



User Guide | PUBLIC  
2022-03-18

# Spain Electronic Invoicing: Setting Up SAP Cloud Integration (SAP S4HANA Cloud) - Cloud Foundry environment

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## 2 Introduction

You use SAP Integration Suite to establish the communication with external systems with whom you want to exchange electronic documents created with *SAP Document and Reporting Compliance*. This document describes the setup steps that you must perform in your SAP S/4HANA Cloud tenant and 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 S/4HANA Cloud tenant 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.

### i 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 **Prerequisites** section for their respective initial setup steps.

### 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 Integration Suite 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

Before you start with the activities described in this document, ensure that 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 in Cloud Foundry Environment](#).
- If you have subscribed to Integration Suite, perform all the initial setup steps described in [Initial Setup](#).

## i Note

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

## 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 Integration Suite 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#VOsMYmG-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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**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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Se publica el nuevo certificado para el entorno de Producción con el que FACe firmará las respuestas SOAP. Dicho certificado entrará en vigor el 18 de Enero de 2019 y estará vigente hasta Marzo de 2020.

↓ [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 Integration Suite

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

## 4.1 General Information

The package *SAP Document and Reporting Compliance: Electronic Invoicing of Public Entities for Spain* contains the following integration flows:

Integration Flows for Spain Electronic Invoicing

Integration Flow Name in WebUI	Project Name/Artifact Name
<i>Spain Electronic Invoicing of Public Entities - Send Invoice</i>	com.sap.GS.Spain.SendInvoice
<i>Spain Electronic Invoicing of Public Entities - Get Status</i>	com.sap.GS.Spain.GetStatus
<i>Spain Electronic Invoicing of Public Entities - Cancel Invoice</i>	com.sap.GS.Spain.CancelInvoice

## 4.2 Deploy Certificates and Credentials

You deploy the certificates and the credentials to the SAP Integration Suite tenants.

1. Deploy the certificate (as private key with alias) in the tenants JAVA\_KEYSTORE.  
To allow the integration flows 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 integration flow parameters. For information about how to configure the alias name, see [Configure and Deploy Integration Flows \[page 10\]](#).
- From version 1.1.8 onwards, the dynamic private key *Alias* is available, that is, you can choose to use an alias in the form of **spainsignaturekey\_XXXXX**, where **spainsignaturekey** will be the suffix, and **XXXXX** will be your company tax ID. If you choose to use the dynamic private key *Alias*, the system will concatenate the suffix and will extract your company tax ID from the header of the XML document.

2. Deploy the public certificate that you generated in the 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.

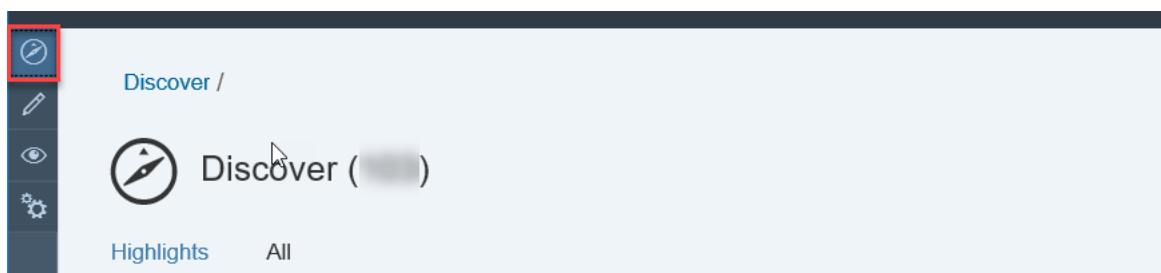
## 4.3 Copy Published Package

### Context

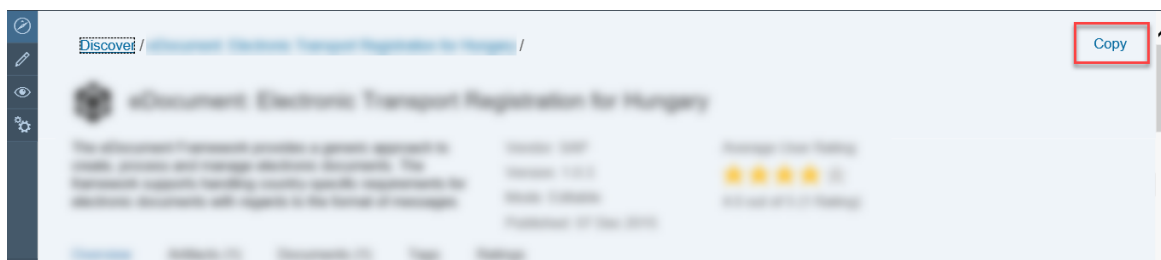
Copy all integration flows in the package *SAP Document and Reporting Compliance: Electronic Invoicing of Public Entities for Spain* to the target tenant as follows:

### 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 and Reporting Compliance: Electronic Invoicing of Public Entities for Spain*.



3. Select the package and choose *Copy*.



## 4.4 Configure and Deploy Integration Flows

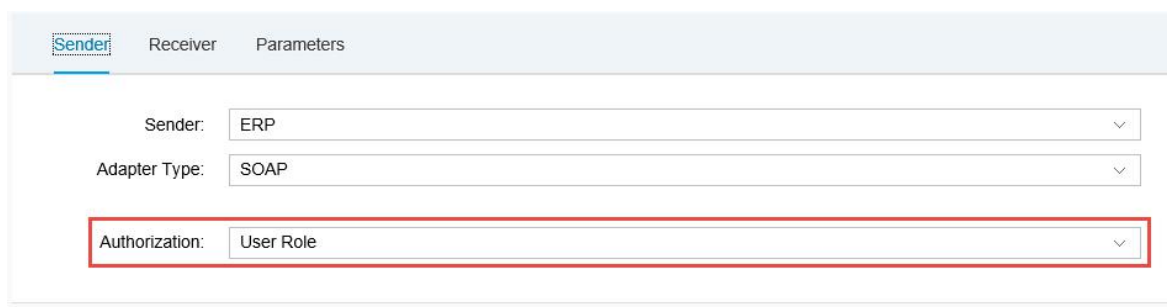
### Context

You configure the package that you have copied as described in [Copy Published Package \[page 9\]](#). For each integration flow, 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 and Reporting 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 tabs: 'Sender', 'Receiver', and 'Parameters'. The 'Sender' tab is active. Below the tabs, there are 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	<a href="https://se-face-webservice.redsara.es/facturasspp">https://se-face-webservice.redsara.es/facturasspp</a> 
PRODUCTION	<a href="https://webservice.face.gob.es/facturasspp">https://webservice.face.gob.es/facturasspp</a> 

- *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 for a Receiver in the SAP system. 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 integration flows *Get Status* and *Cancel Invoice* do not have the *Parameters* tab page. You make the settings in this step only for the *Send Invoice* integration flow.

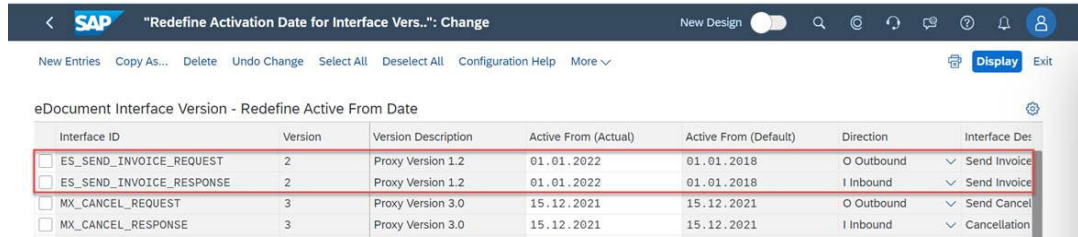
- *Correo* field: Enter the e-mail ID for all communications with FACE.
- The *Send Invoice* integration flow supports both the 3.2 and 3.2.2 version of the XML file, depending on which version you use, enter data in the fields below as follows:

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

To switch from Facturae v3.2 (default version) to v3.2.2, make settings as follows:

1. Click on the *Manage Your Solution* tile in the Business Process Configuration and ensure that the local version is set to *Spain*.
2. Click on *Configure Your Solution*.
3. In the Application section, choose *Application Platform and Infrastructure* and in the Sub Application section, choose *General Settings for eDocuments* under Item Name.
4. Configure Step Name *Redefine Activation Date for Interface Version* with SSCUI ID 103657 (view EDOINTVERSCUSTV).
5. Enter the date of activation in *Active From (Actual)* for the *Interface IDs* of **ES\_SEND\_INVOICE\_REQUEST** and **ES\_SEND\_INVOICE\_RESPONSE** with **Proxy Version 1.2**.

See the following example:



The screenshot shows the SAP Fiori 'Redefine Activation Date for Interface Vers...': Change' screen. It displays a table with the following data:

Interface ID	Version	Version Description	Active From (Actual)	Active From (Default)	Direction	Interface Det.
<input type="checkbox"/> ES_SEND_INVOICE_REQUEST	2	Proxy Version 1.2	01.01.2022	01.01.2018	O Outbound	Send Invoice
<input type="checkbox"/> ES_SEND_INVOICE_RESPONSE	2	Proxy Version 1.2	01.01.2022	01.01.2018	I Inbound	Send Invoice
<input type="checkbox"/> MX_CANCEL_REQUEST	3	Proxy Version 3.0	15.12.2021	15.12.2021	O Outbound	Send Cancel
<input type="checkbox"/> MX_CANCEL_RESPONSE	3	Proxy Version 3.0	15.12.2021	15.12.2021	I Inbound	Cancellation

6. If you want to disable Facturae v3.2.2, edit *Active From (Actual)* to **12/31/9999**.

- In the *addTaxidtoKeyAlias* field, enter **YES** if you want to use the dynamic private key alias, then update the *keyAliasSuffix* field with the name that matches the name that you have defined in section . The system will concatenate the *keyAliasSuffix* field with the tax ID of your company automatically. By default, the *keyAliasSuffix* field is set to **NO**.

Sender    Receiver    **More**

Type:

addTaxidtoKeyAlias:

correo:

KeyAliasSuffix:

responseNamespace:

Signing\_Namespace:

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 integration flows 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 Integration Suite tenant.

### Prerequisites

- Live SAP Integration Suite 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 Integration Suite 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 Integration Suite tenant.

You can find the host name for your SAP Integration Suite 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-  
v1234-tmn.avt.eu1.hana.ondemand.com/soap/sa/soapdefinitions

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' for both.
- User for Outbound Communication:** A table with columns 'Authentication Method' and 'User Name/Certificate/Client ID'. The current entry shows 'No data' for both. A red box highlights a '+' icon in the top right corner of this section.

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

The 'New Outbound User' dialog box is shown with the following fields and a dropdown menu:

- \*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.

- 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 Integration Suite. For more information, see [Creating Service Instances](#).

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

- \*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.

- 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 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 SAP S/4HANA Cloud. For more information, see [Defining a Service Key for the Instance in the Cloud Foundry Environment](#).

**New Outbound User**

\*Authentication Method: SSL Client Certificate ▼

Certificate Type: Default Client Certificate ▼

Create Cancel

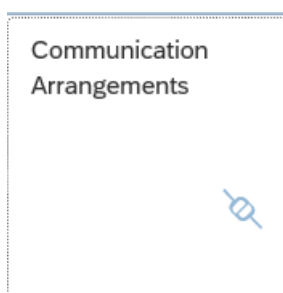
8. Choose *Save*.

## 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 Integration Suite package) and an *Arrangement Name*. For arrangement name, it is recommended to choose a name like `SAP_COM_0419_<name of SAP Integration Suite tenant>`, for example, `SAP_COM_0419_v1234` for tenant host name beginning with `v1234-tmn`.

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.

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

6. Enter the path part for your integration flow URL for all outbound services.



# 6 Testing the Communication

## Context

To test the communication, we recommend that you create and send an electronic document 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 Spain (for example, an invoice).

### i Note

If the system is configured to generate an electronic document 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 Integration Suite. 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 Integration Suite 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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