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Spain Electronic Invoicing: Setting Up SAP Cloud Platform Integration (SAP S/4HANA Cloud) - Cloud Foundry

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2 Introduction

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

The setup steps are typically done by an SAP Cloud Platform Integration consulting team, which is responsible for configuring the SAP S/4HANA Cloud tenant and the connection with SAP Cloud Platform Integration. This team may be also responsible for maintaining the integration content and certificates/credentials on the SAP Cloud Platform 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 Platform Integration tenant. It may happen, however, that in the SAP S/4HANA Cloud tenant 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 S/4HANA Cloud documentation and to the relevant tax authority information, respectively.

3 Prerequisites

3.1 Registration at FACe

You must complete the registration at the General Point of Entry of Electronic Invoices of the General State Administration (FACe) and the following data must be available:

- Certificate used for digital signature (private key and password)
- Public certificate to verify the SOAP response deployed on SAP Cloud Platform Integration tenant's keystore. Follow the steps below to generate the public certificate:
 1. Download the appropriate certificate from the FACe Portal.
At the time of publishing this document, the relevant link is <http://administracionelectronica.gob.es/ctt/face/descargas#.VOsMYvmG-4I> 

2. Search for the certificate NUEVO Certificado para WS as shown in the example below:

FACe - Punto General de Entrada de Facturas Electrónicas de la AGE



General Info. Adicional **Área Descargas** Indicadores

NOTA : Está accediendo al contenido **público** del área de Descargas de esta solución. Acceda a través de la **red SARA** con un **usuario registrado de las Administraciones Públicas** y podrá encontrar aquí disponibles más contenidos específicos para las Administraciones Públicas.

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Presentación de FACe

Instrumento jurídico para el consumo del servicio

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Kit de bienvenida

Documentación para usuarios - Organismos

Documentación para usuarios - Proveedores

Documentación para integradores

NUEVO Certificado para WS - PRUEBAS

Se publica el nuevo certificado para el entorno de Pruebas con el que FACe firmará las respuestas SOAP. Dicho certificado entrará en vigor el 18 de Enero de 2019 y estará vigente hasta Diciembre de 2021

↓ [SELLO ENTIDAD SGAD PRUEBAS crt \(3 KB · TXT\)](#)

Fecha de modificación: 14/01/2019

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↓ [SELLO DE ENTIDAD SGAD crt \(2 KB · TXT\)](#)

Fecha de modificación: 14/01/2019

i Note

The screenshot is from June, 2020. SAP cannot guarantee that the layout of the page and the name of the certificate remain constant. SAP is not responsible for the content of external web pages.

3. Copy the content of the certificate into a text file and save it with **.cer** extension.



i Note

The screenshot is from June, 2020. SAP cannot guarantee that the layout of the page and the name of the certificate remain constant. SAP is not responsible for the content of external web pages.

- Public certificate “*.redsara.es” to communicate with FACE.
These certificates can be obtained from the respective contacts from FACE.

4 Configuration Steps in SAP Cloud Platform Integration

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

4.1 General Information

The package **SAP Document Compliance: Electronic Invoicing of Public Entities for Spain** contains the following iFlows:

iFlows for Spain Electronic Invoicing

iFlow Name in WebUI	Project Name/Artifact Name
<i>Send Invoice</i>	com.sap.GS.Spain.SendInvoice
<i>Get Status</i>	com.sap.GS.Spain.GetStatus
<i>Cancel Invoice</i>	com.sap.GS.Spain.CancellInvoice

4.2 Deploy Certificates and Credentials

You deploy the certificates and the credentials to the SAP Cloud Platform Integration tenants.

1. Deploy the certificate (as private key with alias) in the tenants JAVA_KEYSTORE.
To allow the iFlows to be updated with minimal adaptation effort, use the following alias for the private key:
Private key alias: **spainsignaturekey**

i Note

If you deploy the private key with another alias, you must configure the alias name in the iFlow parameters. For information about how to configure the alias name, see [Configure and Deploy Integration Flows \[page 10\]](#).

2. Deploy the public certificate that you generated in the [Registration at FACe \[page 5\]](#) section into the tenants JAVA_KEYSTORE. Deploy the public certificate for staging in the TEST tenants JAVA_KEYSTORE and the public certificate for production in the PRODUCTION tenants JAVA_KEYSTORE.

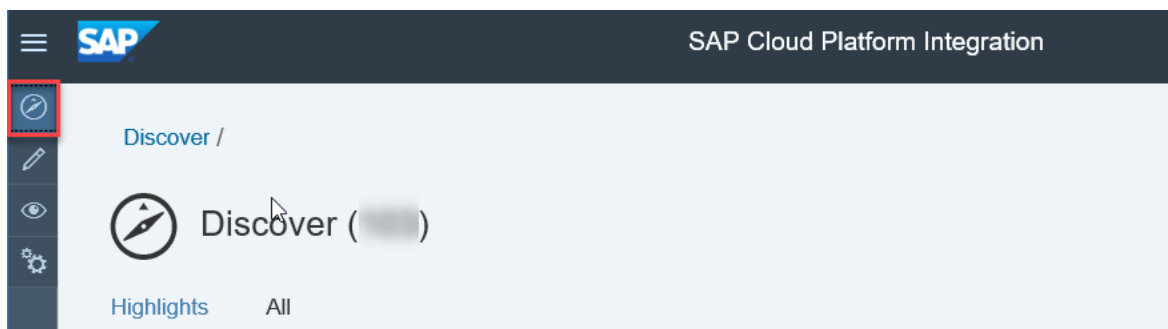
4.3 Copy Published Package

Context

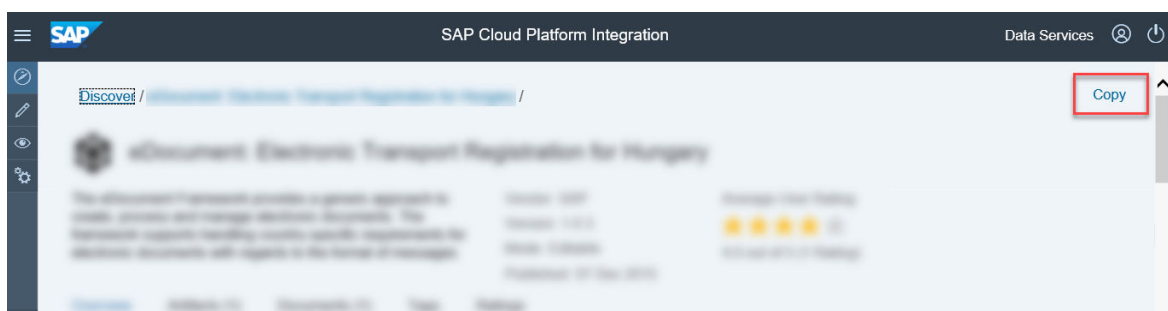
Copy all iFlows in the package *SAP Document Compliance: Electronic Invoicing of Public Entities for Spain* to the target tenant as follows:

Procedure

1. In your browser, go to the WebUI of the tenant (URL: <Tenant URL>/itspaces/#shell/catalog).
2. In the *Discover* section of your tenant, select the package **SAP Document Compliance: Electronic Invoicing of Public Entities for Spain**.



3. Select the package and choose *Copy*.



4.4 Configure and Deploy Integration Flows

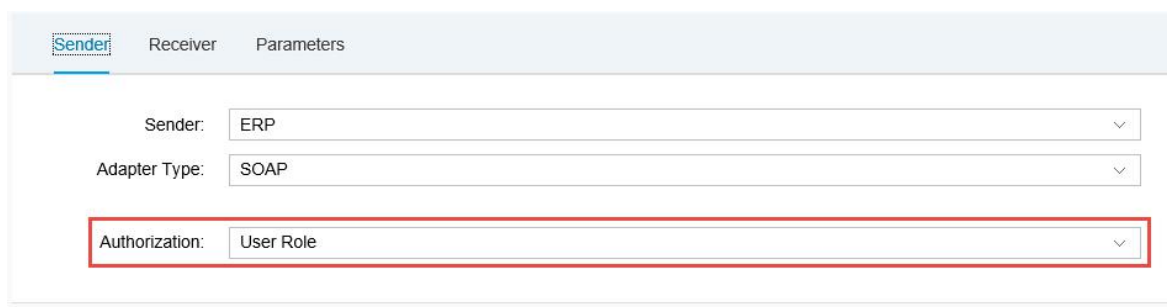
Context

You configure the package that you have copied as described in [Copy Published Package \[page 9\]](#). For each iFlow, you must maintain several parameters as described below.

Procedure



1. Choose *Design* from the upper left corner of the page.
2. Click on the *SAP Document Compliance: Electronic Invoicing of Public Entities for Spain* package.
3. Go to the *Artifacts* tab page.
4. Choose **► Actions ► Configure ▾** for the artifact you are configuring.
5. Choose the *Sender* tab and make settings as follows:
 - *Authorization* field: Select **User Role** or **Client Certificate**
 - *Client Certificate* only: Upload your client certificates. *Subject DN* and *Issuer DN* are filled from the certificate information.

See the following example:



The screenshot shows the configuration interface for the 'Sender' tab. It includes three dropdown menus: 'Sender' set to 'ERP', 'Adapter Type' set to 'SOAP', and 'Authorization' set to 'User Role'. The 'Authorization' dropdown is highlighted with a red border.

6. Choose the *Receiver* tab and make settings as follows:
 - Maintain the receiver URL in the *Address* field:

Environment	URL
TEST	https://se-face-webservice.redsara.es/facturasspp 
PRODUCTION	https://webservice.face.gob.es/facturasspp 

- *Private Key Alias for Signing* field: The default alias for the private key is **spainsignaturekey**. If you deployed the private key with a different alias, definit it here.

See the following example:

The screenshot shows the configuration interface for an iFlow. It has three tabs: 'Sender', 'Receiver', and 'Parameters'. The 'Receiver' tab is active. The configuration includes:

- Receiver: FACe
- Adapter Type: SOAP
- CONNECTION: Address: https://example.com/sspp
- WS-SECURITY: WS-Security Configuration: Via Manual Configuration in Channel; WS-Security Type: Sign Message
- Private Key Alias for...: spainsignaturekey

7. Choose the *Parameters* tab and make settings as follows:

Note

The iFlows *Get Status* and *Cancel Invoice* do not have the *Parameters* tab page. You make the settings in this step only for the *Send Invoice* iFlow.

- *Correo* field: Enter the e-mail ID for all communications with FACe.
- The *Send Invoice* iFlow supports both the 3.2 and 3.2.2 version of the XML file, depending on which version you use, enter data in the fields below as follows:

Field	Value for 3.2 Version	Value for 3.2.2 Version
<i>responseNamespace</i>	http://www.sap.com/eDocument/Spain/SendInvoice/v1.1	http://www.sap.com/eDocument/Spain/SendInvoice/v1.2
<i>Signing_Namespace</i>	http://www.facturae.es/Facturae/2009/v3.2/Facturae	http://www.facturae.gob.es/formato/Versiones/Facturaev3_2_2.xml

8. Choose *Save* and *Deploy* to deploy it actively to server. Note down the URLs of the endpoints for each service. Provide the endpoint URLs for FACe in the externalized parameters of the iFlows for the test and productive tenants.

5 Configuration Steps for SAP S/4HANA Cloud

The following sections tell you the necessary configuration you do in SAP S/4HANA Cloud.

5.1 Configure Communication System

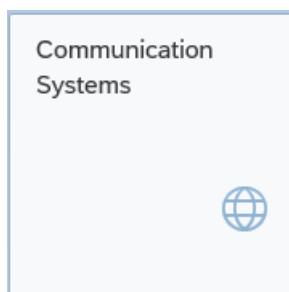
Create a communication system that represents your SAP Cloud Platform Integration tenant.

Prerequisites

- Live SAP Cloud Platform Integration test or productive tenant must be available.
- Communication systems and communication arrangements are not transportable. Configure them in both your quality and production systems.
- The SAP S/4HANA Cloud user, who configures communication systems and communication arrangements, must be assigned a business role with the business catalog `SAP_BCR_CORE_COM` (*Communication Management*) for accessing communication management apps.

Procedure

1. Log in to your S/4HANA Cloud tenant.
2. Find and launch the *Communication Systems* app. Choose *New*.



A *New Communication System* dialog box appears.

3. Create a system ID and give it a descriptive name.

For example, if the host name of your SAP Cloud Platform Integration tenant is `v1234-tmn.avt.eu1.hana.ondemand.com`, you can use `EDOC_v1234` as the system ID.

New Communication System

*System ID:

*System Name:

Create Cancel

4. Choose *Create*.

An editing screen for the communication system appears.

5. In the *Technical Data* section, enter the host name and HTTPS port of your SAP Cloud Platform Integration tenant.

You can find the host name for your SAP Cloud Platform 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 from the *Endpoints* tab.


The composition of an endpoint URL is **https://<host name>/<path>**.



Endpoints
Status Details
Artifact Details
Log Configuration



```
https://v1234-
tmn.avt.eu1.hana.ondemand.com/soap/servlet/wsdl
```

WSDL

WSDL without policies



See the following example:

EDOC_V1234

Changed By: administrator John Editing Status: Draft
 Changed On: 08.10.2018, 12:13

General Data

*System ID: Notes:

*System Name:

Technical Data

General

*Host Name: UI Host Name:

Logical System: Business System:

HTTPS Port: Use Cloud Connector:

6. In the *User for Outbound Communication* section, choose +.

The screenshot shows a configuration page with the following sections:

- Contact Information:** Includes input fields for Contact Person Name, E-Mail, and Phone Number.
- OAuth 2.0 Identity Provider:** Includes an 'Enabled' checkbox.
- User for Inbound Communication:** A table with columns 'Authentication Method' and 'User Name'. The current entry shows 'No data' in the 'User Name' column. A '+' icon is visible to the right of the section header.
- User for Outbound Communication:** A table with columns 'Authentication Method' and 'User Name/Certificate/Client ID'. The current entry shows 'No data' in the 'User Name/Certificate/Client ID' column. A '+' icon is highlighted with a red box to the right of the section header.

7. Select an authentication method, which is used to connect to your SAP Cloud Platform Integration tenant. Proceed as follows:

The 'New Outbound User' dialog box is shown with the following fields and options:

- *Authentication Method:** A dropdown menu is open, showing options: 'User Name and Password' (selected), 'SSL Client Certificate', 'OAuth 1.0', 'OAuth 2.0', and 'None'.
- *User Name:** A text input field.
- *Password:** A text input field.

Buttons for 'Cancel' and 'Create' are visible at the bottom right of the dialog.

- If you select the authentication method *User Name and Password*, for *User Name* enter the value for the **clientid** and for *Password*, the value for the **clientsecret**. You create these values for your service instance in SAP Cloud Platform Integration. For more information, see [Creating Service Instances](#).

The 'New Outbound User' dialog box is shown with the following fields and options:

- *Authentication Method:** A dropdown menu is closed, showing 'User Name and Password'.
- *User Name:** A text input field.
- *Password:** A text input field.

Buttons for 'Create' and 'Cancel' are visible at the bottom right of the dialog.

- If you select the authentication method *SSL Client Certificate*, select the *Default Client Certificate* type and choose *Create*. You must configure this certificate in SAP Cloud Platform Integration too. For that you create a service instance using the required *grant_type*. You create the service key using the certificate uploaded to the SAP S/4HANA Cloud. For more information, see [Defining a Service Key for the Instance in the Cloud Foundry Environment](#).

The screenshot shows a dialog box titled "New Outbound User". It contains two dropdown menus: "Authentication Method" with the value "SSL Client Certificate" and "Certificate Type" with the value "Default Client Certificate". At the bottom right, there are two buttons: "Create" (highlighted in blue) and "Cancel".

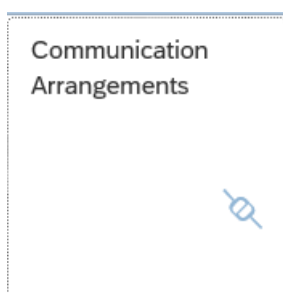
8. Choose *Save*.

5.2 Configure Communication Arrangement

Configuration steps for SAP S/4HANA Cloud Communication Arrangement.

Procedure

1. Login to your S/4HANA Cloud tenant with the Cloud User.
2. Find and launch the application *Communication Arrangements*.



3. Choose *New*. In the new pop-up window, enter the scenario *SAP_COM_0419* (which is the one designated for communication with the tax authority via SAP Cloud Platform Integration package) and an *Arrangement Name*. For arrangement name, it is recommended to choose a name like *SAP_COM_0419_<name of SAP Cloud Platform Integration tenant>*, for example, *SAP_COM_0419_v1234* for tenant host name beginning with *v1234-tmn*.

New Communication Arrangement

*Scenario:

Arrangement Name:

Create Cancel

4. Choose *Create*.
5. In the new window, choose the communication system created in the previous step (for example, EDOC_V1234) and the authentication method, relevant to the communication system.
 - If the authentication is by User ID, then select *User Name and Password* from the *Outbound Communication* list.

Common Data

Arrangement Name:

*Communication System: [Display](#)

Own System:

Outbound Communication [Download](#) [Supported Authentication Methods](#)

*User Name:

Authentication Method:

- If the authentication method is Default Client Certificate, download the certificate here and upload it to SAP Cloud Platform Integration.

Common Data

Arrangement Name:

*Communication System: [Display](#)

Own System:

Outbound Communication [Download](#) [Supported Authentication Methods](#)

*Certificate: [Display](#)

Authentication Method:

6. Scroll down and enter the path part for your integration flow URL for all outbound services.

Outbound Services

▼ Spain invoice cancel services version 1.1 [Download WSDL](#) [Check Connection](#)

Service Status: Active

Application Protocol: SOAP

Port:

Path:

Service URL:

▼ Spain eInvoice get status service version 1.1 Download WSDL Check Connection

Service Status: Active

Application Protocol: SOAP

Port:

Path:

Service URL:

▼ Spain eInvoice send invoice service version 1.1 Download WSDL Check Connection

Service Status: Active

Application Protocol: SOAP

Port:

Path:

Service URL:

7. Choose [Save](#).

6 Testing the Communication

Context

To test the communication, we recommend that you create and send an eDocument from SAP S/4HANA Cloud. The way you do this depends on how the system is configured to generate and send eDocuments. Follow the steps described below.

Procedure

1. Create a relevant document for eDocument for Spain (for example, an invoice).

i Note

If the system is configured to generate an eDocument for the selected document type, an instance of the eDocument will be created as soon as the document is posted (for example, when you save a billing document).



2. Go to the *eDocument Cockpit* app.
3. From the *Result Overview*, select the relevant process for Spain.
4. Select the eDocument and choose *Submit* to trigger the communication with SAP Cloud Platform Integration. The system displays the eDocuments that match the search on the right side of the Cockpit.
5. From the list of eDocument displayed, find the one that you just created and check the following:
 - You can double-check if the message went through on the SAP Cloud Platform Integration tenant
 - You can double-click on the *Interface Message GUID* field to navigate to AIF and look at the log. Communication errors will be displayed there.

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