

## **Building block Configuration Guide**

**CUSTOMER**

Create or Update Customer Master Data from SAP ERP to  
SAP S4HANA Cloud September 2022  
English

# **Create or Update Customer Master Data from SAP ERP to SAP S4HANA Cloud**

# Document History

Revision	Date	Author
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# 1 Prerequisites

The Iflow consists in sending a Customer Master Data from SAP ERP (SAP ECC) to S4HANA Cloud.

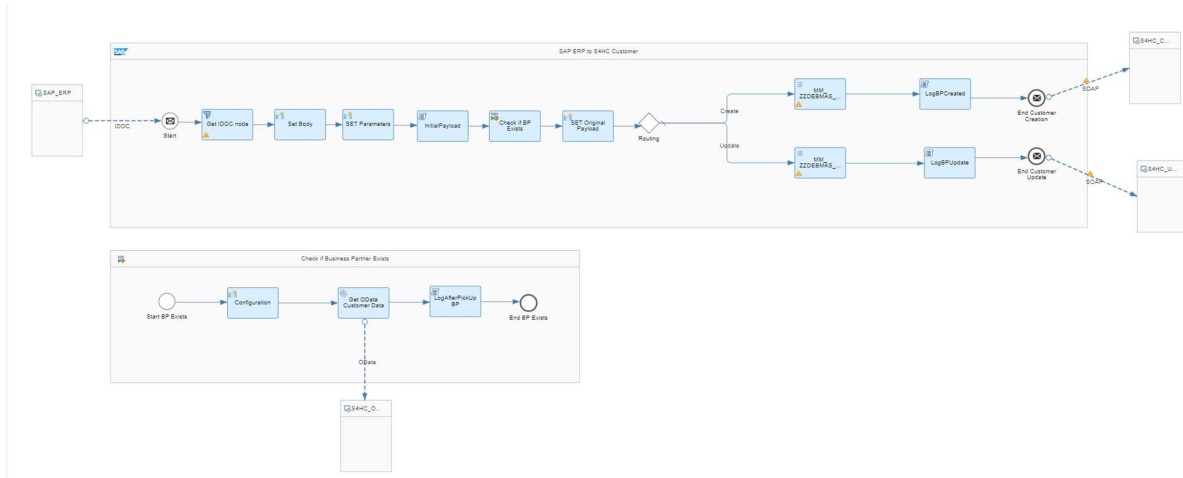
- Configuration steps in SAP ERP (SAP ECC):
  - o Setting up of IDoc Communication for create and update scenario which includes:
    - Define Logical Systems, Assign Logical Systems, Create the RFC Destination, Create Port for IDOC Processing, Maintain ALE Distribution Model, Manually Maintain Partner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

## 2 Documentation

Regardless of whether the Customer IDoc defined in SAP ERP is DEBMAS07 or ZZ\_DEBMAS\_360, the flow will filter by the main IDoc node to process all messages as if they were one.

What will define if the Customer is a creation or a change is a call to the API OData with the Customer number to check if the Customer exists in S/4HANA, if it exists, it follows the change route, if not the creation route.

Customer Creation or Change in S/4HANA Cloud is triggered by SOAP API call related to communication Scenario SAP\_COM\_0008 - Business Partner, Customer and Supplier Integration.



## 3 Configuration steps on SAP Cloud Integration

To set up the IDOC

Try to define specific section, such as:

- Receiver Configuration
- Sender Configuration
- Cloud Connector Configuration
- Sender System Configuration
- Receiver System Configuration

If there are any backend system configuration needed, please describe them here shortly.

The following subsections are only proposals and can be changed.>

### 3.1 Configure Sender IDOC Adapter

The screenshot shows the 'IDOC' configuration window with the 'General' tab selected. The 'Name' field is set to 'IDOC\_SND\_ERP'. Below this, there are two sections: 'CHANNEL DETAILS' and 'ADAPTER DETAILS'. In 'CHANNEL DETAILS', 'Direction' is 'Sender', 'System' is 'SAP ERP', and 'Description' is empty. In 'ADAPTER DETAILS', 'Adapter Type' is 'IDOC', 'Transport Protocol' is 'HTTPS', and 'Message Protocol' is 'IDoc SOAP'.

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

The screenshot shows the 'IDOC' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section contains three fields: 'Address' is '/Customer/IDOC/DEBMAS07', 'Authorization' is 'User Role' (selected from a dropdown), and 'User Role' is 'ESBMessaging.send'.

Figure 2 - Sender IDOC Adapter – Connection.

Address	Enter the URL of the SAP ERP 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.

**IDOC**

General Connection **Processing** Conditions

PROCESSING DETAILS

Invalid XML Character Handling: Throw Exception ▾

Figure 3 - Sender IDOC Adapter – Request Processing.

**IDOC**

General Connection Processing **Conditions**

MAXIMUM MESSAGE SIZE

Body Size (in MB):

Attachments Size (in MB):

Figure 4 - Sender IDOC Adapter – Conditions/Maximum Message Size.

For further information:

IDOC Adapter:

[https://help.sap.com/docs/CLOUD\\_INTEGRATION/368c481cd6954bd5d0435479fd4eaf/6042250661aa437c81dc8b3b4de567c4.html?locale=en-US](https://help.sap.com/docs/CLOUD_INTEGRATION/368c481cd6954bd5d0435479fd4eaf/6042250661aa437c81dc8b3b4de567c4.html?locale=en-US)



## 3.2 Configure Receiver ODATA Adapter (GET Customer)


The receiver OData Adapter for Get Customer data is described below:

The screenshot shows the 'OData' configuration window with the 'General' tab selected. The 'Name' field is set to 'OData'. Below this, the configuration is split into two columns: 'CHANNEL DETAILS' and 'ADAPTER DETAILS'. In 'CHANNEL DETAILS', 'Direction' is 'Receiver', 'System' is 'S4HC\_OData', and 'Description' is empty. In 'ADAPTER DETAILS', 'Adapter Type' is 'OData', 'Transport Protocol' is 'HTTP', and 'Message Protocol' is 'OData V2'.

Figure 3 – Receiver OData Adapter (GET Customer) – General/Channel Details.

The screenshot shows the 'OData' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section contains the following fields: 'Address' is 'https://mysystemcode-api.s4hana.ondemand.com/sz', 'Proxy Type' is 'Internet', 'Authentication' is 'Basic', 'Credential Name' is 'S4HC\_API\_USER', and 'CSRF Protected' is checked.

Figure 4 - Receiver OData Adapter (GET 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://mysystemcode-api.s4hana.ondemand.com/sap/opu/odata/SAP/API_BUSINESS_PARTNER</i>
Proxy Type	The type of proxy you want to use for establishing connection with OData Service. Currently, you can choose between Internet (default) and On-Premise. Define Internet for S/4HANA Cloud. For On-premise systems it is required to define Location ID.
Location ID (Only Proxy Type as On-Premise)	Location ID that you've configured in the cloud connector installed on your system.
Authentication	Enter the authentication method for connecting to the OData service. E.g Basic, client certificate..
Credential Name	Credential name of the credentials that is deployed in Security Material section of  (Operations View)
Private Key Alias (Only for Client Certificate Authentication).	Enter the private key alias that enables the system to fetch the private key from keystore for authentication.
CSRF Protected	Check. By default, option.

OData

GeneralConnectionProcessing

PROCESSING DETAILS

Operation Details:

Query (GET) ▾

Resource Path:

A\_BusinessPartner

Query Options:

\$select=Customer,BusinessPartner,Supplier,AcademicTitle,AuthorizationGroup,BusinessPartnerCategory,BusinessPartnerFullName,BusinessPartnerGrouping,BusinessPartnerName,BusinessPartnerUUID,CorrespondenceLanguage,CreatedByUser,CreationDate,CreationTime,FirstName,FormOfAddress,Industry,InternationalLocationNumber1,InternationalLocationNumber2,IsFemale,IsMale,IsNaturalPerson,IsSexUnknown,GenderCodeName,Language,LastChangeDate,LastChangeTime,LastChan

Preview

Enable Batch Processing:

☐

Custom Query Options:

Content Type:

Atom ▾

Page Size:

Process in Pages:

☐

Timeout (in min):

1

HEADER DETAILS

Request Headers:

Response Headers:

METADATA DETAILS

Request Headers:

Custom Query Parameters:

Operation Details	Enter the operation preferred. For this step please define Query GET.
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_BusinessPartner</i>
Query Options	Select the fields from Resource Path (entity that you're performing the operation on). In this case, consider this select all fields and add this filter: \$select=Customer,BusinessPartner,Supplier,AcademicTitle,.....&\$filter=Customer eq '{property.Customer}'

[OData Adapter](#) | [SAP Help Portal](#)

[Overview](#) | [Business Partner \(A2X\)](#) | [SAP API Business Hub](#)

## 3.3 Configure Receiver SOAP Adapter (CREATE Customer)

The receiver SOAP Adapter for Create Customer data is described below:


The screenshot shows the 'SOAP' configuration window with the 'General' tab selected. The 'Name' field is set to 'SOAP\_RCV\_S4HC\_Create'. Below this, the 'CHANNEL DETAILS' and 'ADAPTER DETAILS' sections are visible. In 'CHANNEL DETAILS', 'Direction' is 'Receiver', 'System' is 'S4HC\_Create', and 'Description' is empty. In 'ADAPTER DETAILS', 'Adapter Type' is 'SOAP', 'Transport Protocol' is 'HTTP', and 'Message Protocol' is 'SAP RM'.

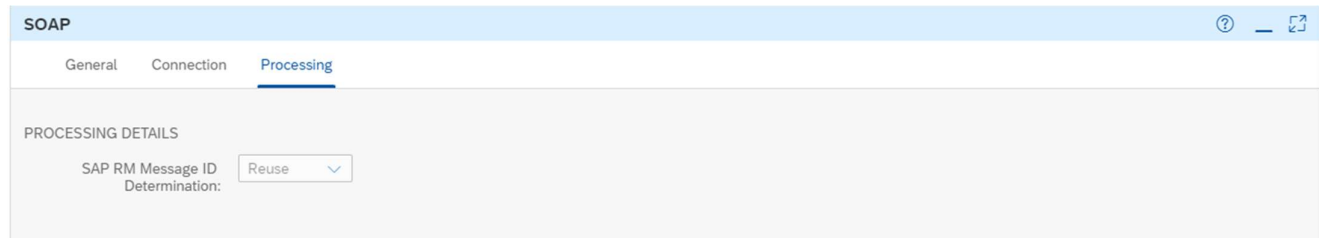
Figure 6 – Receiver SOAP Adapter (Create Customer) – General/Channel Details.

The screenshot shows the 'SOAP' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section contains the following fields: 'Address' is 'https://mysystemcode-api.s4hana.ondemand.com/sz', 'URL to WSDL' is empty, 'Service' is empty, 'Endpoint' is empty, 'Operation Name' is empty, 'Proxy Type' is 'Internet', 'Authentication' is 'Basic', 'Credential Name' is 'S4HC\_PROD\_API\_USER', '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 7 - Receiver SOAP Adapter (Create Customer) – Connection/Connection Details.

Address	<p>Enter the address of the SOAP service.</p> <p><i>Note: In this case, it is used the API:</i>  <a href="https://mysystemcode-api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspartnersuitebulkreplic">https://mysystemcode-api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspartnersuitebulkreplic</a></p>
Proxy Type	<p>The type of proxy you want to use for establishing connection with SOAP Service.</p> <p>Currently, you can choose between Internet (default) and On-Premise.</p> <p>Define Internet for S/4HANA Cloud. For On-premise systems it is required to define Location ID.</p>
Location ID (Only Proxy Type as On-Premise)	<p>Location ID that you've configured in the cloud connector installed on your system.</p>

Authentication	Enter the authentication method for connecting to the OData service. E.g Basic, client certificate..
Credential Name	Credential name of the credentials that is deployed in Security Material section of  (Operations View)
Private Key Alias (Only for Client Certificate Authentication).	Enter the private key alias that enables the system to fetch the private key from keystore for authentication.



The screenshot shows the 'SOAP' configuration window with the 'Processing' tab selected. Under 'PROCESSING DETAILS', the 'SAP RM Message ID Determination' is set to 'Reuse'.

*Figure 8 - Receiver SOAP Adapter (Create Customer) – Processing/Processing Details.*

For further information:

[SOAP \(SAP RM\) Adapter | SAP Help Portal](#)

API Business Partner Replicate from Client to SAP S/4HANA Cloud :

[Business Partner A2A](#)

## 3.4 Configure Receiver SOAP Adapter (UPDATE Customer)


The receiver SOAP Adapter for Customer Update is described below:

The screenshot shows the 'SOAP' configuration window with the 'General' tab selected. The 'Name' field is 'SOAP\_RCV\_S4HC\_Update'. The 'CHANNEL DETAILS' section includes 'Direction' (Receiver), 'System' (S4HC\_Update), and 'Description'. The 'ADAPTER DETAILS' section includes 'Adapter Type' (SOAP), 'Transport Protocol' (HTTP), and 'Message Protocol' (SAP RM).

Figure 9 - Receiver SOAP Adapter (Update Customer) – General/Channel Details.

The screenshot shows the 'SOAP' configuration window with the 'Connection' tab selected. The 'CONNECTION DETAILS' section includes 'Address' (https://mysystemcode-api.s4hana.ondemand.com/sa), 'URL to WSDL', 'Service', 'Endpoint', 'Operation Name', 'Proxy Type' (Internet), 'Authentication' (Basic), 'Credential Name' (S4HC\_API\_USER), 'Timeout (in ms)' (60000), 'Compress Message' (unchecked), 'Allow Chunking' (checked), 'Return HTTP Response Code as Header' (unchecked), and 'Clean-up Request Headers' (checked).

Figure 10 - Receiver SOAP Adapter (Update Customer) – Connection/Connection Details.

Address	Enter the address of the SOAP service. <i>Note: In this case, it is used the API:</i> <i>https://mysystemcode-api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspartnersuitebulkreplic?MessageId=\${header.MessageId}</i>
Proxy Type	The type of proxy you want to use for establishing connection with SOAP Service. Currently, you can choose between Internet (default) and On-Premise. Define Internet for S/4HANA Cloud. For On-premise systems it is required to define Location ID.
Location ID (Only Proxy Type as On-Premise)	Location ID that you've configured in the cloud connector installed on your system.
Authentication	Enter the authentication method for connecting to the OData service. E.g Basic, client certificate..
Credential Name	Credential name of the credentials that is deployed in Security Material section of  (Operations View)

Private Key Alias (Only for Client Certificate Authentication).	Enter the private key alias that enables the system to fetch the private key from keystore for authentication.
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The screenshot shows the 'SOAP' configuration window with three tabs: 'General', 'Connection', and 'Processing'. The 'Processing' tab is selected and highlighted. Below the tabs, the 'PROCESSING DETAILS' section is visible, containing a label 'SAP RM Message ID Determination:' and a dropdown menu currently set to 'Reuse'.

*Figure 11 - Receiver SOAP Adapter (Update Customer) – Processing/Processing Details.*

For further information:

[SOAP \(SAP RM\) Adapter | SAP Help Portal](#)

API Business Partner Replicate from Client to SAP S/4HANA Cloud :

[Business Partner A2A](#)

## 3.5 Configure Receiver 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.

### 3.5.1 Prerequisites

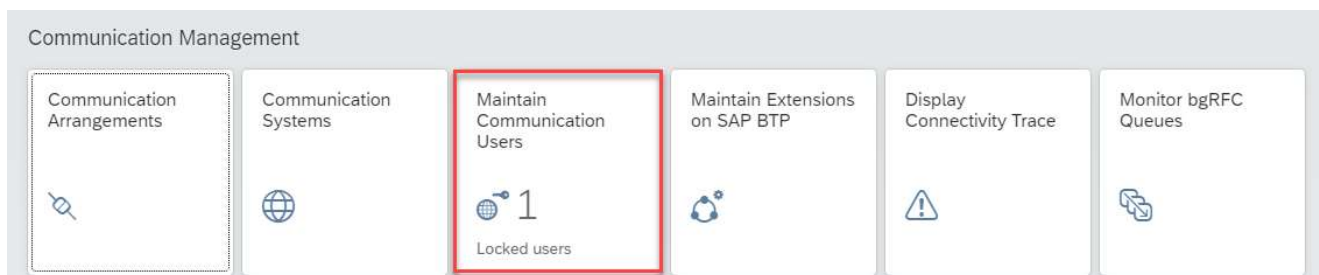
You must create a business role by using the template SAP\_BR\_ADMINISTRATOR, and assign this to the administrator in the SAP S/4HANA system. For more information, refer to Maintain Business Roles. <https://uacp.hana.ondemand.com/http.svc/rc/PRODUCTION/1a93686c176845f0832a2a73221dd90b/1611%20500/en-US/frameset.htm?8980ad05330b4585ab96a8e09cef4688.html>

### 3.5.2 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.



3. Choose New.

< **SAP** Create Communication User Q ? 31

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General

User Data

User Name:\*  Description:\*

Password

Password:

Certificate

[Upload](#)

Subject	Issuer
No data	

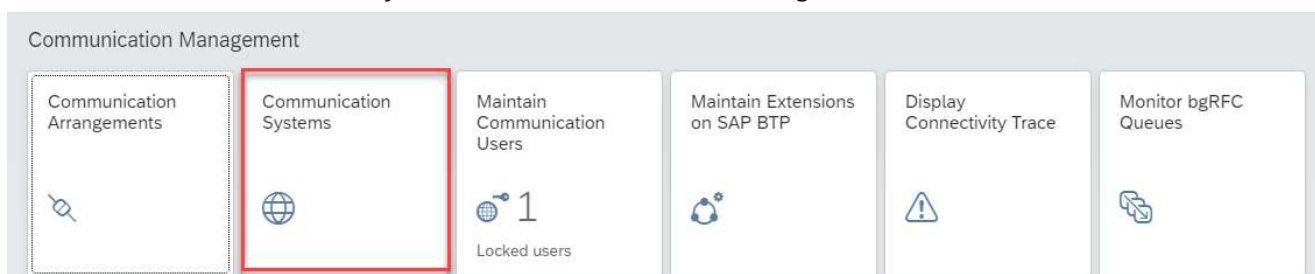
4. Enter the User Name and Description.
5. Enter a password. You can also upload an SSL client certificate.
6. Choose Create.

### 3.5.3 Communication System

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

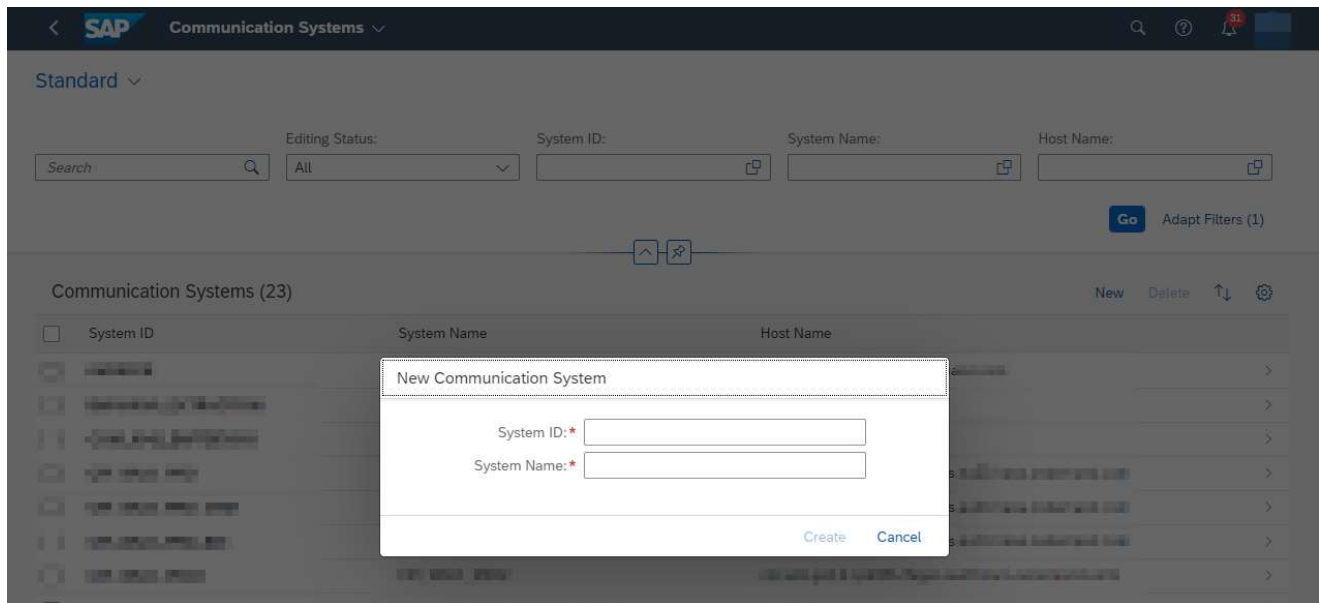
#### Procedure

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



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





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

The screenshot shows the configuration page for a communication system named 'DEMO'. The 'General' tab is selected. The 'General Data' section contains fields for 'System ID' (DEMO), 'System Name' (DEMO), and 'Notes'. The 'Technical Data' section contains fields for 'Host Name' (highlighted with a red border), 'Logical System', 'Port' (443), 'UI Host Name', and 'Business System'. There are also checkboxes for 'Is Hub System' and 'Inbound Only'.

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.

**Users for Inbound Communication**

+

Authentication Method	User Name
No data	

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

**New Inbound Communication User**

User Name: \*

Authentication Method: \* User Name and Password

SSL Client Certificate

User Name and Password

Maintain User New User OK Cancel

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

**Users for Outbound Communication**

+

Authentication Method	User Name / Certificate / Client ID
No data	

13. Choose Create.
14. Choose Save.

### 3.5.4 Communication Arrangement

The Communication Arrangements defined in 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.

**Communication Management**

<b>Communication Arrangements</b> 	<b>Communication Systems</b> 	<b>Maintain Communication Users</b> 1 Locked users	<b>Maintain Extensions on SAP BTP</b> 	<b>Display Connectivity Trace</b> 	<b>Monitor bgRFC Queues</b> 
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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**

SAP\_COM\_0008

Scenario ID: SAP\_COM\_0008  
 Scenario: Business Partner, Customer and Supplier Integration  
 Draft Last Changed By:   
 Draft Last Changed On: 25.09.2022, 18:58:31  
 Editing Status: Draft

**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" value=""/>

**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://my. api.s4hana.ondemand.com/sap/bc/srt/IDoc		
Replicate Suppliers from Client to S/4 System	IDoc	https://my. api.s4hana.ondemand.com/sap/bc/srt/IDoc		
Replicate Company Addresses from Client to S/4 System	IDoc	https://my. api.s4hana.ondemand.com/sap/bc/srt/IDoc		
Replicate Workplace Addresses from Client to S/4 System	IDoc	https://my. api.s4hana.ondemand.com/sap/bc/srt/IDoc		
Replicate Personal Addresses from Client to S/4 System	IDoc	https://my. api.s4hana.ondemand.com/sap/bc/srt/IDoc		
<b>Business Partner - Replicate from Client to SAP S/4HANA Cloud</b>	SOAP	https://my. api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspa rtnersuitebulkreplic		
Business Partner Relationship - Replicate from Client to SAP S/4HANA Cloud	SOAP	https://my. api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspa rtnerrelationshipsui		
Business Partner - Receive Confirmation from Client to SAP S/4HANA Cloud	SOAP	https://my. api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspa rtnersuitebulkrepli1		
BP Relationship - Receive Confirmation from Client to SAP S/4HANA Cloud	SOAP	https://my. api.s4hana.ondemand.com/sap/bc/srt/scs_ext/sap/businesspa rtnerrelationshipsui1		
Business Partner (A2X)	OData V2	https://my. api.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINES S_PARTNER		
Attachments	OData V2	https://my. api.s4hana.ondemand.com/sap/opu/odata/sap/API_CV_ATT		

**Save** **Cancel**

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.