



Integration Guide | PUBLIC
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Greece Electronic Tax Register Books (e-Books): Setting Up SAP Integration Suite (SAP ERP, SAP S/4HANA) - Cloud Foundry Environment

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2 Introduction

You use SAP Integration Suite to establish the communication with external systems and transfer to them the electronic documents you have created using the *SAP Document and Reporting Compliance*. This document lists the required setup steps you perform in the SAP ERP or SAP S/4HANA system and the SAP Integration Suite tenant so that the integration between the systems works.

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

📘 Note

Although the service name SAP Integration Suite is used in the guide title and throughout the guide, this guide also applies to SAP Cloud Integration running in the Cloud Foundry environment. If you were onboarded before July 2020, the service you use is SAP Cloud Integration. The initial setup steps for the two services are different, while the integration flow settings and configuration steps in your back-end system are the same. See the Set Up Your Tenants section for their respective initial setup steps.

📘 Note

This document describes functionality that is provided by the Integration Package itself, that is, by the artifacts that are deployed in the SAP Integration Suite tenant. It may happen, however, that in the SAP back-end systems 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 back-end systems documentation and to the relevant tax authority information, respectively.

For the sake of simplicity in this guide, we mention SAP back-end systems when something refers to both SAP ERP or SAP S/4HANA.

3 Prerequisites

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

1. You have installed in the test and productive systems all necessary SAP Notes for the Document and Reporting Compliance Solution.
2. You have set up your tenant as follows:
 - If you have subscribed to Process Integration, perform all the initial setup steps described in [Initial Setup of SAP Cloud Integration in Cloud Foundry Environment](#).
 - If you have subscribed to Integration Suite, perform all the initial setup steps described in [Initial Setup](#).

📌 Note

SAP Document and Reporting Compliance requires the **Cloud Integration capability**. You need to activate this capability in the step **Provisioning the Capabilities**.

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 Integration Suite.

Inbound HTTP connections aren't required for Greece. Outbound HTTP connections are required, and are supported with specific, public certificates.

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. If there are 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 [Operations guide for SAP Cloud Integration](#).

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're using a client certificate, this must be signed by one of the root certificates supported by the load balancer. A self-signed certificate isn't suitable. For more information, see [Load Balancer Root Certificates Supported by SAP](#).

4.1.1 Retrieve and Save Public Certificates

Prerequisites

If you do not find any integration flows in your tenant then refer to [Copy Integration Flows \[page 12\]](#) and [Configure Integration Flows \[page 13\]](#).

Context

Find and save the public certificates from your SAP Integration Suite 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. Use the tenant URL you created as defined in the prerequisites of this document. The URL has the following format: `https://<tenant>.cfapps.<data center>.hana.ondemand.com`, where <tenant> corresponds to the dynamic part and is unique for each subaccount and <data center> corresponds to the data center you are using.
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.

4.1.2 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 Integration Suite.

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.

4.1.3 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 certificate. 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 Integration Suite

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

5.1 General Information

The package *SAP Document and Reporting Compliance: Electronic Tax Register Books for Greece* contains the following integration flows:

Integration Flows for Document and Reporting Compliance for Greece

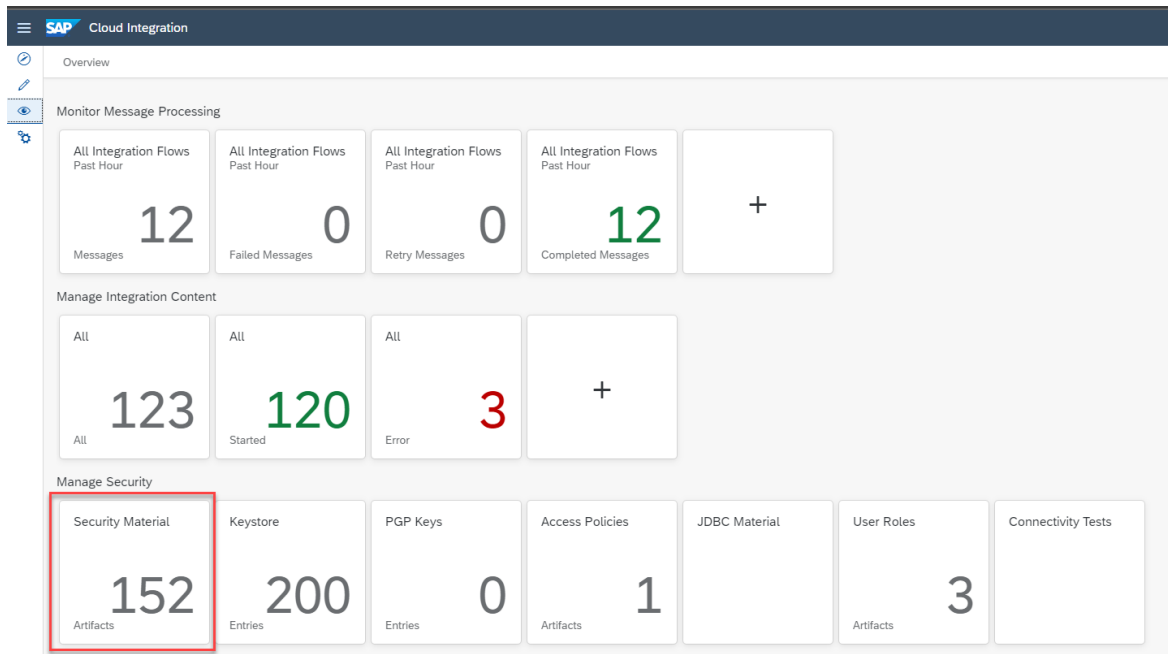
Integration Flow Name in WebUI	Project Name/Artifact Name
Greece Cancel Invoice	com.sap.GS.Greece.CancelInvoice
Greece Receive Documents	com.sap.GS.Greece.ReceiveInvoice
Greece Send Expense Classification	com.sap.GS.Greece.SendExpenseClassification
Greece Send Invoice	com.sap.GS.Greece.SendInvoice
Greece Send Income Classification	com.sap.GS.Greece.SendIncomeClassification
Greece Request VAT Information	com.sap.GS.Greece.RequestVATInfo

5.2 Deploy Credentials to Tenants

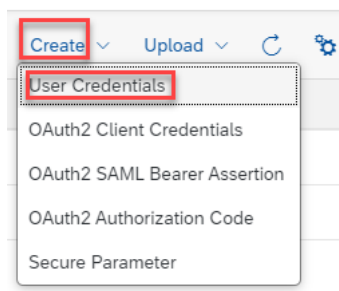
Procedure

Deploy the user ID and Subscription key that you've got from the tax authority (myDATA) to your SAP Integration Suite tenant.

- a. In your browser, go to the [Overview](#) tab and choose [Security Material](#).



b. Choose *Add* on the right corner and choose *User Credentials*.



c. Enter the name, username and password, and deploy them. There are two cases:

Add User Credentials

Name: *

Description:

Type: * ▼

User: *

Password:

Repeat Password:

[Deploy](#) [Cancel](#)

- You need to add a User Credentials for your company code. See details as follows:
 - Name has a specific format as follows:
 - `edoc_greece_myDATA_test_<VAT ID>` for the test environment.

- `edoc_greece_myDATA_prod_<VAT ID>` for the productive environment.
- Username and password are the User ID and the Subscription key that are received from myDATA.

Note

`<VAT ID>` needs to be replaced with the value of the company's VAT ID registered with myDATA. For example, "edoc_greece_myDATA_test_123456789" for the test environment.

- For companies that submit documents through an authorized accountant, you need to add another *User Credentials*. See details as follows:
 - The name format is the same as the above-mentioned format:
 - `edoc_greece_myDATA_test_<VAT ID>` for the test environment.
 - `edoc_greece_myDATA_prod_<VAT ID>` for the productive environment.
 - Username and password are the User ID and the Subscription key of the authorized accountant that are received from myDATA.

Note

`<VAT ID>` needs to be replaced with the value of the authorized accountant's VAT ID of the authorized accountant registered with myDATA.

Submission through the authorized accountant is only enabled for the integration flow of Greece Send Expense Classification. Other integration flows are still submitted through company's VAT ID.

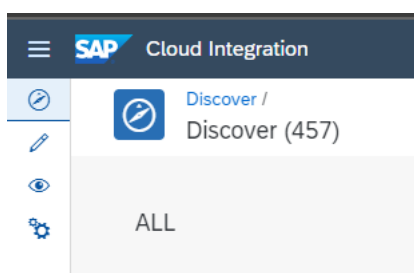
5.3 Copy Integration Flows

Context

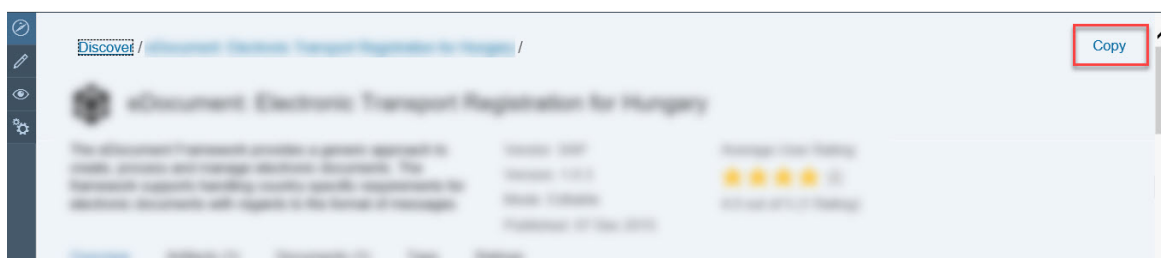
Copy all integration flows in the package *SAP Document and Reporting Compliance: Electronic Tax Register Books for Greece* to the target tenant as follows:

Procedure

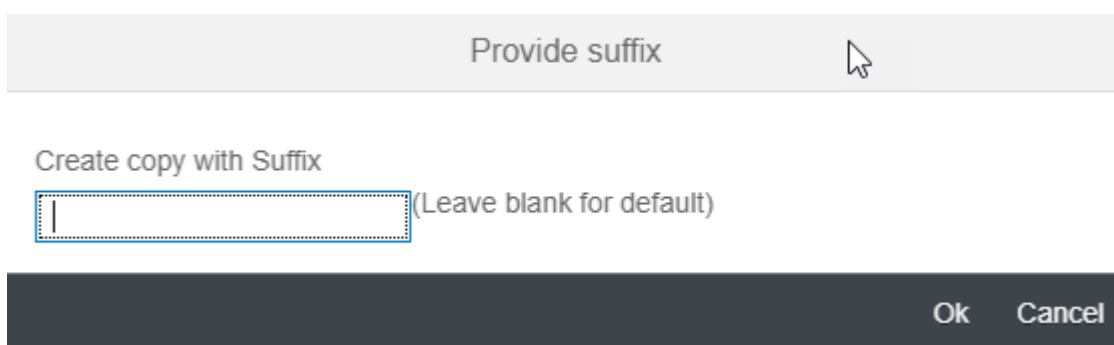
1. In your browser, go to the WebUI of the tenant (URL: `<Tenant URL>/itspaces/#shell/catalog`).
2. Choose **Discover** **All**.



3. Search for *SAP Document and Reporting Compliance: Electronic Tax Register Books for Greece*.
4. Select the Package and choose *Copy*.



5. In the *Provide suffix* dialog box, leave the field blank, and choose *Ok*.



5.4 Configure Integration Flows

Context

You configure the package that you've copied as described in [Copy Integration Flows \[page 12\]](#).

Procedure

1. Choose *Design* from the upper left corner of the page.
2. Click on the package that you copied from the original *SAP Document and Reporting Compliance: Electronic Tax Register Books for Greece* package.
3. Go to the *Artifacts* tab page.
4. Following are the *Artifacts* in the integration package *SAP Document and Reporting Compliance: Electronic Tax Register Books for Greece*:
 - Greece Cancel Invoice
 - Greece Receive Documents

- Greece Send Expense Classification
- Greece Send Invoice
- Greece Send Income Classification
- Greece Request VAT Information

Take Greece Send Invoices as an example, similar steps should be done for the other integration flows:

5. Choose **Actions** > **Configure** for the artifact you're configuring.



6. Choose **Configure** > **More** tab (in some versions it may be *Externalized Parameters*).

- Use the *Enable Logging* field for switching logging on and off:

Value	Description
YES	Enable logging of the request and response messages
NO	Disable logging of the request and response messages parameter to set up the integration package usage mode:

- Use the Mode.

Value	Description
TEST	To use the test system of the tax authority.
PROD	To use the productive (that is, legally binding) system of the tax authority.

Enter the URL in its respective parameters.

Configure "Greece Send Invoice"

Sender **More**

Type:	All Parameters
Enable Logging:	YES
Mode:	TEST
Receiver_PROD_URL:	
Receiver_TEST_URL:	https://mydataapidev.aade.gr/SendInvoices

There are specific URLs for both Test and Production as follows you need to enter for different integration flows.

- Find the following URLs for Test:

Specific URLs for Test

Integration Flows	URL
Greece Cancel Invoice	https://mydataapidev.aade.gr/CancelInvoice
Greece Receive Documents	https://mydataapidev.aade.gr/RequestDocs
Greece Send Expense Classification	https://mydataapidev.aade.gr/SendExpensesClassification
Greece Send Invoice	https://mydataapidev.aade.gr/SendInvoices
Greece Send Income Classification	https://mydataapidev.aade.gr/SendIncomeClassification
Greece Request VAT Information	https://mydataapidev.aade.gr/RequestVATInfo

- Find the following URLs for Production:

Specific URLs for Production

Integration Flows	URL
Greece Cancel Invoice	https://mydatapi.aade.gr/myDATA/CancelInvoice
Greece Receive Documents	https://mydatapi.aade.gr/myDATA/RequestDocs
Greece Send Expense Classification	https://mydatapi.aade.gr/myDATA/SendExpensesClassification
Greece Send Invoice	https://mydatapi.aade.gr/myDATA/SendInvoices

Integration Flows	URL
Greece Send Income Classification	https://mydatapi.aade.gr/myDATA/SendIncomeClassification
Greece Request VAT Information	https://mydatapi.aade.gr/myDATA/RequestVATInfo

Note

These service URLs are provided by the government and are subject to change.

Check the latest service URLs for Production at <https://www.aade.gr/mydata>.

7. Choose **Configure** > **Sender** tab.

- Use the `Address` parameter to set up the integration package address. Normally you don't have to change this field. In case you change the field, make sure to use the same address when configuring the logical ports in the next chapter.
- Use the `Authorization` parameter to configure the authorization type.

Value	Description
User Role	You want to use basic authentication (user/password).
Client Certificate	You want to use client certificate authentication.

- Use the `User Role` parameter to configure the role based on which the inbound authorization is checked. Choose **Select** to get a list of all available roles. The role `ESBMessaging.send` is provided by default.

Configure "Greece Send Invoice"

Sender More

Sender:

Adapter Type:

Connection

Address:

Authorization:

User Role:

8. Choose [Save](#) and [Deploy](#) to deploy it actively to server. Note down the URLs of the endpoints for each service.

ⓘ Note

Depending on the version of your tenant, after pressing these buttons, a warning message can appear. You can ignore these messages by choosing [Close](#). The first two warnings are related to the payload attachments; currently the invoice registration process doesn't support or require message attachments (for example, scanned copies of invoices) in any stage of processing and communication.

5.5 Create Logical Ports in SOAMANAGER

Required step for configuring the Integration Package for eDocument and SAP Integration Suite.

Context

You configure proxies that are needed to connect to the SAP Integration Suite tenant via logical ports. In test SAP back-end systems, the logical ports are configured to connect to the test tenant. In productive SAP back-end systems, the logical ports are configured to connect to the productive SAP Integration Suite tenant.

ⓘ Note

Depending on your release, the look-and-feel of the screens in your system may differ from the screenshots displayed below.

Procedure

1. In your SAP back-end system, go to the `SOAMANAGER` transaction and search for [Web Service Configuration](#).

Service Administration | Technical Administration | Logs and Traces | Management Connections | Services

Identifiable Business Context
Define Identifiable Business Contexts (IBCs)

Identifiable Business Context Reference
Define Identifiable Business Context references (IBC reference)

Design Time Cache
Display central design time cache

Web Service Configuration
Configure service definitions, consumer proxies and service groups

Simplified Web Service Configuration
Configure service definitions for Web service consumers with limited capabilities

Logon Data Management
Define logon data used by business scenario configuration

Pending Tasks
Process pending tasks generated by business scenario configuration

Local Integration Scenario Configuration
Configure multiple service definitions and service groups supporting change management

Logical Determination of Receiver using ServiceGroups
Define rules for determining receiver IBC reference during service group runtime

Logical Determination of Receiver, Sender, and Authentication using Consumer Factories
Define rules for determining receiver IBC, sender IBC reference and authentication method during consumer factory runtime

Web Service Isolation
Tool to isolate service definitions and consumer proxies

- Find the proxies for SAP Document and Reporting Compliance (eDocument) for Greece with search term ***edoc*gr***.

Search criteria

Object Type is All

Object Name contains

Maximum Number of Results: 100

Search Clear values Reset search criteria

Enter the search term here

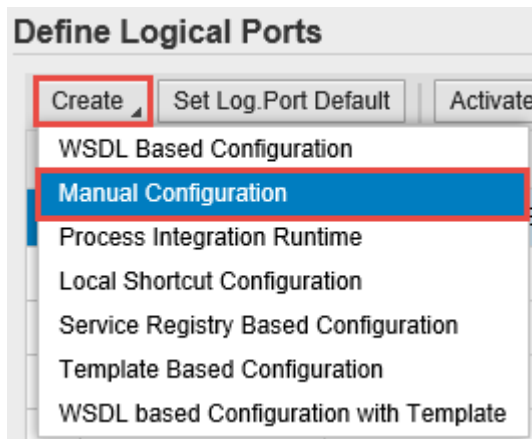
The following table lists the proxies and the logical port name, description, and path for each proxy.

List of Proxies, Logical Port Names, and Paths

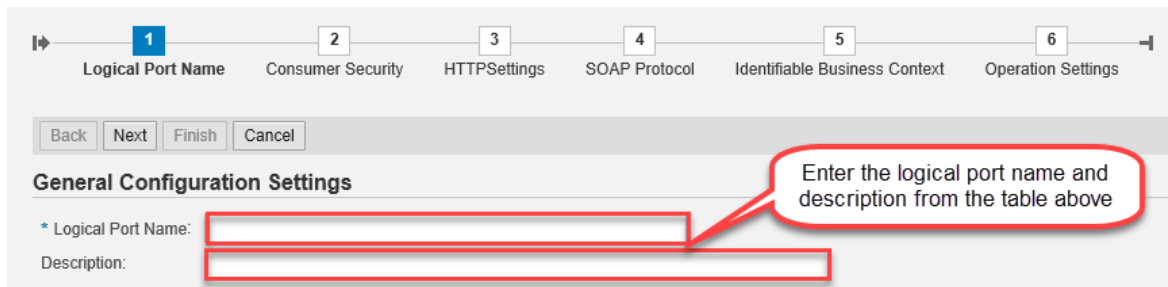
Proxy Name	Logical Port Name	Description	Path
CO_EDO_GR_CANCEL_INVOICE	EDO_GR_CANCEL_INVOICE	eDocument Greece – Cancel Invoice	/cxf/GreeceCancelInvoice
CO_EDO_GR_EXPENSE_CLASSIFICATION	EDO_GR_EXPENSE_CLASSIFICATION	eDocument Greece – Expense Classification	/cxf/GreeceSendExpenseClassification
CO_EDO_GR_REQUEST_DOCS	EDO_GR_REQUEST_DOCUMENTS	eDocument Greece – Pull Documents	/cxf/GreeceRequestDocuments
CO_EDO_GR_SEND_INVOICE	EDO_GR_SEND_INVOICE	eDocument Greece – Send Invoice	/cxf/GreeceSendInvoice

Proxy Name	Logical Port Name	Description	Path
CO_EDO_GR_IN-COME_CLASSIFICATIO	EDO_GR_INCOME_CLASSIFICATION	eDocument Greece - Income Classification	/cxf/GreeceSendIncome-Classification
CO_EDO_GR_RE-QUEST_VATINFO	EDO_GR_REQUEST_VAT-INFO	eDocument Greece – Request VAT Info	/cxf/GreeceRequestVA-TInfo

3. In the *Result List*, select a proxy from the list above and create a logical port for each proxy. Choose **► Create ► Manual Configuration ►**.



4. Enter the logical port name and a description.



5. The configuration you do in the *Consumer Security* tab in the *Configuration* screen depends on the security being used in the communication between the back-end system and SAP Integration Suite.

New Manual Configuration of Logical Port for Consumer Proxy ' [REDACTED]'

1 Logical Port Name 2 Consumer Security 3 HTTPSettings 4 SOAP Protocol 5 Identifiable Business Context 6 Operation Settings

Back Next Finish Cancel

Configuration of Consumer Settings without WSDL Document. LP= [REDACTED]

Authentication Level: Basic

Authentication Settings

User ID / Password
 SAP Authentication Assertion Ticket
 X.509 SSL Client Certificate

User ID/Password

User Name:
Password:

- If you use the basic authentication for *User Name*, enter the value for the **clientid** and for *Password*, enter the value for **clientsecret**. You've created these values for your service instance in SAP Integration Suite. See [Creating Service Instances](#).

1 Logical Port Name 2 Consumer Security 3 HTTPSettings 4 SOAP Protocol 5 Identifiable Business Context 6 Operation Settings

Back Next Finish Cancel

Configuration of Consumer Settings without WSDL Document. [REDACTED]

Authentication Level: Basic

Authentication Settings

User ID / Password
 SAP Authentication Assertion Ticket
 X.509 SSL Client Certificate

X.509 SSL Client PSE

SSL Client PSE of transaction STRUST:

Enter the name of the PSE created in STRUST

- If you use certificate-based authentication, select *X.509 SSL Client Certification* and choose the certificate you've uploaded to `STRUST`. You must configure this certificate in SAP Integration Suite too. For that you create a service instance using the required `grant_type`. You create the service key using the certificate uploaded to the `STRUST`. For more information, see [Defining a Service Key for the Instance in the Cloud Foundry Environment](#)

6. On the *HTTP Settings* tab, make the following entries:

1 Logical Port Name 2 Consumer Security **3 HTTP Settings** 4 SOAP Protocol 5 Identifiable Business Context 6 Operation Settings

Back Next **Finish** Cancel

URL Access Path

URL **URL components**

* Protocol: **HTTPS** *Look Up the SAP Cloud Integration*

* Host: **443**

Port: **443**

* Path: _____ *For each logical port, enter the path from the table above*

Logon Language: **Language of User Context**

Proxy

Name of Proxy Host: _____

Port Number of Proxy Host: _____

User Name for Proxy Access: _____

Password of Proxy User: _____

Enter the proxy settings of your company's network

Transport Binding

Make Local Call: **No Call in Local System**

* Transport Binding Type: **SOAP 1.1**

Maximum Wait for WS Consumer: **0**

Optimized XML Transfer: **None**

Compress HTTP Message: **Inactive**

Compress Response: **True**

Port 443 is the standard port for the HTTPS protocol.

To find the Host, go to SAP Integration Suite Web UI and under Managed Integration Content, go to **Monitor > All**. Use the search to find your integration flow as in the screenshot below:

Overview / Manage Integration Content

Integration Content (489) Filter by Name or ID [Search Icon] [Refresh Icon] [Settings Icon]

1 Go to Operations View

2 Enter the integration flow name as search term

3 Copy the host name from here (the part between https:// and /cxfl)

Deployed On: Feb 11, 2021, 11:49:57
 Deployed By: _____
 ID: _____
 Version: 1.0.3
 Package: _____

Endpoints Status Details Artifact Details Log Configuration

https://.../cxfl...

Status Details

Note

The entries for the proxy fields depend on your company's network settings. The proxy server is needed to enable the connection to the internet through the firewall.

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

The screenshot shows a configuration wizard with six steps: 1. Logical Port Name, 2. Consumer Security, 3. HTTPSettings, 4. SOAP Protocol (active), 5. Identifiable Business Context, and 6. Operation Settings. Below the steps are buttons for Back, Next, Finish, and Cancel. The 'Message ID (Synchronous)' section has 'Message ID Protocol' set to 'Suppress ID Transfer'. The 'Metering of Service Calls' section has 'Data transfer scope' set to 'Enhanced Data Transfer' and 'Transfer protocol' set to 'Transfer via SOAP header'. The 'Message Attachment Handling' section has 'Process Attachments' set to 'No'.

8. No settings are required in the *Identifiable Business Context* and *Operation Settings* tabs. Just select **Next** **Finish**.

To check if the connection works, choose Ping Web Service. If the connection works, the system shows the following result (HTTP 405 Service Ping ERROR: Method Not Allowed).

You can set up an HTTP connection in the `SM59` transaction. Maintain a host and a port of SAP Integration Suite service and execute a connection test. If there is a successful connection, you receive an error with HTTP return code 500.

9. Remember to create logical ports for each proxy and to execute the following steps in the SAP back-end systems, see SAP Note [2683318](#) for more information.
 - Define the SOA service names and assign the logical ports to the combination of a SOA service name and a company code in `EDOSOASERV` view.
 - Assign the SOA service names you created before to an interface ID in `EDOINTV` view

6 Test the Integration

Describes the steps to test the integration of SAP Document and Reporting Compliance with the integration scenario from SAP Integration Suite.

Context

The best way to test if the integration works is to create and submit an eDocument from SAP backend system and see if that reaches the destination system, typically the tax authority's system.

Procedure



1. In the back-end system, go to the *eDocument Cockpit* (EDOC_COCKPIT) transaction, in the relevant process.
2. Select an eDocument and check the status of the eDocument in the Cockpit and perform the following actions, accordingly:
 - a. If the status of the eDocument is *Created*, the eDocument was created but not submitted yet. In this case, select it and choose *Submit*. This action triggers the creation of the XML and the subsequent communication with SAP Integration Suite.
 - a. If the status is green or yellow, but not *Created*, the communication with SAP Integration Suite was triggered and was probably successful. You can double-check if the message went through on the SAP Integration Suite tenant. Alternatively, you can use a trace from the *SRT_UTIL* transaction to look at the XMLs transmitted via web services from the SAP back-end systems.
 - b. If the status is red, an error happened during the submission of the eDocument. Select the *Interface Field* to be directed to the Application Interface Platform (AIF) where you can check the log. Any communication errors are displayed there.
3. If the eDocument is successfully submitted, the status changes to *Accepted by Tax Authority*, then the connection to tax authority has been correctly set up.

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