Integration Guide | PUBLIC
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Turkey Electronic Invoices and Delivery Notes: Setting Up SAP Cloud Integration (SAP ERP, SAP S/4HANA) - Neo environment

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Content

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2 Introduction

You use SAP Cloud Integration to establish the communication with external systems and transfer to them the electronic documents you have created. This document describes the setup steps that you must perform in your SAP ERP or SAP S/4HANA system and SAP Cloud Integration tenant so that the integration between the systems works.

The setup steps are typically done by an SAP Cloud Integration consulting team, which is responsible for configuring the connection with SAP Cloud Integration. This team may be also responsible for maintaining the integration content and certificates/credentials on the SAP Cloud Integration tenant.

> **i Note**
>
> This document describes functionality that is provided by the Integration Package itself, that is, by the artifacts that are deployed in the SAP Cloud Integration tenant. It may happen, however, that in your SAP ERP or SAP S/4HANA system the access to such functionality is only partially implemented. Additionally, it may also happen that the tax authority servers do not provide all services that are described in this document. Please refer to the relevant SAP ERP or SAP S/4HANA documentation and to the relevant tax authority information, respectively.

For the sake of simplicity in this guide, we sometimes refer to SAP ERP or SAP S/4HANA as SAP back-end system.

3 Prerequisites

Before you start with the activities described in this document, ensure that the following prerequisites are met.

3.1 Registration with the Tax Authorities and an Application Service Provider

You must ensure the following:

- You have completed registration with the tax authorities (TRA) for the invoice and delivery note scenarios.
- You have completed registration with an application service provider for the invoice and delivery note scenarios.
  The application service provider issues user credentials (username and password) for your VKNs. You need to configure these user credentials on your tenant. In addition, you need to get service URLs from your application service provider and configure them in integration flows.
  You can find application service providers who are in partnership with SAP from SAP App Center. Search with the keyword **SAP Document and Reporting Compliance**.

3.2 Installation of eDocument Full Solution

The eDocument Full solution is installed in your test and production systems.

- For the generic part, refer to the Installation Guide for eDocument attached to SAP Note 2134248.
- For the invoice scenario, refer to the SAP Notes under the *Full Solution* section in SAP Note 2214845.
- For the delivery note scenario, refer to the SAP Notes under the *Full Solution* section in SAP Note 2711030.

4 Connectivity Steps

4.1 Setup of Secure Connection

You establish a trustworthy SSL connection to set up a connection between the SAP back-end systems and the SAP Cloud Integration. For more information, see Connecting a Customer System to Cloud Integration.

You use SAP ERP Trust Manager (transaction `STRUST`) to manage the certificates required for a trustworthy SSL connection. The certificates include public certificates to support outbound connections, as well as trusted certificate authority (CA) certificates to support integration flow authentication.

Refer to the system documentation for more information regarding the certificate deployment to SAP back-end systems. In case of issues, refer to the following SAP notes:

- 2368112 Outgoing HTTPS connection does not work in AS ABAP
- 510007 Setting up SSL on Application Server ABAP

For more information, refer to Operating and Monitoring Cloud Integration

> **i Note**
>
> If you encounter any issues in the information provided in the SAP Cloud Integration product page, open a customer incident against the `LOD-HCI-PI-OPS` component.

Client Certificate

If you are using a client certificate, this must be signed by one of the root certificates supported by the load balancer. A self-signed certificate is not suitable. For more information see Load Balancer Root Certificates Supported by SAP.

For information about creating your own certificate and get it signed by a trusted certificate authority (CA), see Authenticate Integration Flows [page 8].

4.1.1 Set Up SAP Cloud Integration Tenants

Ensure that your SAP Cloud Integration test and production tenants are live, and users in the tenants have the rights to copy the integration package and to configure and deploy the integration flows.

When your tenants are provisioned, you receive an email with a Tenant Management (TMN) URL. You need this URL when configuring in your SAP S/4HANA system the communication with the SAP Cloud Integration tenant.

To be able to deploy the security content you must be assigned the `AuthGroup.Administrator` role.

If you are a first-time user, you must first set up your users (members) and their authorizations in the SAP BTP cockpit.

4.1.2 Retrieve and Save Public Certificates

You perform this action in the back-end systems only if you are using certificate-based authentification. Not required for basic authentification.

Context

Find and save the public certificates from your SAP Cloud Integration runtime.

Procedure

1. Access the SAP BTP cockpit, and navigate to your subaccount (tenant) page.
2. Click the subscriptions link to display the subscriptions for your subaccount.
3. Select the subscription with suffix **`iflmap`** as this corresponds to your worker node within SAP Cloud Integration.

   Alternatively, use the URL emailed to you with your SAP Cloud Integration subscription details. The URL has the following format **`https://xxxxx.hana.ondemand.com/itspaces`**.
4. In the *Operations* view, choose *Manage Integration Content* and select *All* to display the integration flows available.
5. Select an integration flow to display its details.
6. Copy the URL listed within the *Endpoints* tab, and paste the URL into your web browser.
7. When prompted by the *Website Identification* window, choose *View certificate*.
8. Select the root certificate, and then choose *Export to file* to save the certificate locally.
9. Repeat these steps for each unique root, intermediate and leaf certificate, and repeat for both your test and production tenants.

4.1.3 Upload the Certificates

Store the public certificates used for your productive and test tenants.

Context

You use the SAP ERP Trust Manager (transaction `STRUST`) to store and manage the certificates required to support connectivity between SAP back-end systems and SAP Cloud Integration.

Procedure

1. Access transaction `STRUST`.
2. Navigate to the PSE for **SSL Client (Anonymous)** and open it by double-clicking the PSE.
3. Switch to edit mode.
4. Choose the *Import certificate* button.
5. In the *Import Certificate* dialog box, enter or select the path to the required certificates and choose *Enter*. The certificates are displayed in the *Certificate* area.
6. Choose *Add to Certificate List* to add the certificates to the *Certificate List*.
7. Save your entries.

4.1.4 Authenticate Integration Flows

Create an own certificate and get it signed by a trusted certificate authority (CA) to support integration flow authentication.

Context

You use the SAP ERP Trust Manager (transaction `STRUST`) for this purpose.

This process is required only if you use certificate-based authentication (that is, you choose the **`X.509 SSL Client Certification`** option in your settings for SOAMANAGER).

Procedure

1. Access transaction `STRUST`.

2. Create your own PSE (for example, Client SSL Standard) and then generate a certificate sign request.
3. Export the certificate sign request as a `*.csr` file.
4. Arrange for the certificate to be signed by a trusted certificate authority (CA).

   If you are using a client certificate, this must be signed by one of the root certificates supported by the load balancer. A self-signed certificate is not suitable. For more information, see Load Balancer Root Certificates Supported by SAP.

   The CA may have specific requirements and request company-specific data, they may also require time to analyze your company before issuing a signed certicate. When signed, the CA provides the certificate for import.
5. Navigate to the PSE for **SSL Client Standard** and open it by double-clicking the PSE.
6. Switch to edit mode.
7. Choose the *Import certificate* button.
8. In the *Import Certificate* dialog box, enter or select the path to the CA-signed certificate and choose *Enter*. The certificate is displayed in the *Certificate* area.
9. Choose *Add to Certificate List* to add the signed certificate to the *Certificate List*.

   Ensure that you import the CA root and intermediate certificates to complete the import.
10. Save your entries.

    The certificates can now be used in the SOA Manager (transaction `SOAMANAGER`).

5 Configuration Steps in SAP Cloud Integration

The following sections tell you the necessary configuration steps you do in SAP Cloud Integration.

5.1 Deploy User Credentials

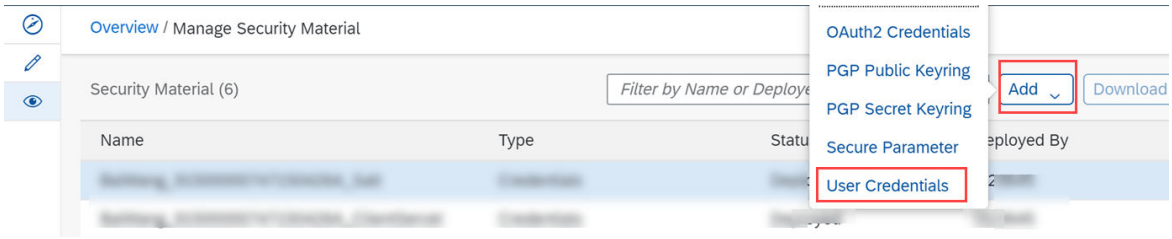
You must deploy the user credentials that you've got from your application service provider to the SAP Cloud Integration tenant.

> **i Note**
>
> User credentials for the delivery note scenario and invoices scenario may vary.

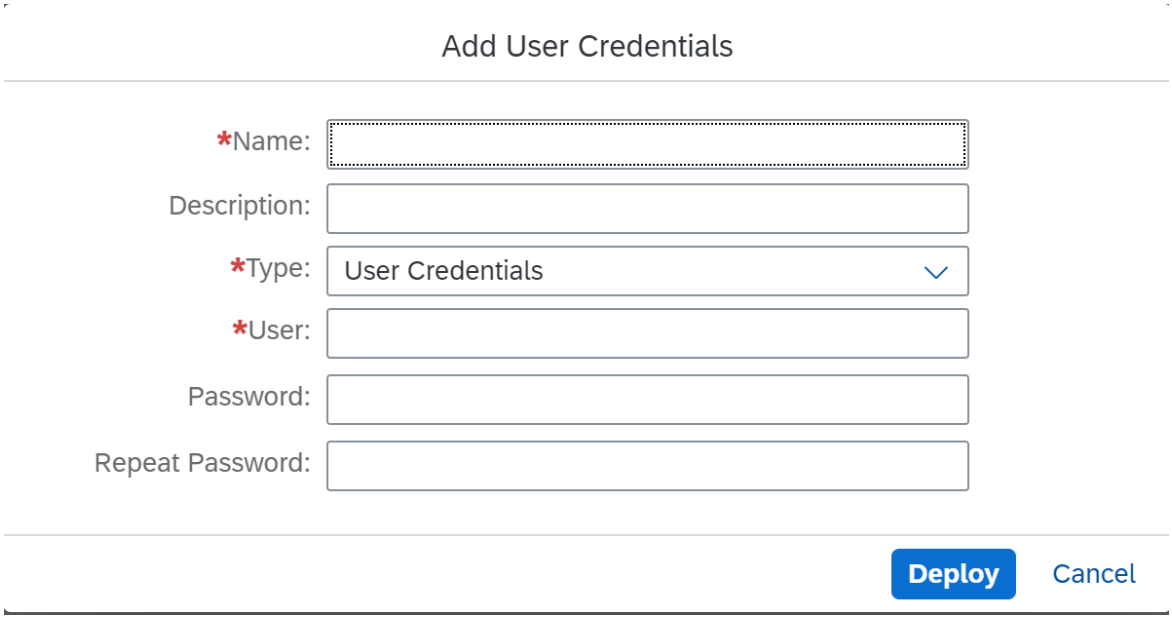
Procedure

To configure a pair of credentials (username and password), follow the steps below:

1. Log into your SAP Cloud Integration tenant.
2. Go to *Monitor* (Operations view) and open the *Security Material* app.
3. Click *Add* on the top right corner of the browser window. Select *User Credentials*.



An *Add User Credentials* dialog box appears.



4. In the *Name*
5. In the *User* field, enter the user name.
6. In *Password* field, enter the password.
7. In the *Repeat Password* field, repeat the password. field, create a name for your credentials.
8. Choose *Deploy*.

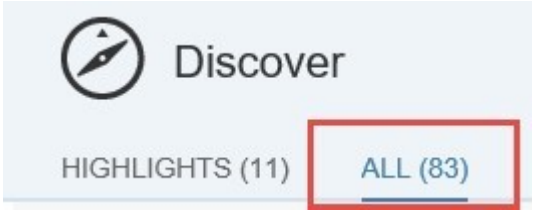
5.2 Copy Published Package

Context

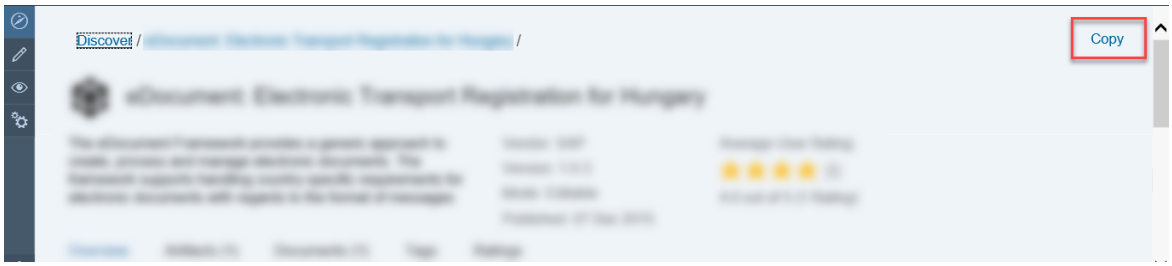
Copy the package *SAP Document and Reporting Compliance: Electronic Invoices and Delivery Notes for Turkey* to the target tenant as follows:

Procedure

1. Log in to your SAP Cloud Integration tenant.
2. Choose *Discover* > *All* > .



3. Search for *SAP Document and Reporting Compliance: Electronic Invoices and Delivery Notes for Turkey*.
4. Select the package and choose *Copy*.



5.3 Deploy Integration Flows

Context

The following integration flows are available in the integration package *SAP Document and Reporting Compliance: Electronic Invoices and Delivery Notes for Turkey*:

Integration Flow	Explanation
Turkey Invoice via Any Service Provider	Deploy this integration flow if you want to use **a service provider other than Foriba**.
Turkey eArsiv via Any Service Provider	Deploy this integration flow if you want to send electronic consumer invoices via **a service provider other than Foriba**. **i Note** To send electronic consumer invoices via a service provider other than Foriba, you must deploy both the *Turkey Invoice via Any Service Provider* and *Turkey eArsiv via Any Service Provider* integration flows.
Turkey Invoice via Specific Service Provider	Deploy this integration flow if you want to send and receive electronic invoices via **the service provider Foriba**.
Turkey Delivery Note via Any Service Provider	Deploy this integration flow if you want to send and receive electronic delivery notes via **a service provider other than Foriba**.
Turkey Delivery Note via Specific Service Provider	Deploy this integration flow if you want to send and receive electronic delivery notes via **the service provider Foriba**.

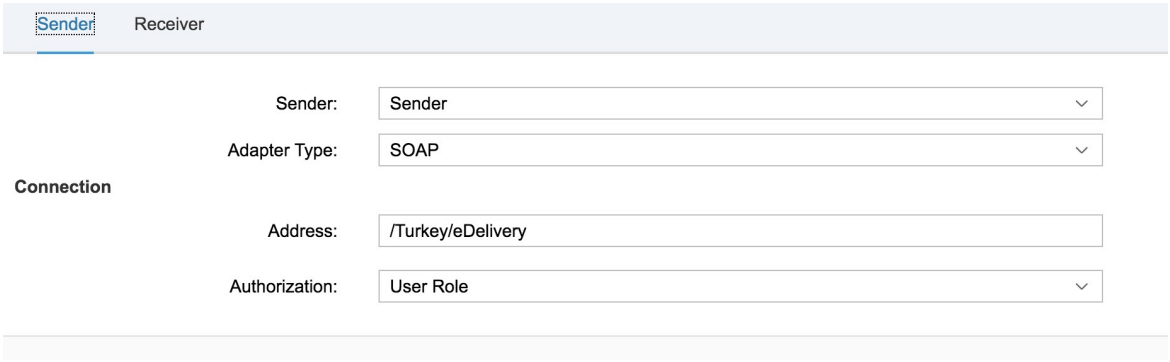
For each integration flow, you must configure several parameters as described below:

Procedure

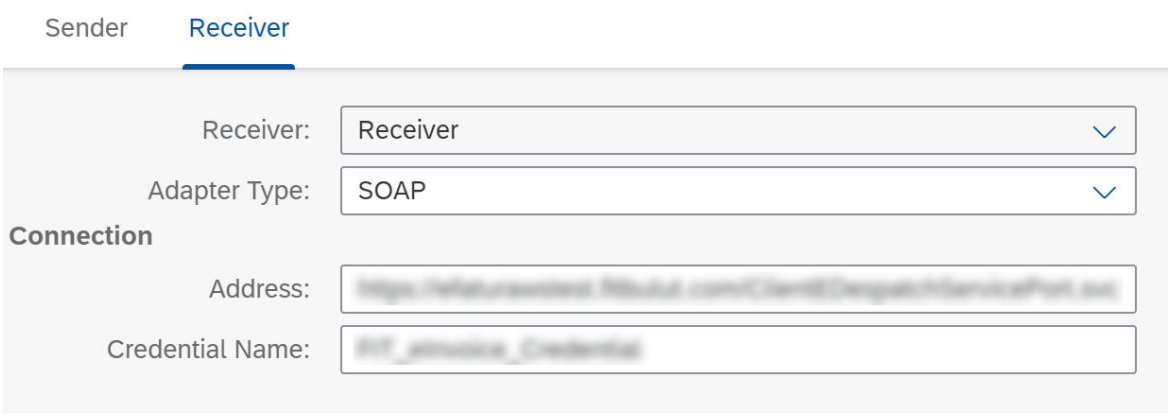
1. Open the integration package that you copied.
2. Go to the *Artifacts* tab page.
3. Choose *Actions* > *Configure* for the integration flow you want to configure.
4. Choose the *Sender* tab. Make the following settings:
   - In the *Address* field, keep the default address or enter a custom sender address.
     If you have multiple company codes, instead of copying the integration package for each company code, you may want to copy an integration flow for each company code. In this case, to differentiate the sender addresses for different company codes, you can define custom, company code-specific sender addresses.
   - From the *Authorization* dropdown list, select an authorization type. The available options are:

Authorization Type	Description
User Role	Select this authorization type if you want to use basic authentication (user/password) or client certificate authentication with Certificate-to-User-Mapping.
Client Certificate	Select this authorization type if you want to use client certificate authentication without Certificate-to-User-Mapping. For more information, see Cloud Integration – How to Setup Secure Outbound HTTP Connection using Keystore Monitor.

   See the following example:



5. Choose the *Receiver* tab. Make settings as follows:
   - In the *Address* field, enter the service URL that you got from your service provider.
   - In the *Credential Name* field, enter the name of the credential that you deployed to your tenant (see).



6. Choose *Deploy* to deploy it to the server.

6 Configuration Steps in SAP ERP or SAP S/4HANA

Some steps are required in your SAP ERP or SAP S/4HANA system.

6.1 Create Logical Ports in SOAMANAGER

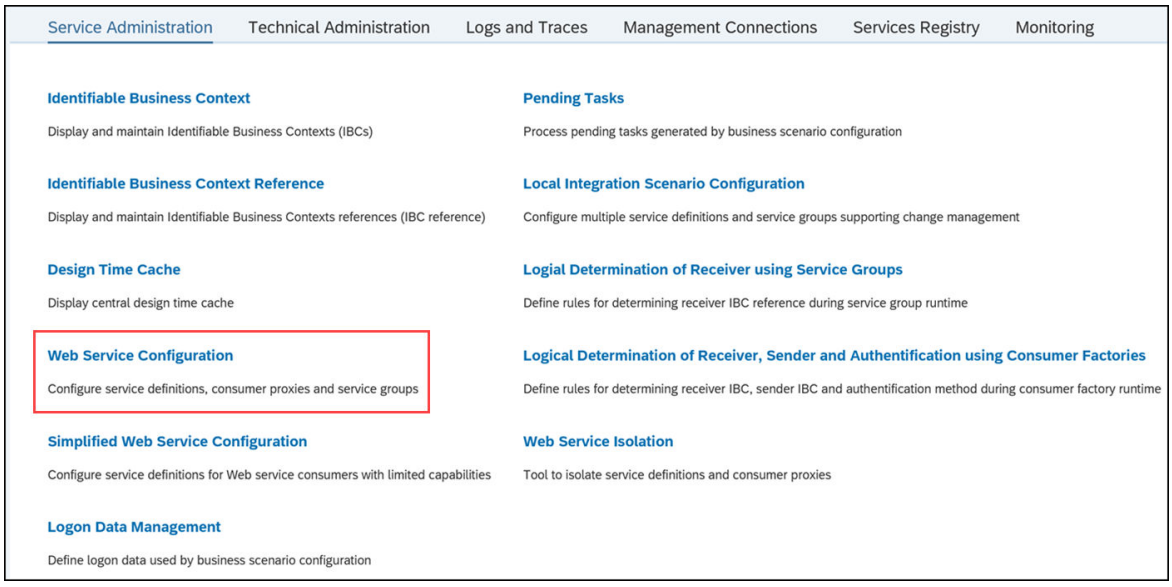
Context

You connect the required proxies to your SAP Cloud Integration tenant via logical ports. In a test SAP ERP or SAP S/4HANA system, you configure the logical ports to connect to your test SAP Cloud Integration tenant. In a productive SAP ERP or SAP S/4HANA system, you configure the logical ports to connect to your productive SAP Cloud Integration tenant.

> **i** Note
>
> Depending on your product version, the look and feel of the screens in your system may differ from the screenshots in this document.

Procedure

1. Call up transaction `SOAMANAGER`. Choose *Web Service Configuration*.

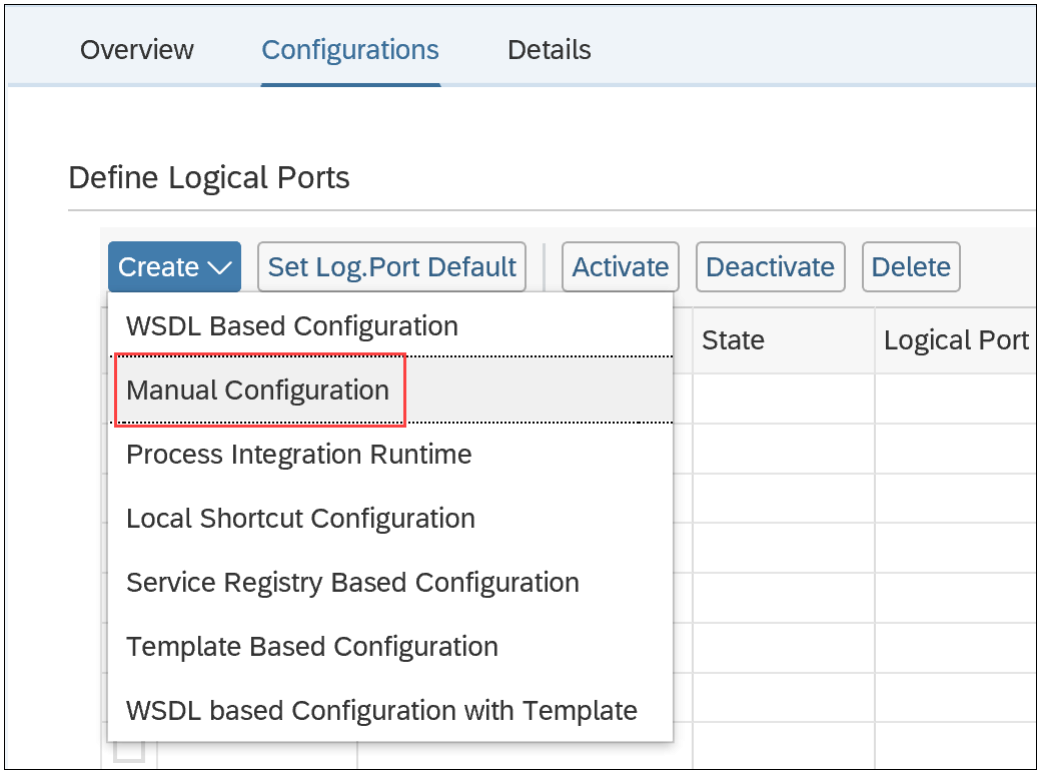


2. Search for the proxies for Turkey with the search criterion **object name containing CO_EDO_TR***.

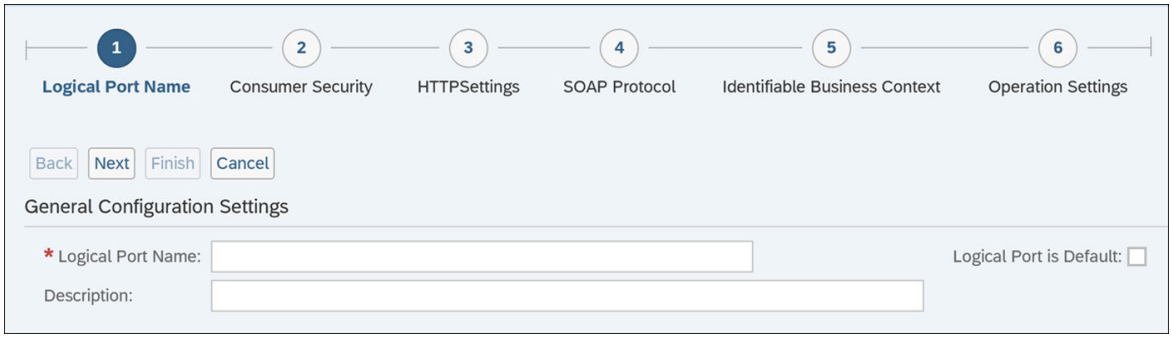
   The following proxies appear in the search results:

Proxy Name	Description
`CO_EDO_TR_CLIENT_EDESPATCH_SER`	Turkey Delivery Note Services
`CO_EDO_TR_CLIENT_EINVOICE_SERV`	Turkey eInvoice: eFactura
`CO_EDO_TR_CONS_INV_TRANSM_SERV`	Turkey eInvoice: eArsiv
`CO_EDO_TR_CLIENT_EINVOICE_SER1`	Turkey eInvoice: Get User List **i Note** If you want to implement eFactura, you should create a logical port for both the `CO_EDO_TR_CLIENT_EINVOICE_SERV` and `CO_EDO_TR_CLIENT_EINVOICE_SER1` proxies.

3. Select a proxy and create a logical port for it. Choose *Create* > *Manual Configuration*.



4. Enter a logical port name and description. Choose *Next*.

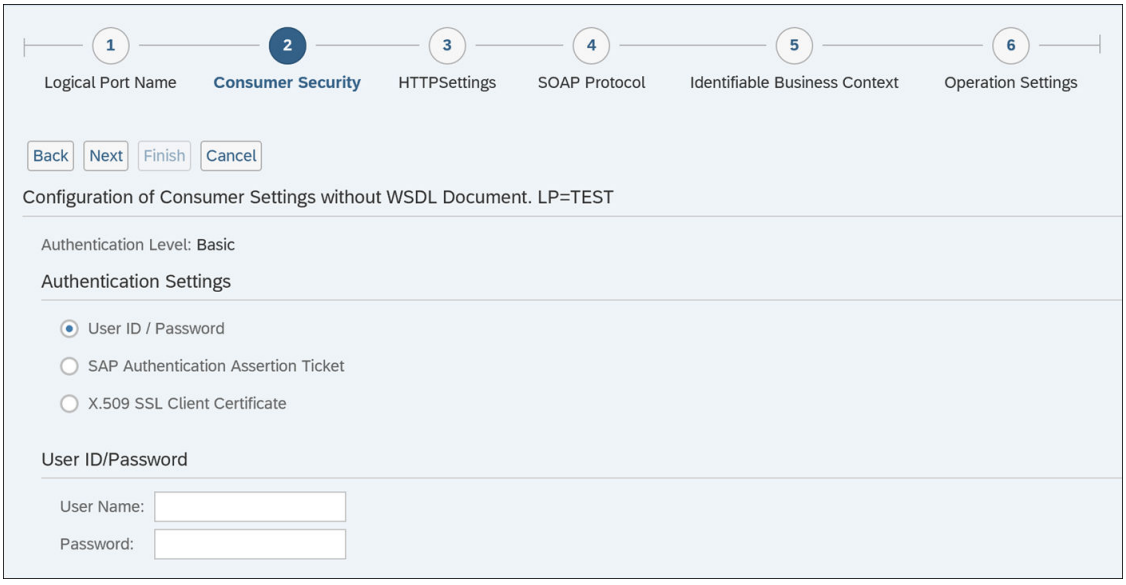


> ## Note
>
> Ensure that the logical port configurations correspond to the settings you made when setting up SAP Application Interface Framework as described in the attachments of the following SAP Notes:
>
> - SAP Note 2214857 for electronic invoices
> - SAP Note 2744568 for electronic delivery notes

5. On the *Consumer Security* tab, make authentication settings. Choose *Next*.

   The authentication settings depend on the authentication level of the communication between your SAP ERP or SAP S/4HANA system and SAP Cloud Integration. Proceed as follows:

   - If you use the basic authentication, select *User ID / Password*. Enter your user ID and password of your SAP Cloud Integration tenant that allows communication with your SAP S/4HANA or SAP ERP system.

   - If you use certificate-based authentication, select *X.509 SSL Client Certification*. Ensure that the required certificates are available in the `STRUST` transaction.

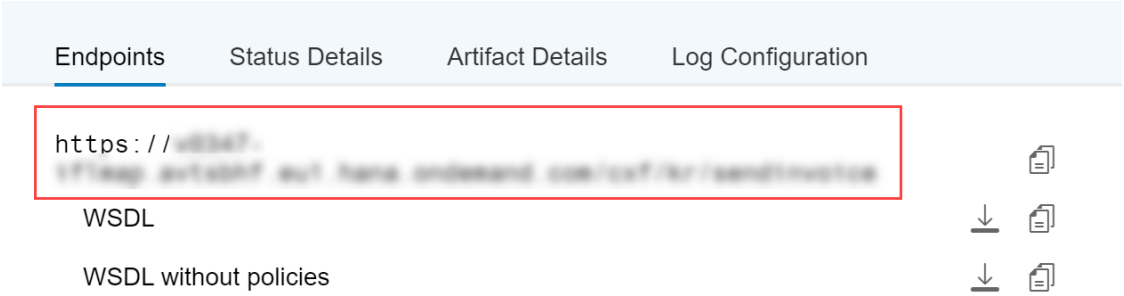
> ## Note
>
> If you do not see this option or cannot select it, check SAP Note 2368112 and SAP Note 510007.

6. On the *HTTP Settings* tab, select the *URL components* radio button and make the following settings:

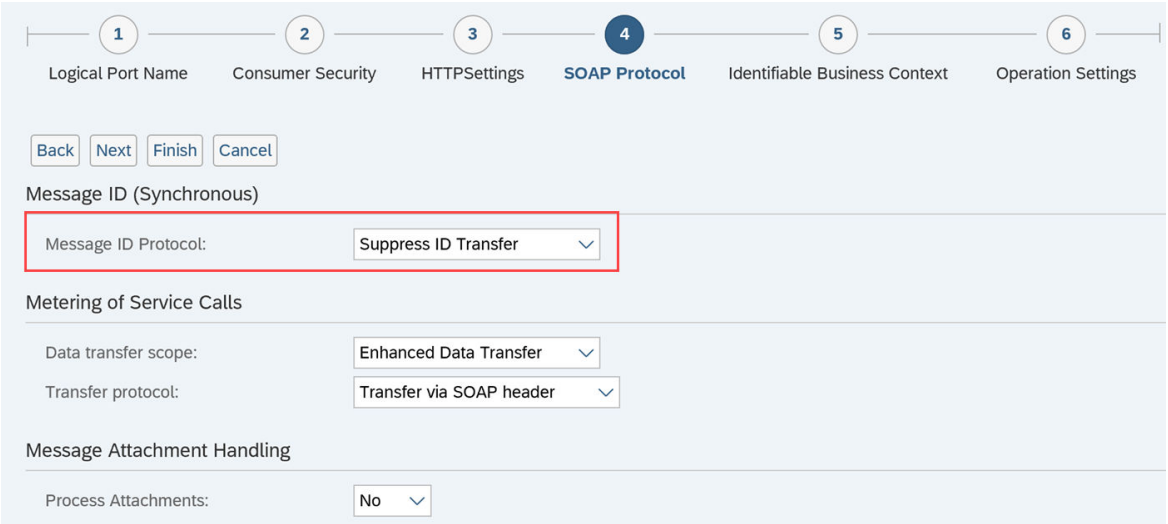
Setting	Remark
Protocol	Select *HTTPS*.
Host	Enter the host name of your SAP Cloud Integration tenant.
Port	Enter **443**, which is the standard port for the HTTPS protocol.
Path	Find the path of the related integration flow from your SAP Cloud Integration tenant.
Proxy	Enter the information about your company's network proxy.

You can find the host name and path for your SAP Cloud Integration tenant, as follows:

1. From the menu on the left, choose *Monitor*.
2. Select *Manage Integration Content* (All).
3. Search for the integration flow for the scenario you are configuring.
4. Find the host name and path from the endpoint URL on the *Endpoints* tab.
   The composition of an endpoint URL is **https://**`<host name>`**/**`<path>`.



7. On the *SOAP Protocol* tab, set the message ID protocol to *Suppress ID Transfer*.



8. No settings are required on the *Identifiable Business Context* tab. Choose *Next*.
9. No settings are required on the *Operation Settings* tab. Choose *Finish*.

> **Note**
>
> SAP Cloud Integration does not support WebService Pin for testing your configuration.
>
> You can set up an HTTP connection in transaction `SM59`. Maintain the host and port of your SAP Cloud Integration tenant and execute a connection test. In case of a successful connection, you receive an error with HTTP return code 500.

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