

Configuration Guide

Microsoft Dynamics CRM Integration with SAP S/4HANA
Cloud and SAP ERP
January 2023
English

Create or Update Customer with Sales Data from Microsoft Dynamics CRM to SAP S/4HANA Cloud and SAP ERP

Content

1 Prerequisites	3
2 Documentation	4
3 Configuration steps on SAP Cloud Integration	5
3.1 Configure Sender HTTPS Adapter	6
3.2 Configure Receiver OData Adapter (Create Customer)	7
3.3 Configure Receiver OData Adapter (Update Customer)	8
3.4 Configure Receiver IDoc Adapter (ERP Account)	9
3.5 Configure Receiver IDoc Adapter (ERP Account Detail)	10
3.6 Configure Backend system (SAP S/4HANA Cloud)	11
3.7 Configure Backend system (SAP ERP)	17

1 Prerequisites

The Iflow consists in sending a Customer with Sales Data from External/Legacy System to SAP S/4HANA Cloud and SAP ERP (SAP ECC).

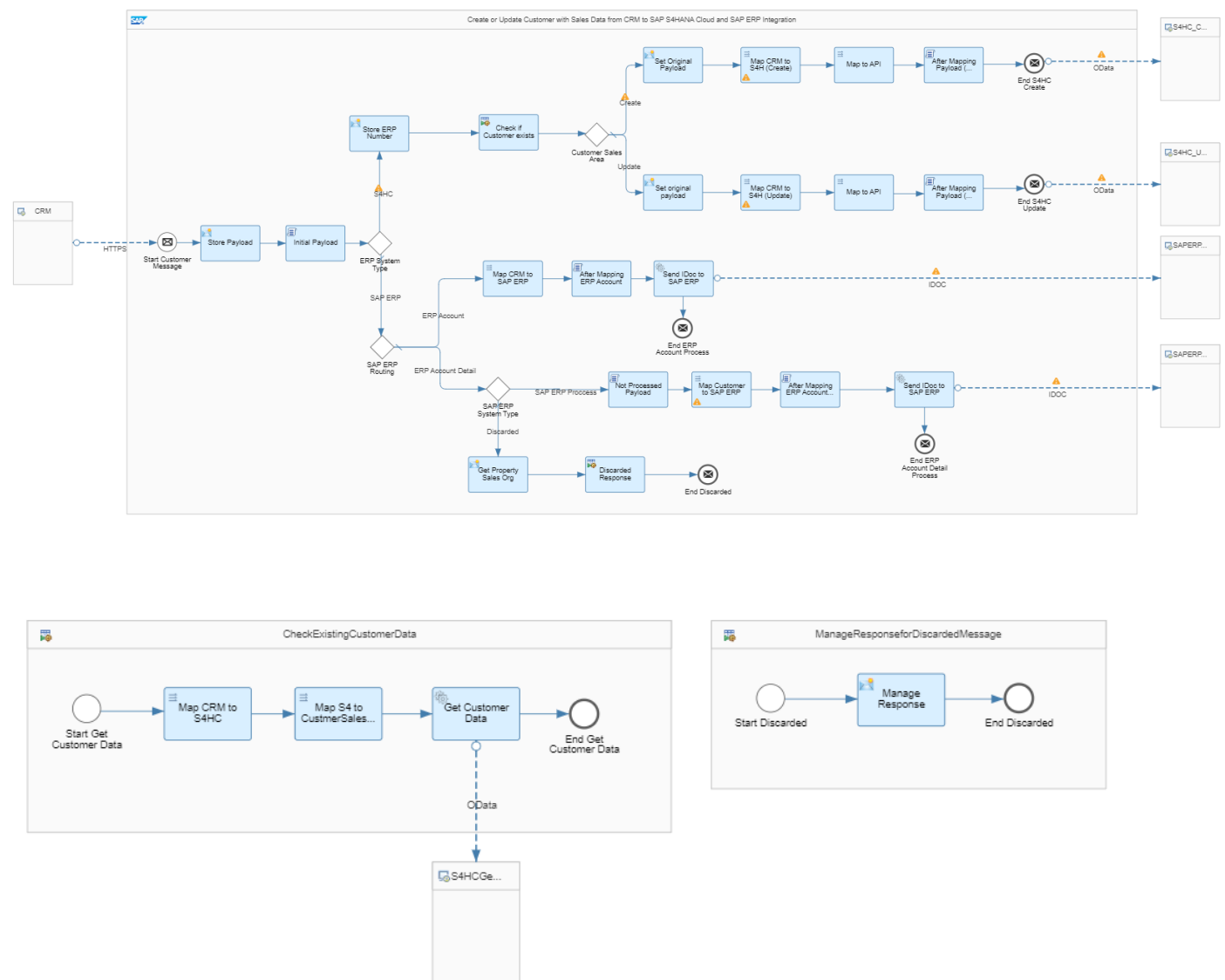
- Configuration steps in External/Legacy System:
 - o Configuration of HTTPS connection details which includes:
 - Address, Authorization and User Role.
- Configuration steps in SAP S/4HANA Cloud:
 - o Communication Arrangement Configuration in SAP S/4HANA Cloud
 - Scenario ID: SAP_COM_0008
 - Scenario: 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 Microsoft Dynamics CRM system to SAP. The first step is an erpsystemtype field evaluation. If erpsystemtype is equal to the constant S/4HANA Cloud, the message is sent to SAP S/4HANA Cloud branch. In this case, the next step is checking if the customer sent by Microsoft Dynamics CRM has already existed in 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 S/4HANA Cloud. Both customer creating and updating are done via OData API.

In the other hand, if erpsystemtype is different from S/4HANA Cloud, 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

For setting up the ODATA Adapter connectivity, please check:

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

For setting up the IDoc Adapter connectivity, please check:

https://help.sap.com/docs/CLOUD_INTEGRATION/368c481cd6954bdfa5d0435479fd4eaf/018aa88b6d284ca2b8476b6e6053cfeb.html

3.1 Configure Sender HTTPS Adapter

HTTPS

Externalize ?

General

Connection

Conditions

Name: HTTPS_SND_CRM_CustomerSalesData

CHANNEL DETAILS

ADAPTER DETAILS

Direction: Sender

System: CRM

Description:

Adapter Type: HTTPS

Transport Protocol: HTTPS

Message Protocol: None

HTTPS

Externalize ?

General

Connection

Conditions

REQUEST PROCESSING

Address: /CustomerSalesData_CRM_to_S4HC_ERP

Authorization: User Role

User Role: ESBMessaging.send

CSRF Protected:

Select

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.

HTTPS

Externalize

General

Connection

Conditions

MAXIMUM MESSAGE SIZE

Body Size (in MB): 40

3.2 Configure Receiver OData Adapter (Create Customer)

The receiver OData Adapter for Customer creation is described below:

OData Externalize ?

General Connection Processing

Name: OData_RCV_S4HC_CustomerSalesData_Create

CHANNEL DETAILS

Direction: Receiver

System: S4HC_Create

Description:

ADAPTER DETAILS

Adapter Type: OData

Transport Protocol: HTTP

Message Protocol: OData V2

OData Externalize ?

General Connection Processing

CONNECTION DETAILS

Address: https://test.com/sap/opu/odata/sap/API_BUSINESS_PARTNER

Proxy Type: Internet

Authentication: Client Certificate

Private Key Alias: <Define Value>

CSRF Protected: ☒

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.

OData Externalize ?

General Connection Processing

PROCESSING DETAILS

Operation Details: Create (POST)

Resource Path: A_CustomerSalesArea Select

Fields: Customer,SalesOrganization,DistributionChannel,Division,AccountByCustomer,AuthorizationGroup,BillingsBlockedForCustomer,CompleteDeliveryIsDefined,Currency,CustomerABCClassification,CustomerAccountAssignmentGroup,CustomerGroup,CustomerPaymentTerms,CustomerPriceGroup,CustomerPricingProcedure,DeliveryIsBlockedForCustomer,DeliveryPriority,IncotermsClassification,IncotermsLocation2,IncotermsVersion,IncotermsLocation1,DeletionIndicator,IncotermsTransferLocation,InvoiceDate,ItemOrderProbabilityInPercent,OrderCombinationsAllowed,OrdersBlockedForCustomer,PartialDeliveryIsAllowed,PriceListType,SalesGroup,SalesOffice,ShippingCondition,SupplyingPlant,SalesDistrict,InvoiceListSchedule,ExchangeRateType,AdditionalCus Preview

Enable Batch Processing: ☐

Custom Query Options:

Content Type: Atom

Content Type Encoding: None

Timeout (in min): 1

HEADER DETAILS

Request Headers:

Response Headers:

METADATA DETAILS

Request Headers:

Custom Query Parameters:

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</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:

OData Externalize ?

General Connection Processing

Name: OData_RCV_S4HC_CustomerSalesData_Update

CHANNEL DETAILS **ADAPTER DETAILS**

Direction: Receiver Adapter Type: OData

System: S4HC_Update Transport Protocol: HTTP

Description: Message Protocol: OData V2

OData Externalize ?

General Connection Processing

CONNECTION DETAILS

Address: * https://teste.com/sap/opu/odata/sap/API_BUSINESS_PARTNER

Proxy Type: * Internet

Authentication: * Client Certificate

Private Key Alias: <Define Value>

CSRF Protected: ☒

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.

OData Externalize ?

General Connection Processing

PROCESSING DETAILS

Operation Details: * Patch (PATCH)

Resource Path: * A_CustomerSalesArea('Customer','SalesOrganization','DistributionChannel') Select

Fields: Customer,SalesOrganization,DistributionChannel,Division,AccountByCustomer,AuthorizationGroup,BillingIsBlockedForCustomer,CompleteDeliveryIsDefined,Currency,CustomerABCClassification,CustomerAccountAssignmentGroup,CustomerGroup,CustomerPaymentTerms,CustomerPriceGroup,CustomerPricingProcedure,DeliveryIsBlockedForCustomer,DeliveryPriority,IncotermsClassification,IncotermsLocation2,IncotermsVersion,IncotermsLocation1,DeletionIndicator,IncotermsTransferLocation,InvoiceData,ItemOrderProbabilityInPercent,OrderCombinationsAllowed,OrdersBlockedForCustomer,PartialDeliveryIsAllowed,PriceListType,SalesGroup,SalesOffice,ShippingCondition,SupplyingPlant,SalesDistrict,InvoiceListSchedule,ExchangeRateType,AdditionalCus Preview

Enable Batch Processing: ☐

Custom Query Options:

Content Type: JSON

Content Type Encoding: None

Timeout (in min): * 1

HEADER DETAILS

Request Headers:

Response Headers:

METADATA DETAILS

Request Headers:

Custom Query Parameters:

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:

IDOC

Externalize ?

General

Connection

Name: IDoc_RCV_ERP_ERPAccount

CHANNEL DETAILS

ADAPTER DETAILS

Direction: Receiver

System: SAPERP_ERPAccount

Description:

Adapter Type: IDOC

Transport Protocol: HTTP/HTTPS

Message Protocol: IDoc SOAP

IDOC

Externalize ?

General

Connection

CONNECTION DETAILS

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: * test

Timeout (in ms): 60000

Compress Message: ☐

Allow Chunking: ☒

Return HTTP Response Code as Header: ☐

Clean-up Request Headers: ☒

Address	Enter the endpoint address on which SAP 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:

IDOC

Externalize ?

General

Connection

Name: IDoc_RCV_ERP_ERPAccountDetail

CHANNEL DETAILS

ADAPTER DETAILS

Direction: Receiver

System: SAPERP_ERPAccountDetails

Description:

Adapter Type: IDOC

Transport Protocol: HTTP/HTTPS

Message Protocol: IDoc SOAP

IDOC

Externalize ?

General

Connection

CONNECTION DETAILS

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: ☐

Allow Chunking: ☒

Return HTTP Response Code as Header: ☐

Clean-up Request Headers: ☒

Address	Enter the endpoint address on which SAP 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 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.

1.1.1. 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 Cloud system.

For more information, refer to Maintain Business Roles

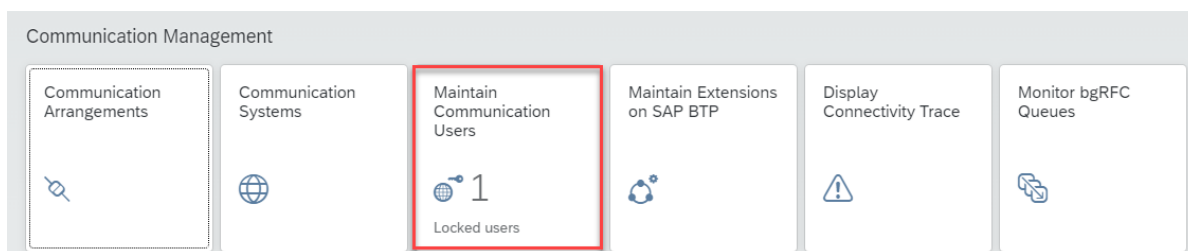
<https://uacp.hana.ondemand.com/http.svc/rc/PRODUCTION/1a93686c176845f0832a2a73221dd90b/1611%20500/en-US/frameset.htm?8980ad05330b4585ab96a8e09cef4688.html>

1.1.2. Communication User

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

Procedure

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



3. Choose New.

4. Enter the User Name and Description.

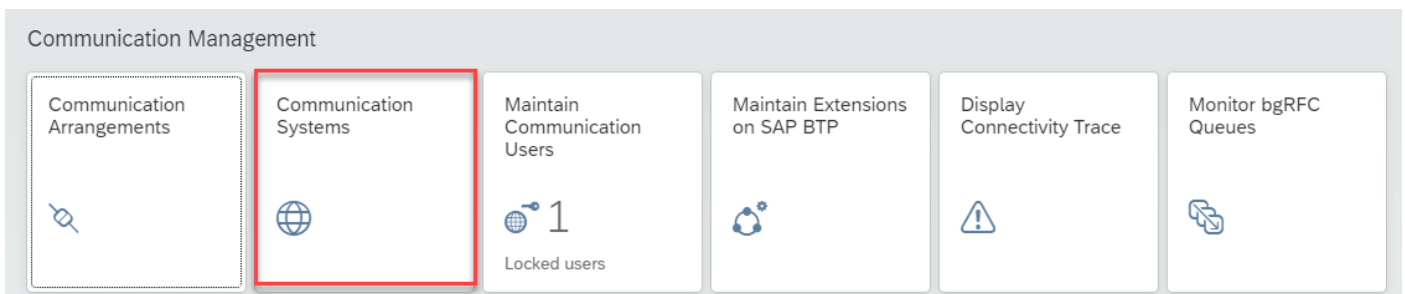
5. Enter a password. You can also upload an SSL client certificate.
6. Choose Create.

1.1.3. Communication System

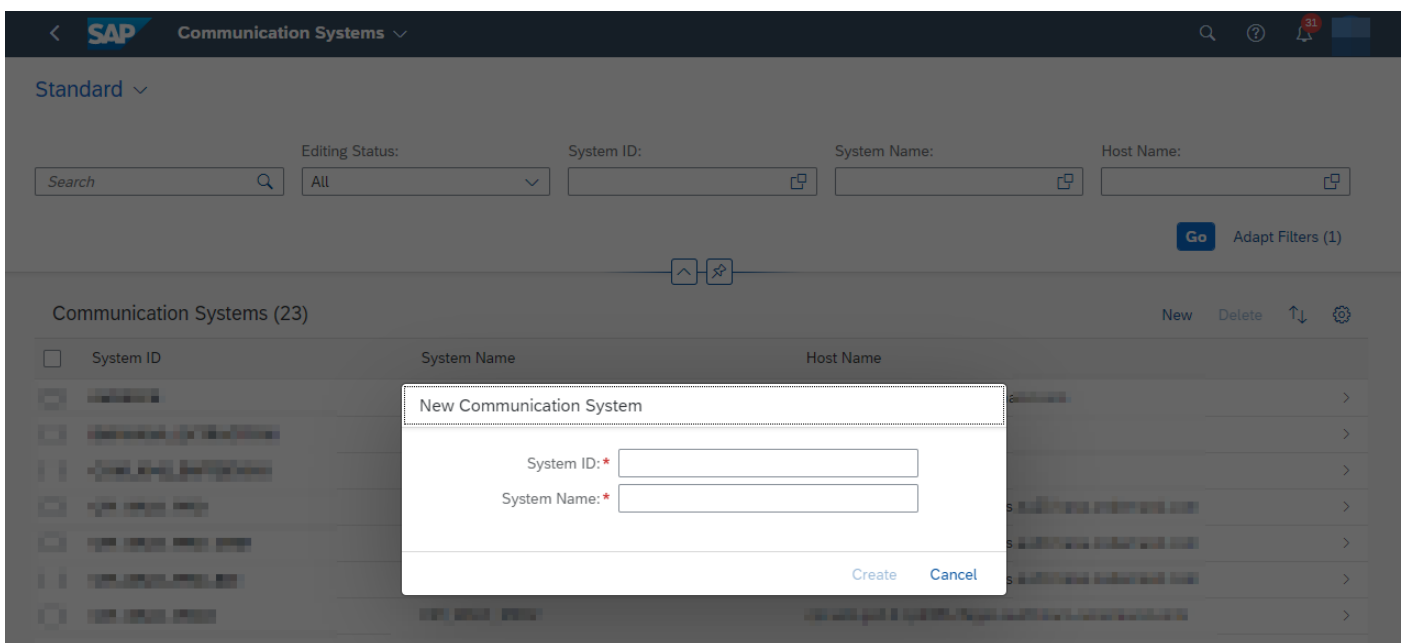
The communication system defined in the SAP S/4HANA Cloud system is used as the source or target system.

Procedure

1. Access the SAP S/4HANA Cloud 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 is connected with the SAP S/4HANA Cloud system.
5. Enter a descriptive name in the System Name field.
6. Choose Create.

<

SAP

Communication System

>

Q

?

31

DEMO

DEMO

Changed By:

Profile Name

Editing Status: Draft

Changed On:

2024-03-20, 09:42

General

Users for Inbound Communication

Users for Outbound Communication

Business Partners

Communication Arrangements

General Data

System ID:*

DEMO

System Name:*

DEMO

Notes:

Technical Data

General

Host Name:*

Logical System:

Port:

443

Is Hub System:

☐

Inbound Only:

☐

UI Host Name:

Business System:

Cloud Connector

OFF

RFC Settings

Client:

OAuth 2.0 Settings

Auth. Endpoint:

Token Endpoint:

Audience:

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:

E-Mail:

Phone Number:

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.

1.1.4. Communication Arrangement

The Communication Arrangements defined in SAP S/4HANA Cloud 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 Cloud system and log on as an Administrator and open the app Communication Arrangements.

Communication Management

Communication Arrangements

Communication Systems

Maintain Communication Users

Locked users

Maintain Extensions on SAP BTP

Display Connectivity Trace

Monitor bgRFC Queues

2. Choose New.

New Communication Arrangement

Scenario: *

SAP_COM_0008

Arrangement Name:

SAP_COM_0008

Create Cancel

3. Choose the scenario SAP_COM_0008 from the value help.
4. Enter an Arrangement Name.
5. Choose Create.

Editing Status: Active

Own SAP Cloud System:

API-URL: .s4hana.ondemand.com

Supported Authentication Methods

Authentication Method:

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

3.7 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.