PUBLIC

Catena-X Business Partner Data Management with SAP Master Data Governance (Beta)

Integration Package

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Introduction

This is the documentation for the Cloud Integration (CI) package “Catena-X Business Partner Data Management with SAP Master Data Governance (Beta)” (short: “(Catena-X) BPDM with MDG”).

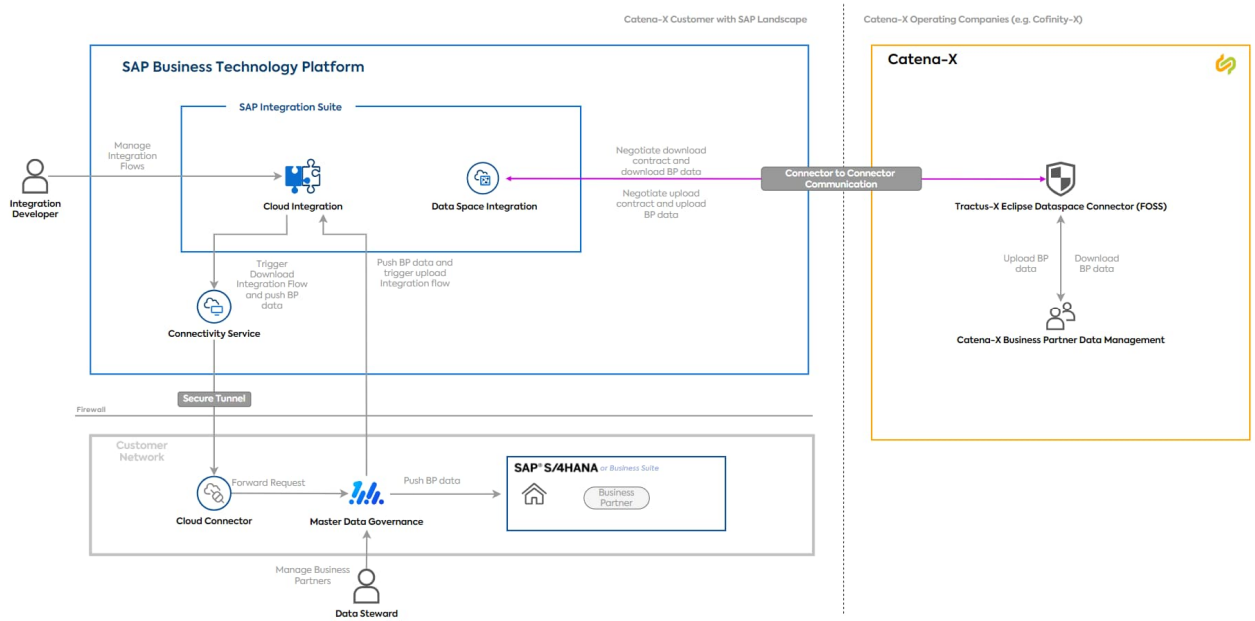
The integration package is used to upload business partner data from MDG to Catena-X BPDM and download business partner data from Catena-X BPDM to MDG. There are two main use case for this:

- share company’s own data while onboarding to Catena-X network and later if there are any changes
- curate and enrich customer and supplier data, even if these business partners are not members of the Catena-X network (consent required)

Both use cases aim to improve data quality for business partner data in the network and in the enterprise.

BPDM as a business case in Catena-X is explained here.

The integration package is available on SAP Business Accelerator Hub here.



This integration package establishes a bi-directional connection between MDG and the BPDM. It uses two capabilities of the SAP Integration Suite, which act as middleware component: Cloud Integration transforms and routes the business partner messages, Data Space Integration (Beta) establishes the secure, and self-sovereign data exchange by automatically negotiating upload and download contracts.

Note that (despite the high version number) the Catena-X BPDM APIs that this integration package uses are still in an experimental beta stage (see also Known Issues below). This is why this package is marked as beta, too.

Used APIs

S/4 HANA / MDG

The current integration package supports SAP Master Data Governance (MDG) only. It does not support SAP Master Data Governance, cloud edition or SAP Master Data Integration.

In the integration package, the following APIs are used (all versions since SAP S/4HANA release 2020 FPS02 are supported):

- for the business partner upload from MDG to BPDM:
  - Business Partner - Replicate from SAP S/4HANA to Client - BusinessPartnerSUITEBulkReplicateRequest_Out
  - Business Partner - Receive Confirmation from Client to SAP S/4HANA - BusinessPartnerSUITEBulkReplicateConfirmation_In
- for the business partner download from BPDM to MDG:
  - Business Partner - Replicate from Client to SAP S/4HANA - BusinessPartnerSUITEBulkReplicateRequest_In
  - Business Partner - Send Confirmation from SAP S/4HANA to Client - BusinessPartnerSUITEBulkReplicateConfirmation_Out
- for the business partner relationship upload from MDG to BPDM[1]:
  - Business Partner Relationship - Replicate from SAP S/4HANA to Client - BusinessPartnerRelationshipSUITEBulkReplicateRequest_Out
  - Business Partner Relationship - Receive Confirmation from Client to SAP S/4HANA - BusinessPartnerRelationshipSUITEBulkReplicateConfirmation_In
- for the business partner relationship download from BPDM to MDG[2]:
  - Business Partner Relationship - Replicate from Client to SAP S/4HANA - BusinessPartnerRelationshipSUITEBulkReplicateRequest_In
  - Business Partner Relationship - Send Confirmation from SAP S/4HANA to Client - BusinessPartnerRelationshipSUITEBulkReplicateConfirmation_Out

[1] Note that upload of business partner relationship data is still not supported by BPDM.
[2] Note that download of business partner relationship data is still not supported by BPDM.

Data Space Integration (Beta) / Eclipse Dataspace Connector (EDC)

Data Space Integration (Beta) is planned as a new capability of SAP Integration Suite and enables convenient, secure, and self-sovereign data exchange in data spaces, such as Catena-X.

The current integration package supports Data Space Integration (Beta) version 0.12.x based on EDC version 0.7.2 on the consumer side (based on Catena-X Release 24.08). The following resources can be used to get information about the Data Space Integration (Beta) API:

- CX-0018 Dataspace Connectivity 3.1.0
- Data Space Integration (Beta) API 0.12.x

Note that communication with other EDCs or other versions (0.7.3 and higher) on the provider side might be supported if they adhere to the Dataspace Protocol version 0.8[3]. The following resources can be used to get information about the Dataspace Protocol:

- Dataspace Protocol 0.8

BPDM

The current integration package supports Catena-X BPDM version 24.08. The following resources can be used to get information about the Business Partner Gate API (short: BPDM Gate), all referring to the same Catena-X version:

- CX-0074 Business Partner Gate API Standard 3.0.0
- BPDM Gate OpenAPI Document 6.0.0
- BPDM Gate Postman Collection 6.0.0
- BPDM Gate KIT documentation 24.08

Known Issues

These are the currently known issues:

- naming of sender and receiver adapters not always corresponds to what the sender / receiver adapter does
- naming of attributes is not always correct

These known issues will only be fixed, once the components and APIs this integration package depends on support them:

- legal form codes not supported (standardized code list missing)
- only reduced scope of business partner identification types and tax number types supported (standardized code list missing)
- internationalized address versions are not supported
- address validities are not supported

[3] There is, however, a known incompatibility between EDC 0.7.2 and 0.7.3, where the short-lived token of the EDR cannot be refreshed if the provider side runs 0.7.3. There are also other provider side issues with the EDC 0.7.3, which may result in EDRs not being transferred at all. So, it's recommended to stay on 0.7.2 on provider side and fix the issues and incompatibilities as soon as possible.

- multiple addresses are not supported
- business partner relationships are not supported

Restrictions

As this is a beta version of this integration package, it is not intended to use this for productive business partner data.

Prerequisites

The following SAP products and components are prerequisite for the integration package:

- SAP S/4 HANA
- SAP Master Data Governance
- SAP Cloud Connector
- SAP Integration Suite, with capabilities:
  - Cloud Integration
  - Data Space Integration (Beta)

Overview

Integration Use Cases

Two integration use cases need to be considered:

- Initial Sharing of Business Partners
- Continuous Sharing of Business Partners

Initial Sharing

While a Sharing Member joins Catena-X, a BPNL is generated for its legal entity. To make known to Catena-X additional information of the legal entity, all sites and addresses of the Sharing Member's company as well as legal entities, sites and addresses of its suppliers and customers, all business partners initially need to be shared. For this, the Sharing Member must subscribe to the BPDM Golden Record service and then a dedicated BPDM Gate is deployed for the Sharing Member.

Sharing Waves Approach

The initial sharing of business partners should take place in waves. There are different criteria for forming the waves, which shall be explained in the following and which require the integration package to be configured accordingly.

Own vs. Foreign Company Data

Business partners can be distinguished into own company data and foreign company data (suppliers and customers). It is recommended to first make known to Catena-X all own company data business partners and then go on with supplier and customer business partners.

While uploading business partners, own vs. foreign company data can be distinguished by setting the “isOwnCompanyData” parameter (see Additional Parameters in the "Upload Business Partner from SAP Master Data Governance to Catena-X" integration flow). Which business partners belong to the own company data in MDG can be determined by applying a DRF filter on the Business Partner ID while uploading business partners using transaction DRFOUT.

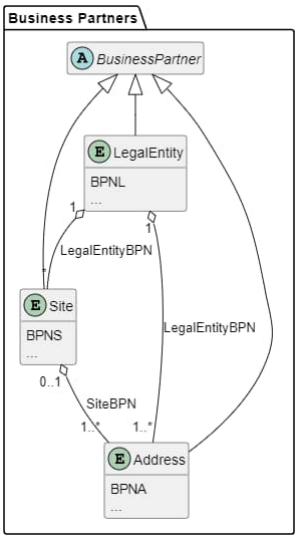
In the download to MDG this distinction is currently not made.

Legal Entity, Sites and Additional Addresses

Business partners can be distinguished into legal entities, sites, and additional addresses. Note that only the Sharing Member can correctly make a relation between legal entity, sites, and additional addresses for its own company data. Note that currently only one legal entity for own company data is supported by BPDM.

There are three additional requirements stemming from the data model of the BPDM Pool:

- legal entity and site must not be created without a proper postal address
- sites and additional addresses must not be created without a reference to a legal entity
- sites can only be created by the Sharing Member owning the site business partner



This means that for creating a legal entity or a site, a postal address must be shared in the same sharing step. From this postal address an address (with BPNA) is created additionally to the legal entity or site. Also, by creating a site or additional address a legal entity must be referenced by its BPNL. For own company data this BPNL is taken from the deployment parameters of the dedicated BPDM Gate instance, to which the Sharing Member uploads its data. For foreign company data the correct legal entity must be determined by the Core Service Provider / Operating Company of BPDM, if not already shared to BPDM by another Sharing Member.

While uploading business partners, legal entity, sites, and additional addresses can be distinguished by the “addressType” parameter (see Additional Parameters in the "Upload Business Partner from SAP Master Data Governance to Catena-X" integration flow). Which business partners represent the legal entity, the sites, and additional addresses of the own company data in MDG can be determined by applying a DRF filter on the Business Partner ID while uploading business partners using transaction DRFOUT.

In the downloaded MDG business partners the distinction is made as follows:

- business partners, representing a legal entity (with its legal address) have BPNL and BPNA assigned; if they additionally represent the main address of a site, they have a BPNS assigned
- business partners, representing only the main address of a site or an additional address to a site have only the BPNS and BPNA assigned
- business partners, representing only an additional address, where a site is not known, have only the BPNA assigned

In further versions of this integration package and if BPDM supports this, the business partner relationship in MDG could be used to store such relational information.

Further Break Down of Foreign Company Data

Note that the amount of own company data business partners is usually in the range of 100-1,000, while foreign company data is in the range of 100,000 to 10,000,000 business partner data records at each Sharing Member, which is why it makes sense to further break down the foreign company data in specific waves. It is recommended to use certain grouping attributes, like business partner role, sales and purchasing organization etc. to make the initial sharing of foreign business partner data feasible. Which business partners

belong to which business partner role, sales or purchasing organization in MDG can be determined by applying the respective DRF filter while uploading business partners using transaction DRFOUT.

It is also recommended to additionally break down business partners in technical batches of 100 business partners no matter if they belong to own or foreign company data. This can be achieved by configuring the respective PACK_SIZE_BULK (see Replication Model and Business System) parameter in the DRF configuration.

Note that sales or purchasing organization of each business partner is not uploaded to BPDM, while the business partner role can be uploaded.

Proposal for Configuring the Waves

We propose the following waves and corresponding configuration:

Wave 0: Own Legal Entity

> Precondition: Successful registration at the Catena-X Portal and subscription of Golden Record service / deployment of BPDM Gate.
>
> Result of the Upload / Download: Additional information to the own legal entity is known to BPDM. BPNL and BPNA for own legal entity set at the corresponding business partner in MDG. If legal address is also a site main address, BPNS for own legal entity is set at the corresponding business partner in MDG, too.
>
> Parameters: isOwnCompanyData = true; addressType = LegalAddress (or LegalAndSiteMainAddress)
>
> DRF Filter: Business Partner ID

Wave 1: Own Sites

> Precondition: none
>
> Result of the Upload / Download: Own sites are known to BPDM. BPNS and BPNA for all own sites set at the corresponding business partner in MDG.
>
> Parameters: isOwnCompanyData = true; addressType = SiteMainAddress
>
> DRF Filter: Business Partner ID

Wave 2: Own Additional Addresses

> Precondition: BPNS is set manually at the business partners in MDG, representing the additional addresses of each own site.
>
> Result of the Upload / Download: Own additional addresses are known to BPDM. BPNA for all own additional addresses set at the corresponding business partner in MDG.
>
> Parameters: isOwnCompanyData = true; addressType = AdditionalAddress
>
> DRF Filter: Business Partner ID

Wave 3-5: Suppliers of Purchasing Organizations in DACH Countries, Rest of Europe, Rest of World

Precondition: none

Result of the Upload / Download: Suppliers in DACH countries (3), rest of Europe (4), rest of world (5) known in BPDM. BPNL, BPNS and BPNA for these suppliers set at the corresponding business partners in MDG. Business partners corrected and enriched by information from the Catena-X network.

Parameters: isOwnCompanyData = false; addressType = {empty}

DRF Filter: Business Partner Role and Purchasing Organization

Wave 6-8: Customers of Sales Organizations in Rest of Europe

Precondition: none

Result of the Upload / Download: Customers in DACH countries (6), rest of Europe (7), rest of world (8) known in BPDM. BPNL, BPNS and BPNA for these suppliers set at the corresponding business partners in MDG. Business partners corrected and enriched by information from the Catena-X network.

Parameters: isOwnCompanyData = false; addressType = {empty}

DRF Filter: Business Partner Role and Sales Organization

Reduced vs. Full Download Scope

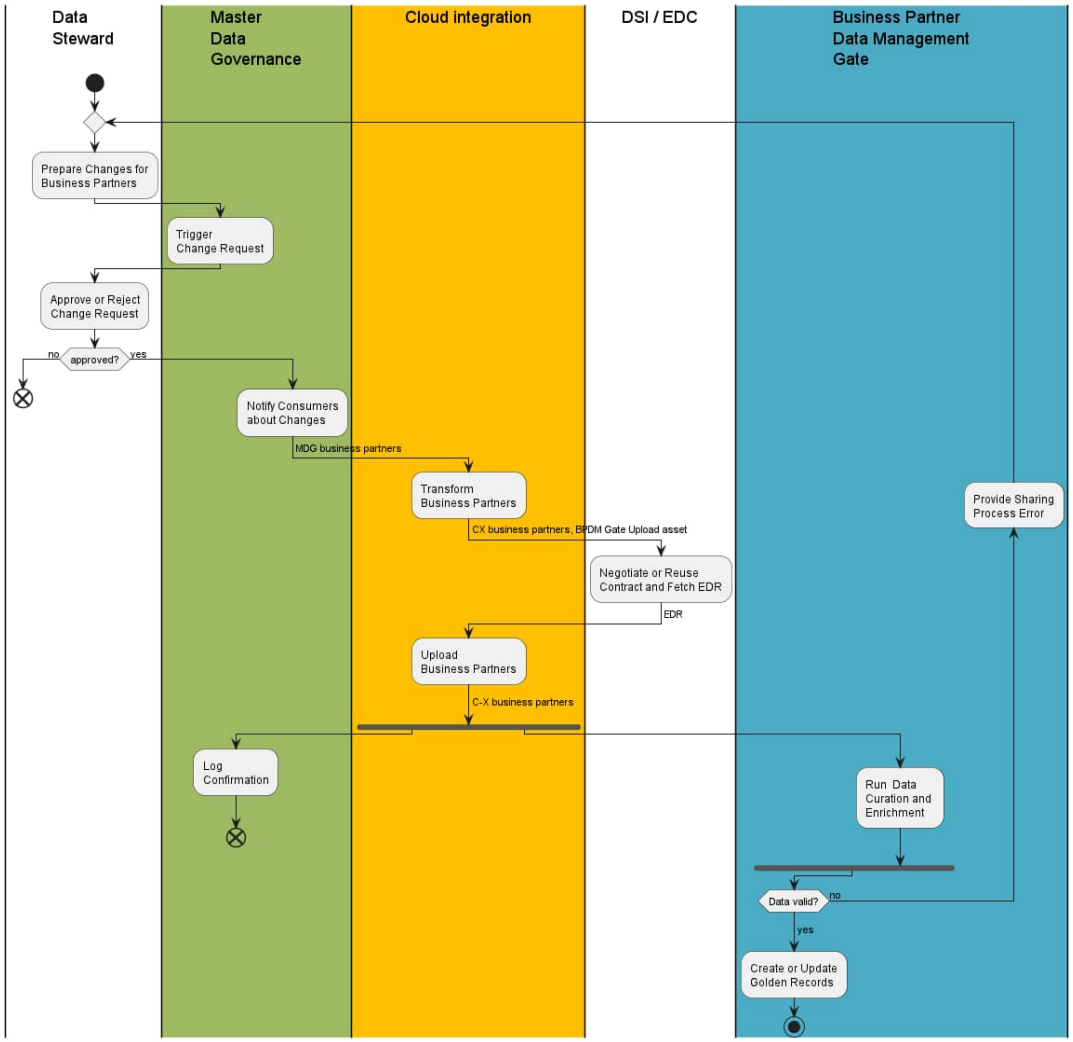
It might be required to reduce the download scope to only downloading BPNL, BPNS and BPNA. This can be achieved by implementing a customer specific BAdI.

Continuous Sharing

If the initial sharing has been done, business partners can be updated via the established MDG change request processes.

Upload Process in Integration Package

The following figure shows the upload from MDG to BPDM Gate from an activity perspective.



The upload activity starts with the data steward of a Sharing Member preparing changes for one or several business partners and making the changes in MDG UI. A change request is triggered by the data steward in MDG, which must be approved in most cases by at least one other data steward (4-eyes principle). If the change request is not approved, the activity ends. If the change request is approved, MDG / DRF notifies all consumers about these changes, sending the MDG business partners as payload. This includes Cloud Integration (CI), where this integration package is deployed.

In CI the MDG business partners are transformed to Catena-X business partners. Next, the upload contract is negotiated, or an existing contract is reused via DSI (Beta) based on the EDC upload asset, which can be fetched from the EDC catalog using the following parameters:

- Type = BPDM Gate
- Subject = FullAccessGateInputForSharingMember
- Version = 6.0

Once the End Point Data Reference (EDR) is fetched by DSI (Beta), the transformed business partners are uploaded. If the upload succeeds a positive confirmation is sent back to MDG. If it fails an error message is

sent back to MDG. Note that a positive confirmation only means that BPDM received the business partners successfully in the BPDM Gate input persistence.

Lastly, data curation and enrichment are executed in BPDM on these business partners. Note that this so-called sharing process must be triggered separately, if the BPDM Gate is configured like that. During this process several validity checks are executed. Triggering the sharing process and displaying any errors is done by means, which are out of scope of this integration package. Most probably this activity is implemented via a separate Catena-X UI. Sharing errors must be corrected by the data steward in MDG, triggering a new change request and starting the upload all over. If all checks succeed, new Golden Records are created and/or existing Golden Records are updated in the BPDM Pool based on the business partner data of the other Sharing Members and external sources. These Golden Records are then transformed and send back to the BPDM Gate output persistence, from where they can be downloaded (see Download).

Upload Integration Flows

The following integration flows are used in the upload from MDG to BPDM Gate:

- Upload Business Partner from SAP Master Data Governance to Catena-X
- Upload Business Partner Relationship from SAP Master Data Governance to Catena-X[4]
- Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider
- Send Confirmation Message to SAP Master Data Governance

Upload Message Mapping

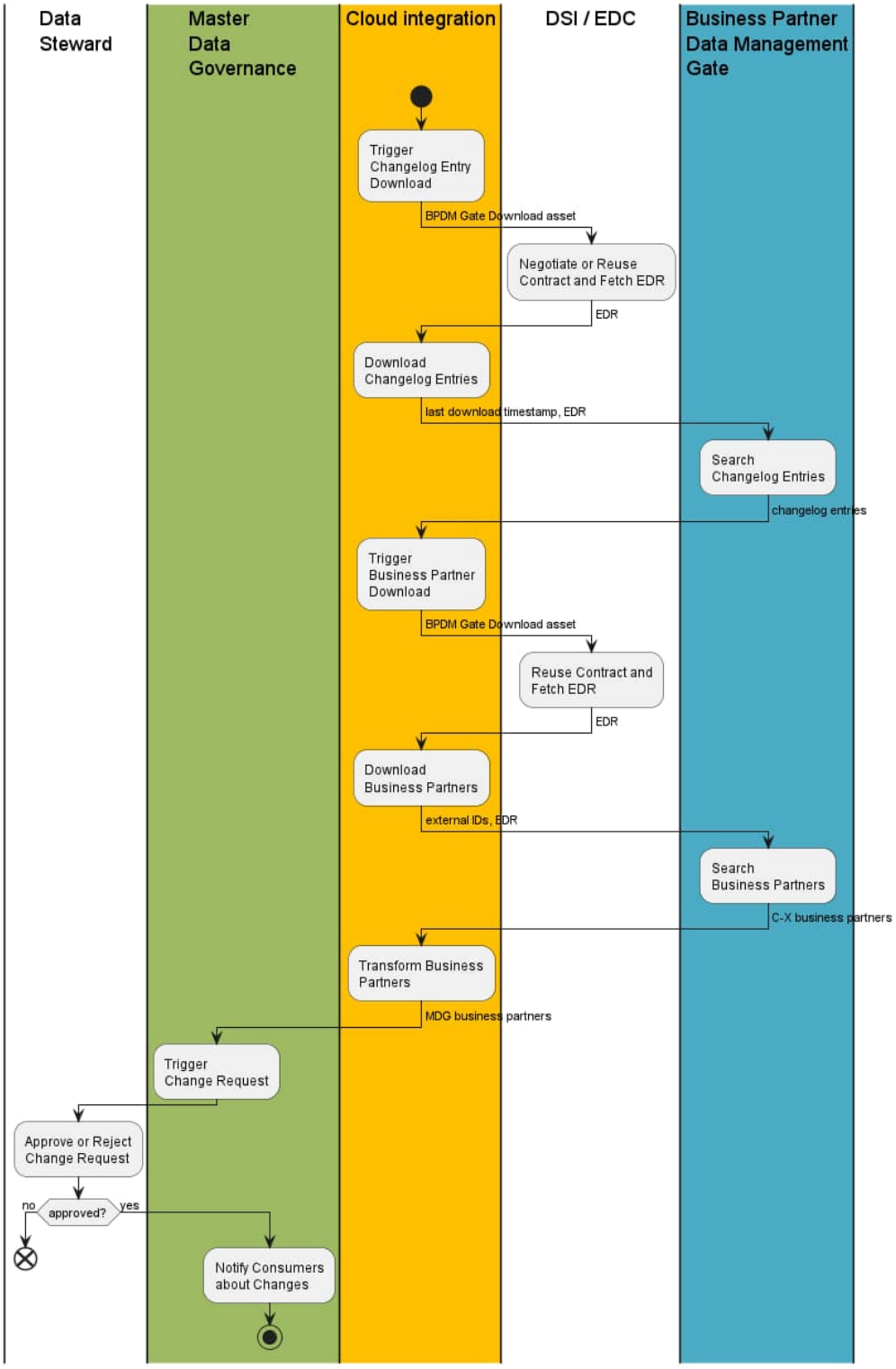
The upload message mapping is available here:

- SAP Master Data Governance Business Partner to Catena-X Gate Business Partner

[4] Note that upload of business partner relationship is currently not supported by BPDM. However, this integration flow is implemented, so that consumer proxies in SOA manager can be created and logical ports will execute a web service ping successfully.

Download Process in Integration Package

The following figure shows the download from BPDM Gate to MDG from an activity perspective.



The download activity starts with Cloud Integration triggering the download of changelog entries from the output persistence of the BPDM Gate periodically. For this, a download contract is negotiated, or an existing

contract is reused via DSI (Beta) based on the EDC download asset upload asset, which can be fetched from the EDC catalog using the following parameters:

- Type = BPDM Gate
- Subject = ReadAccessGateOutputForSharingMember
- Version = 6.0

Once the End Point Data Reference (EDR) is fetched by DSI (Beta), the changelog entries can be downloaded. Changelog entries are searched and returned to CI by the BPDM Gate based on the last (successful) download timestamp.

Next, CI triggers the download of business partners based on the changelog entries. For this, the existing download contract is reused via DSI (Beta) based on the EDC download asset from the previous negotiation step. Once the End Point Data Reference (EDR) is fetched by DSI (Beta), the business partners can be downloaded. The business partners are searched and returned to CI by the BPDM Gate based on external IDs found in the changelog entries.

Lastly, Catena-X business partners are transformed to MDG business partners and send to MDG, where a change request is triggered. If the change request is not approved by the data steward, the activity ends. If the change request is approved, MDG / DRF notifies all consumers about these changes, sending the MDG business partners as payload. This also includes the CI, where this integration package is deployed. To prevent a circular repetition of upload / download activities, the BPDM Gate input persistence checks for changes in business partners.

Download Integration Flows

The following integration flows are used in the download from BPDM Gate to MDG:

- Download Business Partner from Catena-X to SAP Master Data Governance[5]
- Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider
- Handle Confirmation for Business Partner Download from Catena-X to SAP Master Data Governance
- Handle Confirmation for Business Partner Relationship Download from Catena-X to SAP Master Data Governance[6]

Download Message Mapping

The download message mapping is available here:

- Catena-X Gate Business Partner to SAP Master Data Governance Business Partner

Value Mapping in Integration Package

The value mapping for both upload and download is available here:

[5] Note that download of business partner relationship data is still not supported by BPDM.
[6] Note that download of business partner relationship data is still not supported by BPDM. However, this integration flow is implemented, so that consumer proxies in SOA manager can be created and logical ports will execute a web service ping successfully.

- Value Mapping Business Partner Value Lists

Script Collection in Integration Package

A script collection for upload and download is available here:

- Script Collection for Business Partner Data Management

Configuration Steps

The following steps describe how to set up the integration between MDG and BPDM Gate.

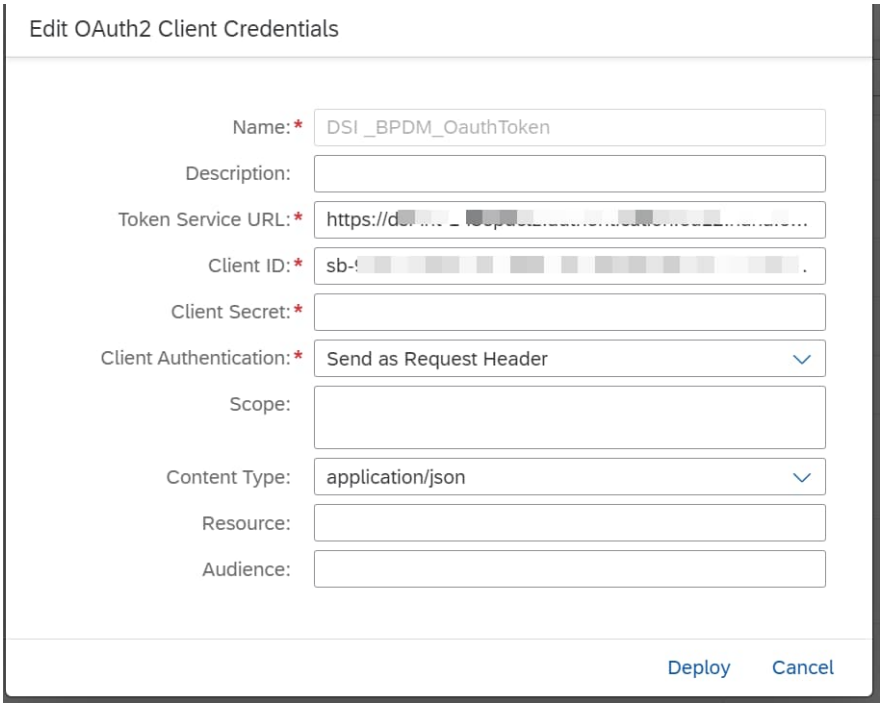
1. Configure Data Space Integration (Beta)
2. Configure Cloud Integration
3. Configure the Connection between MDG and CI
4. Configure the Integration Package

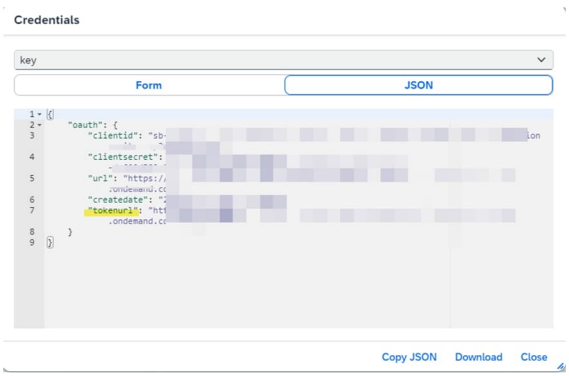
Data Space Integration (Beta)

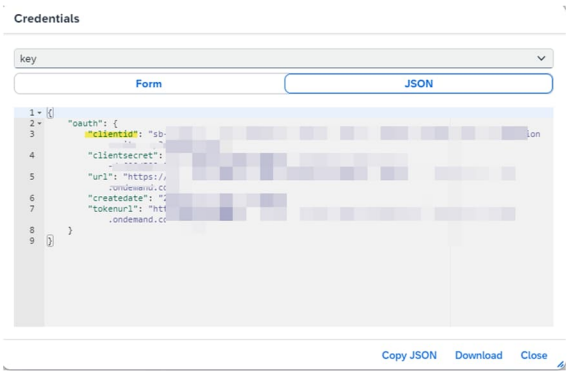
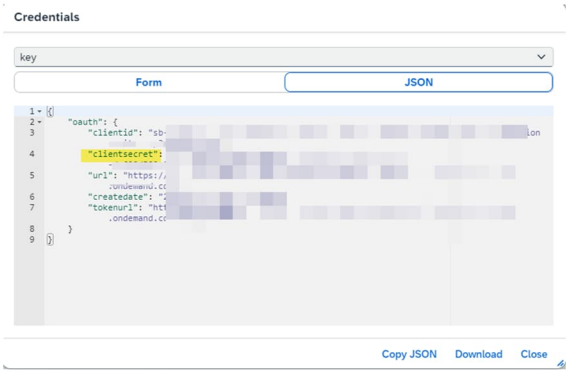
Information about the initial setup of Data Space Integration (Beta) can be found here. This documentation is available for beta customers only.

Accessing DSI (Beta) from CI

- In SAP BTP Cockpit, create a dedicated service key in the corresponding subaccount (see Using APIs To Work With Data Space Integration (Beta) | SAP Help Portal and Creating Service Instance and Service Key for Inbound Authentication | SAP Help Portal) of type “OAuth2 ClientId/Secret” for a new or existing service instance “Data Space Integration API access (Beta)”, the plan “api” and at least role “AuthGroup_DataspaceConsumer”; to create service instance and keys you need the following prerequisites:
  - Subaccount admin role
  - Cloud Foundry organization member
  - Assignment to Cloud Foundry space
- In SAP Integration Suite under “Security Material”, create a new security material for CI (see Managing Security Material | SAP Help Portal) of type “OAuth2 Client Credentials” an arbitrary name



Parameter name	Parameter value
Name	E.g. DSI_BPDM_OauthToken
Token Service URL	 Paste here value from parameter “tokenurl” from the service key configured in the step above

Client ID	 Paste here value from parameter “clientid” from the service key configured in the step above
Client Secret	 Paste here value from parameter “clientsecret” from the service key configured in the step above
Client Authentication	Send as Request Header
Content Type	application/json

Cloud Integration

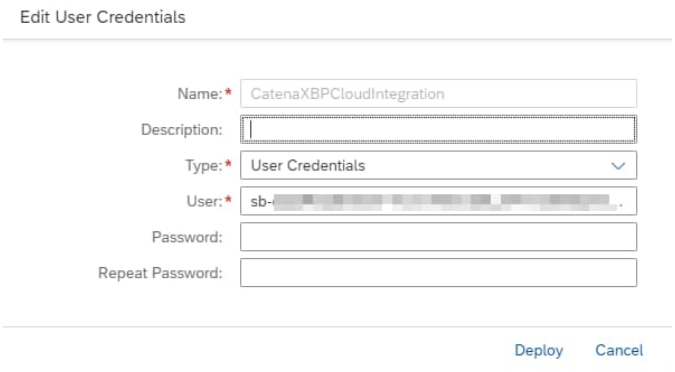
Information about the initial setup of Cloud Integration can be found here.

Communication between Integration Flows on CI

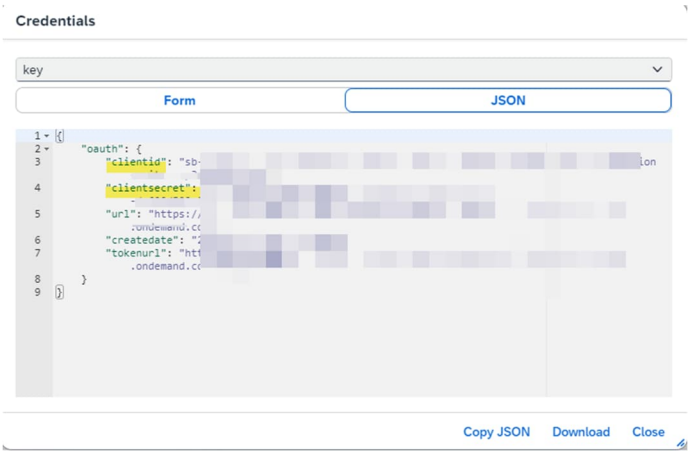
- In SAP BTP Cockpit, create a dedicated service key in the corresponding subaccount (see Creating Service Instance and Service Key for Inbound Authentication | SAP Help Portal) of type “ClientId/Secret” for a new or existing service instance “Process Integration Runtime”, the plan “integration-flow” and at least role “ESBMessaging.send”; to create service keys you need the following prerequisites:
  - Subaccount admin role
  - Cloud Foundry organization member
  - Assignment to Cloud Foundry space

Creating Security Material “User Credentials”

- In SAP Integration Suite under “Security Material”, create a new security material for CI (see Managing Security Material | SAP Help Portal) of type “User Credentials” using an arbitrary name

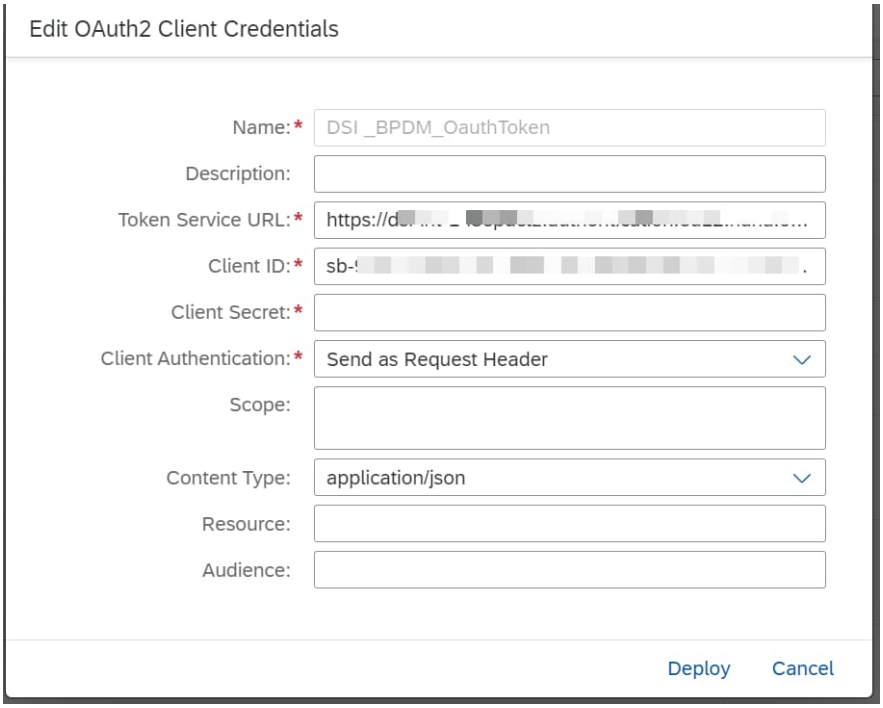


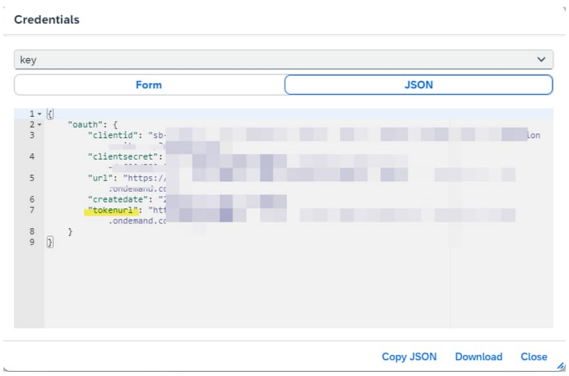
- As user and password use values from parameters “clientid”, “clientsecret” from the service key created in the configuration step above.

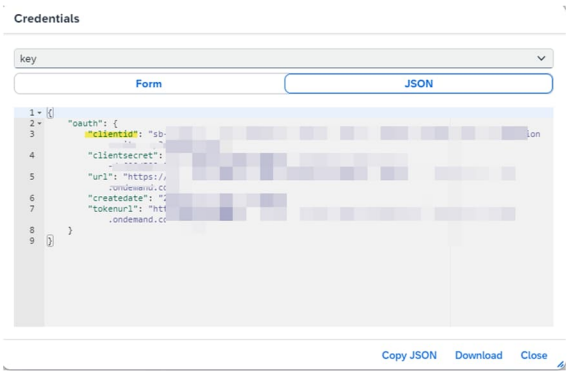
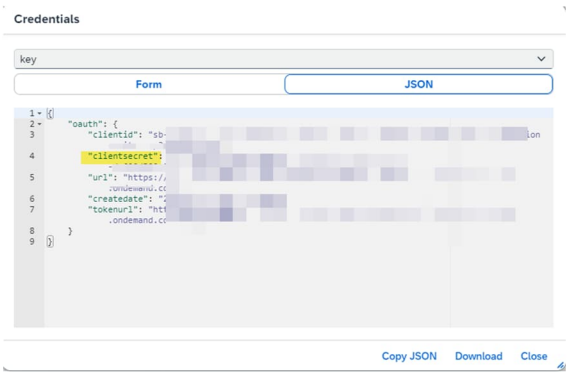


Creating Security Material “OAuth2 Client Credentials”

- In SAP Integration Suite under “Security Material”, create a new security material for CI (see Managing Security Material | SAP Help Portal) of type “OAuth2 Client Credentials” an arbitrary name

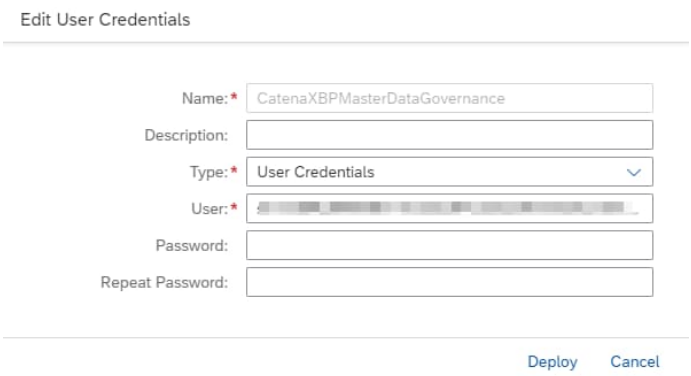


Parameter name	Parameter value
Name	E.g. CI_BPDM_OauthToken
Token Service URL	 Paste here value from parameter “tokenurl” from the service key configured in the step above

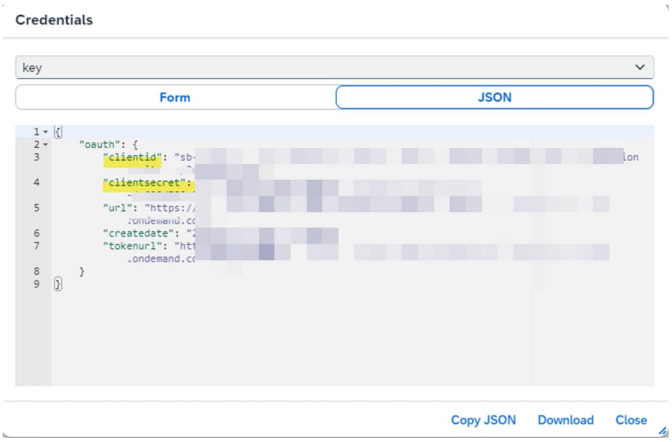
Client ID	 Paste here value from parameter “clientid” from the service key configured in the step above
Client Secret	 Paste here value from parameter “clientsecret” from the service key configured in the step above
Client Authentication	Send as Request Header
Content Type	application/json

Accessing CI from MDG

- In SAP BTP Cockpit, create a service key in the corresponding subaccount (see Creating Service Instance and Service Key for Inbound Authentication | SAP Help Portal) of type OAuth2 ClientId/Secret for a new or existing service instance “Process Integration Runtime”, the plan “integration-flow” and at least role “ESBMessaging.send”; to create service keys you need the following prerequisites:
  - Subaccount admin role
  - Cloud Foundry organization member
  - Assignment to Cloud Foundry space
- In SAP Integration Suite under “Security Material”, create a new security material for CI (see Managing Security Material | SAP Help Portal) of type “User Credentials” using an arbitrary name

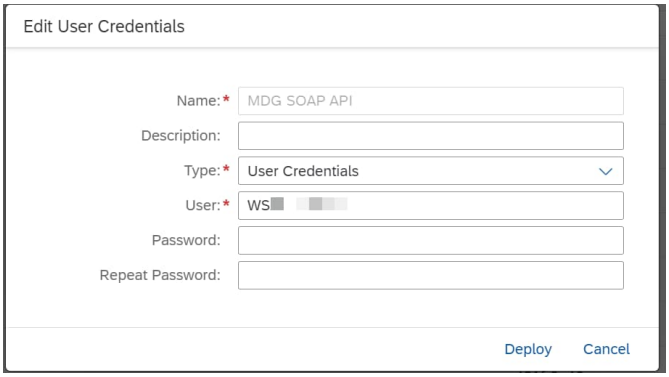


- As user and password use values from parameters “clientid”, “clientsecret” from the service key created in the configuration step above.



Accessing MDG from CI

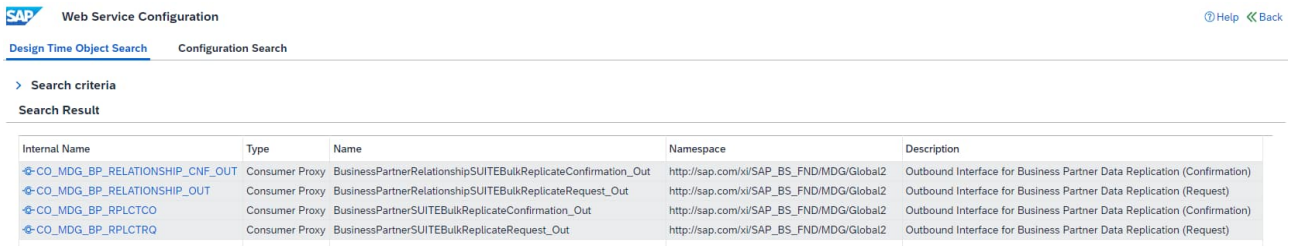
- Create a new security material in CI (see Managing Security Material | SAP Help Portal) of type “User Credentials” using a service user (SOAP API) for MDG / S/4 (see also Configuring the SOA Manager for MDG (NW 7.53 or higher) | SAP Help Portal for the required role and business functions)



Connection between MDG and CI

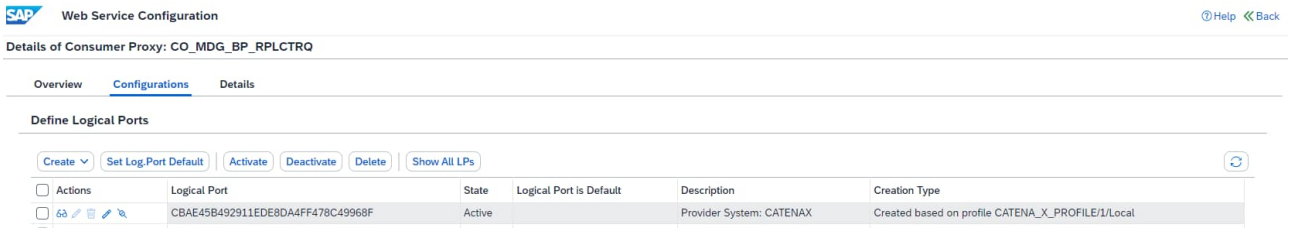
SOA Management for Outbound MDG APIs

For each of the outbound MDG API endpoints web service configurations of type consumer proxy need to be created using SOA Manager (transaction: SOAMANAGER)



- CO_MDG_BP_RPLCTRQ corresponds to MDG SOAP API Business Partner - Replicate from SAP S/4HANA to Client
- CO_MDG_BP_RPLCTCO corresponds to MDG SOAP API Business Partner - Send Confirmation from SAP S/4HANA to Client
- CO_MDG_BP_RELATIONSHIP_OUT corresponds to MDG SOAP API Business Partner Relationship - Replicate from SAP S/4HANA to Client
- CO_MDG_BP_RELATIONSHIP_CNF_OUT corresponds to MDG SOAP API Business Partner Relationship - Send Confirmation from SAP S/4HANA to Client

The web service configurations of type consumer proxy must be bound to new logical ports that connect the sender and receiver based on their identifiable business context reference (IBC reference).

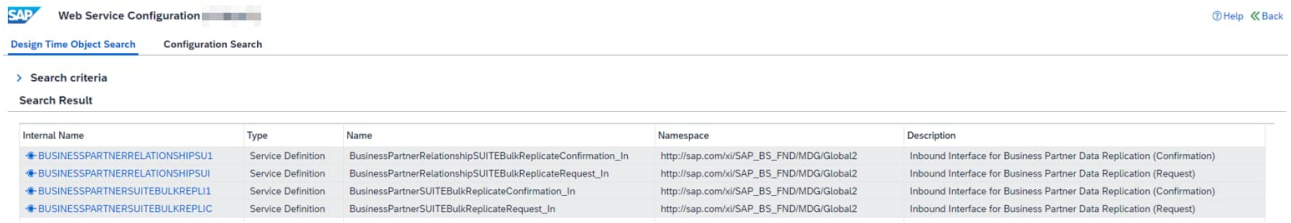


The logical ports need to be created automatically by creating service definitions and binding them to the web service configurations of type consumer proxy. Furthermore, a profile, a physical and a provider system, logon definitions (using the corresponding service key created before in Accessing CI from MDG) , and an integration scenario must be created. The service definitions can be automatically created by uploading the corresponding WSDLs with added binding information. You can go step by step using this guide written for a similar replication of business partners to Ariba SLP[7].

[7] See appendix for WSDL binding examples.

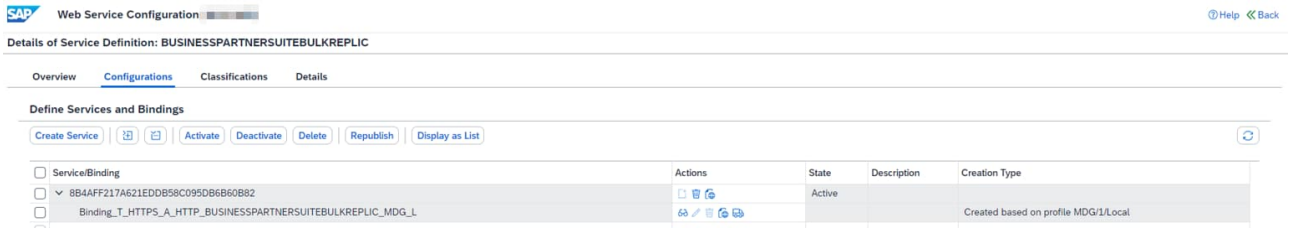
SOA Management for Inbound MDG APIs

For each of the inbound MDG API endpoints web service configurations of type service definition need to be created using SOA Manager (transaction: SOAMANAGER)



- BUSINESSPARTNERSUITEBULKREPLIC corresponds to MDG SOAP API Business Partner - Replicate from Client to SAP S/4HANA
- BUSINESSPARTNERSUITEBULKREPLI1 corresponds to MDG SOAP API Business Partner - Receive Confirmation from Client to SAP S/4HANA
- BUSINESSPARTNERRELATIONSHIPSUI corresponds to MDG SOAP API Business Partner Relationship - Replicate from Client to SAP S/4HANA
- BUSINESSPARTNERRELATIONSHIPSU1 corresponds to MDG SOAP API Business Partner Relationship - Receive Confirmation from Client to SAP S/4HANA

The web service configurations of type service definitions must be bound to new services.

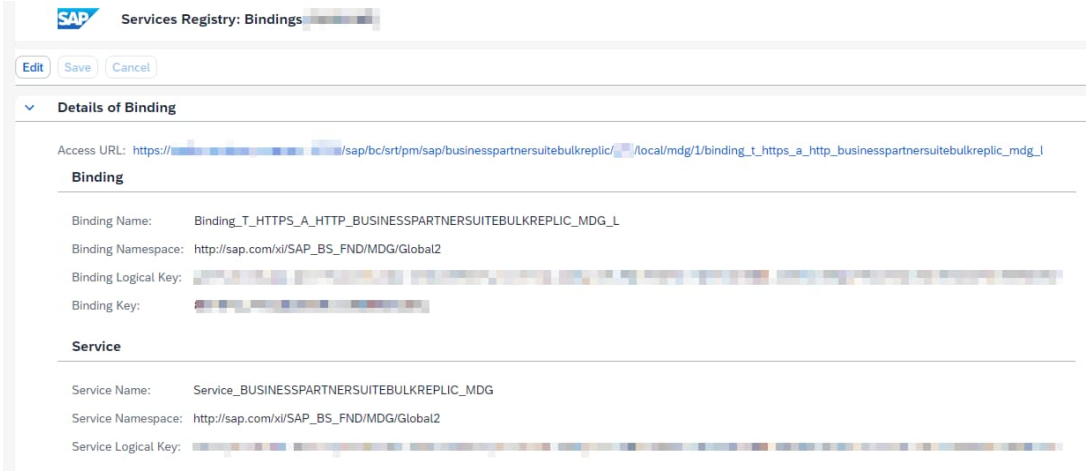


The services and web service configurations need to be created automatically by binding them to existing service definitions. You can reuse the profile and integration scenario from the configuration of the outbound MDG APIs.

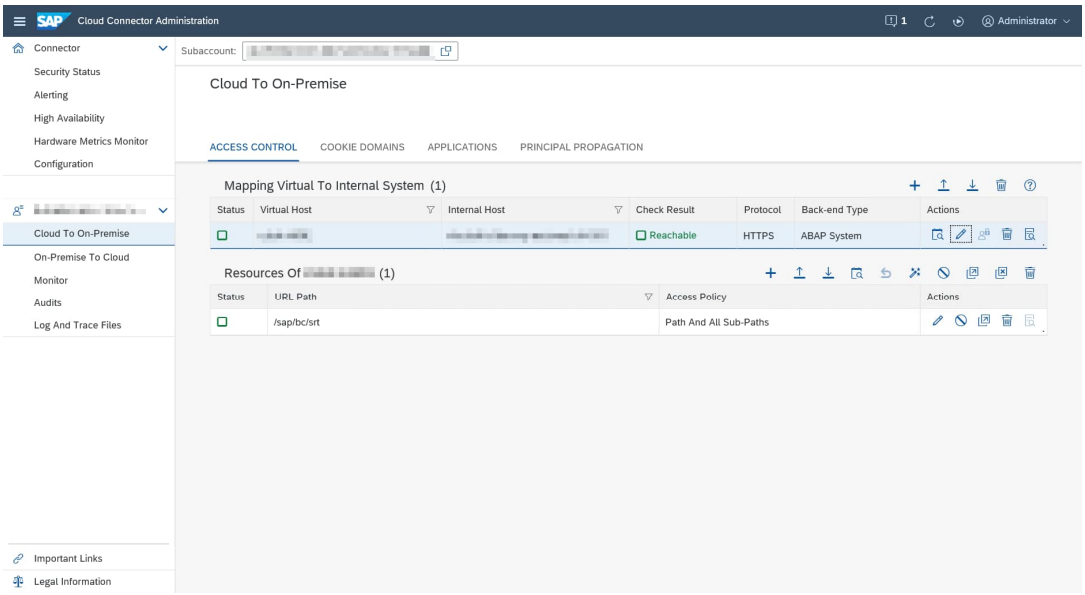
Cloud Connector for Inbound MDG APIs

For inbound MDG APIs, you must configure the Cloud Connector properly.

1. For each inbound MDG API lookup the access URL from the published bindings (transaction: SOAMANAGER->Service Registry->Published Bindings



2. Create a Cloud to On Premise mapping in Cloud Connector and allow the path(s) from the access URLs above



Note that the screen shot above shows a working configuration. Please make sure your configuration complies with the rules of your organization regarding accessing on premise systems from outside your organization, such as for port forwarding, allowed resources / paths etc.

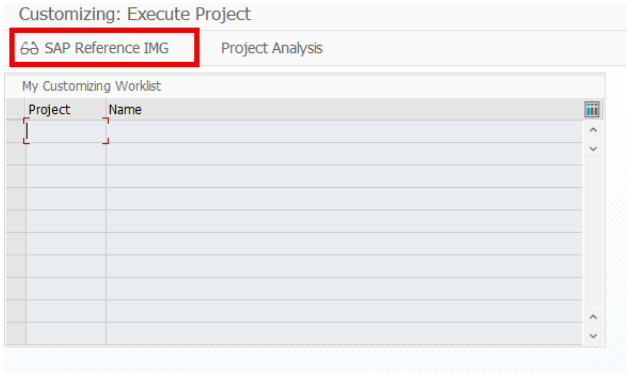
A detailed guide on how to configure the Cloud Connector and recommendations can be found here.

MDG Customizing

To use the Catena-X Business Partner Numbers (BPNA, BPNL, BPNS) we have to create the Identification Category and Identification Type in the SAP Customizing.

Define Identification Categories

1. Open Transaction SPRO for customizing
2. Click on SAP Reference IMG

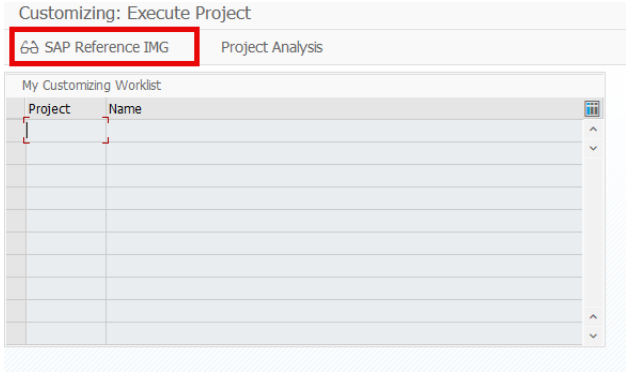


3. Open the following path: Cross-Application Components → SAP Business Partner → Business Partner → Basic Settings → Identification Numbers → Define Identification Categories (Caution: The table is cross-client)
4. Click on New Entries and add the following categories and Save
5.

ID CAT	DESCRIPTION
ZCBPNA	Catena-X BP Number for Addresses
ZCBPNL	Catena-X BP Number for Legal Entities
ZCBPNS	Catena-X BP Number for Sites

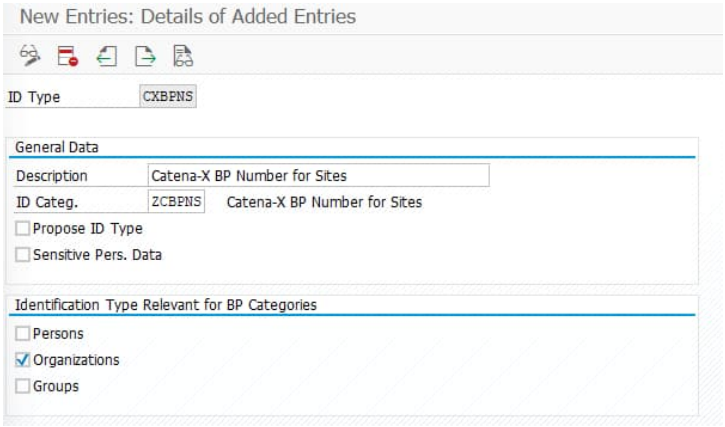
Define Identification Types

1. Open Transaction SPRO for customizing
2. Click on SAP Reference IMG



3. Open the following path: Cross-Application Components → SAP Business Partner → Business Partner → Basic Settings → Identification Numbers → Define Identification Types
4. Click on New Entries and add the following types and Save

ID TYPE	DESCRIPTION	CATEGORY	IDENTIFICATION TYPE RELEVANT FOR BP CATEGORIES
CXBPNA	Catena-X BP Number for Addresses	ZCBPNA	Organization
CXBPNL	Catena-X BP Number for Legal Entities	ZCBPNL	Organization
CXBPNS	Catena-X BP Number for Sites	ZCBPNS	Organization



DRF Configuration

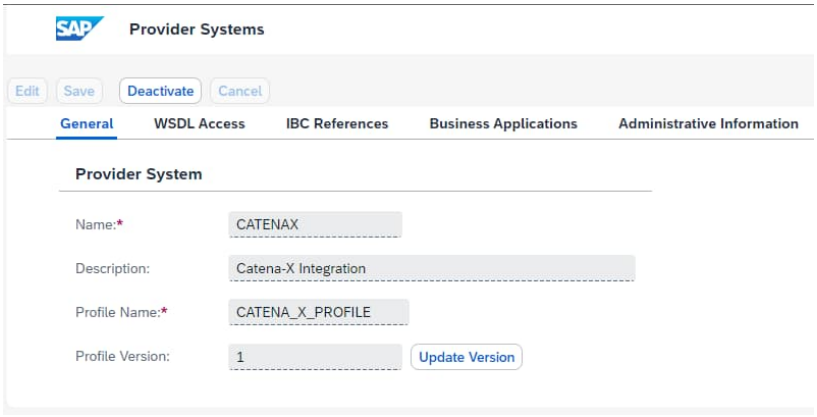
To connect MDG and CI we use the Data Replication Framework (DRF) which needs to be properly setup in the environment and configured.

Replication Model and Business System

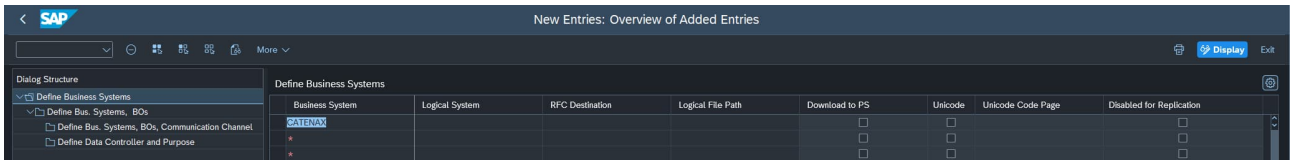
Messages are only forwarded correctly by the DRF web service engine if the SOA provider system name is

equal to the DRF replication model business system ID:

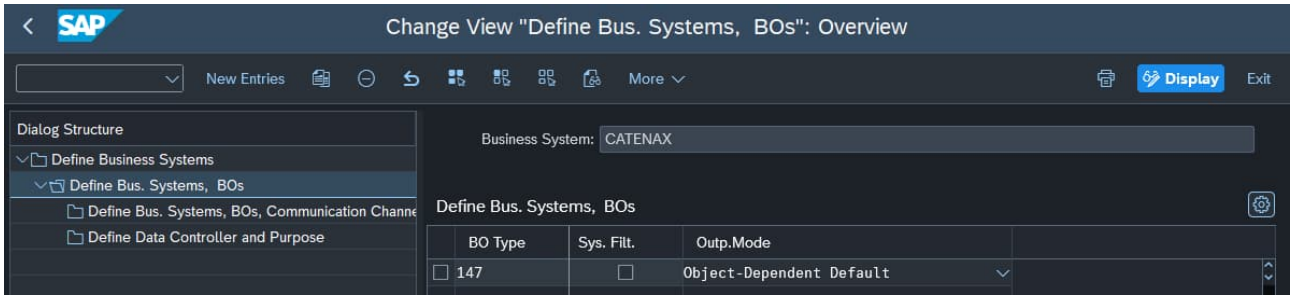
1. Lookup the name from the provider systems configuration (transaction: SOAMANAGER->Technical Administration->Provider Systems):



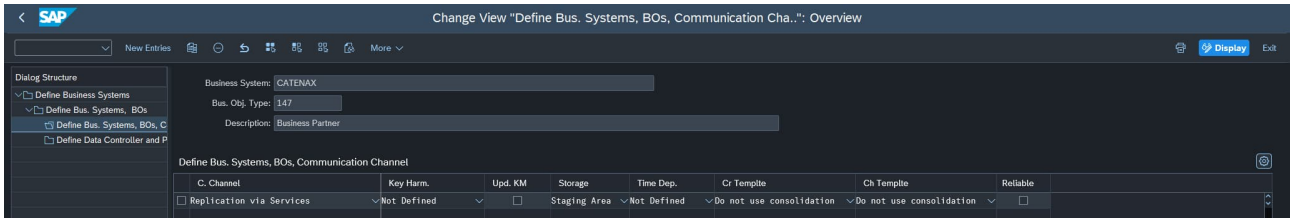
2. Add a new business system and insert the provider system as name (transaction: DRFIMG->Data Replication->Define Custom Settings for Data Replication->Define Technical Settings for Business Systems->New Entries):



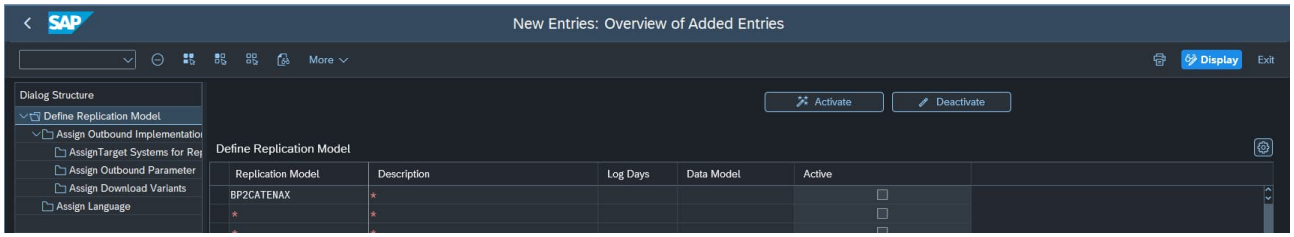
3. Add a new entry for the business object (147):



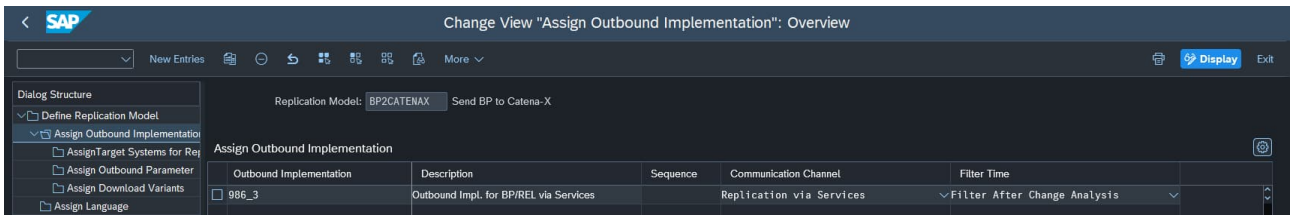
4. Add a new entry for the communication channel. The storage property must be set to “Staging Area”, so that inbound replicate requests trigger MDG change requests:



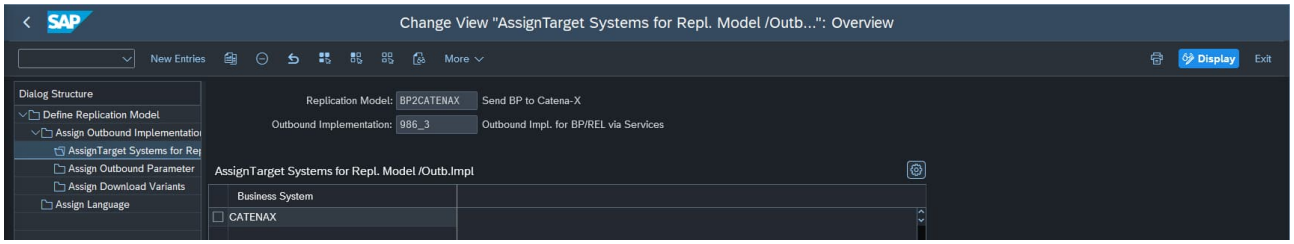
5. Add a new replication model (transaction: DRFIMG->Data Replication->Define Custom Settings for Data Replication->Define Replication Models->New Entries):



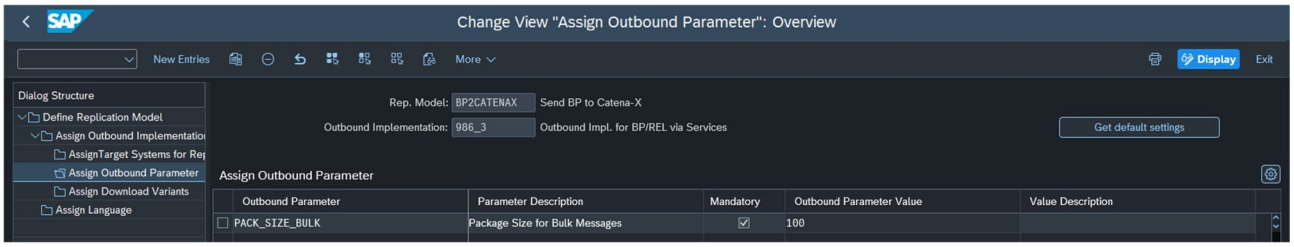
6. Add a new outbound implementation using (986_3):



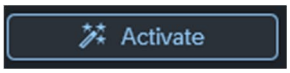
7. Assign the target system:



8. Assign outbound parameter PACK_SIZE_BULK; set it to mandatory and the value to e.g. 100:



9. Activate the replication model in setting the check box and clicking the button:



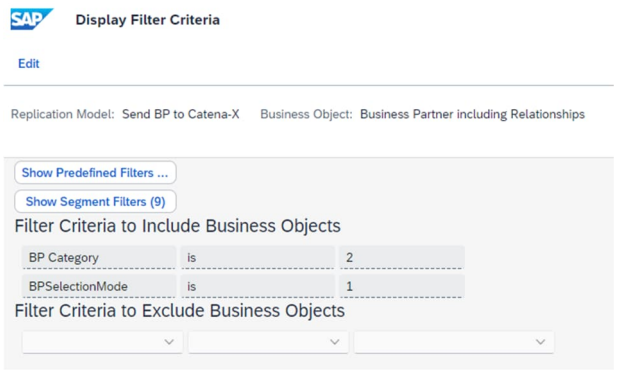
Object Filters

It is required to configure DRF object filters for the defined business partner replication model, so that only those data are uploaded (and downloaded), that shall be provided to BPDM and can be processed and understood by BPDM (transaction: DRFF).

Upload only those business partners, that you want to share with BPDM. Those business partners should have given you consent to upload their data to BPDM.

Note that BPDM only handles organizations and (currently) does not support business partner relationships:

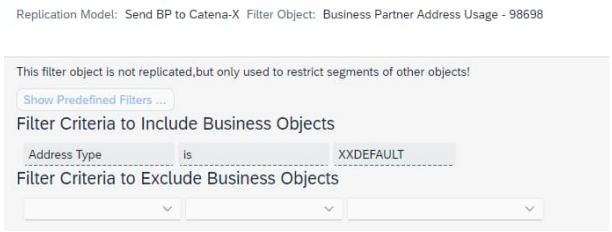
1. Set the business object filter to the include objects filter by the following criteria:
    a. BP Category: 2 – Organization.
    b. BP SelectionMode: 1 – Business partners only



Segment Filters

It is required to configure additional DRF segment filters for the defined business partner replication model, so that only those data are uploaded (and downloaded), that shall be provided to BPDM and can be processed and understood by BPDM (transaction: DRFF).

1. Set the filter for business partner address usage segment (Business Partner Address Usage - 98698) to address type “XXDEFAULT”[8]:

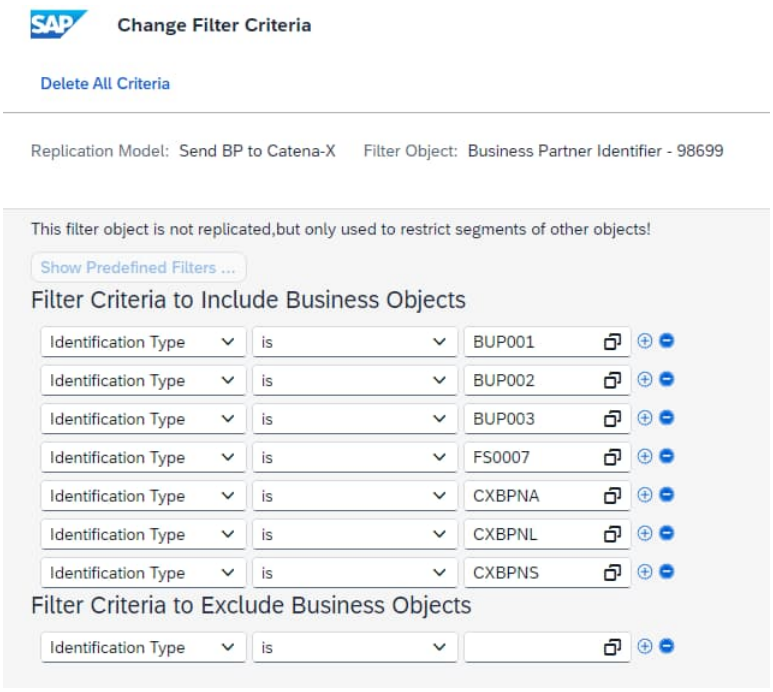


2. Set the filter for business partner identifier segment (Business Partner Identifier - 98699) to the identification types known to BPDM[9]:
    a. BUP001 – Dun & Bradstreet Number (DUNS)
    b. BUP002 – German Handelsregisternummer (HRB)

[8] Note that only the default address usage (XXDEFAULT) without validity is supported by BPDM.

[9] Refer to the Value Mapping Business Partner Value Lists artifact of the integration package for all identifier type codes (PartyIdentifierTypeCode) known to BPDM.

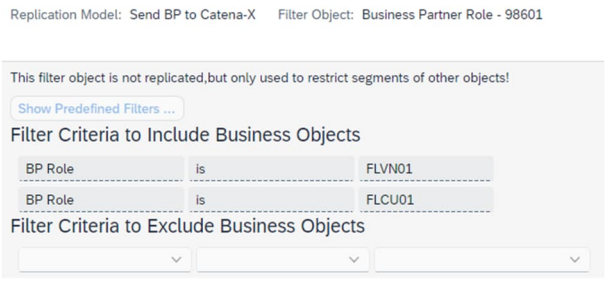
c. BUP003 – GS1 Global Location Number (GLN)
d. CXBPNA - Catena-X BP Number for Addresses
e. CXBPNL - Catena-X BP Number for Legal Entities
f. CXBPNS - Catena-X BP Number for Sites
g. Other identifiers that are known to Catena-X, but are not part of the SAP standard delivery, like FS0007 – Legal Entity Identifier (LEI) etc.



3. Set the filter for business partner tax number segment (BP Seg filter for TaxCategory - 98700) to the tax number categories (of the countries / jurisdictions) known to BPDM[10]:

[10] Refer to the Value Mapping Business Partner Value Lists artifact of the integration package for all tax category type codes (LONG_TaxidentificationNumberTypeCode) known to BPDM.

4. Set the filter for business partner roles segment (Business Partner Role - 98601) to roles known to BPDM[11]:
    a. FLVN01 - Supplier
    b. FLCU01 - Customer



The following other segments are known to BPDM but do not need a special DRF filter:

- Common segment[12]
  - Organization segment
- Address Information segment[13]
  - Address segment
    - Postal Address segment[14]
  - Address Usage segment (see above)

The current MDG SOAP APIs implement delta replication at several sub-objects and attributes of the business partner. For delta replication to work correctly, it is required to set the object and segment filters as described above. Additionally, the corresponding action codes (@actionCode) and complete transmission indicators (CTIs, e.g. @addressInformationListCompleteTransmissionIndicator) have been set in the SOAP Payload.

However, the granularity of delta replication is not fitting to the required scope of BPDM in some places. These known incompatibilities of delta replication granularity between MDG and BPDM can be addressed by implementing a customer specific BAdI:

- address information will be removed from the business partner and recreated in the change request on download from BPDM
- communication data (mostly email address, telephone / fax number, language of correspondence) will be removed from the business partner in the change request on download from BPDM
- additional identification data (mostly valid from, valid to etc.) will be removed from the business partner in the change request on download from BPDM

[11] Refer to the Value Mapping Business Partner Value Lists artifact of the integration package for all business role codes (RoleCode) known to BPDM.

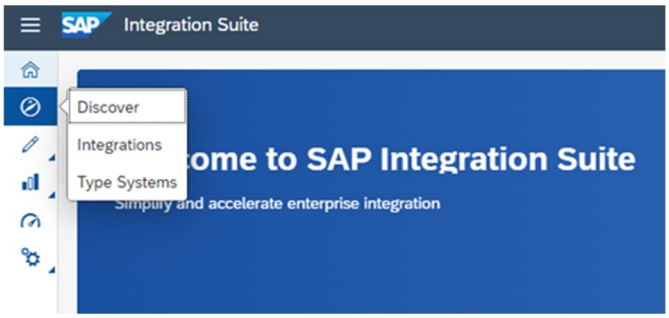
[12] Note that business partners with validity are not supported by BPDM.

[13] Note that addresses with validity are not supported by BPDM.

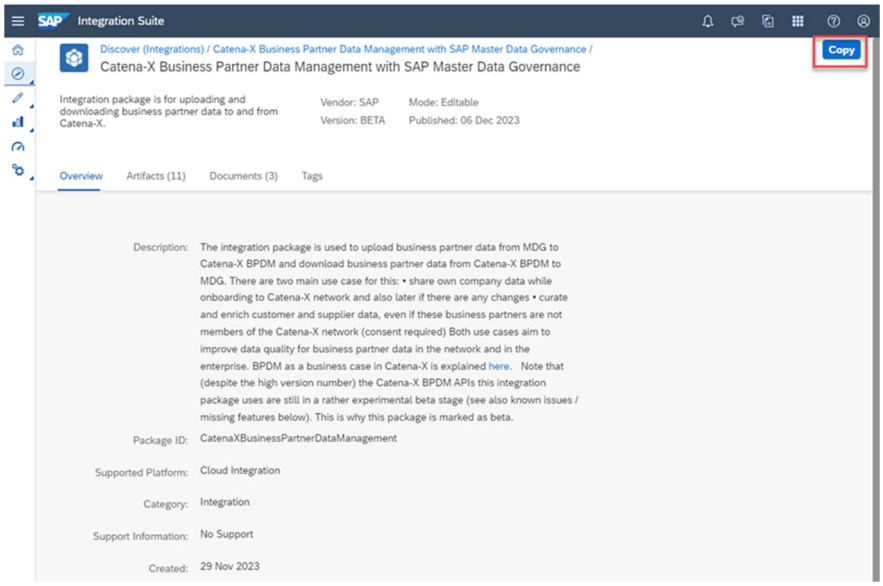
[14] Note that internalized address versions are not supported by BPDM.

Integration Package

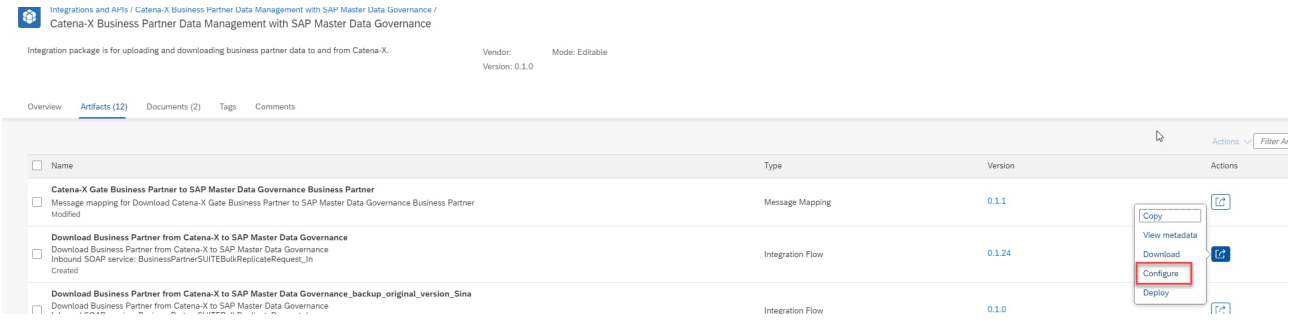
1. Connect to SAP Integration Suite
2. Go to Discover (Integrations) view.



3. Search for the package Catena-X Business Partner Data Management with SAP Master Data Governance.
4. Select the package and copy it to your Design workspace by clicking the Copy button in the right corner.



5. All the integration flows will be shown/ listed under the Artifacts section of the page.
6. After copying go to Design (Integrations and APIs) view and open the package Catena-X Business Partner Data Management with SAP Master Data Governance
7. Select the integration flows described in the table below and choose Actions button in the right and select Configure.



Note: You can either configure a single integration flow or do a mass configuration by checking multiple artifacts and Selecting Configuration under Action Button.

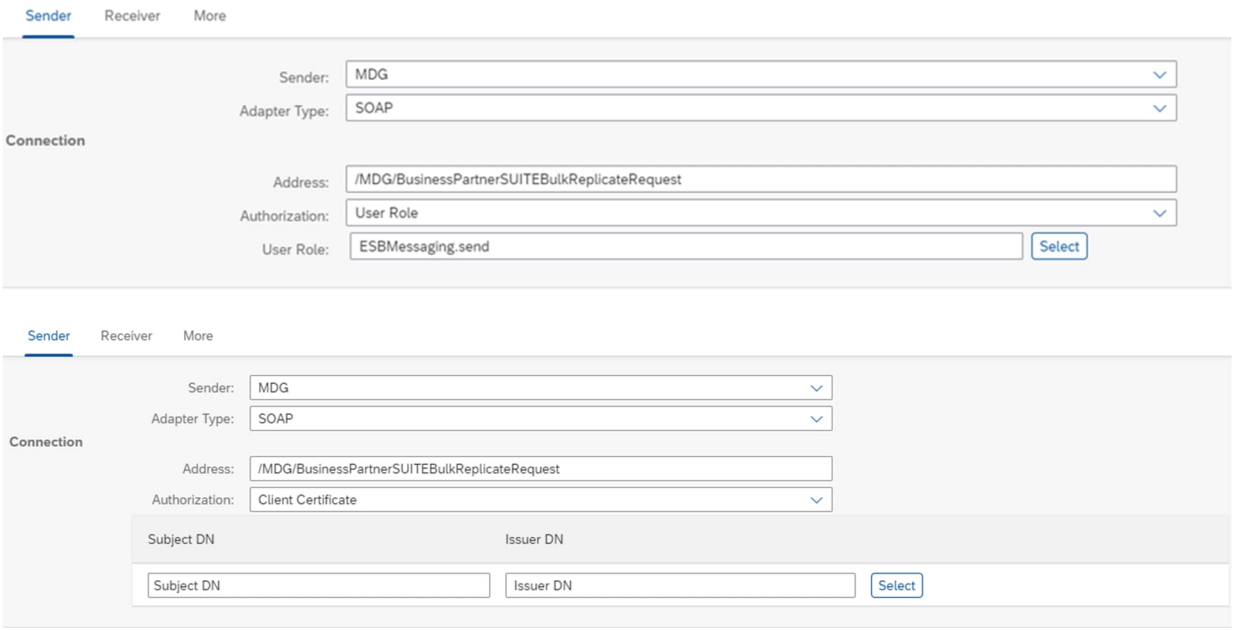
Following integration flows must be configured.		
Name of the integration flow	Description of the integration flow	Direction of the Message flow
Download Business Partner from Catena-X to SAP Master Data Governance	Business partner data is downloaded from BPDM Gate and sent to SAP MDG.	BPDM Gate (Sender) to SAP MDG (Receiver)
Handle Confirmation for Business Partner Download from Catena-X to SAP Master Data Governance	Confirmation Message from SAP MDG will be evaluated.	SAP MDG (Sender) to Cloud Integration (Receiver)
Handle Confirmation for Business Partner Relationship Download from Catena-X to SAP Master Data Governance	Confirmation Message from SAP MDG will be evaluated. The integration flow exists only for the sake of completeness.	SAP MDG (Sender) to Cloud Integration (Receiver)
Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider	This integration flow consists of 3 subprocesses with 3 separate HTTPS endpoints. The first subprocess initiates contract negotiation with DSI (Beta) as well as initiates the EDR transfer from the BPDM Gate EDC to DSI. The second subprocess waits for a callback from DSI (Beta) in which an EDR (URL + short lived token) is provided. The third subprocess provides an HTTPS endpoint to check if an EDR was received by Cloud Integration and cached in a temporary data store.	Cloud Integration to DSI (Beta), DSI (Beta) to Cloud Integration, Cloud Integration to Cloud Integration
Send Confirmation Message to SAP Master Data Governance	After uploading the business partner to BPDM Gate, a confirmation message is sent to SAP MDG.	Cloud Integration (Sender) to SAP MDG (Receiver)
Upload Business Partner from SAP Master Data Governance to Catena-X	Business Partner data is received from SAP MDG and uploaded to BPDM Gate.	SAP MDG (Sender) to BPDM Gate (Receiver)

Upload Business Partner from SAP Master Data Governance to Catena-X

This integration flow uploads business partners from MDG to BPDM Gate.

Sender Adapter MDG

Via the MDG sender adapter, business partners are received from MDG. You can find more details here: [Business Partner - Replicate from SAP S/4HANA to Client.]

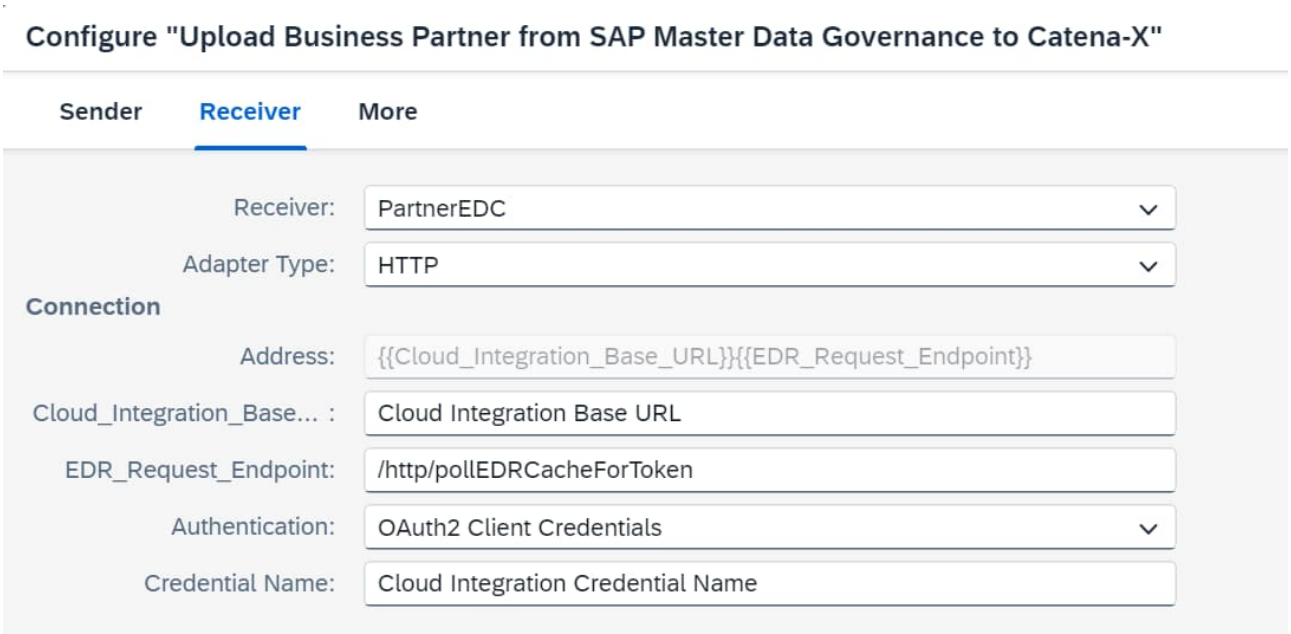


Sender	
Parameter	Description
Address	Relative endpoint address at which the ESB listens to the incoming requests. Recommended: /MDG/BusinessPartnerSUITEBulkReplicateRequest
Authorization	Use either Client Certificate or User Role as authorization method.
User Role	Choose Select to get a list of all available roles. The role ESBMessaging.send is provided by default. It is a predefined role provided by SAP that authorizes a sender system to process messages on a tenant. However, using SAP BTP Cockpit, you can also define custom roles for the runtime node as well. When you choose Select, a selection of all custom roles defined that way is offered.

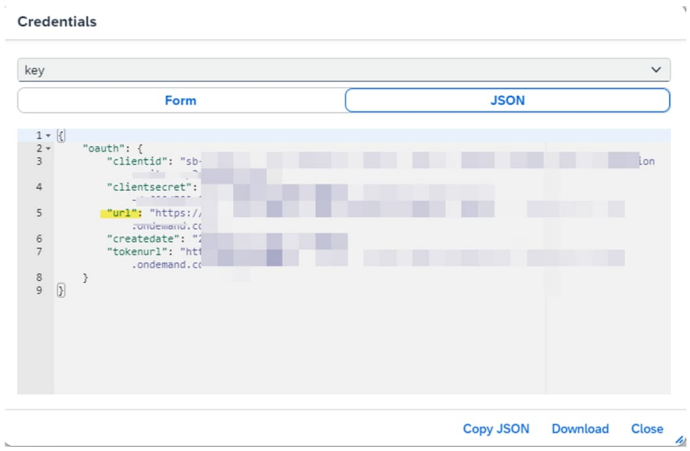
Subject DN / Issuer DN	Choose Add to add a new certificate for inbound authorization for the selected adapter. You can then select a certificate stored locally on your computer. You can also delete certificates from the list. For each certificate, the following attributes are displayed: Subject DN (information used to authorize the sender) and Issuer DN (information about the certificate authority that issues the certificate).

Receiver Adapter PartnerEDC

Via the PartnerEDC receiver adapter, contract negotiation and request of a new EDR for the upload asset are triggered using DSI (Beta). This calls the “Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider” integration flow as sender “RequestingSystem”.



Receiver: PartnerEDC	
Parameter	Description

Cloud_Integration_Base_URL	Value of parameter “url” from the service key used for Communication between Integration Flows on CI. 
EDR_Request_Endpoint:	Use constant value: /http/pollEDRCacheForToken
Authentication	You can select one of the following authentication methods: None, Basic, OAuth2 Client Credentials, OAuth2 SAML Bearer Assertion, Client Certificate Default value is “OAuth2 Client Credentials”
Credential Name	Name of the Communication between Integration Flows on CI.

Receiver Adapter CatenaX

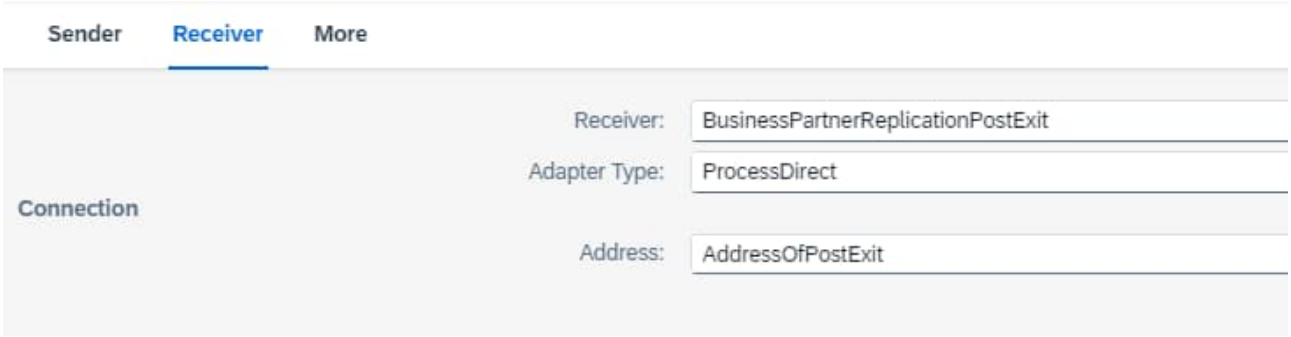
Via the CatenaX receiver adapter, business partners are sent to BPDM Gate EDC using the upload asset and the corresponding EDR.

Receiver: CatenaX	
Parameter	Description
Address	URL of the BPDM Gate EDC public API provided by the Catena-X operating company.

Receiver Adapter BusinessPartnerReplicationPostExit

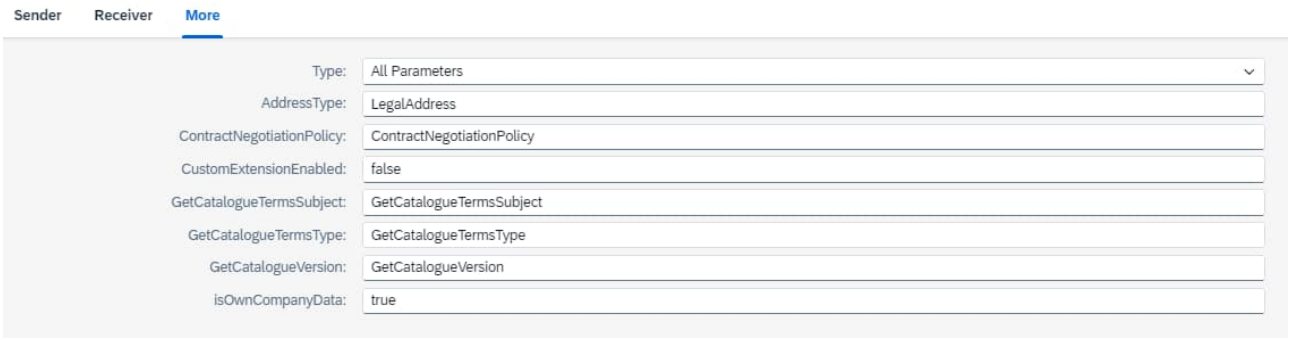
This integration flow provides the possibility to extend the standard mapping. This post-exit allows you to implement specific message mapping relevant to your business use case without changing the content provided by SAP. More information about custom exits can be found here: Integration Flow Extension - Concepts

Note: The custom integration flows and this integration flow and have to be deployed on the same tenant.



Receiver: BusinessPartnerReplicationPostExit	
Parameter	Description
Address	Address of the post exit integration flow that you are connecting to. This address has to be configured also in the Sender Process Direct Adapter from customer integration flow. Example: /MDG/PostExitUpload

Additional Parameters



More	
Parameter	Description
AddressType[15]	The address type will be only sent, when the attribute “isOwnCompanyData” is true and then it must filled, see also Legal Entity, Sites and Additional Addresses. Possible values: LegalAndSiteMainAddress, LegalAddress, SiteMainAddress, AdditionalAddress Default value is empty.
ContractNegotiationPolicy	This parameter is used during “request a new EDR for the upload asset” step. Use here constant value: {"policy":{"atid":"null","attype":"Offer","permission":[{"action":"use","constraint":{"and":[{"leftOperand":"FrameworkAgreement","operator":"eq","rightOperand":"businessPartner:1.0"},{"leftOperand":"UsagePurpose","operator":"eq","rightOperand":"cx.bpdm.gate.upload:1"}]}}],"target":"null","assigner":"null"}} Please mind that policy values for BP upload and BP download iFlows are not the same!
CustomExtensionEnabled	Set to “true” if custom extension should be enabled. Default value is false.
GetCatalogueTermsSubject	Use constant value: cx-taxo:FullAccessGateInputForSharingMember
GetCatalogueTermsType	Use constant value: cx-taxo:BPDMGate
GetCatalogueVersion	Use constant value: 6.0
isOwnCompanyData[16]	If you want to upload own company data to Catena-X, you must set this attribute to “true”, see also Own vs. Foreign Company Data. Possible values: true, false. Default value is false.

After configuration you can deploy the integration flow.

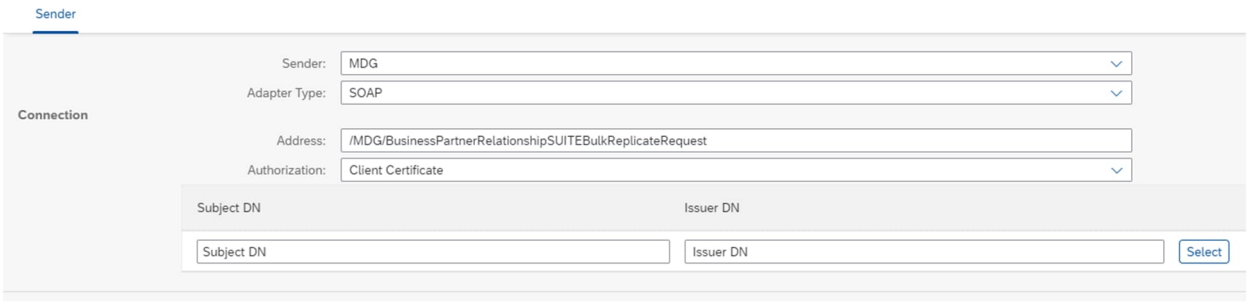
[15] Note that the attribute “addressType” can also be set at each business partner in a more variable way using a customer exit. Then the “addressType” parameter is ignored.
[16] Note that the attribute “isOwnCompanyData” can also be set at each business partner in a more variable way using a customer exit. Then the “isOwnCompanyData” parameter is ignored.

Upload Business Partner Relationship from SAP Master Data Governance to Catena-X

This integration flow uploads business partners relationship from MDG to BPDM Gate.

Sender Adapter MDG

Via the MDG sender adapter, business partner relationships are received from MDG. You can find more details here: [Business Partner Relationship - Replicate from Client to SAP S/4HANA]



Sender	
Parameter	Description
Address	Relative endpoint address at which the ESB listens to the incoming requests. Recommended: /MDG/BusinessPartnerRelationshipSUITEBulkReplicateRequest
Authorization	Use either Client Certificate or User Role as authorization method.
User Role	Choose Select to get a list of all available roles. The role ESBMessaging.send is provided by default. It is a predefined role provided by SAP that authorizes a sender system to process messages on a tenant. However, using SAP BTP Cockpit, you can also define custom roles for the runtime node as well. When you choose Select, a selection of all custom roles defined that way is offered.

Send Confirmation Message to SAP Master Data Governance

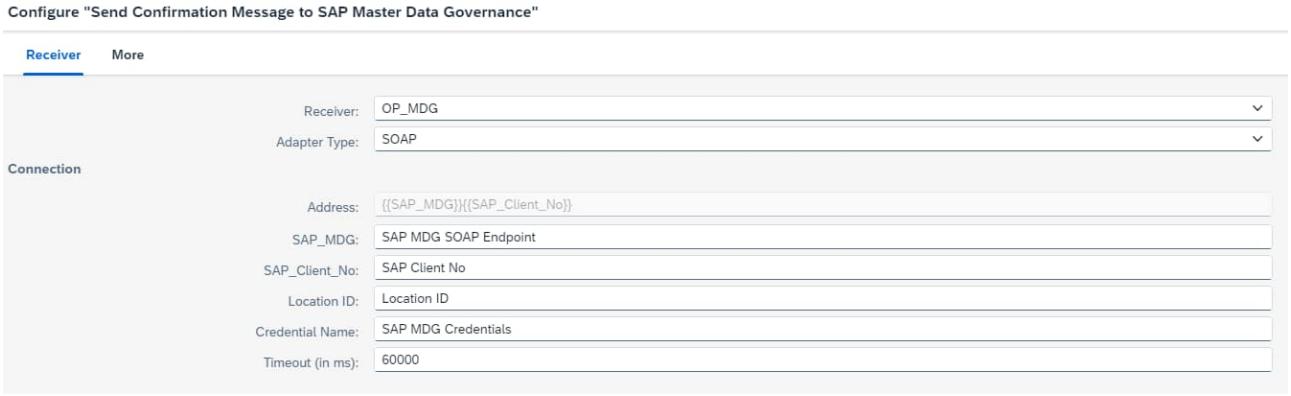
This integration flow sends a confirmation message to MDG about the business partner upload from MDG to BPDM Gate.

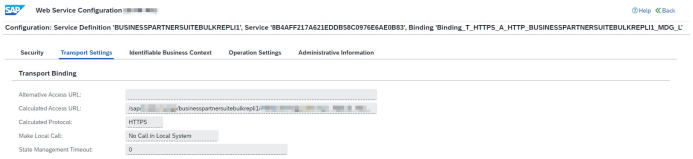
The confirmation message provides feedback as to whether the message was successfully processed in the cloud integration and successfully uploaded to the BPDM Gate. In the event of an error, the subprocess, in which the message encountered an error, the Cloud Integration Message Processing Log ID and the Correlation ID are output in the confirmation message.

There is no feedback as to whether a business partner successfully went through the Golden Record / sharing process.

Receiver Adapter OP_MDG

Via The OP_MDG receiver adapter, confirmation messages regarding business partners are sent to MDG. You can find more details here: [Business Partner - Receive Confirmation from Client to SAP S/4HANA]



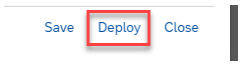
Receiver:	
Parameter	Description
SAP_MDG	Endpoint URL from SAP MDG System, in the following format “<protocol>://<host defined in Cloud Connector>:<port defined in Cloud Connector>/<path defined in SOA Manager>?sap-client=” The endpoint URL is configured while setting up SOA Management for Inbound MDG APIs. It is required to use the Cloud Connector to access the MDG host from Cloud Integration, see Cloud Connector for Inbound MDG APIs. 
SAP_Client_No	Client Number from MDG System

Credential Name	Name of the security material, containing the user credentials used for Accessing MDG from CI.
Location ID	To connect to a Cloud Connector instance associated with your account, enter the location ID that you defined for this instance in the destination configuration on the cloud side.
Timeout (in ms)	Specifies the time (in milliseconds) that the client waits for a response before the connection is interrupted. The default value is 60000 milliseconds (1 minute).

Additional Parameters

More	
Parameter	Description
RecipientBusinessSystemID	Name of MDG System, for example: MDG100
SenderBusinessSystemID	Name of the Catena-X System or Cloud Integration, for example: CATENAX. This must be equal to the DRF business system configured in Replication Model and Business System.

After configuration you can deploy the integration flow.

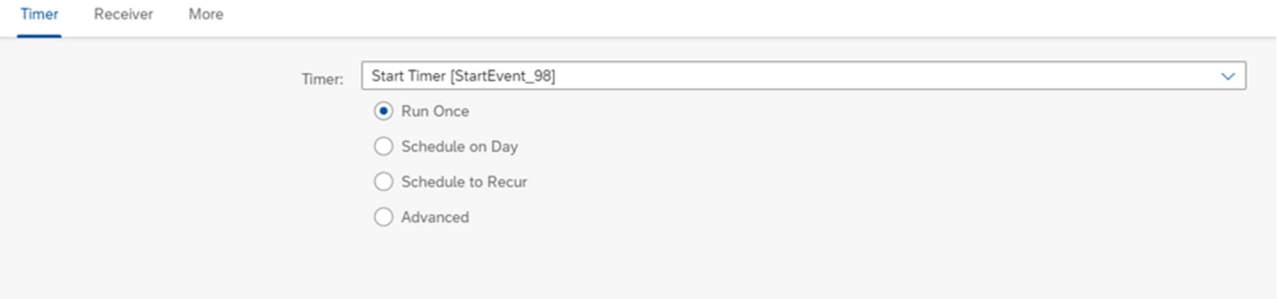


Download Business Partner from Catena-X to SAP Master Data Governance

This integration flow downloads business partners from BPDM Gate to MDG.

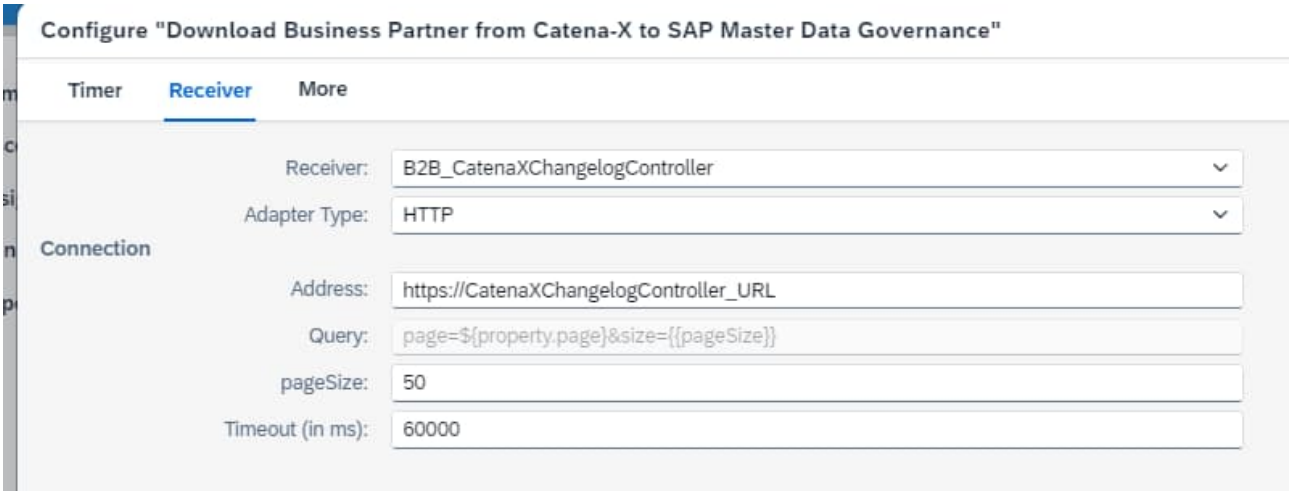
Start Time of this Integration Flow

It is possible to configure the automatic start and execution according to a specific schedule.



Receiver Adapter B2B_CatenaXChangelogController

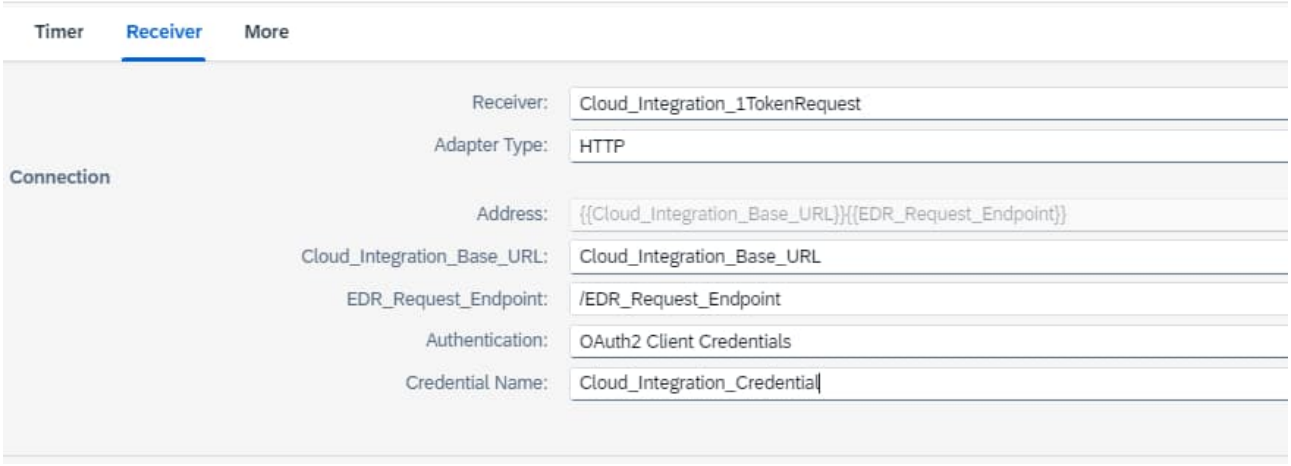
Via the B2B_CatenaXChangelogController receiver adapter, changelog entries are fetched for the business partner entries using the download asset and the corresponding EDR.

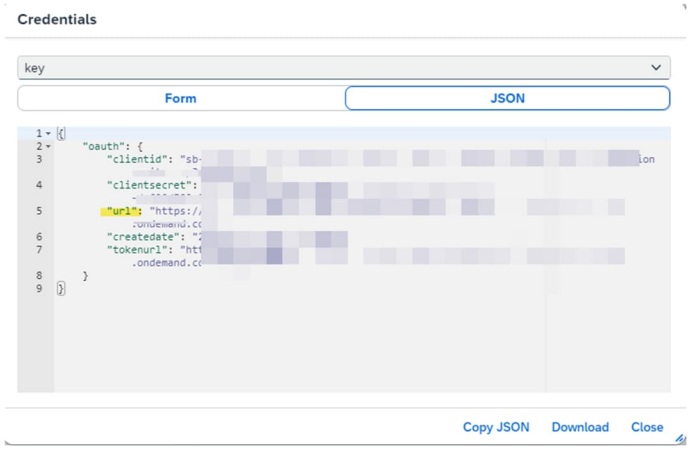


Receiver: B2B_CatenaXChangelogController	
Parameter	Description
Address	Address of BPDM Gate EDC
PageSize	Number of entries per page
Timeout (in ms)	Specifies the time (in milliseconds) that the client waits for a response before the connection is interrupted. The default value is 60000 milliseconds (1 minute).

Receiver Adapter Cloud_Integration_1TokenRequest

Via the Cloud_Integration_1TokenRequest receiver adapter, a contract negotiation and request of a new EDR for download asset is triggered. This calls the “Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider” integration flow as sender “RequestingSystem”.



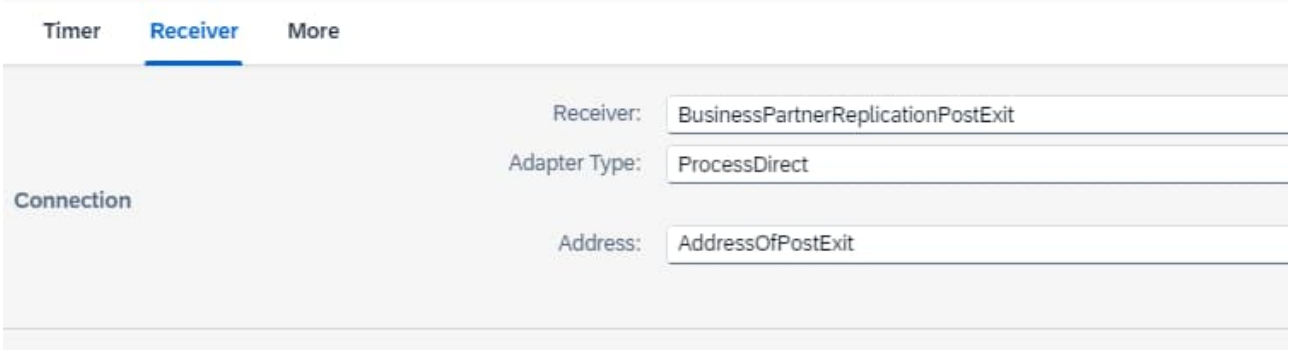
Receiver: Cloud_Integration_1TokenRequest	
Parameter	Description
Cloud_Integration_Base_URL	Value from parameter “url” of the service key used for Communication between Integration Flows on CI. 
EDR_Request_Endpoint:	Use constant value: /http/pollEDRCacheForToken
Authentication	You can select one of the following authentication methods: None, Basic, OAuth2 Client Credentials, OAuth2 SAML Bearer Assertion, Client Certificate Default value is “OAuth2 Client Credentials”

Credential Name	Name of the security material, containing the user credentials used for Communication between Integration Flows on CI.

Receiver Adapter BusinessPartnerReplicationPostExit

This integration flow provides the possibility to extend the standard mapping. This post-exit allows you to implement specific message mapping relevant to your business use case without changing the content provided by SAP. More information about custom exits can be found here: Integration Flow Extension - Concepts

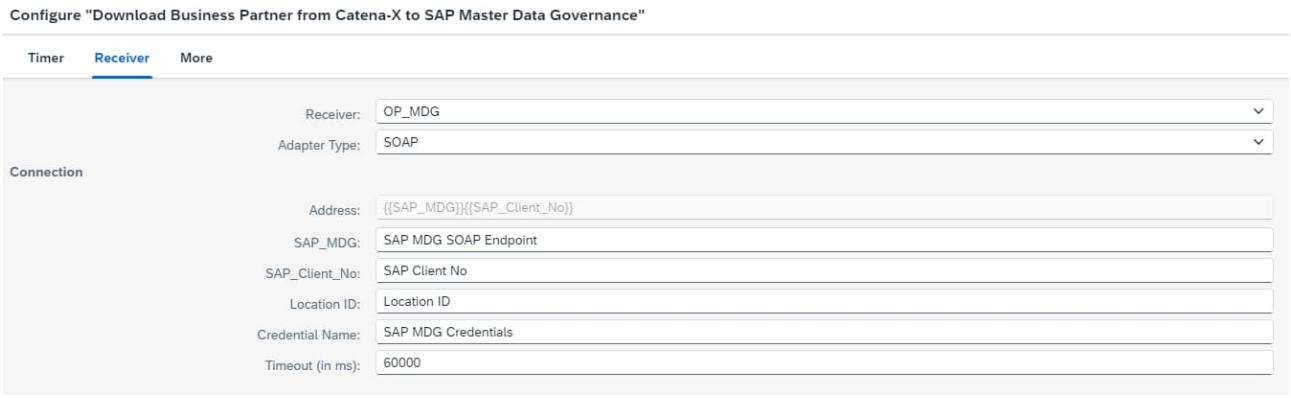
Note: The custom integration flows and this integration flow and have to be deployed on the same tenant.

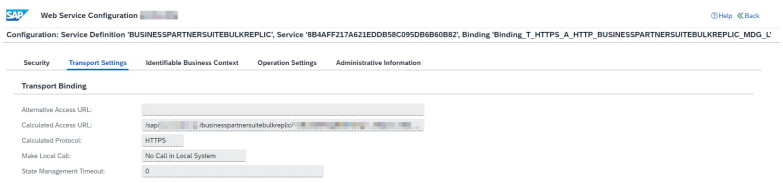


Receiver: BusinessPartnerReplicationPostExit	
Parameter	Description
Address	Address of the post exit integration flow that you are connecting to. This address has to be configured also in the Sender Process Direct Adapter from customer integration flow. Example: /MDG/PostExitDownload

Receiver Adapter OP_MDG

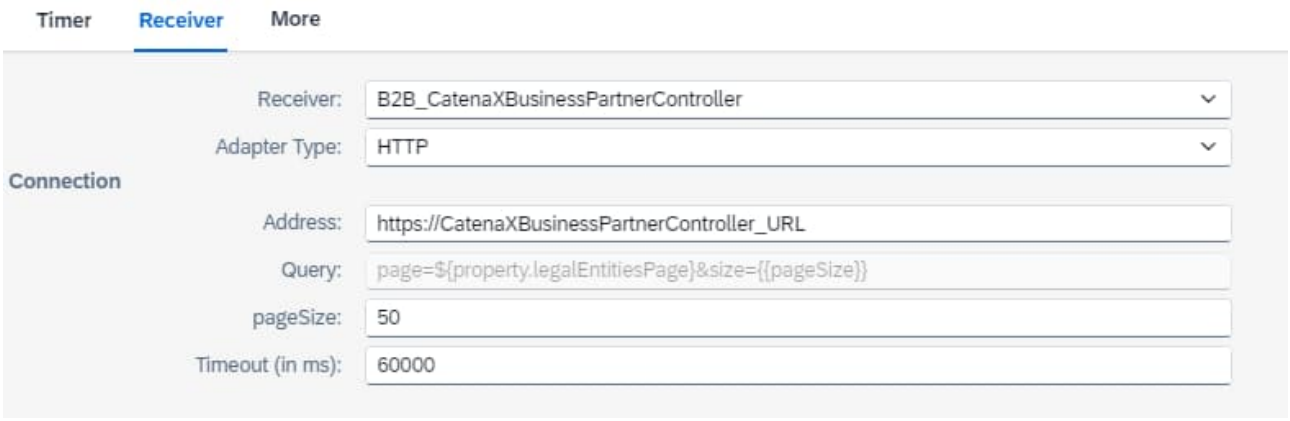
Via the OP_MDG receiver adapter, business partners are sent as business partners to MDG. You can find more details here: Business Partner - Replicate from Client to SAP S/4HANA



Receiver: OP_MDG	
Parameter	Description
SAP_MDG	Endpoint URL from SAP MDG System, in the following format “<protocol>://<host defined in Cloud Connector>:<port defined in Cloud Connector>/<path defined in SOA Manager>?sap-client=” The endpoint URL is configured while setting up SOA Management for Inbound MDG APIs. It is required to use the Cloud Connector to access the MDG host from Cloud Integration, see Cloud Connector for Inbound MDG APIs. 
SAP_Client_No	Client Number form MDG System
Location ID	To connect to a Cloud Connector instance associated with your account, enter the location ID that you defined for this instance in the destination configuration on the cloud side.
Credential Name	Name of the security material, containing the user credentials used for Accessing MDG from CI.
Timeout (in ms)	Specifies the time (in milliseconds) that the client waits for a response before the connection is interrupted. The default value is 60000 milliseconds (1 minute).

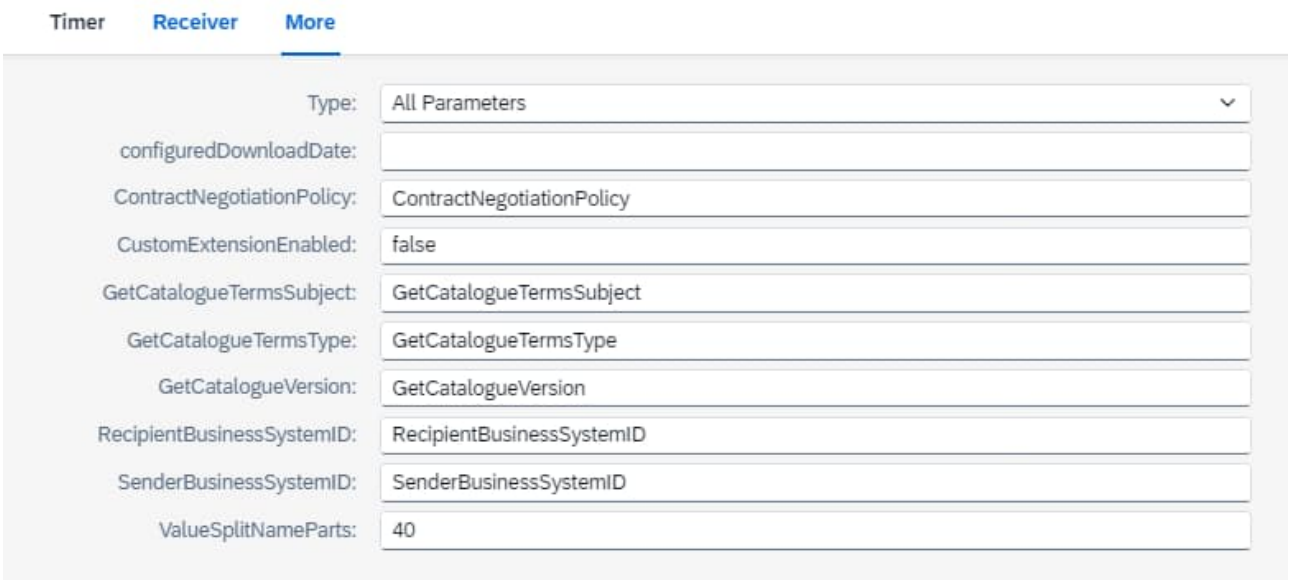
Receiver Adapter B2B_CatenaXBusninessPartnerController

Via the B2B_CatenaXLegalEntityController receiver adapter, the business partners are fetched using the donload asset and the corresponding EDR.



Receiver: B2B_CatenaXLegalEntityController	
Parameter	Description
Address	Address of BPDM Gate EDC
PageSize	Number of entries per page
Timeout (in ms)	Specifies the time (in milliseconds) that the client waits for a response before the connection is interrupted. The default value is 60000 milliseconds (1 minute).

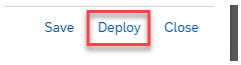
Additional Parameters



More	
Parameter	Description
configuredDownloadDate	With this date, it is possible to overwrite the “timestampAfter“ manually. This date is used to get the changelog entries from all business partner from this specified timestamp. Example: 2024-02-29T11:07:42Z Default value is empty.
ContractNegotiationPolicy:	This parameter is used during “request a new EDR for the download asset” step. Use here constant value: {"policy":{"atid":"null","attype":"Offer","permission":[{"action":"use","constraint":{"and":[{"leftOperand":"FrameworkAgreement","operator":"eq","rightOperand":"businessPartner:1.0"},{"leftOperand":"UsagePurpose","operator":"eq","rightOperand":"cx.bpdm.gate.download:1"}]}}],"target":"null","assigner":"null"}} Please mind that policy values for BP upload and BP download iFlows are not the same!
CustomExtensionEnabled	Set to “true” if custom extension should be enabled. Default value is false.
GetCatalogueTermsSubject	Use constant value: cx-taxo:ReadAccessGateOutputForSharingMember

GetCatalogueTermsType	Use constant value: cx-taxo:BPDMGate
GetCatalogueVersion	Use constant value: 6.0
RecipientBusinessSystemID	Name of MDG system, for example: MDG100
SenderBusinessSystemID	Name of the Catena-X System or Cloud Integration, for example: CATENAX. This must be equal to the DRF business system configured in Replication Model and Business System.
ValueSplitNameParts	Value of string length of FirstLineName in MDG System. Default is 40.

After configuration you can deploy the integration flow.

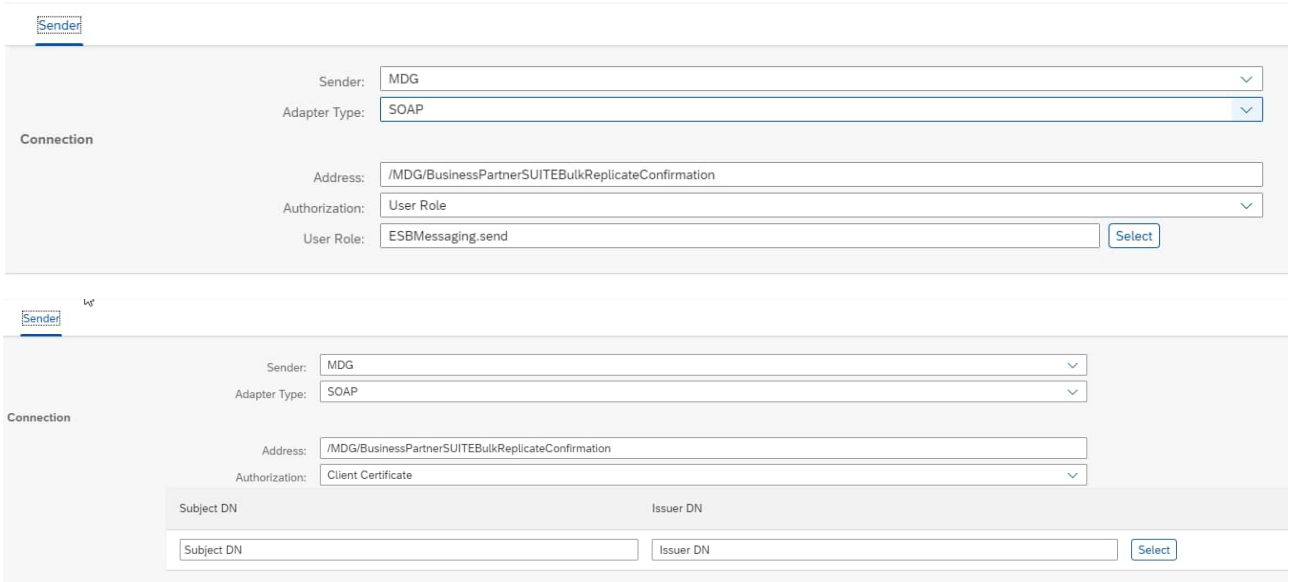


Handle Confirmation for Business Partner Download from Catena-X to SAP Master Data Governance

This integration flow handles the confirmation messages send from MDG to CI regarding the business partner download from BPDM Gate to MDG.

Sender Adapter MDG

Via the MDG sender adapter, confirmation messages regarding business partners are received from MDG. You can find more details here: Business Partner - Send Confirmation from SAP S/4HANA to Client



Sender

Parameter	Description
Address	Relative endpoint address at which the ESB listens to the incoming requests. Recommended: /MDG/BusinessPartnerSUITEBulkReplicateConfirmation
Authorization	Use either Client Certificate or User Role as authorization method.
User Role	Choose Select to get a list of all available roles. The role ESBMessaging.send is provided by default. It is a predefined role provided by SAP that authorizes a sender system to process messages on a tenant. However, using SAP BTP Cockpit, you can also define custom roles for the runtime node as well. When you choose Select, a selection of all custom roles defined that way is offered.
Subject DN / Issuer DN	Choose Add to add a new certificate for inbound authorization for the selected adapter. You can then select a certificate stored locally on your computer. You can also delete certificates from the list. For each certificate, the following attributes are displayed: Subject DN (information used to authorize the sender) and Issuer DN (information about the certificate authority that issues the certificate).

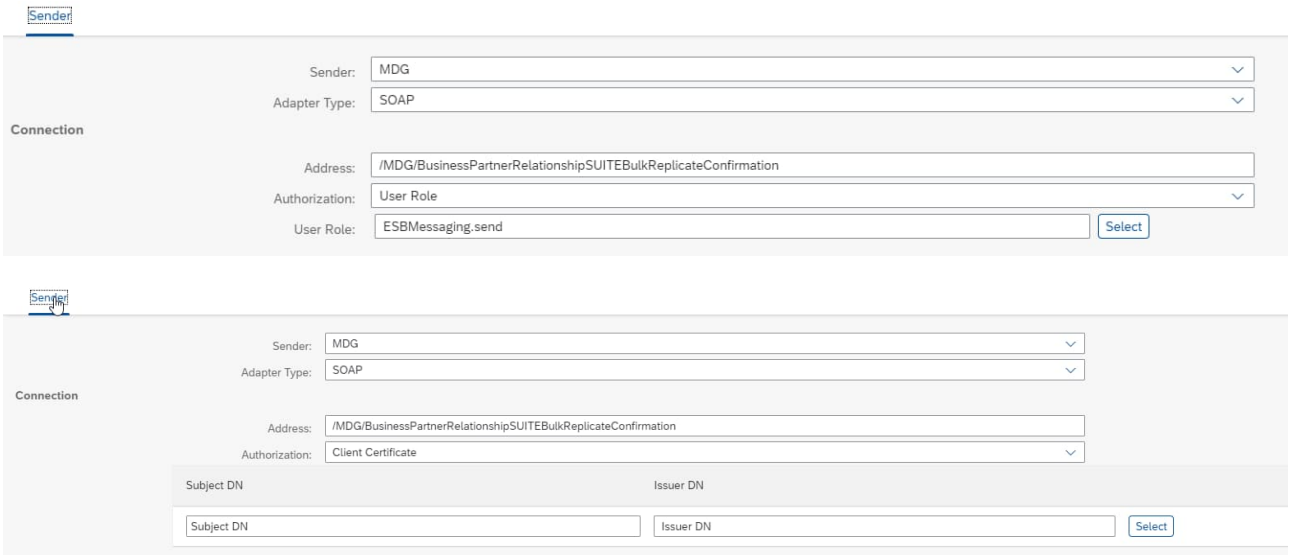
After configuration you can deploy the integration flow.

Handle Confirmation for Business Partner Relationship Download from Catena-X to SAP Master Data Governance

This integration flow handles the confirmation messages send from MDG to CI regarding the business partner relationship download from BPDM Gate to MDG.

Sender Adapter MDG

Via the MDG sender adapter, confirmation messages regarding business partner relationship are received from MDG. You can find more details here: [Business Partner Relationship - Send Confirmation from SAP S/4HANA to Client]



Sender	
Parameter	Description
Address	Relative endpoint address at which the ESB listens to the incoming requests. Recommended: /MDG/BusinessPartnerRelationshipSUITEBulkReplicateConfirmation
Authorization	Use either Client Certificate or User Role as authorization method.
User Role	Choose Select to get a list of all available roles. The role ESBMessaging.send is provided by default. It is a predefined role provided by SAP that authorizes a sender system to process messages on a tenant. However, using SAP BTP Cockpit, you can also define custom roles for the runtime

	node as well. When you choose Select, a selection of all custom roles defined that way is offered.
Subject DN / Issuer DN	Choose Add to add a new certificate for inbound authorization for the selected adapter. You can then select a certificate stored locally on your computer. You can also delete certificates from the list. For each certificate, the following attributes are displayed: Subject DN (information used to authorize the sender) and Issuer DN (information about the certificate authority that issues the certificate).

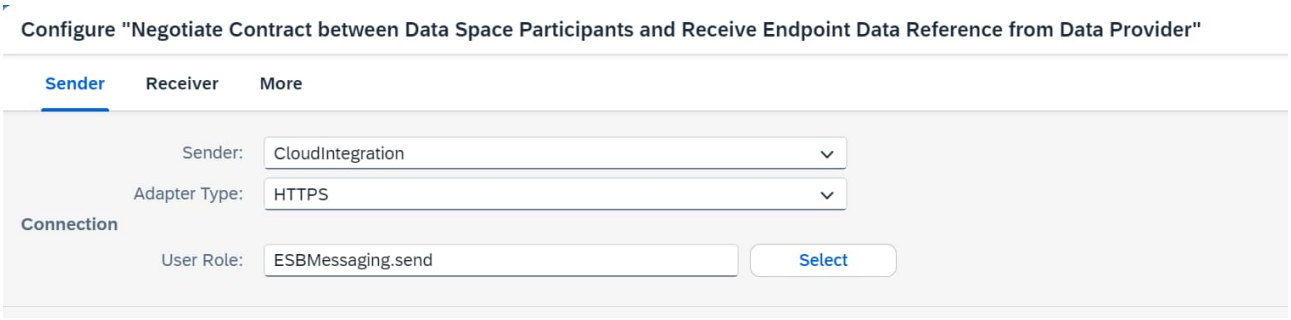
After configuration you can deploy the integration flow.

Negotiate Contract between Data Space Participants and Receive Endpoint Data Reference from Data Provider

This integration flow negotiates the contract between the data space participants and receives an endpoint data reference from the data provider.

Sender Adapter CloudIntegration

The CloudIntegration sender adapter exposes a hardcoded HTTPS endpoint “/pollForEDROauthToken” through which a calling external integration flow e.g., “Upload Business Partner from SAP Master Data Governance to Catena-X” or “Download Business Partner from Catena-X to SAP Master Data Governance” can periodically check whether there is a new EDR available.

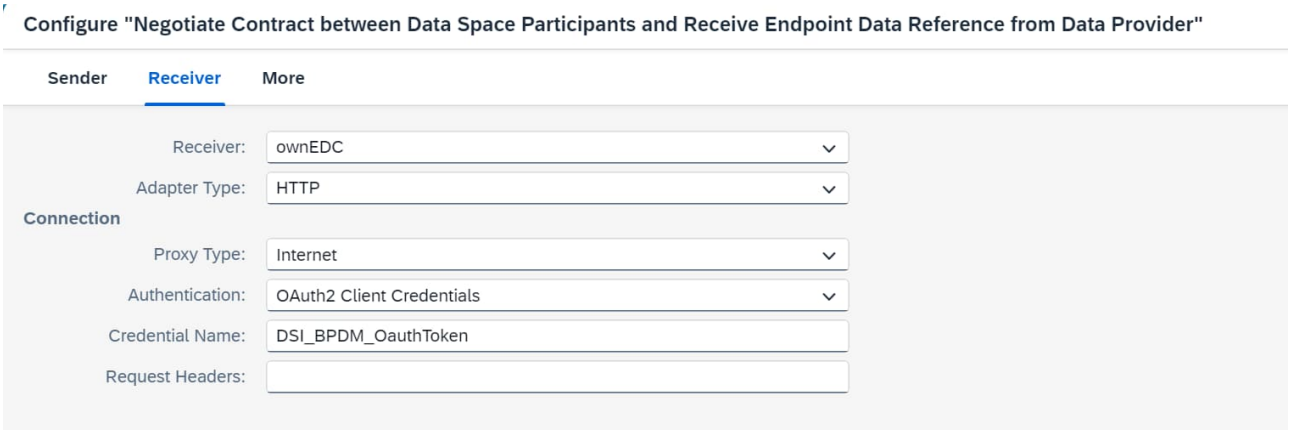


Sender CloudIntegration	
Parameter	Description
User Role	Choose Select to get a list of all available roles. The role ESBMessaging.send is provided by default. It is a predefined role provided by SAP that authorizes a sender system to process messages on a tenant. However, using SAP BTP Cockpit, you can also define custom roles for the runtime node as well. When you choose Select, a selection of all custom roles defined that way is offered.

Receiver Adapter ownEDC

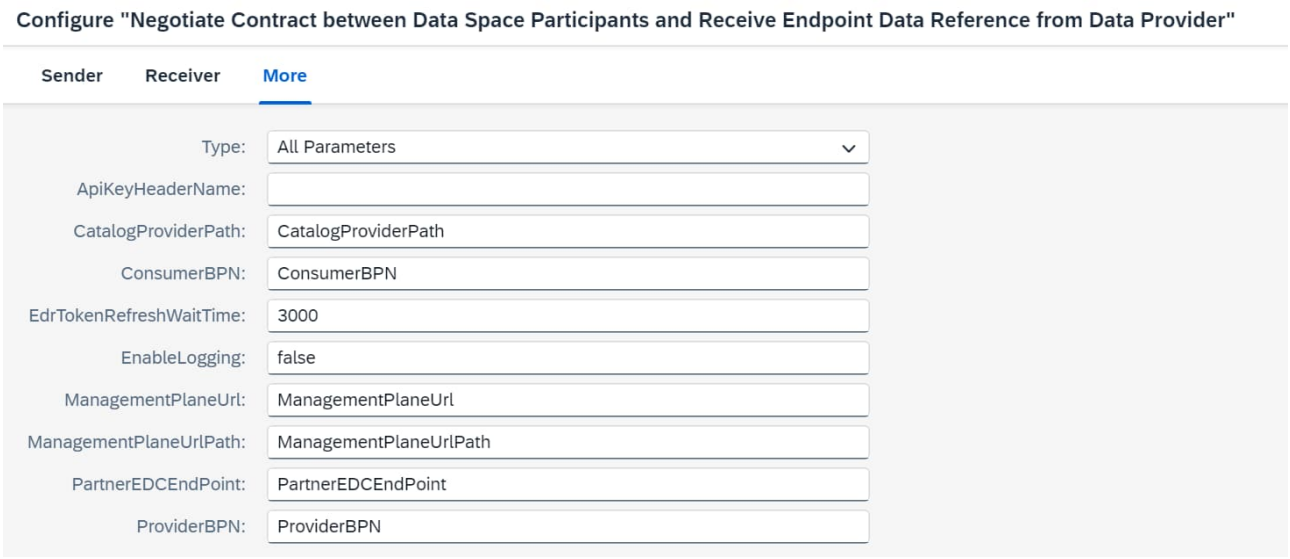
Via the ownEDC receiver adapter the following messages are sent to the management API of DSI (Beta):

- query catalog
- check edr cache
- initiate edr negotiation
- get contract negotiation state
- get edr from edc



Receiver ownEDC	
Parameter	Description
Adapter Type	For each call mentioned above there is one entry here. However, for all calls the same security material is used.
Credential Name	Name of the security material, containing the user credentials used for Accessing DSI (Beta) from CI.

Additional Parameters



More Tab	
Parameter	Description
ApiKeyHeaderName	Set this parameter only if “Authentication” type under “Receiver” Tab is configured as “None”. In this case authentication against own EDC (DSI) works with an Api key sent as “Authorization” header in each request. The API key itself needs to be configured as a “Secure parameter” under “Secure material” artefacts in Cloud Integration UI. We strongly discourage you from using “Authentication” type “None” for productive scenarios because Authentication would work by means of a header attached to the HTTP request itself.
CatalogProviderPath	Provider protocol URL path, should be: /api/v1/dsp
ConsumerBPN	Your business partner number, e.g. BPNL000000000XYZ
EdrTokenRefreshWaitTime	Time interval in milliseconds for waiting time intervals between Get EDR Data Address requests. Default value is configured to 3000
EnableLogging	This parameter is needed for debugging, please keep the default value which is set to “false”
ManagementPlaneUrl	Value of your DSI (Beta) control plane management URL, in the form <protocol>://<host>
PartnerEDCEndPoint	The URL of the BPDM Gate EDC, in the form <protocol>://<host>

ProviderBPN	The provider's business partner number, e.g. BPNL000000000ABC

After configuration you can deploy the integration flow.

Other Artifacts

After configuration of the integration flows also deploy the other artifacts:

- SAP Master Data Governance Business Partner to Catena-X Gate Business Partner (upload message mapping)
- Catena-X Gate Business Partner to SAP Master Data Governance Business Partner (download message mapping)
- Value Mapping Business Partner Value Lists
- Script Collection for Business Partner Data Management

Appendix

Example WSDL Bindings for Consumer Proxy

BusinessPartnerSUITEBulkReplicateRequest_Out - CO_MDG_BP_RPLCTRQ

Replace the places marked in yellow and append this to the WSDL file:

- <port name> - arbitrary unique port name, like CATENA_X_BPDM_PORT
- <cloud integration endpoint> - deployed endpoint of “Upload Business Partner from SAP Master Data Governance to Catena-X” integration flow

```
<wsdl:binding name="CO_MDG_BP_RPLCTRQ"
                type="tns:BusinessPartnerSUITEBulkReplicateRequest_Out">
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http"
                      style="document" />
        <wsdl:operation name="BusinessPartnerSUITEBulkReplicateRequest_Out">
            <soap:operation style="document"
                            soapAction="" />
            <wsdl:input name="BusinessPartnerSUITEBulkReplicateRequest">
                <soap:body use="literal" />
            </wsdl:input>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="BusinessPartnerSUITEBulkReplicateRequestOut">
        <wsdl:port name="<port name>"
                   binding="tns:CO_MDG_BP_RPLCTRQ">
            <soap:address location="<cloud integration endpoint>" />
        </wsdl:port>
    </wsdl:service>
```

BusinessPartnerSUITEBulkReplicateConfirmation_Out - CO_MDG_BP_RPLCTCO

Replace the places marked in yellow and append this to the WSDL file:

- <port name> - arbitrary unique port name, like CATENA_X_BPDM_PORT
- <cloud integration endpoint> - deployed endpoint of “Handle Confirmation for Business Partner Download from Catena-X to SAP Master Data Governance” integration flow

```
<wsdl:binding name="CO_MDG_BP_RPLCTCO"
                type="tns:BusinessPartnerSUITEBulkReplicateConfirmation_Out">
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http"
                      style="document" />
        <wsdl:operation name="BusinessPartnerSUITEBulkReplicateConfirmation_Out">
            <soap:operation style="document"
                            soapAction="" />
            <wsdl:input name="BusinessPartnerSUITEBulkReplicateConfirmation">
                <soap:body use="literal" />
            </wsdl:input>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="BusinessPartnerSUITEBulkReplicateConfirmationOut">
        <wsdl:port name="<port name>"
                   binding="tns:CO_MDG_BP_RPLCTCO">
            <soap:address location="<cloud integration endpoint> />
        </wsdl:port>
    </wsdl:service>
```

BusinessPartnerRelationshipSUITEBulkReplicateRequest_Out - CO_MDG_BP_RELATIONSHIP_OUT

Replace the places marked in yellow and append this to the WSDL file:

- <port name> - arbitrary unique port name, like CATENA_X_BPDM_PORT
- <cloud integration endpoint> - deployed endpoint of “Upload Business Partner Relationship from SAP Master Data Governance to Catena-X” integration flow

```
<wsdl:binding name="CO_MDG_BP_RELATIONSHIP_OUT"
                  type="tns:BusinessPartnerRelationshipSUITEBulkReplicateRequest_Out">
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http"
                      style="document" />
        <wsdl:operation name="BusinessPartnerRelationshipSUITEBulkReplicateRequest_Out">
            <soap:operation style="document"
                            soapAction="" />
            <wsdl:input name="BusinessPartnerRelationshipSUITEBulkReplicateRequest">
                <soap:body use="literal" />
            </wsdl:input>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="BusinessPartnerRelationshipSUITEBulkReplicateRequestOut">
        <wsdl:port name="<port name>"
                   binding="tns:CO_MDG_BP_RELATIONSHIP_OUT">
            <soap:address location="<cloud integration endpoint> />
        </wsdl:port>
    </wsdl:service>
```

BusinessPartnerRelationshipSUITEBulkReplicateConfirmation_Out - CO_MDG_BP_RELATIONSHIP_CNF_OUT

Replace the places marked in yellow and append this to the WSDL file:

- <port name> - arbitrary unique port name, like CATENA_X_BPDM_PORT
- <cloud integration endpoint> - deployed endpoint of “Handle Confirmation for Business Partner Relationship Download from Catena-X to SAP Master Data Governance” integration flow

```
<wsdl:binding name="CO_MDG_BP_RELATIONSHIP_CNF_OUT"
                  type="tns:BusinessPartnerRelationshipSUITEBulkReplicateConfirmation_Out">
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http"
                      style="document" />
        <wsdl:operation name="BusinessPartnerRelationshipSUITEBulkReplicateConfirmation_Out">
            <soap:operation style="document"
                            soapAction="" />
            <wsdl:input name="BusinessPartnerRelationshipSUITEBulkReplicateConfirmation">
                <soap:body use="literal" />
            </wsdl:input>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="BusinessPartnerRelationshipSUITEBulkReplicateConfirmationOut">
        <wsdl:port name="<port name>"
                   binding="tns:CO_MDG_BP_RELATIONSHIP_CNF_OUT">
            <soap:address location="<cloud integration endpoint> />
        </wsdl:port>
    </wsdl:service>
```