

## **Building block Configuration Guide**

**CUSTOMER**

Create or Update Customer with Sales Data from CRM to  
SAP S4HANA Cloud and SAP ERP

September 2022

English

# **Create or Update Customer with Sales Data from CRM to SAP S4HANA Cloud and SAP ERP**

# Document History

Revision	Date	Author
0	September, 2022	Rafaela Nunes

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# 1 Prerequisites

The Iflow consists in sending a Customer with Sales Data from External/Legacy System to SAP S4HANA Cloud and SAP ERP (SAP ECC).

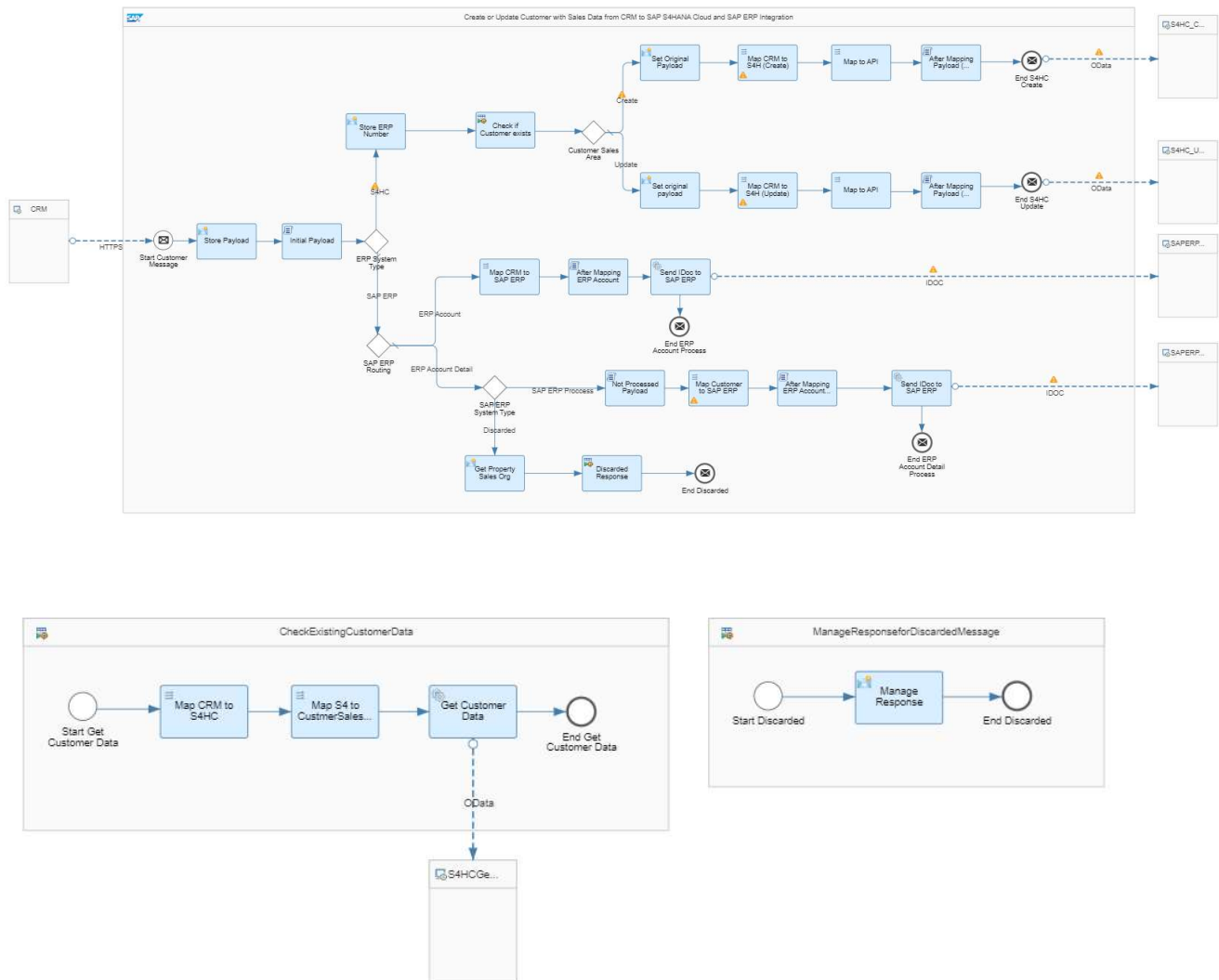
- Configuration steps in External/Legacy System:
  - o Configuration of HTTPS connection details which includes:
    - Address, Authorization and User Role.
- Configuration steps in SAP S4HANA Cloud:
  - o Communication Arrangement Configuration in SAP S4HANA Cloud
    - Scenario ID: SAP\_COM\_0008
    - Scenario: Business Partner, Customer and Supplier Integration
  - o Configuration of OData connection details for create and update scenario which includes:
    - Address, Proxy Type and Authorization.
- Configuration steps in SAP ERP (SAP ECC):
  - o Setting up of IDoc Communication for create and update scenario which includes:
    - Logical Systems, Assign Logical Systems, Create the RFC Destination, Create Port for IDOC Processing, Maintain ALE Distribution Model, Manually Maintain Partner Profile.

## 2 Documentation

A message is triggered from CRM system to SAP CPI. The first step is an erpsystemtype field evaluation. If erpsystemtype is equal to the constant S4HC, the message is sent to SAP S/4HANA Cloud branch. In this case, the next step is checking if the customer sent by CRM has already existed in S4 S/4HANA Cloud. If the customer already exists, it will follow the update route, otherwise, it will follow the create branch and a new customer is created in S4 S/4HANA Cloud. Both customer creating and updating are done via OData API.

In the other hand, if erpsystemtype is different from S4HC, the message is sent to SAP ERP branch (default route). The next validation is based on the erpaccount field and in this case, if erpaccount is sent, an IDoc is triggered to SAP ERP via IDoc adapter. Otherwise, the message is sent to a third branch and if erpsystemtype field is equal to ECC, an IDoc is triggered to SAP ERP. Otherwise, the message is discarded (default route).

The customer creation or update in SAP S/4HANA Cloud is triggered by OData API call related to communication Scenario SAP\_COM\_0008 - Business Partner, Customer and Supplier Integration scenario.



# 3 Configuration steps on SAP Cloud Integration

For setting up the Https Adapter connectivity, please check:

[https://help.sap.com/docs/CLOUD\\_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/0ae4a78909c4479cbc3cc414250919de.html](https://help.sap.com/docs/CLOUD_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/0ae4a78909c4479cbc3cc414250919de.html)

For setting up the ODATA Adapter connectivity, please check:

[https://help.sap.com/docs/CLOUD\\_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/c5c2e38e0c87472e996dfda04920bfc4.html](https://help.sap.com/docs/CLOUD_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/c5c2e38e0c87472e996dfda04920bfc4.html)

For further information regarding, API API\_BUSINESS\_PARTNER, please check:

[https://api.sap.com/api/API\\_BUSINESS\\_PARTNER/overview](https://api.sap.com/api/API_BUSINESS_PARTNER/overview)

For setting up the IDoc Adapter connectivity, please check:

[https://help.sap.com/docs/CLOUD\\_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/018aa88b6d284ca2b8476b6e6053cfeb.html](https://help.sap.com/docs/CLOUD_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/018aa88b6d284ca2b8476b6e6053cfeb.html)

## 3.1 Configure Sender HTTPS Adapter

The screenshot shows the 'General' tab of the 'HTTPS' adapter configuration. The 'Name' field is set to 'HTTPS\_SND\_CRM\_CustomerSalesData'. Below this, there are two sections: 'CHANNEL DETAILS' and 'ADAPTER DETAILS'. In 'CHANNEL DETAILS', 'Direction' is 'Sender', 'System' is 'CRM', and 'Description' is empty. In 'ADAPTER DETAILS', 'Adapter Type' is 'HTTPS', 'Transport Protocol' is 'HTTPS', and 'Message Protocol' is 'None'.

Figure 1 – Sender HTTPS Adapter – General/Channel Details.

The screenshot shows the 'Connection' tab of the 'HTTPS' adapter configuration. Under 'REQUEST PROCESSING', the 'Address' field contains '/CustomerSalesData\_CRM\_to\_S4HC\_ERP'. The 'Authorization' dropdown is set to 'User Role'. The 'User Role' field contains 'ESBMessaging.send' with a 'Select' button next to it. The 'CSRF Protected' checkbox is unchecked.

Figure 2 - Sender HTTPS Adapter – Connection/Request Processing.

Address	Enter the URL of the HTTP system to connect to.
Authorization	Enter the authorization option. In this case, it was used “User Role” type, since this is based on roles defined on the tenant for the user associated with the inbound request.
User Role	Enter the User Role. It is a predefined role provided by SAP which authorizes a sender system to process messages on a tenant.

The screenshot shows the 'Conditions' tab of the 'HTTPS' adapter configuration. Under 'MAXIMUM MESSAGE SIZE', the 'Body Size (in MB)' field is set to '40'.

Figure 3 - Sender HTTPS Adapter – Conditions/Maximum Message Size.

## 3.2 Configure Receiver OData Adapter (Create Customer)

The receiver OData Adapter for Customer creation is described below:

The screenshot shows the 'General' tab of the OData adapter configuration. The 'Name' field is set to 'OData\_RCV\_S4HC\_CustomerSalesData\_Create'. The 'CHANNEL DETAILS' section includes 'Direction' (Receiver), 'System' (S4HC\_Create), and 'Description'. The 'ADAPTER DETAILS' section includes 'Adapter Type' (OData), 'Transport Protocol' (HTTP), and 'Message Protocol' (OData V2).

Figure 4 - Receiver OData Adapter (Create Customer) – General/Channel Details.

The screenshot shows the 'Connection' tab of the OData adapter configuration. The 'CONNECTION DETAILS' section includes 'Address' (https://test.com/sap/opu/odata/sap/API\_BUSINESS\_PARTNER), 'Proxy Type' (Internet), 'Authentication' (Client Certificate), 'Private Key Alias' (<Define Value>), and 'CSRF Protected' (checked).

Figure 5 - Receiver OData Adapter (Create Customer) – Connection/Connection Details.

Address	Enter the address of the OData service. <i>Note: In this case, it is used the API:</i> <i>https://mysystem.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER</i>
Proxy Type	Enter the proxy type.
Authentication	Enter the authentication method for connecting to the OData service.
CSRF Protected	Check. By default, option.

The screenshot shows the 'Processing' tab of the OData adapter configuration. The 'PROCESSING DETAILS' section includes 'Operation Details' (Create (POST)), 'Resource Path' (A\_CustomerSalesArea), 'Fields' (a list of SAP OData fields), 'Enable Batch Processing' (unchecked), 'Custom Query Options', 'Content Type' (Atom), 'Content Type Encoding' (None), and 'Timeout (in min)' (1). The 'HEADER DETAILS' section includes 'Request Headers' and 'Response Headers'. The 'METADATA DETAILS' section includes 'Request Headers' and 'Custom Query Parameters'.

Figure 6 - Receiver OData Adapter (Create Customer) – Processing/Processing Details.

Operation Details	Enter the operation preferred.
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Resource Path	Select the Model Operation where you can find and select the entity preferred and after the fields for model operation. In this case, define <i>A_CustomerSalesArea</i> .
Fields	Select the fields from Resource Path (entity that you're performing the operation on).

## 3.3 Configure Receiver OData Adapter (Update Customer)

The receiver OData Adapter for Customer update is described below:

The screenshot shows the 'OData' configuration window with the 'General' tab selected. The 'Name' field is set to 'OData\_RCV\_S4HC\_CustomerSalesData\_Update'. The 'CHANNEL DETAILS' section includes fields for 'Direction' (set to 'Receiver'), 'System' (set to 'S4HC\_Update'), and 'Description'. The 'ADAPTER DETAILS' section includes fields for 'Adapter Type' (set to 'OData'), 'Transport Protocol' (set to 'HTTP'), and 'Message Protocol' (set to 'OData V2').

Figure 7 - Receiver OData Adapter (Update Customer) – General/Channel Details.

The screenshot shows the 'OData' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section includes fields for 'Address' (set to 'https://testle.com/sap/opu/odata/sap/API\_BUSINESS\_PARTNER'), 'Proxy Type' (set to 'Internet'), 'Authentication' (set to 'Client Certificate'), 'Private Key Alias' (set to '<Define Value>'), and 'CSRF Protected' (checked).

Figure 8 - Receiver OData Adapter (Update Customer) – Connection/Connection Details.

Address	Enter the address of the OData service. <i>Note: In this case, it is used the API:</i> <i>https://mysystem.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER</i>
Proxy Type	Enter the proxy type.
Authentication	Enter the authentication method for connecting to the OData service.
CSRF Protected	Check. By default, option.

The screenshot shows the 'OData' configuration window with the 'Processing' tab selected. The 'PROCESSING DETAILS' section includes fields for 'Operation Details' (set to 'Patch (PATCH)'), 'Resource Path' (set to '/A\_CustomerSalesArea/Customer/SalesOrganization/DistributionCha'), 'Fields' (a list of fields with a 'Preview' button), 'Enable Batch Processing' (unchecked), 'Custom Query Options' (empty), 'Content Type' (set to 'JSON'), 'Content Type Encoding' (set to 'None'), and 'Timeout (in min)' (set to '1'). The 'HEADER DETAILS' section includes fields for 'Request Headers' and 'Response Headers'. The 'METADATA DETAILS' section includes fields for 'Request Headers' and 'Custom Query Parameters'.

Figure 9 - Receiver OData Adapter (Update Customer) – Processing/Processing Details.

Operation Details	Enter the operation preferred.
Resource Path	Select the Model Operation where you can find and select the entity preferred and after the fields for model operation. In this case, define <i>A_CustomerSalesArea('Customer','SalesOrganization','DistributionChannel','Division')</i> .
Fields	Select the fields from Resource Path (entity that you're performing the operation on).

## 3.4 Configure Receiver IDoc Adapter (ERP Account)

The receiver IDoc Adapter for ERP Account is described below:

The screenshot shows the 'IDOC' configuration window with the 'General' tab selected. The 'Name' field is set to 'IDoc\_RCV\_ERP\_ERPAccount'. Below this, the interface is split into two sections: 'CHANNEL DETAILS' and 'ADAPTER DETAILS'. In 'CHANNEL DETAILS', 'Direction' is 'Receiver', 'System' is 'SAPERP\_ERPAccount', and 'Description' is empty. In 'ADAPTER DETAILS', 'Adapter Type' is 'IDOC', 'Transport Protocol' is 'HTTP/HTTPS', and 'Message Protocol' is 'IDoc SOAP'.

Figure 10 – Receiver IDoc Adapter (ERP Account) – General/Channel Details.

The screenshot shows the 'IDOC' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section contains several fields: 'Address' is 'http://host:port/sap/bc/srt/idoc?sap-client=001', 'Proxy Type' is 'On-Premise', 'Location ID' is empty, 'IDoc Content Type' is 'Text/XML', 'Authentication' is 'Basic', 'Credential Name' is 'test', 'Timeout (in ms)' is '60000', 'Compress Message' is unchecked, 'Allow Chunking' is checked, 'Return HTTP Response Code as Header' is unchecked, and 'Clean-up Request Headers' is checked.

Figure 11 - Receiver IDoc Adapter (ERP Account) – Connection/ Connection Details.

Address	Enter the endpoint address on which Cloud Integration posts the outbound message.
Proxy Type	Enter the proxy type (on-premise SAP ERP).
IDoc Content Type	Enter the IDoc Content Type.
Authentication	Enter the authentication method.
Credential Name	Enter the Credential Name.

## 3.5 Configure Receiver IDoc Adapter (ERP Account Detail)

The receiver IDoc Adapter for ERP Account Detail is described below:

The screenshot shows the 'IDOC' configuration window with the 'General' tab selected. The 'Name' field is 'IDoc\_RCV\_ERP\_ERPAccountDetail'. The 'CHANNEL DETAILS' section includes 'Direction' (Receiver), 'System' (SAPERP\_ERPAccountDetails), and 'Description'. The 'ADAPTER DETAILS' section includes 'Adapter Type' (IDOC), 'Transport Protocol' (HTTP/HTTPS), and 'Message Protocol' (IDoc SOAP).

Figure 12 – Receiver IDoc Adapter (ERP Account Detail) – General/Channel Details.

The screenshot shows the 'IDOC' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section includes 'Address' (http://host:port/sap/bc/srt/idoc?sap-client=001), 'Proxy Type' (On-Premise), 'Location ID', 'IDoc Content Type' (Text/XML), 'Authentication' (Basic), 'Credential Name' (teste), 'Timeout (in ms)' (60000), 'Compress Message' (unchecked), 'Allow Chunking' (checked), 'Return HTTP Response Code as Header' (unchecked), and 'Clean-up Request Headers' (checked).

Figure 13 - Receiver IDoc Adapter (ERP Account Detail) – Connection/ Connection Details.

Address	Enter the endpoint address on which Cloud Integration posts the outbound message
Proxy Type	Enter the proxy type (on-premise SAP ERP).
IDoc Content Type	Enter the IDoc Content Type.
Authentication	Enter the authentication method.
Credential Name	Enter the Credential Name.

## 3.6 <Configure Cloud Connector>

<Describe the configuration steps on the Cloud Connector to connect to OnPremise System >

## 3.7 Configure Backend system (SAP S/4HANA Cloud)

This section describes how to set up the communication scenario SAP\_COM\_0008 for Business Partner, Customer and Supplier Integration by using the Communication Arrangement tool.

### 3.7.1. Prerequisites

You must create a business role by using the template SAP\_BR\_ADMINISTRATOR and assign this to the administrator in the SAP S/4HANA system.

For more information, refer to Maintain Business Roles

<https://uacp.hana.ondemand.com/http.svc/rc/PRODUCTION/1a93686c176845f0832a2a73221dd90b/1611%20500/en-US/frameset.htm?8980ad05330b4585ab96a8e09cef4688.html>

### 3.7.2. Communication User

The communication user defined in the SAP S/4HANA system is used for inbound communication and for processing messages in the system.

#### Procedure

1. Access the SAP S/4HANA system and log on as an Administrator.
2. Choose the Maintain Communication Users tile under Communication Management.

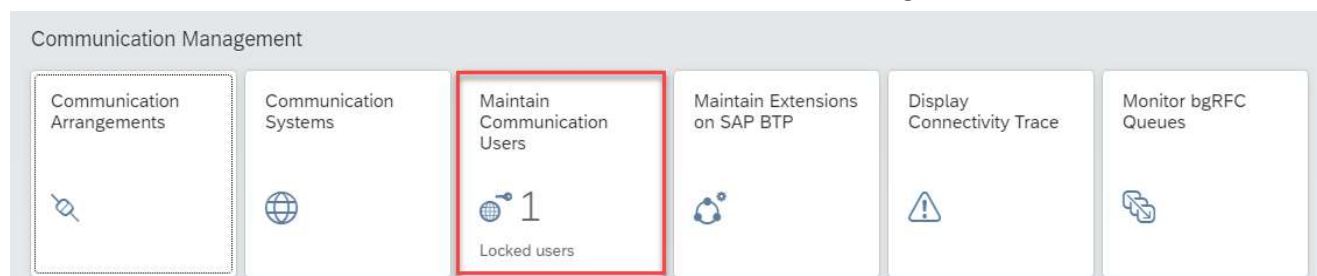
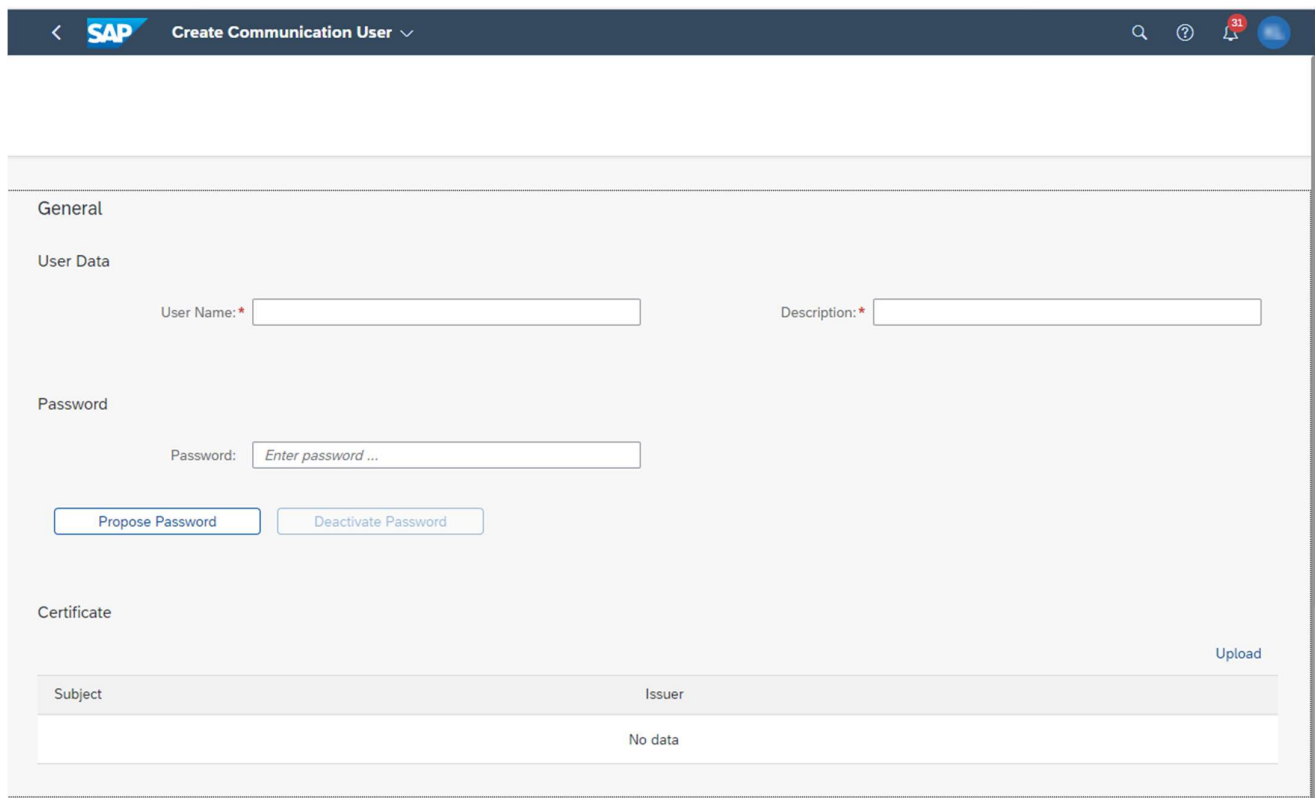


Figure 14 – Communication Management - Communication User.

3. Choose New.



The screenshot shows the 'Create Communication User' interface in SAP. The top bar includes the SAP logo and the title 'Create Communication User'. The main area is divided into sections: 'General' (containing 'User Data' with fields for 'User Name' and 'Description', and 'Password' with a 'Password' field and 'Propose Password'/'Deactivate Password' buttons), and 'Certificate' (with an 'Upload' button and a table for certificate details). The table has columns for 'Subject' and 'Issuer', and currently shows 'No data'.

Figure 15 -Create Communication User.

4. Enter the User Name and Description.
5. Enter a password. You can also upload an SSL client certificate.
6. Choose Create.

### 3.7.3. Communication System

The communication system defined in the SAP S/4HANA system is used as the source or target system.

#### Procedure

1. Access the SAP S/4HANA system and log on as an Administrator.
2. Choose Communication Systems tile under Communication Management.

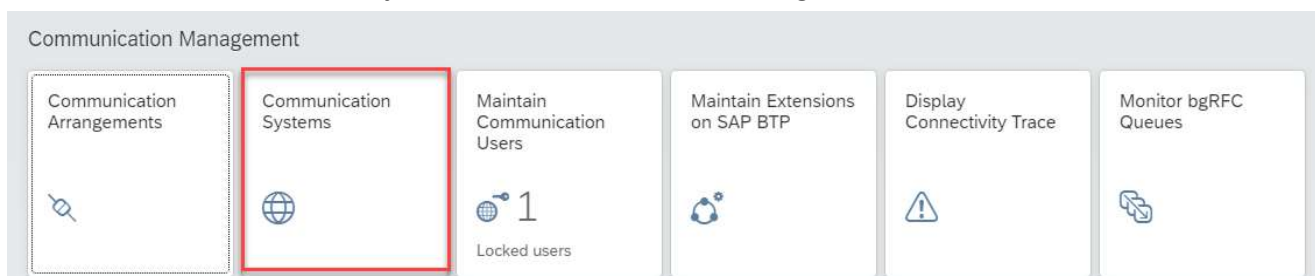


Figure 16 - Communication Management - Communication System.

3. In the next window, choose New. The following screen appears.

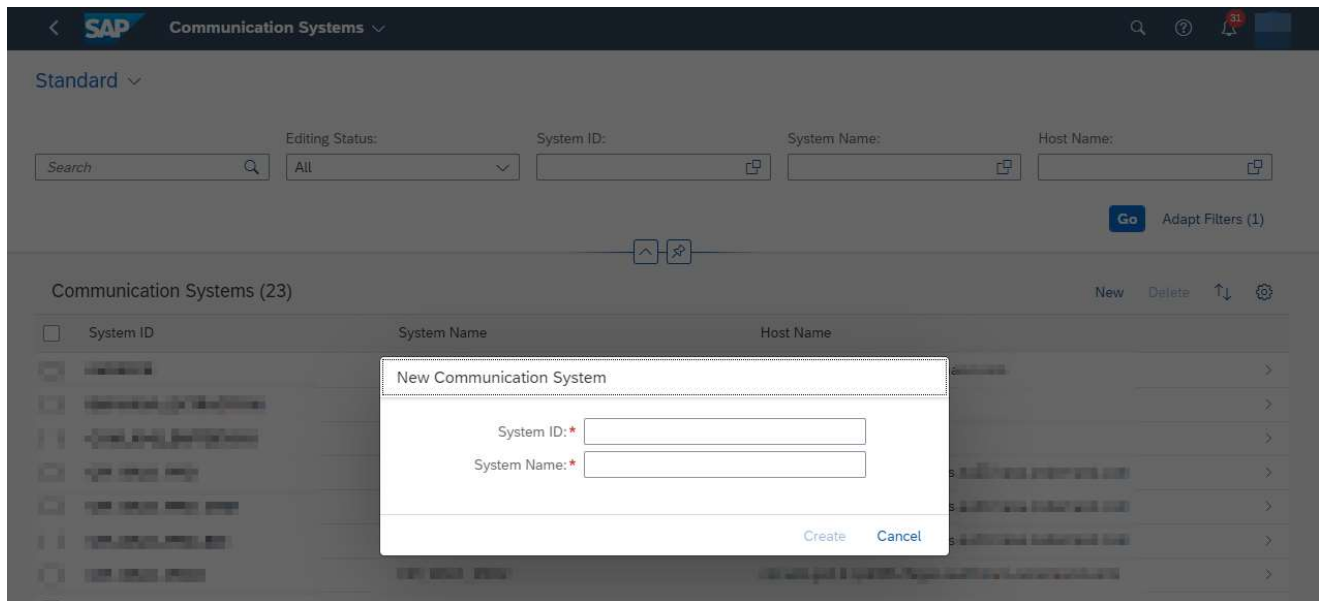


Figure 17 – Communication System creation.

4. Enter the System ID. Optionally, you can enter the ID to recognize the integration system, which is connected with the SAP S/4HANA system.
5. Enter a descriptive name in the System Name field.
6. Choose Create.

 The screenshot shows the 'General' configuration page for a communication system named 'DEMO'. The page has a header with the SAP logo and 'Communication System'. Below the header, there's a section for 'General Data' with fields for 'System ID: \*' (containing 'DEMO') and 'System Name: \*' (containing 'DEMO'). To the right is a 'Notes' field. Below this is the 'Technical Data' section, with a sub-section 'General' containing fields for 'Host Name: \*' (highlighted with a red border), 'Logical System', 'Port' (set to '443'), 'Is Hub System' (checkbox), 'Inbound Only' (checkbox), 'UI Host Name', and 'Business System'.

Figure 18 - Communication System/General.



Cloud Connector
OFF

RFC Settings

Client:

OAuth 2.0 Settings

Auth. Endpoint:

Audience:

Token Endpoint:

mTLS Endpoint:

Event Mesh
OFF

OAuth 2.0 Identity Provider
OFF

SAML Bearer Assertion Provider
OFF

OpenID Connect (OIDC) Provider
OFF

Contact Information

Contact Person Name:

Phone Number:

E-Mail:

Users for Inbound Communication
+

Authentication Method	User Name
No data	

Users for Outbound Communication
+

Authentication Method	User Name / Certificate / Client ID
No data	

Business Partners
+

ID	Name
No data	

Communication Arrangements

Arrangement Name	Communication Scenario ID	Communication Scenario
No data		

7. In the Host Name field, enter the SAP Runtime URL without HTTPS://
8. Enter the Log System ID as the SAP tenant ID.
9. Enter the Business System ID as the SAP tenant ID.
10. Under User for Inbound Communication, choose Add.

Figure 19 - Define the users for Inbound Communication.

11. Choose an Authentication Method as per your requirements and specify a relevant user name. Choose OK.

Figure 20 - Define inbound communication user (user name and authentication method).

12. User for Outbound communication, choose the user name and Authentication Method as per your requirements.

Figure 21 - Define the users for Outbound Communication.

13. Choose Create.
14. Choose Save.

### 3.7.4. Communication Arrangement

The Communication Arrangements defined in SAP S/4HANA systems enables key users to create and edit communication arrangements that your company has set up with a communication partner.

#### Procedure

1. Access the SAP S/4HANA system and log on as an Administrator and open the app Communication Arrangements.

Figure 22 – Define the Communication Arrangement.

2. Choose New.

**New Communication Arrangement**

Scenario: \*

Arrangement Name:

**Create** **Cancel**

3. Choose the scenario SAP\_COM\_0008 from the value help.
4. Enter an Arrangement Name.
5. Choose Create.

**SAP** Communication Arrangement All

SAP\_COM\_0008 Edit Display Changes Delete

Scenario ID: SAP\_COM\_0008 Changed By: Changed On: Editing Status: Active

Scenario: Business Partner, Customer and Supplier Integration

**Common Data**

Arrangement Name:  Own SAP Cloud System:

Communication System: \*  Display API-URL:

**Additional Properties**

Property Name	Property Value
Integration with C4C enabled	<input type="text"/>

**Inbound Communication** Supported Authentication Methods

User Name: \*  Authentication Method:

**Inbound Services**

Service	Application Protocol	Service URL/Service Interface	WSDL/Service Metadata	Additional Properties
Replicate Customers from Client to S/4 System	IDoc	https://s4hana.ondemand.com/sap/bc/srt/IDoc	<a href="#">↓</a>	
BP Relationship - Receive Confirmation from Client to SAP S/4HANA Cloud	SOAP	https://api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspartnerrelationshipspsu1	<a href="#">↓</a>	
Business Partner (A2X)	OData V2	https://s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER	<a href="#">↓</a>	
Attachments	OData V2	https://s4hana.ondemand.com/sap/opu/odata/sap/API_CV_ATTACHMENT_SRV	<a href="#">↓</a>	

6. Choose Communication System ID from the value help.
7. Under Inbound Communication, choose User Name using value help. By default, the user, which is associated with Communication System will be shown in the value help. Choose the same.
8. Choose Save.

## 3.8 Configure Backend system (SAP ERP)

- Setting up of IDoc Communication for create and update scenario which includes:
  - Logical Systems, Assign Logical Systems, Create the RFC Destination, Create Port for IDOC Processing, Maintain ALE Distribution Model, Manually Maintain Partner Profile.