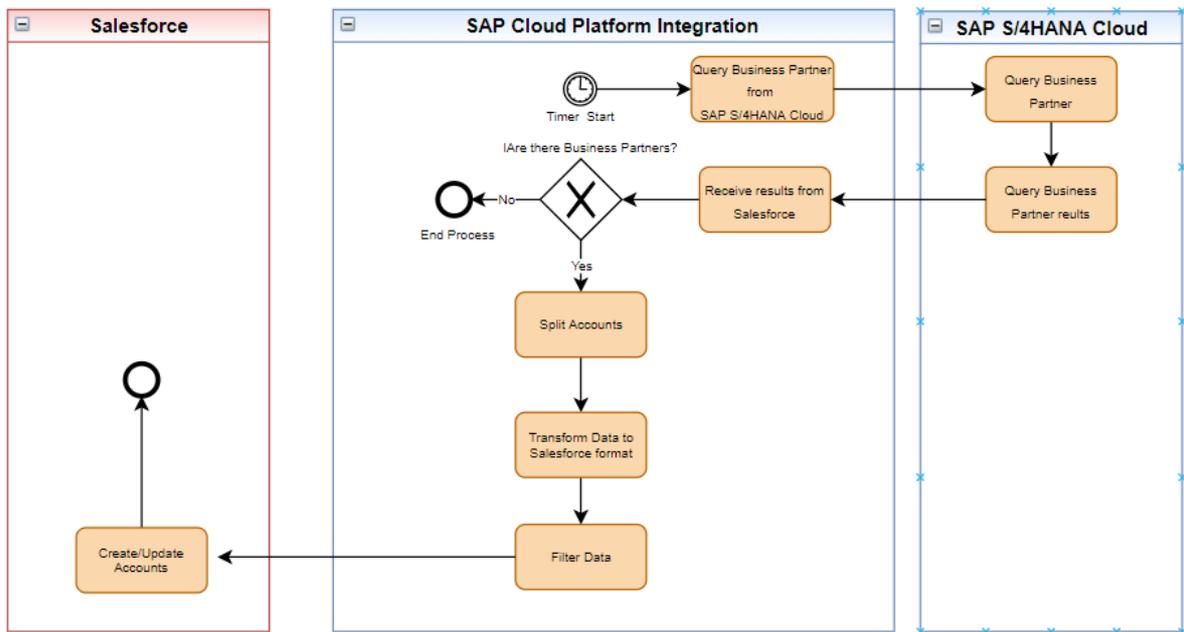


Figure 4.5 Process Diagram

The SAP CPI implementation of the process in Figure 4.5 is shown in Figure 4.6.

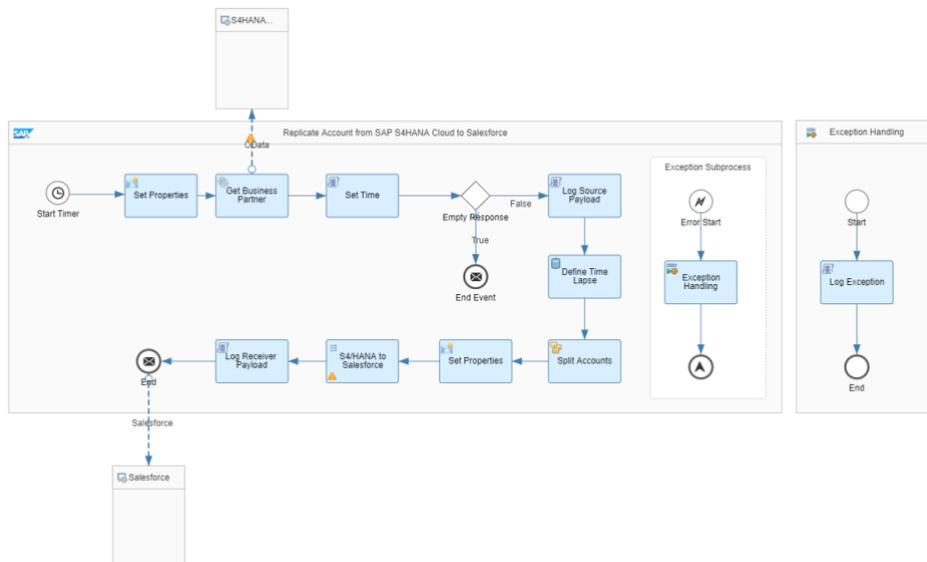


Figure 4.6 Integration Flow



### 4.3.1.2 Prerequisites

The following steps need to be taken as a prerequisite:

- Deploy the security artifacts that will be required during the configuration of the integration content.
- Users need to define the time zone in configuration and the first time run date and hour from when to start replicating.

### 4.3.1.3 Scope

Note that this integration flow will only replicate the Business Partners of the category Customers.

### 4.3.1.4 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Replicate Account from SAP S4HANA Cloud to Salesforce".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - Run Once:** iFlow will be executed only once, can be used for the initial load.
  - Schedule on Day:** iFlow will be executed on a specific date/time.
  - Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).

Figure 4.7 Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Go to Receiver.
5. Configure "Receiver" named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.8.



Configure "Replicate Account from SAP S4HANA Cloud to Salesforce"

Figure 4.8 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.8 is provided in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_BUSINESS_PARTNER
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  https://hostname: <b>port</b> /sap/opu/odata/sap/API_BUSINESS_PARTNER
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 2. Configure Receiver SAP S/4HANA Cloud

6. Configure the "Receiver" connector named "Salesforce". See Figure 4.9.

Figure 4.9 Configure Receiver Salesforce



The description of each of the fields in Figure 4.9 are provided in the table below.

Parameter	Description
Login URL	The data store URL for Salesforce. E.g.: https://login.salesforce.com
Basic Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token Alias	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network.
OAuth Credential Name	Name of deployed OAuth credential name.

Table 3. Configure Receiver Salesforce

## 7. Configure "More" as shown in Figure 4.10.

Configure "Replicate Account from SAP S4HANA Cloud to Salesforce"

Timer Receiver **More**

Type: All Parameters

ExceptionLogging: YES

InitialDate: 1970-01-01T00:00:00.000Z

InitialHour: PT00H00M00S

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

Figure 4.10 Configure More options

The description of each of the fields in Figure 4.10 are presented in the table below.



Parameter	Description
ExceptionLogging	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the exception if any.</p> <p>Specify "NO" or leave blank otherwise.</p>
InitialDate	<p>Date from when the integration flow will replicate for the first time. Correct format: YYYY-MM-DD'T'hh:mm:ss.sss'Z'</p> <p>E.g.: 1970-01-01T00:00:00.000Z</p>
InitialHour	<p>Time from when the integration flow will replicate for the first time.</p> <p>Correct format: 'PT'hh'H'mm'M'ss'S'</p> <p>E.g.: PT00H00M00S</p>
LogMessageBody	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Body (Not recommended in a live environment).</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageHeader	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Header</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageProperty	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Properties</p> <p>Specify "NO" or leave blank otherwise.</p>

Table 4 Configure More options

## 8. Save and Deploy.



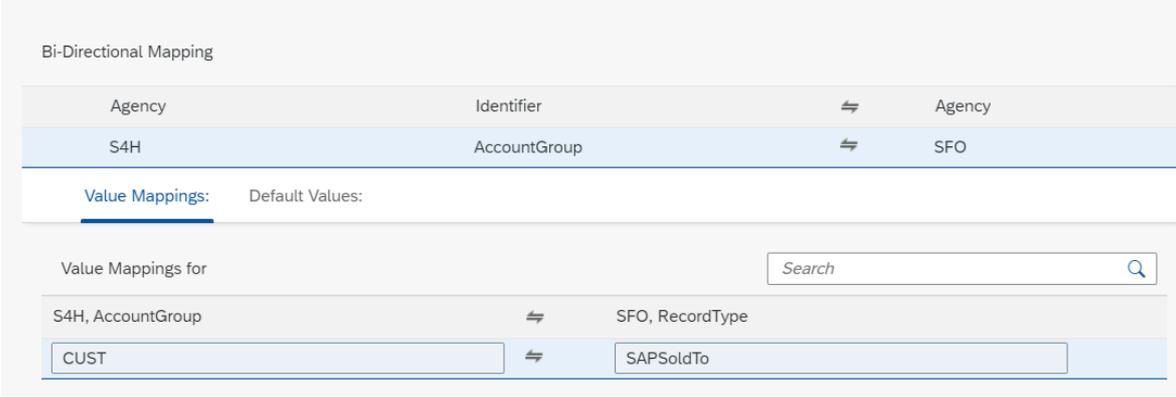
### 4.3.1.5 Integration Message Mapping

In case your organization uses custom fields in Salesforce, you might need to customize the provided integration flow and adapt it to your needs. Users should update the existing solution by creating a new XSD using the Eclipse the Salesforce Plug-in, change this schema in the message mapping, and add custom connections as needed.

### 4.3.1.6 Value Mapping

Value mapping facilitates the customization of Account Group for Customers in SAP S/4HANA Cloud to "RecordType" in Salesforce. In the current version of the content package, there are two Records. Note: Users should rename these Record Types according to their organization.

 Value Mapping for Account Group in SAP S4HANA Cloud



Bi-Directional Mapping

Agency	Identifier	Agency
S4H	AccountGroup	SFO

Value Mappings: Default Values:

Value Mappings for

S4H, AccountGroup	SFO, RecordType
CUST	SAPSoldTo

Figure 4.11 Value Mapping for Account Group

## 4.3.2 Replicate Product from SAP S/4HANA Cloud to Salesforce

### 4.3.2.1 Business Scenario

This integration flow enables the synchronization of the Materials data by replicating the Product master data from SAP S/4HANA Cloud to Salesforce as Products. Whenever a Material in SAP S/4HANA Cloud is created or modified, it will be replicated to Salesforce in the next run of the integration flow (if scheduled).

Figure 4.12 depicts the business process to be implemented.



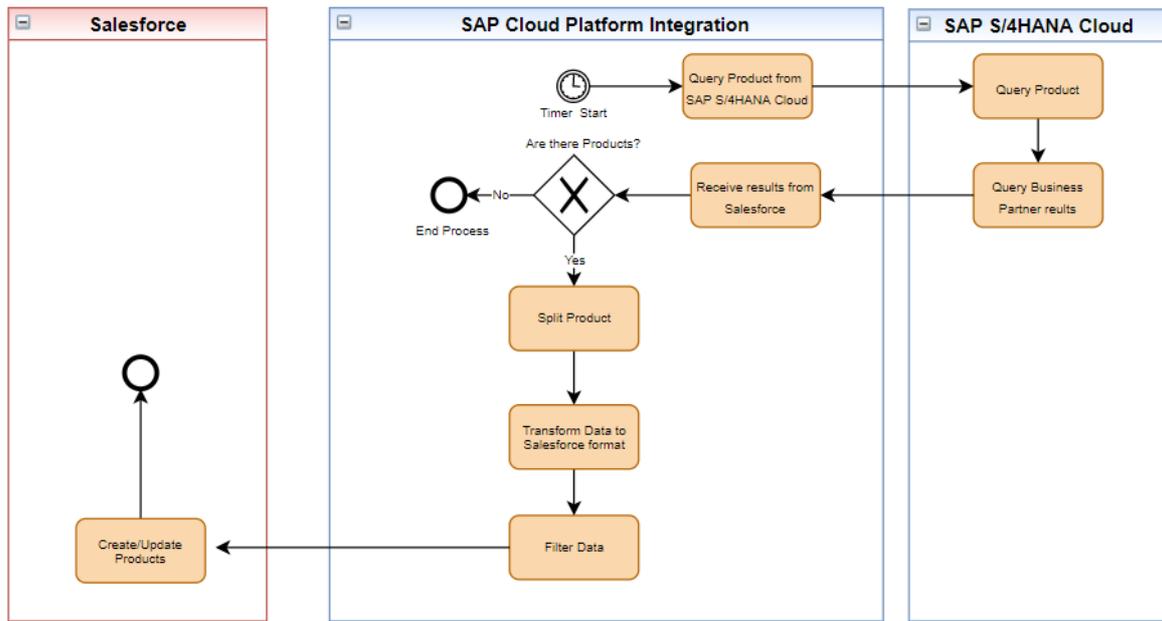


Figure 4.12 Process Diagram

The SAP CPI implementation of the process in Figure 4.12 is shown in Figure 4.13.

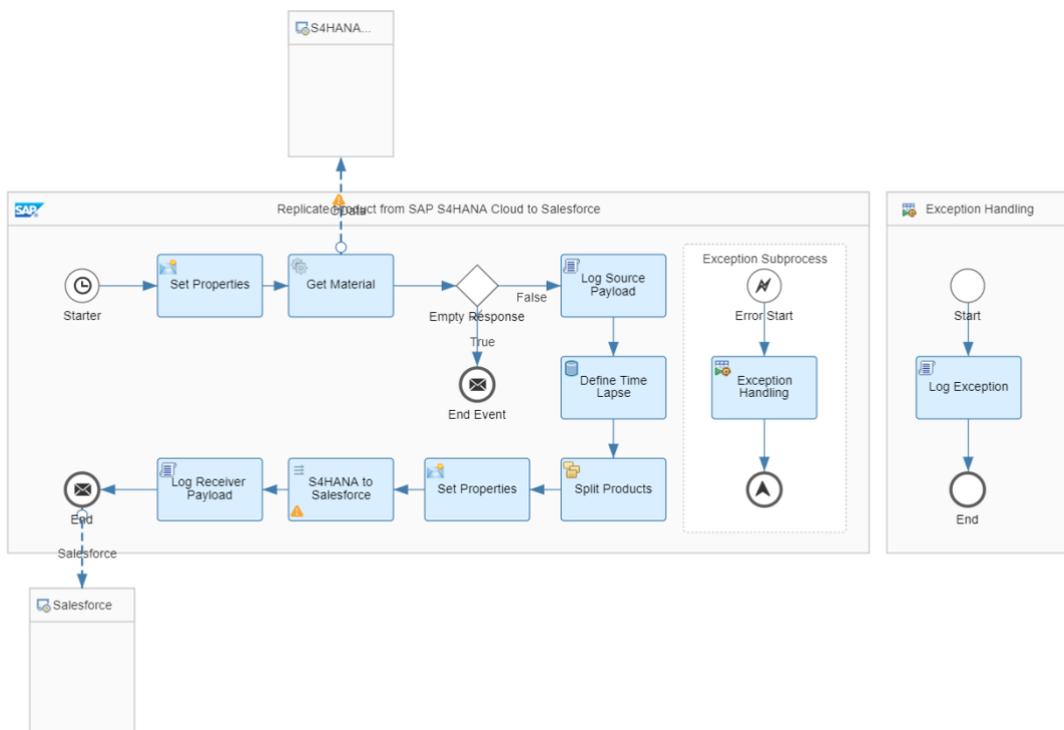


Figure 4.13 Integration Flow



### 4.3.2.2 Prerequisites

The following steps need to be taken as a prerequisite:

- Deploy the security artifacts that will be required during the configuration of Integration content.
- Users need to define the first run date from when to start replicating.

### 4.3.2.3 Scope

SAP S/4HANA Cloud does not save the modification or creation times, it only saves the date. As a result, only the date is taken into consideration for defining intervals for replications.

### 4.3.2.4 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Replicate Product from SAP S4HANA Cloud to Salesforce".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - Run Once:** iFlow will be executed only once, can be used for the initial load.
  - Schedule on Day:** iFlow will be executed on a specific date/time.
  - Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (Suggested mode).

Configure "Replicate Product from SAP S4HANA Cloud to Salesforce"

---

Timer Receiver More

Timer: Starter [StartEvent\_119]

Run Once
  Schedule on Day
  Schedule to Recur

Schedule to Recur

On Time 08:40 AM
  Every 1 hr Between 00:00 and 01:00

Time Zone ( UTC 0:00 ) Greenwich Mean Time(Etc/GMT)

Figure 4.14 Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.15.



Configure "Replicate Product from SAP S4HANA Cloud to Salesforce"

Timer **Receiver** More

Connection

Receiver: S4HANA\_Cloud

Adapter Type: HCIOData

Address: https://{HostName}://{Port}/sap/opu/odata/sap/API\_PRODUCT\_SRV

HostName: [redacted]api.s4hana.ondemand.com

Port: 443

Credential Name: [redacted]

Figure 4.15 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.15 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_PRODUCT_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  https://hostname: <b>port</b> /sap/opu/odata/sap/API_PRODUCT_SRV
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 5. Configure Receiver SAP S/4HANA Cloud

5. Configure the "Receiver" connector named "Salesforce". See Figure **4.16**.



Configure "Replicate Product from SAP S4HANA Cloud to Salesforce"

Timer **Receiver** More

Receiver: Salesforce

Adapter Type: Salesforce\_1.2.2

**Authentication**

Login URL: https://login.salesforce.com

Basic Credential Name: [REDACTED]

Security Token: [REDACTED]

OAuth Credential Name: [REDACTED]

Figure 4.16 Configure Receiver Salesforce

The description of each of the fields in Figure 4.16Figure 4.10 is presented in the table below.

Parameter	Description
Login URL	The data store URL for Salesforce. E.g.: https://login.salesforce.com
Basic Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network.
OAuth Credential Name	Name of deployed OAuth credential name.

Table 6. Configure Receiver Salesforce

6. Configure "More" as shown in Figure **4.17**.



Configure "Replicate Product from SAP S4HANA Cloud to Salesforce"

Timer Receiver **More**

Type: All Parameters

ExceptionLogging: YES

InitialDate: 1970-01-01T00:00:00.000Z

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

Figure 4.17 Configure More options

The description of each of the fields in Figure 4.17 is presented in the table below.

Parameter	Description
ExceptionLogging	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the exception if any.</p> <p>Specify "NO" or leave blank otherwise.</p>
InitialDate	<p>Date from when the integration flow will replicate for the first time. Correct format: YYYY-MM-DD'T'hh:mm:ss.sss'Z'</p> <p>E.g.: 1970-01-01T00:00:00.000Z</p>
LogMessageBody	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Body (Not recommended in a live environment).</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageHeader	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Header</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageProperty	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Properties</p>



	Specify "NO" or leave blank otherwise.
--	--

Table 7. Configure More options

### 4.3.3 Replicate Sales Order from Salesforce to SAP S/4HANA Cloud

#### 4.3.3.1 Business Scenario

This integration flow allows replication of sales orders data by replicating Orders data from Salesforce to SAP S/4HANA Cloud as Sales Orders.

Whenever an Order in Salesforce is created or modified, it would be replicated to SAP S/4HANA Cloud in the next run of the integration flow (if scheduled to recur), as long as it has the custom field *Released*, created in Section 4.2.6, checked.

Figure 4.18 depicts the business process to be implemented.

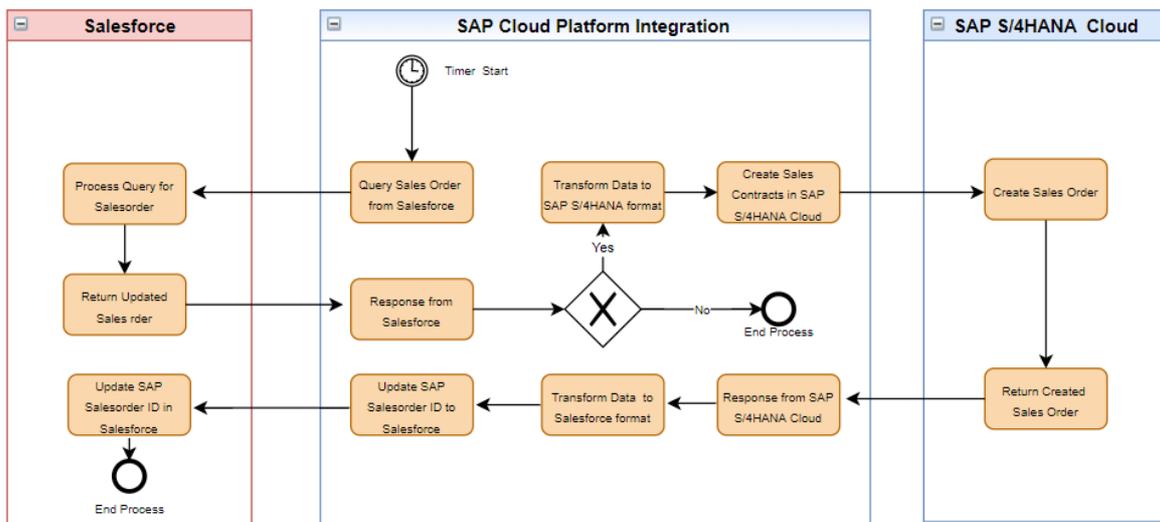


Figure 4.18. Process Diagram

The SAP CPI implementation of the process in Figure 4.18 is shown in Figure 4.19.



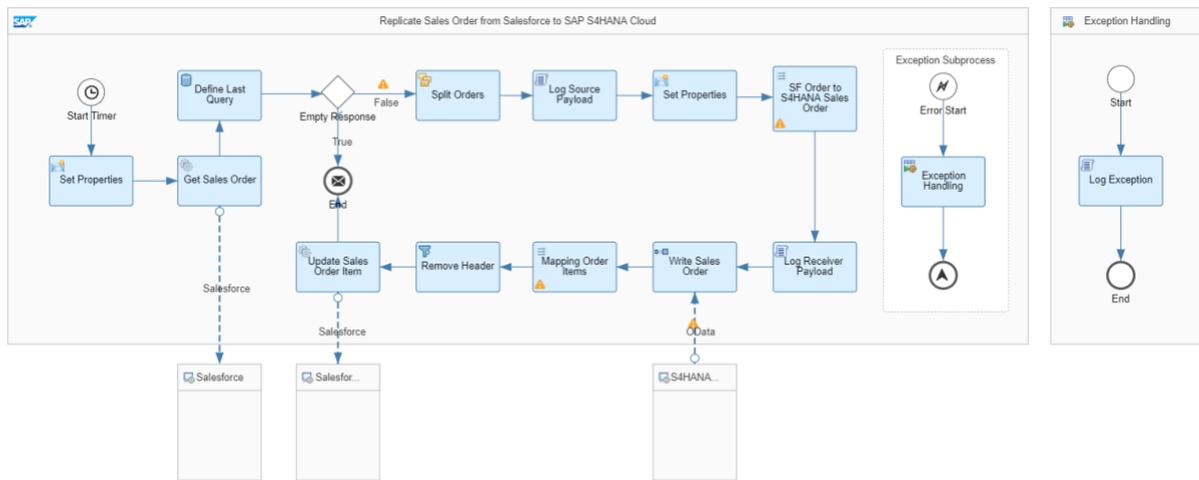


Figure 4.19. Integration Flow

### 4.3.3.2 Prerequisites

The following steps are the prerequisites for this Integration Scenario:

- Deploy the security artifacts that will be required during the configuration of Integration content.
- Customers/Accounts should have been replicated from SAP S/4HANA Cloud to Salesforce
- Materials/Products should have been replicated from SAP S/4HANA Cloud to Salesforce
- Orders were created with replicated Accounts and Products from SAP S/4HANA Cloud.
- Users need to define the first run date-time from when to start replicating.
- Customer Payment Terms, Distribution Channel, Organization Division, Sales Order Type, Sales Organization, and Shipping Conditions are externalized in iFlow and should be configured to correctly replicate to SAP S/4HANA Cloud.

### 4.3.3.3 Scope

- Sales orders cannot be replicated until extending customers/accounts to the respective sales area.
- This integration flow only covers new orders, update is not covered in this version.

### 4.3.3.4 Configuration

Follow the steps below to configure the integration flow:

1. Open the integration flow "Replicate Sales Order from Salesforce to SAP S4HANA Cloud".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - Run Once:** iFlow will be executed only once, can be used for the initial load.



**Schedule on Day:** iFlow will be executed on a specific date/time.

**Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).

Configure "Replicate Sales Order from Salesforce to SAP S4HANA Cloud"

Timer: Starter [StartEvent\_4]

Run Once  
 Schedule on Day  
 Schedule to Recur

Schedule to Recur: Daily

On Time (09:18 AM)  
 Every (30 min) Between (00:00) and (01:00)

Time Zone: (UTC 0:00) Greenwich Mean Time(Etc/GMT)

Figure 4.20 Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.21.

Configure "Replicate Sales Order from Salesforce to SAP S4HANA Cloud"

Receiver: S4HANA\_Cloud

Adapter Type: HCIOData

Address: https://[HostName]:[Port]/sap/opu/odata/sap/API\_SALES\_ORDER\_SRV

HostName: api.s4hana.ondemand.com

Port: 443

Credential Name: [Redacted]

Figure 4.21 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.21 is presented in the table below.



Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_SALES_ORDER_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  https://hostname: <b>port</b> /sap/opu/odata/sap/API_SALES_ORDER_SRV
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 8. Configure Receiver SAP S/4HANA Cloud

## 5. Configure the "Receiver" connector named "Salesforce". See Figure 4.22.

Configure "Replicate Sales Order from Salesforce to SAP S4HANA Cloud"

Timer Receiver More

Receiver: Salesforce

Adapter Type: Salesforce\_1.2.2

Authentication

Login URL: https://login.salesforce.com

Basic Credential Name: [Redacted]

Security Token: [Redacted]

OAuth Credential Name: [Redacted]

Figure 4.22 Configure Receiver Salesforce

The description of each of the fields in Figure 4.22 is presented in the table below.

Parameter	Description
Login URL	The data store URL for Salesforce.  E.g.: https://login.salesforce.com



Basic Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network
OAuth Credential Name	Name of deployed OAuth credential name.

Table 9. Configure Receiver Salesforce

## 6. Configure "More" as shown in Figure 4.23.

Configure "Replicate Sales Order from Salesforce to SAP S4HANA Cloud"

Timer Receiver **More**

Type:	All Parameters
ConditionType:	PMP0
CustomerPaymentTerms:	0004
DistributionChannel:	10
ExceptionLogging:	YES
InitialDate:	1970-01-01T00:00:00.000Z
LogMessageBody:	YES
LogMessageHeader:	YES
LogMessageProperty:	YES
OrganizationDivision:	00
SalesOrderType:	OR
SalesOrganization:	1710
ShippingCondition:	01

Figure 4.23 Configure More options

The description of each of the fields in Figure 4.23 is presented in the table below.

Parameter	Description
Condition Type	Specify the Condition Type to be used in the iFlow. The default value is "PMP0".



Customer Payment Terms	Specify the Customer Payment Terms to be used in the iFlow.  The default value is "0004".
Distribution Channel	Specify the distribution channel to be used in the iFlow.  The default value is "10".
Organization Division	Specify the Organization Division to be used in the iFlow.  The default value is "00".
Sales Order Type	Specify the document type to be used in the iFlow.  The default value is "OR".
Sales Organization	Specify the sales organization to be used in the iFlow.  The default value is "1710".
Shipping Condition	Specify Shipping Condition to be used in the iFlow.  The default value is "01".
InitialDate	Date from when the integration flow will replicate for the first time.  Correct format: YYYY-MM-DD'T'hh:mm:ss.sss'Z'  E.g.: 1970-01-01T00:00:00.000Z
ExceptionLogging	Possible values "YES" / "NO"  Specify "YES" to log the exception if any.  Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO"  Specify "YES" to log the Message Body (Not recommended in a live environment).  Specify "NO" or leave blank otherwise.



LogMessageHeader	Possible values "YES" / "NO" Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.

Table 10. Configure More options

#### 4.3.4 Replicate Sales Contract from Salesforce to SAP S/4HANA Cloud

##### 4.3.4.1 Business Scenario

This integration flow allows the synchronization of Contracts by replicating the Service Contracts from Salesforce to SAP S/4HANA Cloud as Sales Contracts, and by updating it with a reference from SAP S/4HANA Cloud.

Figure 4.24 depicts the business process to be implemented.



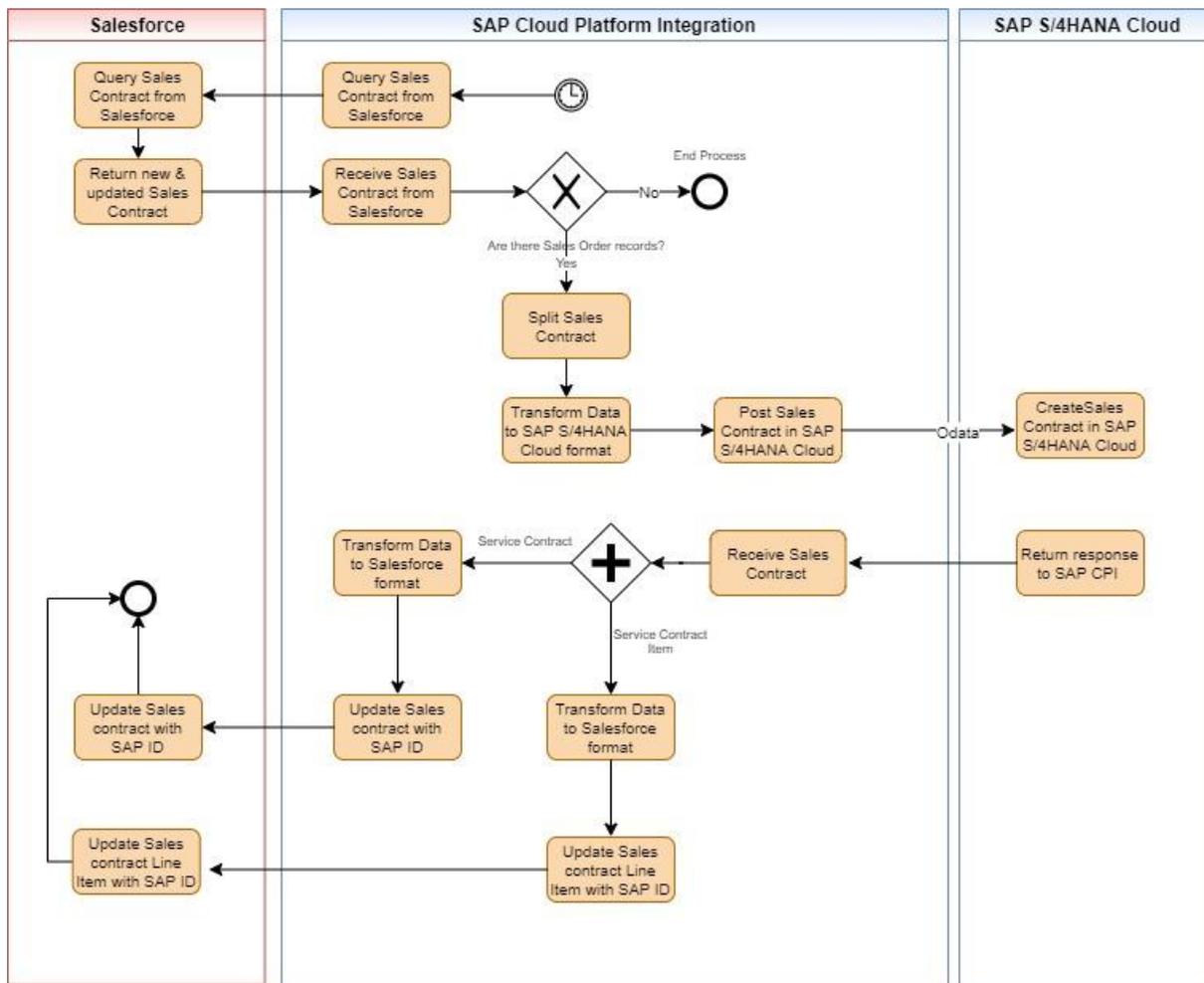


Figure 4.24 Process Diagram

The SAP CPI implementation of the process in Figure 4.24 is shown in Figure 4.25.

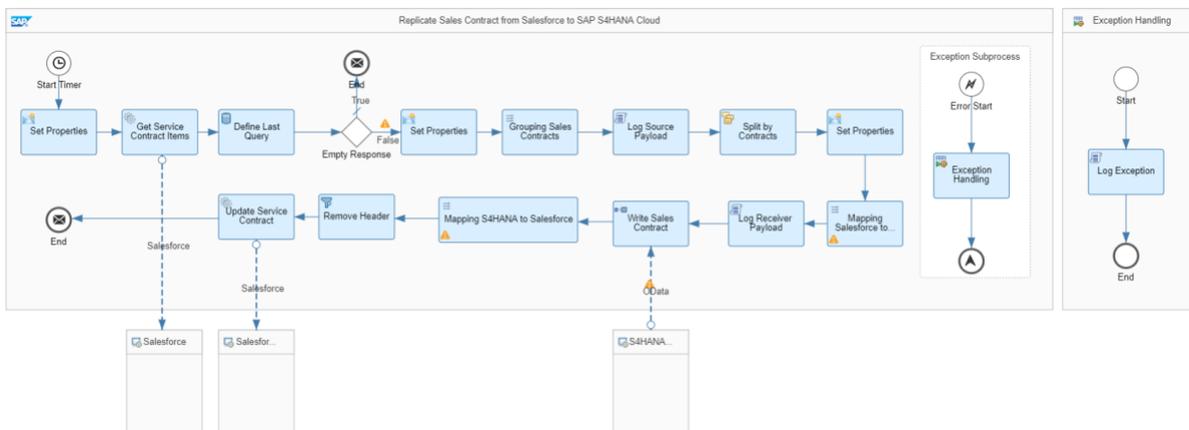


Figure 4.25 Integration Flow



#### 4.3.4.2 Prerequisites

The following steps are the prerequisites for this Integration Scenario:

- Deploy the security artifacts that will be required during the configuration of integration content.
- Salesforce Entitlement Management feature should be enabled in the user's Salesforce instance.
- Customers/Accounts should have been replicated from SAP S/4HANA Cloud to Salesforce.
- Materials/Products should have been replicated from SAP S/4HANA Cloud to Salesforce.
- Service Contracts were created with replicated Customer/Accounts and Materials/Products from SAP S/4HANA Cloud.
- Service Contracts have been marked as Released.
- The custom field *Released* created in Section 4.2.6 must be checked for the replication to occur.
- Condition Type, Customer Payment Terms, Distribution Channel, Organization Division, Sales Contract Type, and Sales Organization are externalized and should be configured in iFlow before the replication.

#### 4.3.4.3 Scope

- Users cannot create sales contracts until extending the master data to the respective sales area.
- Users need to define the first run date-time from when to start replicating.
- This integration flow only covers the new service contracts, update is not covered in this version.

#### 4.3.4.4 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Replicate Sales Contract from Salesforce to SAP S4HANA Cloud".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - **Run Once:** iFlow will be executed only once, can be used for the initial load.
  - **Schedule on Day:** iFlow will be executed on a specific date/time.
  - **Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).



Configure "Replicate Sales Contract from Salesforce to SAP S4HANA Cloud"

Figure 4.26 Configure Timer

Note: Replace the default values of the parameters in the configurations as according to your landscape.

4. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.27.

Configure "Replicate Sales Contract from Salesforce to SAP S4HANA Cloud"

Figure 4.27 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.27 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_SALES_CONTRACT_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.



	https://hostname: <b>port</b> /sap/opu/odata/sap/API_SALES_CONTRACT_SRV
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 11. Configure Receiver SAP S/4HANA Cloud

## 5. Configure the "Receiver" connector named "Salesforce". See Figure 4.28.

Configure "Replicate Sales Contract from Salesforce to SAP S4HANA Cloud"

Figure 4.28 Configure Receiver Salesforce

The description of each of the fields in Figure 4.28 is presented in the table below.

Parameter	Description
Login URL	The data store URL for Salesforce. Eg: https://login.salesforce.com
Basic Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network.
OAuth Credential Name	Name of deployed OAuth credential name.

Table 12. Configure Receiver Salesforce



## 6. Configure "More" as shown in Figure 4.29.

Configure "Replicate Sales Contract from Salesforce to SAP S4HANA Cloud"

Timer Receiver **More**

Type: All Parameters

ConditionType: VTV1

CustomerPaymentTerms: 0004

DistributionChannel: 10

ExceptionLogging: YES

InitialDate: 1970-01-01T00:00:00.000Z

LogMessageBody: YES

LogMessageHeader: NO

LogMessageProperty: NO

OrganizationDivision: 00

SalesContractType: VC01

SalesOrganization: 1710

Figure 4.29 Configure More options

The description of each of the fields in Figure 4.29Figure 4.10 is presented in the table below.

Parameter	Description
Condition Type	Specify the Condition Type to be used in the iFlow. The default value is "VTV1".
Customer Payment Terms	Specify the Customer Payment Terms to be used in the iFlow. The default value is "0004".
Distribution Channel	Specify the distribution channel to be used in the iFlow. The default value is "10".
Organization Division	Specify the Organization Division to be used in the iFlow. The default value is "00".
Sales Contract Type	Specify the document type to be used in the iFlow. The default value is "VC01".



Sales Organization	Specify the sales organization to be used in the iFlow. The default value is "1710".
InitialDate	Date from when the integration flow will replicate for the first time. Correct format: YYYY-MM-DD'T'hh:mm:ss.sss'Z' E.g.: 1970-01-01T00:00:00.000Z
ExceptionLogging	Possible values "YES" / "NO" Specify "YES" to log the exception if any. Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO" Specify "YES" to log the Message Body (Not recommended in a live environment). Specify "NO" or leave blank otherwise.
LogMessageHeader	Possible values "YES" / "NO" Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.

Table 13. Configure More options

### 4.3.5 Receive Product Availability from SAP S/4HANA on Cloud

#### 4.3.5.1 Business Scenario

This integration flow allows users to obtain the availability of materials from a specified plant, as delivered by your SAP S/4HANA Cloud through the SOAP protocol. This SOAP



protocol can be configured in other platforms to extract current stock or to check the availability of a requested quantity.

Figure 4.30 depicts the business process to be implemented.

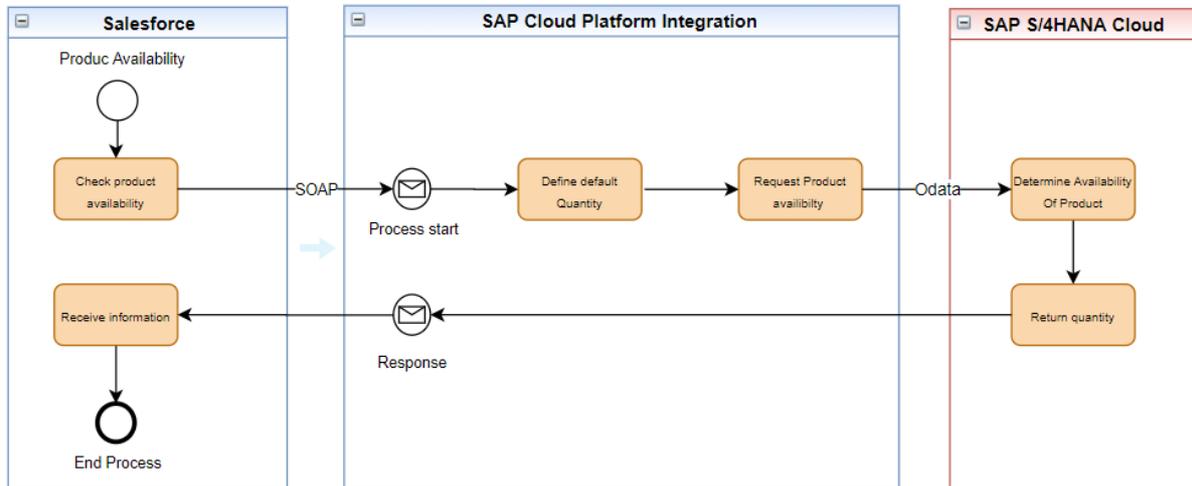


Figure 4.30 Process Diagram

The SAP CPI implementation of the process in Figure 4.30 is shown in Figure 4.31.

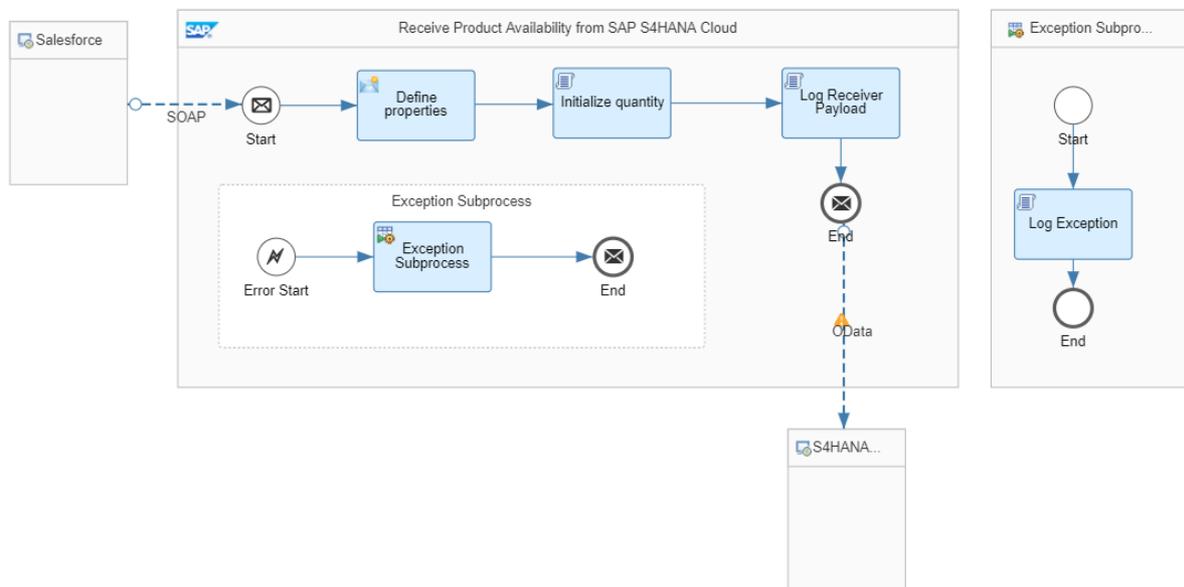


Figure 4.31 Integration Flow



### 4.3.5.2 Prerequisites

The following steps are the prerequisites for this Integration Scenario:

- Deploy the security artifacts that will be required during the configuration of Integration content.
- Users need to implement classes to consume this web service with APEX (for reference, see [Invoking Callouts Using Apex](#)).

### 4.3.5.3 Scope

The value returned is always the maximum quantity available, if any.

### 4.3.5.4 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Receive product availability from SAP S4HANA Cloud".
2. Click on Configure.
3. Go to Sender and configure "Sender" Salesforce.

Parameter	Description
Address	The endpoint URL where your service can be accessed by a client application.

Table 14. Configure Sender Salesforce

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.32.

Configure "Receive Product Availability from SAP S4HANA Cloud"

The screenshot shows the configuration for a Receiver connector. The 'Receiver' tab is active. The configuration details are as follows:

- Receiver: S4HANA\_Cloud
- Adapter Type: HCIOData
- Address: https://{HostName}://{Port}/API\_PRODUCT\_AVAILY\_INFO\_BASIC
- HostName: [redacted].api.s4hana.ondemand.com
- Port: 443
- Credential Name: [redacted]

Figure 4.32 Configure Receiver SAP S/4HANA Cloud



The description of each of the fields in Figure 4.32 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_PRODUCT_AVAILY_INFO_BASIC
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  https://hostname: <b>port</b> /sap/opu/odata/sap/API_PRODUCT_AVAILY_INFO_BASIC
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 15. Configure Receiver SAP S/4HANA Cloud

## 5. Configure "More" as shown in Figure 4.33.

Configure "Receive Product Availability from SAP S4HANA Cloud"

Sender Receiver **More**

Type: All Parameters

ExceptionLogging: YES

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

Figure 4.33. Configure More options

The description of each of the fields in Figure 4.33 is presented in the table below.

Parameter	Description
ExceptionLogging	Possible values "YES" / "NO"  Specify "YES" to log the exception if any.  Specify "NO" or leave blank otherwise.



LogMessageBody	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Body (Not recommended in a live environment).</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageHeader	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Header</p> <p>Specify "NO" or leave blank otherwise.</p>
LogMessageProperty	<p>Possible values "YES" / "NO"</p> <p>Specify "YES" to log the Message Properties</p> <p>Specify "NO" or leave blank otherwise.</p>

Table 16. Configure More options

### 4.3.6 Replicate Sales Prices from S/4HANA on Cloud to Salesforce

#### 4.3.6.1 Business Scenario

This integration flow allows the replication of Pricing by replicating the Sales Pricing data from SAP S/4HANA Cloud to Salesforce as a price book entry. Whenever a new condition in SAP S/4HANA Cloud is created, it is replicated to Salesforce in the next run of the integration flow (if scheduled to recur).

Figure 4.34 depicts the business process to be implemented.



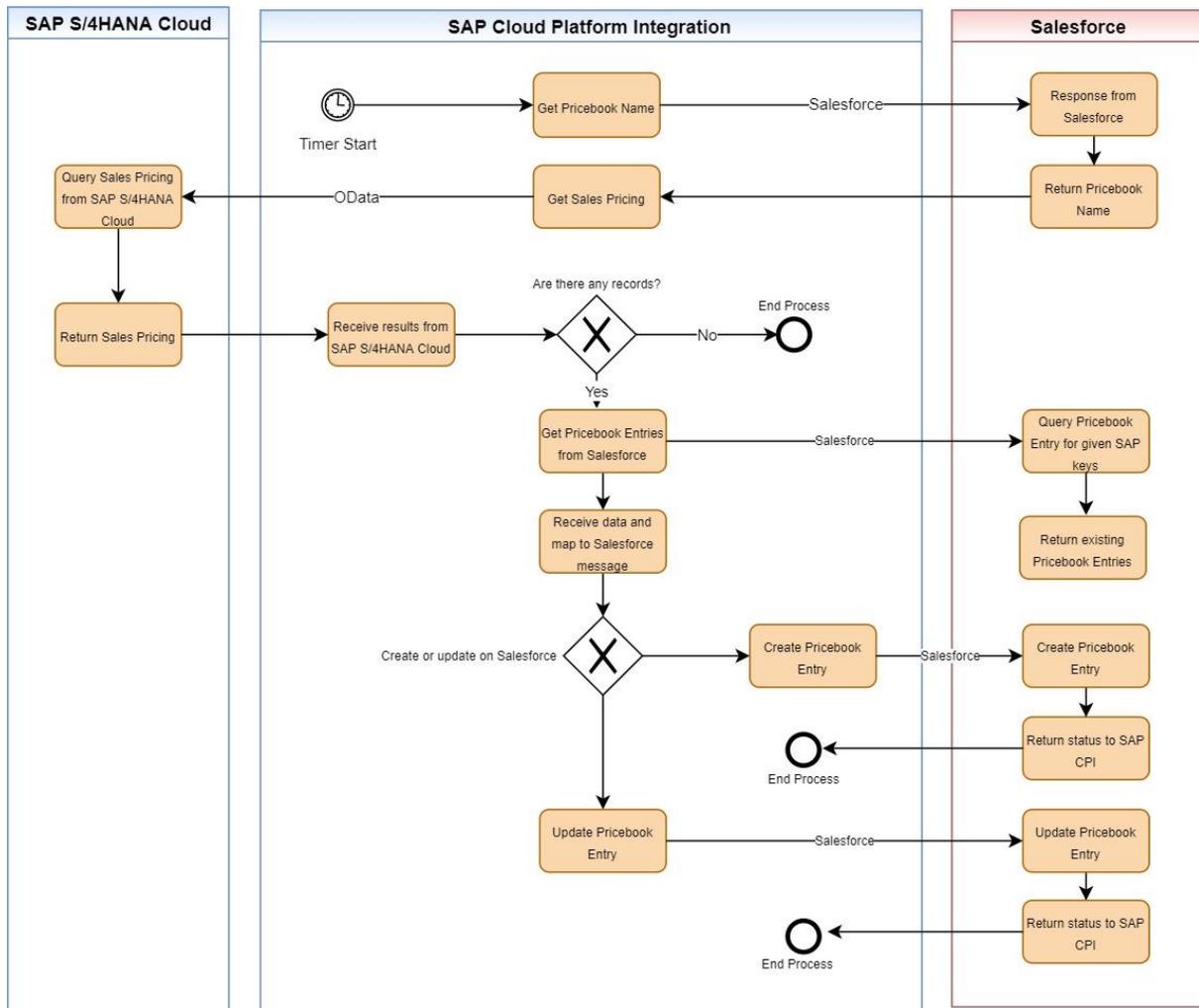


Figure 4.34 Process Diagram

The SAP CPI implementation of the process in Figure 4.34 is shown in Figure 4.35.



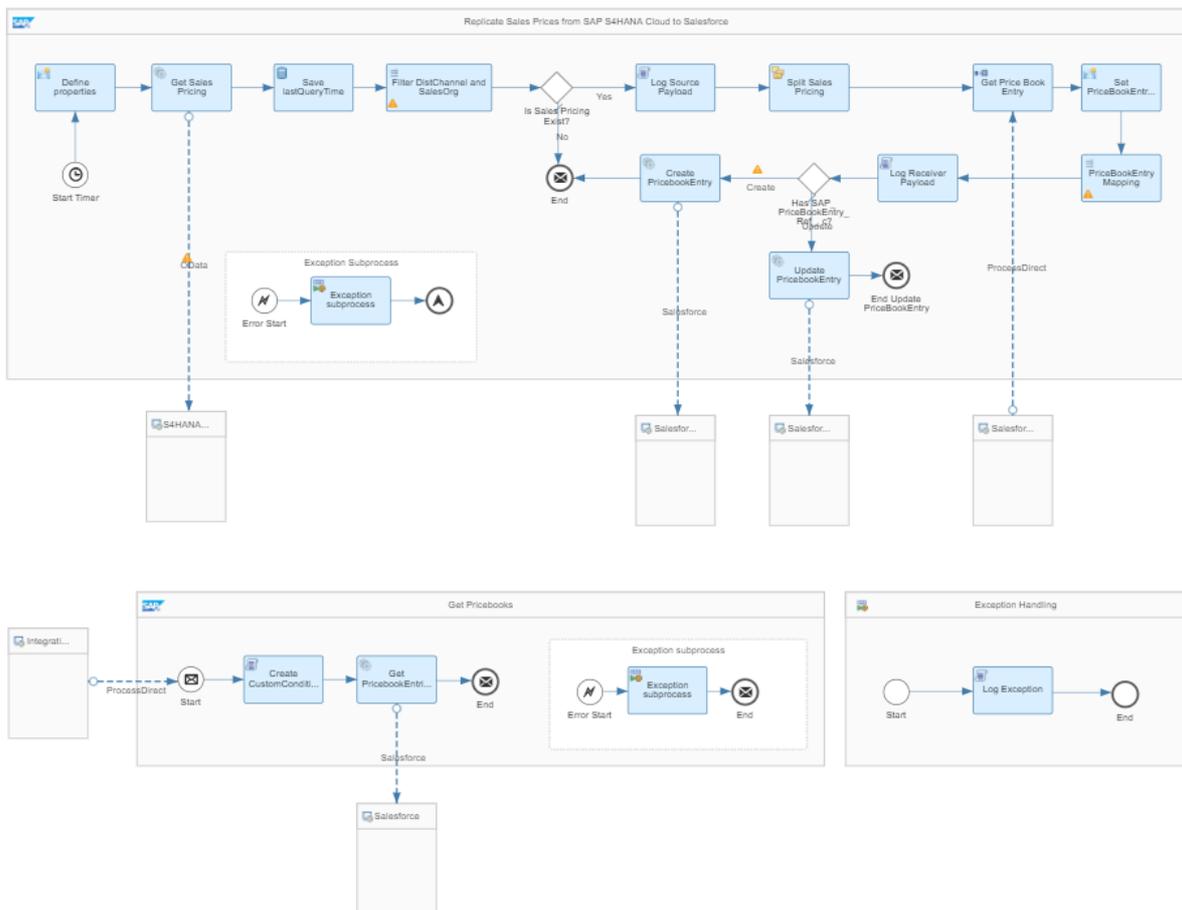


Figure 4.35 Integration Flow

#### 4.3.6.2 Prerequisites

The following steps are the prerequisites for this integration scenario:

- Deploy security artifacts that will be required during the configuration of integration content.
- Products should have been replicated from SAP S/4HANA Cloud to Salesforce.
- Condition Type, Distribution Channel, Pricebook Name, and Sales Organization must be configured before replicating the pricing condition

#### 4.3.6.3 Scope

- Note that this integration flow only covers new sales pricing, updates are not included in this version.
- Salesforce allows only one entry of each material per Price Book.
- The integration Flow should be scheduled to run once a day.



#### 4.3.6.4 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Receive Sales Pricing from S4HANA Cloud".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - Run Once:** iFlow will be executed only once, can be used for the initial load.
  - Schedule on Day:** iFlow will be executed on a specific date/time.
  - Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).

Configure "Replicate Account from SAP S4HANA Cloud to Salesforce"

Figure 4.36. Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Go to Receiver.
5. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.37.

Configure "Replicate Sales Prices from SAP S4HANA Cloud to Salesforce"

Figure 4.37. Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.37 is presented in the table below.



Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  https:// <b>hostname</b> :port/sap/opu/odata/sap/API_SLSPRICINGCONDITIONRECORD_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  https://hostname: <b>port</b> /sap/opu/odata/sap/API_SLSPRICINGCONDITIONRECORD_SRV
Authentication	Select "Basic" authentication Type.
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 17. Configure Receiver SAP S/4HANA Cloud

## 6. Configure "Receiver" Salesforce.

Configure "Replicate Sales Prices from SAP S4HANA Cloud to Salesforce"

Timer Receiver More

Receiver: Salesforce

Adapter Type: Salesforce

Connection

Address: https://login.salesforce.com

Basic Credential Name: [Redacted]

Security Token Alias: [Redacted]

OAuth Credential Name: [Redacted]

Figure 4.38. Configure Receiver Salesforce

The description of each of the fields in Figure 4.38Figure 4.10 is presented in the table below.

Parameter	Description
-----------	-------------



Login URL	The data store URL for Salesforce. E.g.: https://login.salesforce.com
Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network. Salesforce automatically generates this key.
OAuth Credential Name	OAuth credential name.

Table 18. Configure Receiver Salesforce

## 7. Configure "More" as shown in Figure 4.39.

Configure "Replicate Sales Prices from SAP S4HANA Cloud to Salesforce"

Timer Receiver **More**

Type: All Parameters

ConditionType: PPR0

DistributionChannel: 10

ExceptionLogging: YES

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

PricebookName: Standard Price Book

SalesOrganization: 1710

Figure 4.39. Configure More options

The description of each of the fields in Figure 4.39 is presented in the table below.

Parameter	Description
DistributionChannel	Specify the distribution channel to be used in the iFlow. The default value is "10".
SalesOrganization	Specify the sales organization to be used in the iFlow.



	The default value is "1710".
PricebookName	Pricebook name in Salesforce. The default value is "Standard Price Book".
ExceptionLogging	Possible values "YES" / "NO" Specify "YES" to log the exception if any. Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO" Specify "YES" to log the Message Body (Not recommended in a live environment). Specify "NO" or leave blank otherwise.
LogMessageHeader	Possible values "YES" / "NO" Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.

Table 19. Configure More options

### 4.3.7 Update Account from Salesforce to SAP S/4HANA Cloud

#### 4.3.7.1 Business Scenario

This integration flow allows updating Accounts from Salesforce to Customers in SAP S/4HANA Cloud. Whenever an Account is modified in Salesforce it is replicated to SAP S/4HANA Cloud in the next run of the integration flow (if scheduled to recur).

Figure 4.40 depicts the business process to be implemented.



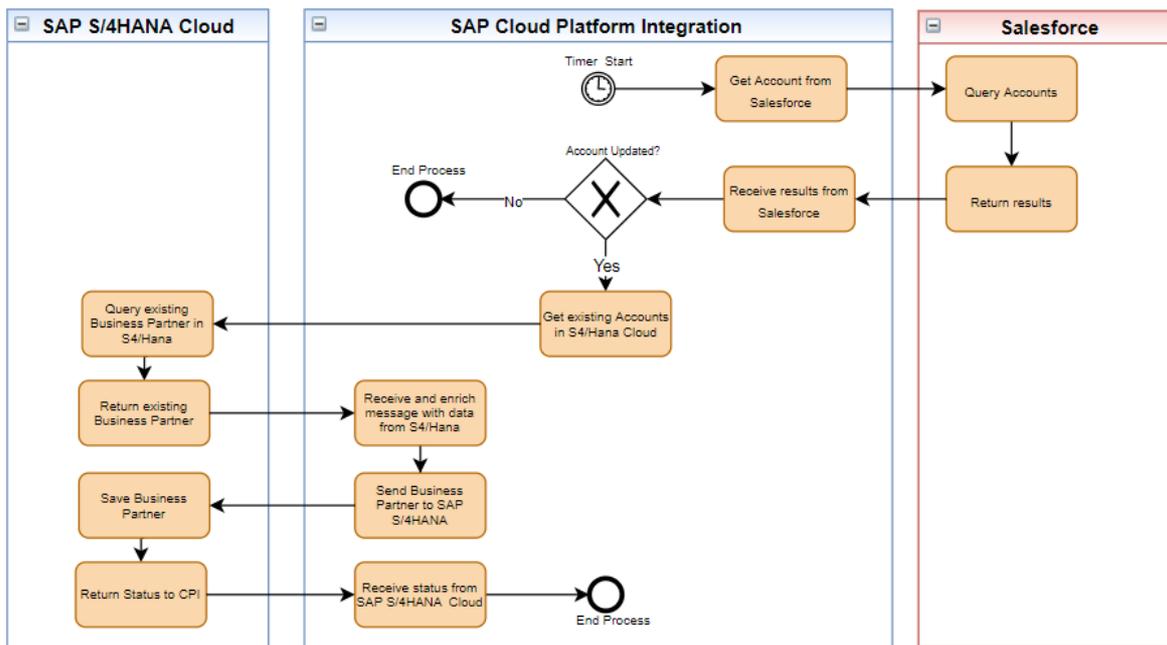


Figure 4.40 Process Diagram

The SAP CPI implementation of the process in Figure 4.40 is shown in Figure 4.41.

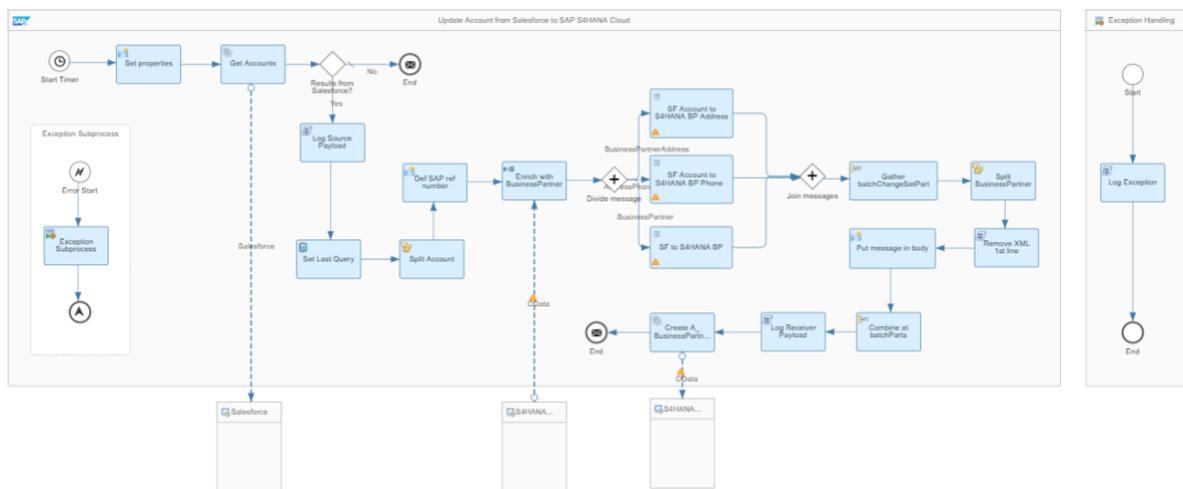


Figure 4.41 Integration Flow

### 4.3.7.2 Prerequisites

The following steps are the prerequisites for this integration scenario:

- Deploy the security artifacts which will be required during the configuration of integration content.
- Customers should have been replicated from SAP S/4HANA Cloud to Salesforce.
- Users need to define the first run date and time from when to start updating.



### 4.3.7.3 Scope

- This integration flow only replicates Accounts of the category Customers.
- Only Accounts modified by a pre-determined user would be replicated.
- Since the number of field names in SAP and Salesforce is different, the Names of the Accounts are separated by spaces. The last value will be mapped to LastName in case of a person or GroupBusinessPartnerName2 in case of a group. All other names will go to FirstName and GroupBusinessPartnerName1, respectively.

### 4.3.7.4 Configuration

To configure the related iFlow, proceed as follows:

1. Open the Integration Flow "Update Account from Salesforce to SAP S4HANA Cloud".
2. Click on Configure.
3. Configure "Timer". You can choose between:
  - **Run Once:** iFlow will be executed only once, can be used for the initial load.
  - **Schedule on Day:** iFlow will be executed on a specific date/time.
  - **Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).

Configure "Update Account from Salesforce to SAP S4HANA Cloud"

The screenshot shows the configuration interface for a timer. It includes a dropdown menu for the timer name, radio buttons for 'Run Once', 'Schedule on Day', and 'Schedule to Recur'. The 'Schedule to Recur' section is expanded, showing a 'Daily' dropdown, an 'On Time' section with a time picker set to '12:32 PM', and an 'Every' section with a '1 hr' interval and a 'Between 00:00 and 01:00' range. The time zone is set to '( UTC 0:00 ) Greenwich Mean Time(Etc/GMT)'.

Figure 4.42 Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Go to Receiver.
5. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.43.



Configure "Update Account from Salesforce to SAP S4HANA Cloud"

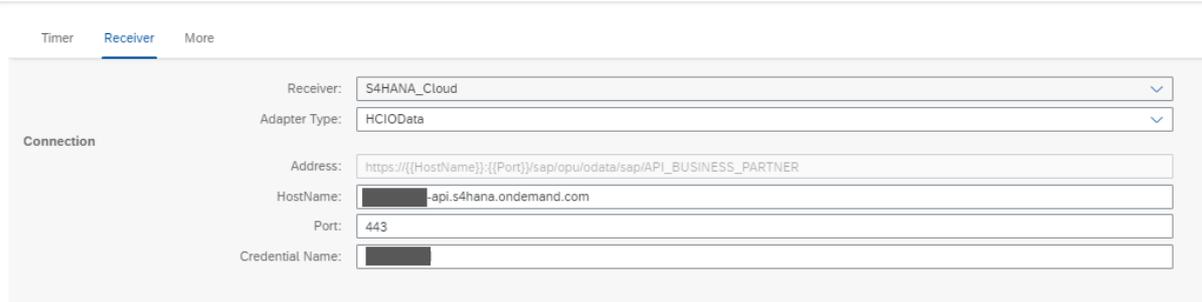


Figure 4.43 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.43 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  Example: https:// <b>hostname</b> :port/sap/opu/odata/sap/API_BUSINESS_PARTNER
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  Example: https://hostname: <b>port</b> /sap/opu/odata/sap/API_BUSINESS_PARTNER
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 20. Configure Receiver SAP S/4HANA Cloud

6. Configure the "Receiver" connector named "Salesforce". See Figure 4.44.

Configure "Update Account from Salesforce to SAP S4HANA Cloud"

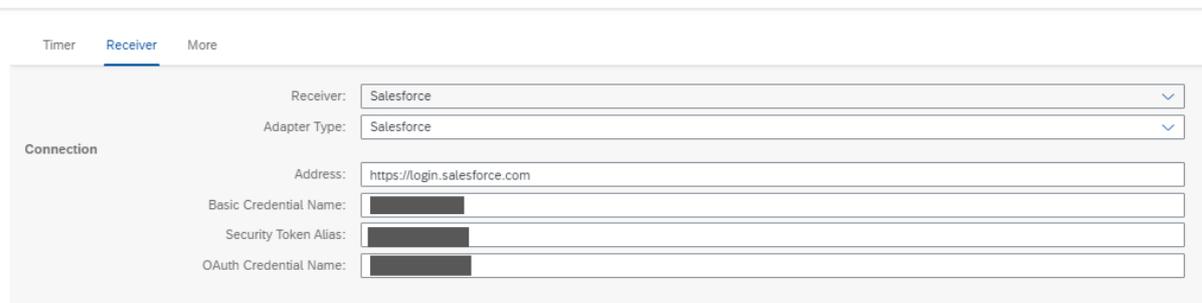


Figure 4.44. Configure Receiver Salesforce



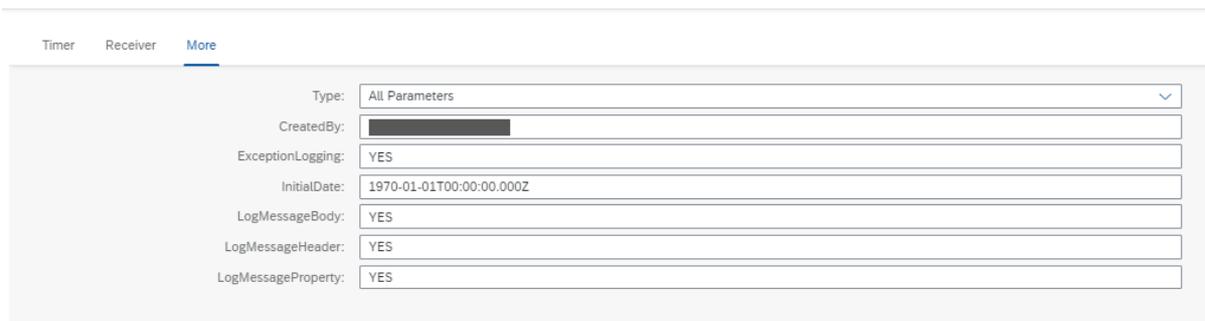
The description of each of the fields in Figure 4.44 is presented in the table below.

Parameter	Description
Login URL	The data store URL for Salesforce. Example: https://login.salesforce.com
Credential Name	Name of a deployed User Credentials artifact which holds Username and Password used to authenticate with Salesforce.
Security Token	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network.
OAuth Credential Name	OAuth credential name.

Table 21. Configure Receiver Salesforce

## 7. Configure "More" as shown in Figure 4.45.

Configure "Update Account from Salesforce to SAP S4HANA Cloud"



Timer Receiver **More**

Type: All Parameters

CreatedBy: [REDACTED]

ExceptionLogging: YES

InitialDate: 1970-01-01T00:00:00.000Z

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

Figure 4.45 Configure More options

The description of each of the fields in Figure 4.45 is presented in the table below.

Parameter	Description
CreatedBy	Specify the salesforce identification for the user that modifies the Accounts.



ExceptionLogging	Possible values "YES" / "NO" Specify "YES" to log the exception if any. Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO" Specify "YES" to log the Message Body (Not recommended in a live environment). Specify "NO" or leave blank otherwise.
LogMessageHeader	Possible values "YES" / "NO" Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
InitialDate	Date from when the integration flow will replicate for the first time. Correct format: <code>YYYY-MM-DD'T'hh:mm:ss.sss'Z'</code> E.g.: 1970-01-01T00:00:00.000Z
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.

Table 22. Configure More options

## 8. Save and Deploy.

**4.1.18 Replicate Sales Order from S/4HANA Cloud to Salesforce****4.3.7.5 Business Scenario**

This integration flow allows sending updates made to SAP S/4HANA Cloud Sales Orders to Salesforce. Changes made in SAP S/4HANA Cloud, including the addition of new materials to the Sales Order, would be replicated to Salesforce.

Figure 4.46 depicts the business process to be implemented.



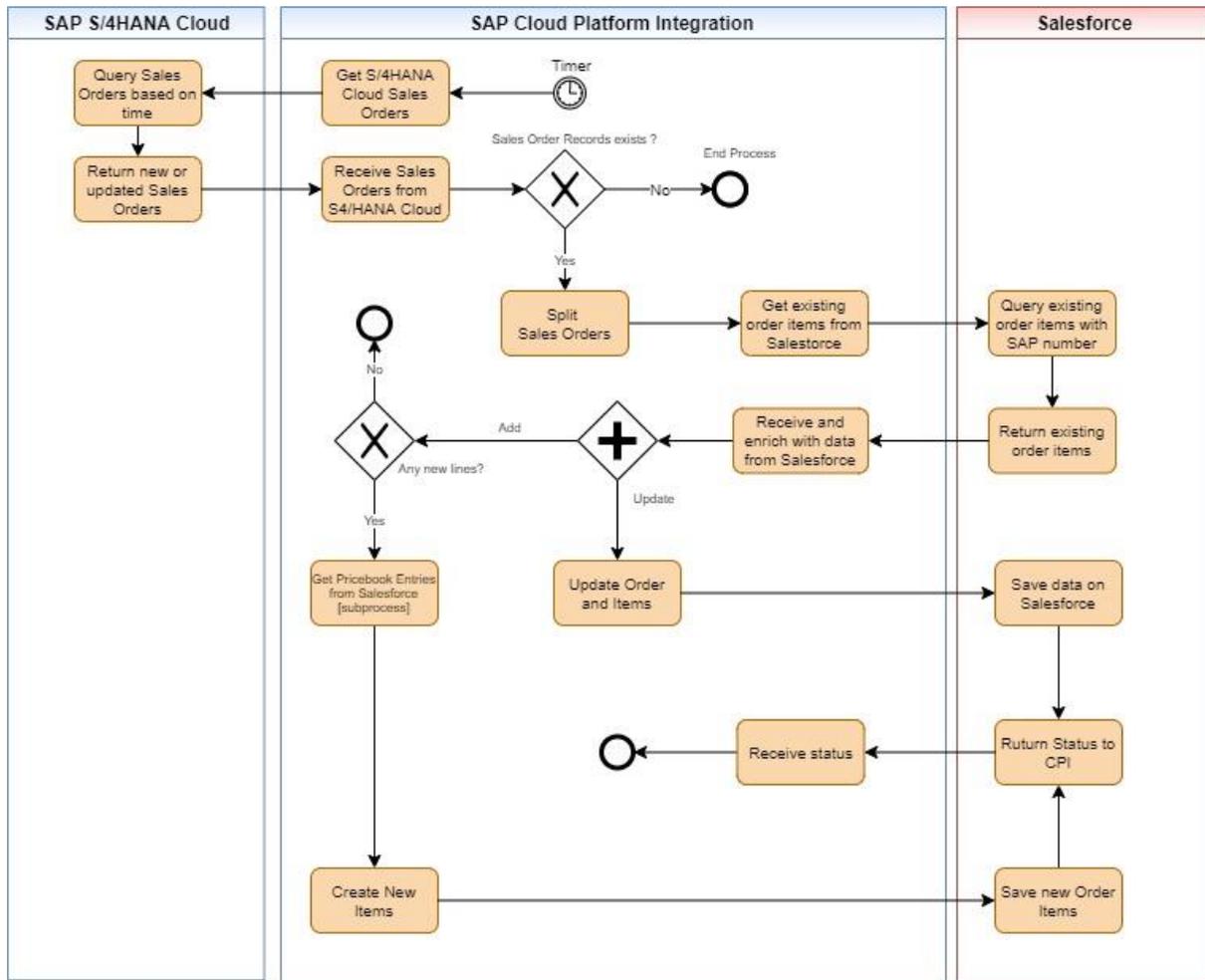
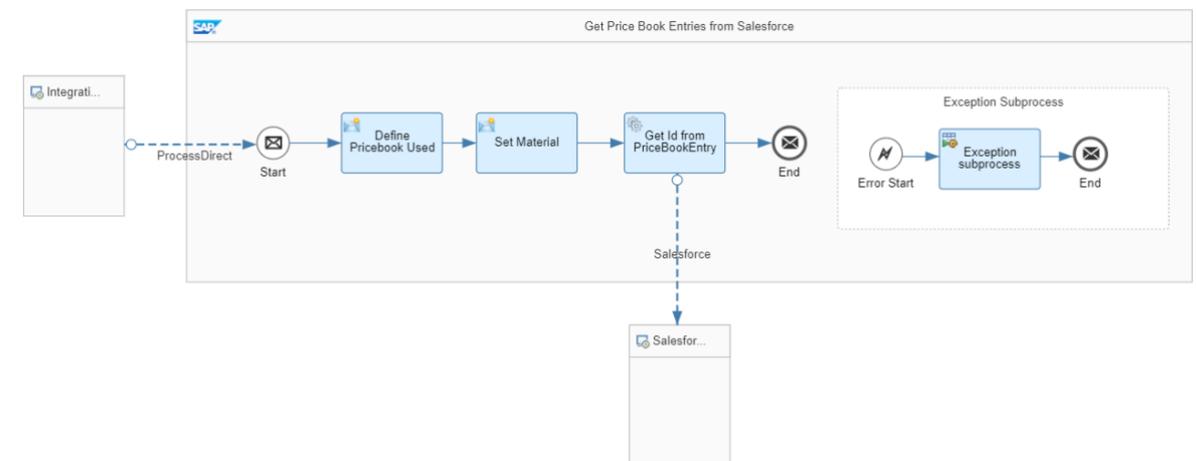
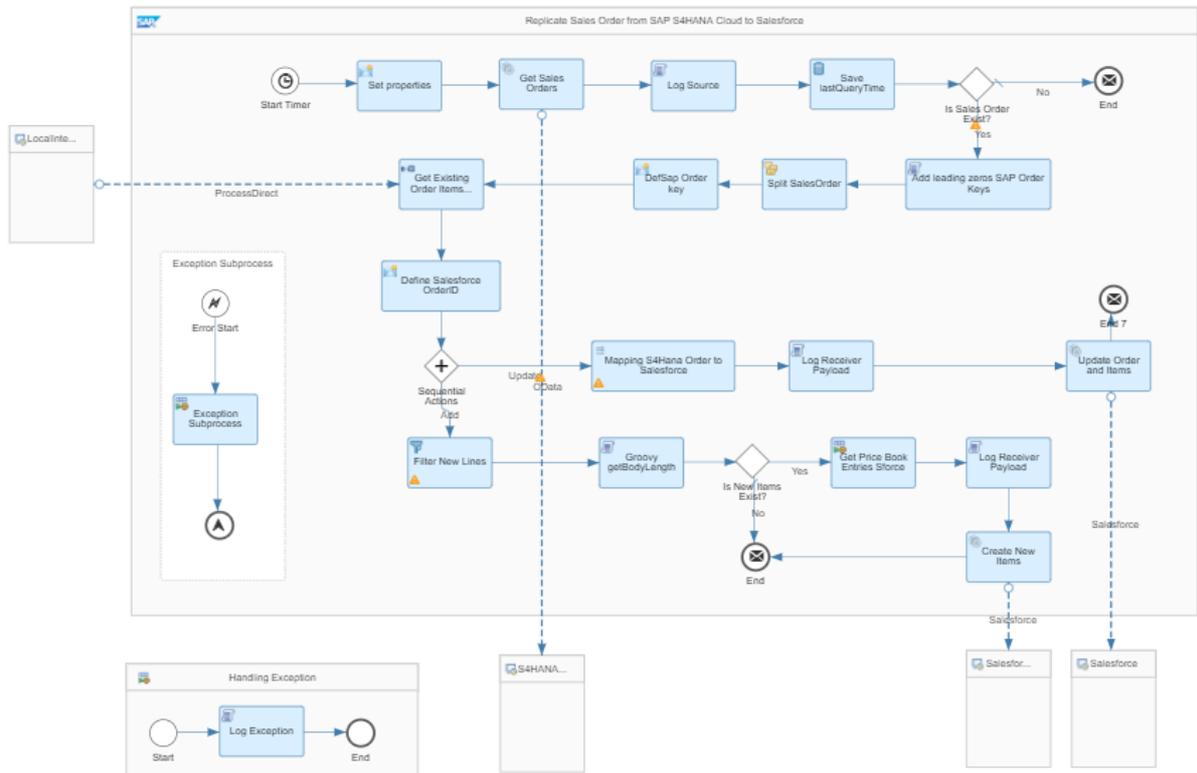


Figure 4.46 Process Diagram

The SAP CPI implementation of the process in Figure 4.46 is shown in Figure 4.47.



# SAP S/4HANA Cloud Integration with Salesforce Configuration Guide



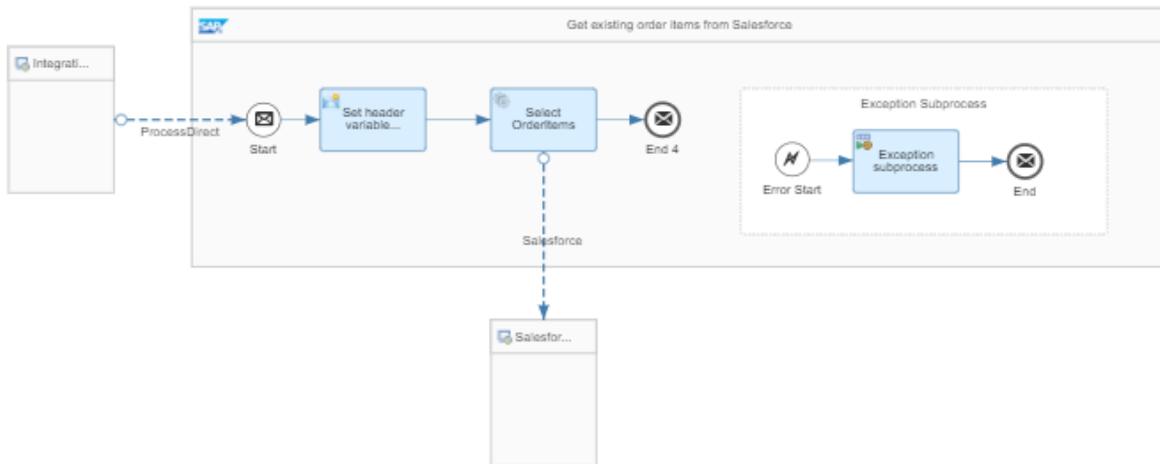


Figure 4.47 Integration Flow

#### 4.3.7.6 Prerequisites

The following steps are the prerequisites for this Integration Scenario:

- Customers/Products should have been replicated from SAP S/4HANACloud to Salesforce.
- The order should have been replicated from Salesforce to SAP S/4HANA Cloud.
- The query filter uses `createdBy`. A service user needs to be utilized in SAP S/4HANA Cloud for Salesforce integration.
- Users need to define the first run date-time from when to start updating.

#### 4.3.7.7 Scope

- Some information must be hardcoded to correctly replicate to Salesforce, such as: Created by User and Pricebook Name.
- This integration flow only covers updating orders replicated from Salesforce, included adding new items.

#### 4.3.7.8 Configuration

To configure the integration Flow, follow the steps below:

1. Open the integration flow "Replicate Sales Order from SAP S4HANA Cloud to Salesforce".
2. Configure "Timer". You can choose between:
  - Run Once:** iFlow will be executed only once, can be used for the initial load.
  - Schedule on Day:** iFlow will be executed on a specific date/time.
  - Schedule to Recur:** iFlow will be executed at a regular interval and will replicate the changes from the source system to the target system (suggested mode).



Configure "Replicate Sales Order from SAP S4HANA Cloud to Salesforce"

Figure 4.48 Configure Timer

Note: Replace the default values of the parameters in the configurations as per your landscape.

3. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.49.

Configure "Replicate Sales Order from SAP S4HANA Cloud to Salesforce"

Figure 4.49 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.49 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address.  Example: https:// <b>hostname</b> :port/sap/opu/odata/sap/API_SALES_ORDER_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address.  Example: https://hostname: <b>port</b> /sap/opu/odata/sap/API_SALES_ORDER_SRV



Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.
-----------------	---

Table 23. Configure Receiver SAP S/4HANA Cloud

- Go to Receiver .
- Configure the "Receiver" connector named "Salesforce". See the example in Figure 4.50.

Configure "Replicate Sales Order from SAP S4HANA Cloud to Salesforce"

The screenshot shows the configuration page for a Receiver connector. At the top, there are tabs for 'Timer', 'Receiver', and 'More', with 'Receiver' selected. Below the tabs, the 'Connection' section is visible. It contains the following fields:

- Receiver: A dropdown menu with 'Salesforce' selected.
- Adapter Type: A dropdown menu with 'Salesforce' selected.
- Address: A text input field containing 'https://login.salesforce.com'.
- Basic Credential Name: A text input field with a redacted value.
- Security Token Alias: A text input field with a redacted value.
- OAuth Credential Name: A text input field with a redacted value.

Figure 4.50 Configure Receiver Salesforce

The description of each of the fields in Figure 4.50 is presented in the table below.

Parameter	Description
Address	The data store URL for Salesforce. Eg: https://login.salesforce.com
Basic Credential Name	Name of a deployed User Credentials artifact that holds Username and Password used to authenticate with Salesforce.
Security Token Alias	Name of a deployed Secure Parameter artifact that holds the real Security Token. The security token is required to log in to Salesforce from an untrusted network. Salesforce automatically generates this key. If you do not have the security token, log into your account, go to Setup > My Personal Information > Reset My Security Token.



OAuth Credential Name	OAuth credential name.
-----------------------	------------------------

Table 24. Configure Receiver Salesforce

## 6. Configure "More" to fit your use case, see example in Figure 4.51.

Configure "Replicate Sales Order from SAP S4HANA Cloud to Salesforce"

The screenshot shows the configuration interface for a receiver. At the top, there are tabs for 'Timer', 'Receiver', and 'More'. The 'More' tab is active. Below the tabs, there is a 'Type' dropdown menu set to 'All Parameters'. The configuration fields are as follows:

Type:	All Parameters
createdByUser:	[Redacted]
ExceptionLogging:	YES
LogMessageBody:	YES
LogMessageHeader:	YES
LogMessageProperty:	YES
PricebookName:	Standard Price Book
Salesforce API Version:	48.0

Figure 4.51 Configure More options

The description of each of the fields in Figure 4.51 is presented in the table below.

Parameter	Description
CreatedBy	Specify the salesforce identification for the user that modifies the Accounts. This ID is generated by Salesforce can be extracted using the plug-in, the field name is CreatdById.
ExceptionLogging	Possible values "YES" / "NO" Specify "YES" to log the exception if any. Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO" Specify "YES" to log the Message Body (Not recommended in live environment). Specify "NO" or leave blank otherwise.
LogMessageHeader	Possible values "YES" / "NO"



	Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
InitialDate	Date from when the integration flow will replicate for the first time. Correct format: YYYY-MM-DDT'hh:mm:ss.sss'Z' E.g.: 1970-01-01T00:00:00.000Z
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.
PricebookName	Pricebook name in Salesforce. The default value is "Standard Price Book"
Salesforce API Version	Choose the version of Salesforce API to connect to. Default is 48.0.

Table 25. Configure More options

### 4.3.7.9 Value Mapping

Value mapping allows customization for OverallSDProcessStatus from Sales Orders in SAP S/4HANA Cloud to Status in Salesforce. In the current version of the content package, there are two Record Types values as guidance: In Approval Process and Draft.

Users should rename this Order Status as fit for your organization.

VM\_OrderStatus\_S4HANACloud\_to\_Salesforce

Bi-Directional Mapping

Agency	Identifier	Agency	Identifier	State
S4Hana	Order_Status	Salesforce	Order_Status	

Value Mappings: Default Values:

Value Mappings for

S4Hana, Order_Status	Salesforce, Order_Status
B	In Approval Process
C	Draft
A	Draft

Usage:  
ValueMap (Source agency, Source Identifier, Source value, Target agency, Target Identifier) = Target value;  
Example:  
ValueMap (S4Hana, Order\_Status, B, Salesforce, Order\_Status) = In Approval Process;  
ValueMap (Salesforce, Order\_Status, In Approval Process, S4Hana, Order\_Status) = B;

Figure 4.52 Configure Value Mapping Order Status



### 4.3.8 Receive Sales Order History from SAP S4HAHA Cloud

#### 4.3.8.1 Business Scenario

This integration flow allows users to check the order history for a specific customer in a defined time frame, as delivered by your SAP S/4HANA Cloud through the SOAP protocol. This SOAP protocol can be configured in other platforms to extract the sales order history for a specific period and sales order type.

Figure 4.53 depicts the business process to be implemented.

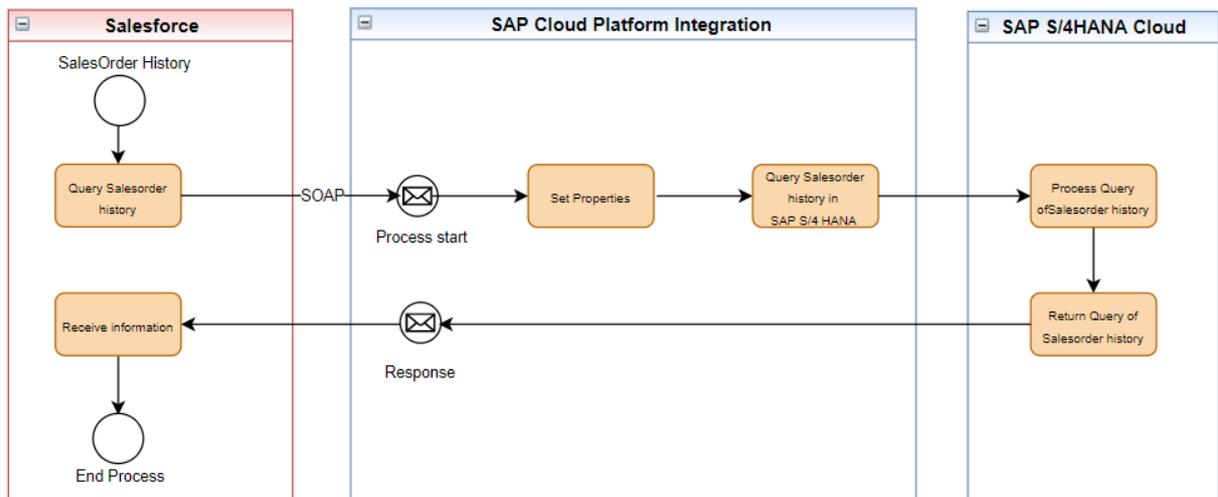


Figure 4.53. Process Diagram

The SAP CPI implementation of the process in Figure 4.53 is shown in Figure 4.54.

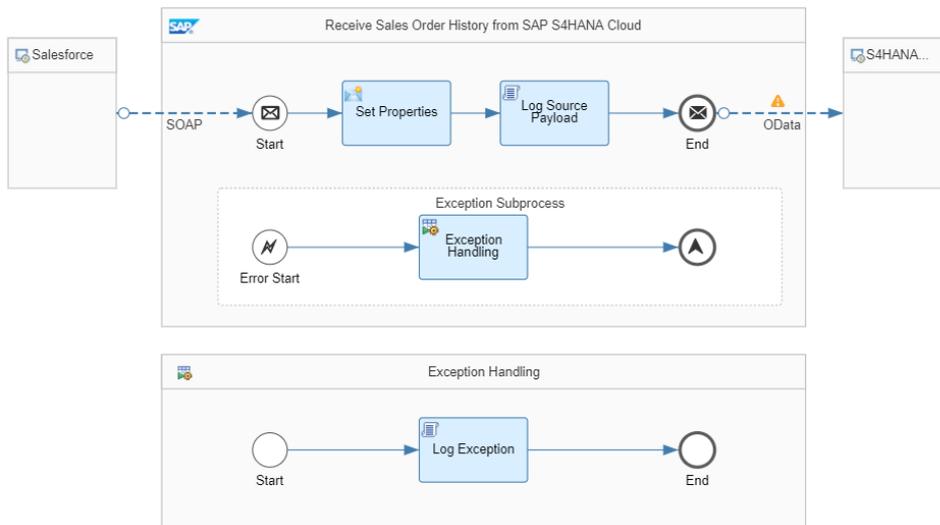


Figure 4.54 Integration Flow

### 4.3.8.2 Prerequisites

The following steps are the prerequisites for this Integration Scenario:

- Deploy the security artifacts that will be required during the configuration of Integration content.
- Users need to implement classes to consume this web service with APEX (for reference, see [Invoking Callouts Using Apex](#)).

### 4.3.8.3 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow "Receive Sales Order History from SAP S4HANA Cloud".
2. Click on Configure.
3. Configure "Sender" SOAP and define an address for the SOAP connection.

Configure "Receive Sales Order History from SAP S4HANA Cloud"

	Sender	Receiver	More
Sender:	Soap		
Adapter Type:	SOAP		
<b>Connection</b>			
Address:	/S4HANACloud_Salesforce/SalesOrderHistoryReception		

Figure 4.55. Configure Sender SOAP



Note: Replace the default values of the parameters in the configurations as per your landscape.

4. Define an address for the SOAP connection
5. Configure the "Receiver" connector named "S4HANA\_Cloud" to fit your specific landscape. See Figure 4.56.

Configure "Receive Sales Order History from SAP S4HANA Cloud"

Sender: Receiver More

Receiver: S4HANA\_Cloud

Adapter Type: HCIOData

Address: https://{{HostName}}:{{Port}}/sap/opu/odata/sap/API\_SALES\_ORDER\_SRV

HostName: [Redacted]

Port: 443

Credential Name: [Redacted]

Figure 4.56 Configure Receiver SAP S/4HANA Cloud

The description of each of the fields in Figure 4.56Figure 4.10 is presented in the table below.

Parameter	Description
Hostname	Enter the API hostname of your S/4HANA Cloud system. The hostname is part of the Address. https:// <b>hostname</b> :port/sap/opu/odata/sap/API_SALES_ORDER_SRV
Port	Enter the API port of your S/4HANA Cloud system. The port is part of the Address. https://hostname: <b>port</b> /sap/opu/odata/sap/API_SALES_ORDER_SRV
Authentication	Select "Basic" authentication Type.
Credential Name	Enter the name of the credential you have deployed for S/4HANA Cloud. See below about deploying credential artifacts.

Table 26. Configure Receiver SAP S/4HANA Cloud

6. Configure "More" as shown in Figure 4.57.



Configure "Receive Sales Order History from SAP S4HANA Cloud"

Sender Receiver **More**

Type: All Parameters

ExceptionLogging: YES

LogMessageBody: YES

LogMessageHeader: YES

LogMessageProperty: YES

Figure 4.57. Configure More options

The description of each of the fields in Figure 4.57Figure 4.10 is presented in the table below.

Parameter	Description
ExceptionLogging	Possible values "YES" / "NO" Specify "YES" to log the exception if any. Specify "NO" or leave blank otherwise.
LogMessageBody	Possible values "YES" / "NO" Specify "YES" to log the Message Body (Not recommended in live environment). Specify "NO" or leave blank otherwise.
LogMessageHeader	Possible values "YES" / "NO" Specify "YES" to log the Message Header Specify "NO" or leave blank otherwise.
LogMessageProperty	Possible values "YES" / "NO" Specify "YES" to log the Message Properties Specify "NO" or leave blank otherwise.

Table 27. Configure More options



## 5 Appendix

### 5.1 Generating Schema from Eclipse plug-in and replacing standard schema used in the Integration Flow

Currently, the integration package works with the standard fields for Salesforce, except for specific fields created in previous chapters. In case other custom fields are needed a new XSD must be generated with the Salesforce's Plug-in, default XSD on mapping must be replaced by the created one, and these fields should also be mapped.

Follow the steps below to create an XSD:

1. Open Eclipse.
2. Go to Windows > Perspective > Open Perspective > Other.
3. Select Salesforce Adapter and click open.
4. Go to XSD Generator XSD (or XSD Generator Aggregation/Composite if more than one object is needed).
5. Select a Version.
6. Select an API.
7. Select the operation that accommodates the integration flow.
8. Select an Object (or many in case of Aggregation/Composite).
9. Select Request XSD or Response XSD depending on the case.
10. Click on Save XSD and select a folder.
11. Replace default XSD from mapping in SAP CPI to recently created XSD.

### 5.2 Deploying Salesforce User Credentials, Token, and OAuth in SAP CPI

#### 5.2.1 Deploying User Credentials

This is necessary to hold the Salesforce username and password information used in the authentication.

Follow the steps below:

1. In your SAP CPI tenant go to Monitor.
2. In Manage Security click on Security Material.
3. Click in the Add dropdown and select User Credentials.
4. Fill Name for future use, User with Salesforce username and Password.
5. Click on Deploy.

#### 5.2.2 Deploying Token

Follow the steps below:

1. In your SAP CPI tenant go to Monitor.
2. In Manage Security click on Security Material.
3. Click in the Add dropdown and select Secure Parameter.
4. Fill Name for future use and Secure Parameter with your Salesforce token.
5. Click on Deploy.



### 5.2.3 Deploying OAuth

Follow the steps below:

1. In your SAP CPI tenant go to Monitor.
2. In Manage Security click on Security Material.
3. Click in the Add dropdown and select User Credentials.
4. Fill Name for future use and User with your OAuth token.
5. Click on Deploy.

