



Integration Guide | PUBLIC  
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# Spain SII Setting Up SAP Integration Suite (SAP S/4HANA Cloud) - Cloud Foundry

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# 1 Disclaimer

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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 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 **Prerequisites** 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 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](#).

### 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 Deploy Certificates for SAP Integration Suite with Tax Agency Communication

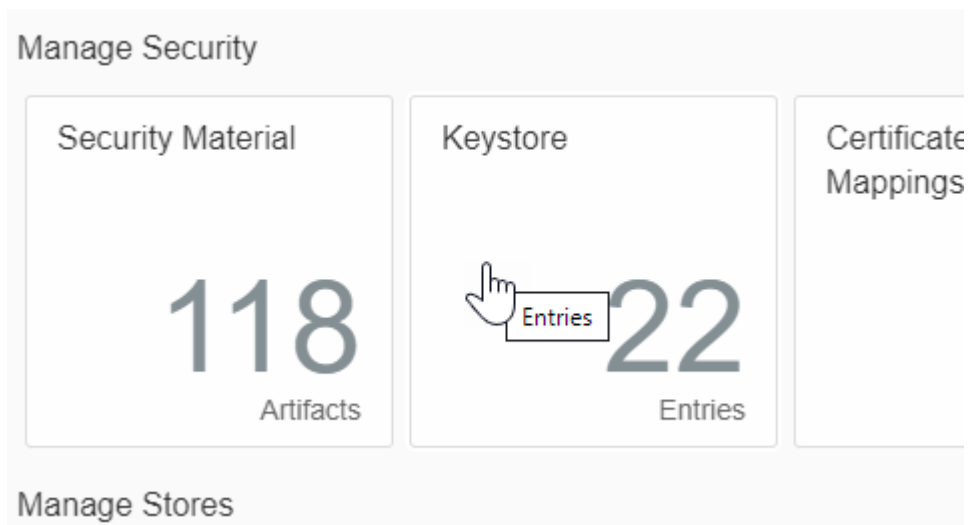
To establish a connection between the SAP Integration Suite and tax agency servers, you must obtain several certificates, and then deploy these to the SAP Integration Suite tenant. For more information about certificate deployment in SAP Integration Suite, see SAP Note [2469460](#).

### 3.2 Add Certificate for Client Certificate Authentication

SAP Integration Suite uses a client certificate to authenticate the communication with external systems. For the SII scenario, you must include certificates that are recognized by the relevant tax agency (AEAT or regional tax agency). Optionally, the tax agency also supports certificates for the electronic seal (“certificado de sello”). This certificate is specific to your company’s Fiscal Identity Number (NIF) and/or Tax Identity Number.

To add the certificate, proceed as follows:

1. Collect the key pair from the regional tax office. This key pair is tax ID-specific.
2. 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.
3. In the *Operations* view, choose *Keystore* under *Manage Security*.



4. Choose **► Add ► Key Pair ►** and add the key pair that you collected from the tax office.

#### 📘 Note

- We recommend that you use private key alias in form of **spainsiixxxx**, where **xxxx** is the company code.
- From version 3.0.0 onwards, the dynamic private key Alias is available, that is, you can choose to use an alias in form of **spainsiprivatekey\_xxxxx**, where **spainsiprivatekey** will be the suffix, and **xxxxx** will be you company NIF. If you choose to use the dynamic private key Alias, the system will concatenate the suffix and will extract your company NIF from the header of XML document.

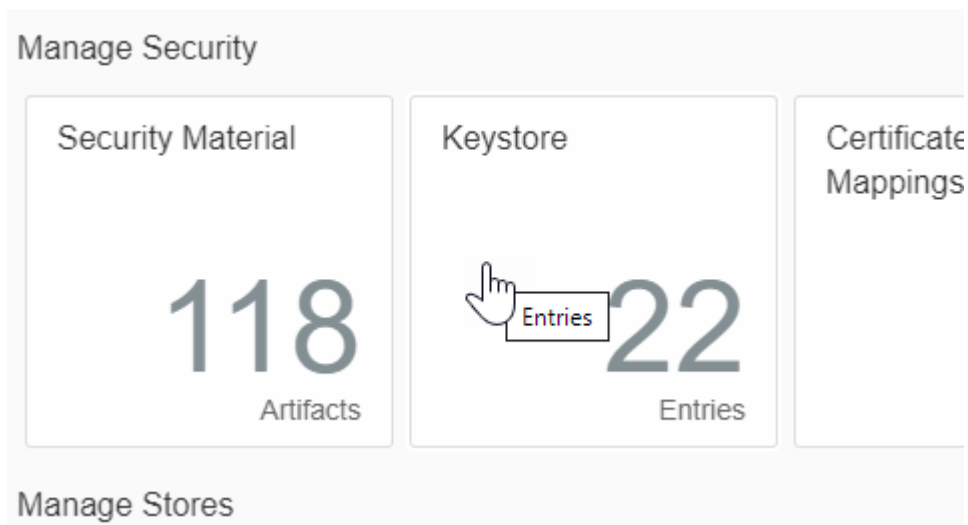
### 3.3 Add Public Certificates of Relevant Tax Agency

To establish an SSL connection to the tax agency server, the SAP Integration Suite needs to trust the SSL certificate from the relevant tax agency servers. To achieve this, you must download the entire certificate chain from the relevant server and upload it to the SAP Integration Suite tenant. Please refer to the relevant tax agencies' sites or the relevant governmental SII support teams to obtain relevant certificate chains.

Another option is to use third-party software, which has the capability of examining and downloading site certificates like browsers or key store explorers. The exact procedure of downloading the SSL certificate depends on third-party software and the operating system that you use.

To add the certificate, proceed as follows:

1. Refer to the regional tax authority guide to get the URL to the tax authority.
2. 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.
3. In the *Operations* view, choose *Keystore* under *Manage Security*.



4. Choose **► Add ► Certificate ►** to add the certificate.

#### ⓘ Note

You can find the list of servers of the regional tax authorities in the document [Regional Support Guide](#), included in this integration package.

# 4 Configuration Steps in SAP Integration Suite

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

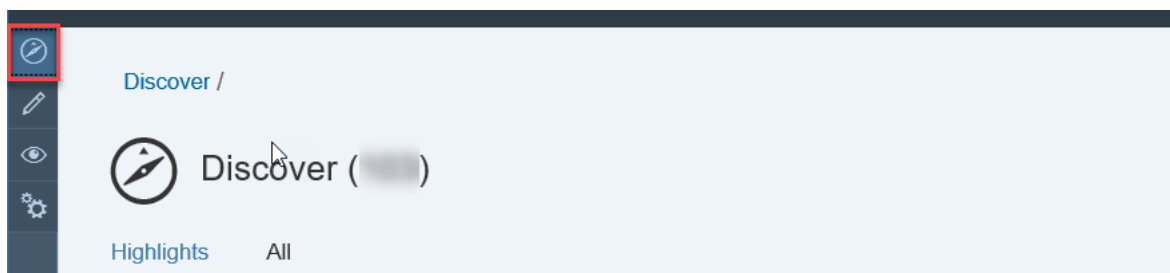
## 4.1 Copy Published Package

### Context

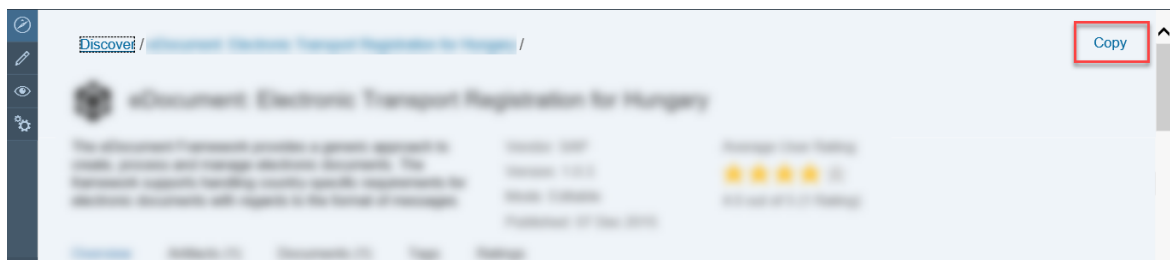
Copy all iFlows in the package *SAP Document and Reporting Compliance: Tax Register Books for Spain* to the target tenant as follows:

### Procedure

1. In the *Discover* section of your tenant, select the package *SAP Document and Reporting Compliance: Tax Register Books for Spain*.




2. Select the package and choose *Copy*.



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



Provide suffix 

Create copy with Suffix

(Leave blank for default)

Ok Cancel

## 4.2 Configure Integration Flow




### 4.2.1 Configure Integration Flow - Communicate to SII

To set up communication with the tax authorities in Spain, you must configure the integration flow “Communicate to SII” as described in this section.

#### Context

You must repeat the steps below for every package that you copied as described in section [Copy Published Package \[page 8\]](#).

#### 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: Tax Register Books for Spain* package.
3. Go to the *Artifacts* tab page.
4. Choose  *Actions*  *Configure*  for the *Communicate to SII* integration flow.

Vendor: SAP    Mode: Editable  
Version: 4.0.0

Overview    **Artifacts (2)**    Documents (4)    Tags

Actions    Filter Artifacts

<input type="checkbox"/>	Name	Type	Version
<input type="checkbox"/>	<b>Communicate to Canary Islands</b> Sending VAT Registration books from SAP ERP to SII Modified	Integration Flow	Draft
<input type="checkbox"/>	<b>Communicate to SII</b> This is a single, multi-purpose integration flow, which does all types of requests Unmodified	Integration Flow	3.0.4

### Note

The version of your artifact may differ from the one shown on the figure above.

5. Choose the *Sender* tab and make settings as follows:

- Update the connection address to a name that can be linked easily to the company code that uses it (for example, `/SpainSIICommunicate-ES01` for your Spain SII company code).

**Sender**    More

Sender: ERP

Adapter Type: SOAP

**Connection**

Address: /SpainSIICommunicate - ES01

- Authorization* field: Select the required authorization (**User Role** or **Client Certificate**) that has been configured for the connection between the system and the tenant.

- For the *User Role* authorization, select the relevant user role (for example, **ESBMessaging.send**):

**Connection**

Address: /SpainSIICommunicate - ES01

Authorization: User Role

User Role: ESBMessaging.send

- For the *Client Certificate* authorization, provide the certificate credentials, for example:

**Connection**

Address: /SpainSIICommunicate - ES01

Authorization: Client Certificate

Subject DN	Issuer DN
<subject-dn>	<issuer-dn>

Select

- If required, increase the body size (that is, the maximum XML file size) to the appropriate value:

**Connection**

Address: /SpainSIICommunicate - ES01

Authorization: User Role

User Role: ESBMessaging.send

Select

**Conditions**

Body Size (in MB): 100

Attachments Size (in MB): 40

6. Choose the *More* tab and make settings as follows:

### Note

- In some versions, this tab may have the title *Parameters*.
- The layout under this menu tab may differ from the screenshot provided.

- In the *Private Key Alias* field, update the name to match the name that you have defined in section .

### Note

From version 3.0.0 onwards, the dynamic private key alias is available.

- In the *addNiftoKeyAlias* 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 NIF of your company automatically. By default, the *addNiftoKeyAlias* field is set to **NO**. In that case, you must also update the *keyAliasSuffix* field with the name that matches the name that you have defined in section .

The screenshot shows a configuration interface with a header bar containing 'Sender' and a 'More' icon. Below the header, there are several fields:

- Type:** A dropdown menu set to 'All Parameters'.
- addNiftoKeyAlias:** A text input field containing 'NO'.
- keyAliasSuffix:** A text input field containing 'spainsiiprivatekey'.
- loggingEnabled:** A text input field containing 'NO'.
- reportTo:** A text input field containing 'Spain'.
- usageMode:** A text input field containing 'TEST'.

- Use the *usageMode* field to set up the integration package usage mode:

Value	Acceptable aliases (not case sensitive)	Description
TEST	TEST, TESTING	Uses the test system of the tax agency
TEST-ELECTRONIC SEAL	TEST-SEAL, TESTING-SEAL, TEST-ESEAL, TESTING-ESEAL	Uses the Test system that accepts certificate of the electronic seal
PROD	PRODUCTION, PROD, PRODUCTIVE,	Uses the productive (that is, legally binding) system of the tax agency
PRODUCTION- ELECTRONIC SEAL	PROD-SEAL, PRODUCTION-SEAL, PRODUCTION-ESEAL, PROD-ESEAL, ESEAL, E-SEAL	Uses the productive system that accepts certificate of the electronic seal

### Note

Submitting documents with an SII Version below 1.0 to productive servers will cause an error. For SII Versions below 1.0, only test services are provided.

- Use the `loggingEnabled` 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

- Use the `reportTo` field to define the regional tax authority to which you want to submit your reports.

Sender [More](#)

Type:

addNiftoKeyAlias:

keyAliasSuffix:

loggingEnabled:

**reportTo:**

#### Note

By default, the reports are submitted to the central tax authority (Agencia Estatal de Administración Tributaria). For the list of the values for the regional tax authorities and supported functions, refer to the document “Submitting to the regional tax authorities” included in this package.

- Select [Save](#) and [Deploy](#) to save your configuration and to deploy it actively to server, respectively.

#### Note

On some tenants, depending on their version, after pressing these buttons, a screen with warning messages may occur, similar to the one below. Ignore these messages, and press the [Close](#) button, as they are related to the payload attachments; currently the SII process either does not support or require message attachments (for example, scanned copies of invoices) in any stage of processing and communication.

Messages (3)		
Type	Location	Message
⚠		Router drops attachment in payload from SOAP 1.x Sender. Router does not support payload attachment.
⚠		Process Call drops attachment in payload from SOAP 1.x Sender. Process Call does not support payload attachment.
⚠		Process Call drops attachment in payload from SOAP 1.x Sender. Process Call does not support payload attachment.

Close

## 4.2.2 Configure Integration Flow - Communicate to Canary Islands

To set up communication with the tax authorities in the Canary Islands, you must configure the integration flow “Communicate to Canary Islands” as described in this section.

Repeat the steps described in section [Configure Integration Flow - Communicate to SII \[page 9\]](#) for the *Communicate to Canary Islands* artifact as all the steps are the same for the Canary Islands.

### ⓘ Note

For the Canary Islands, you must also choose **Spain** in the *Report to* field under the *More* tab.

## 4.2.3 Configure Integration Flow: Retrieve from SII

Running *Electronic Document Consistency* checks at regular intervals ensures that various representations of your business documents remain consistent across different systems. You must configure the *Retrieve From SII* integration flow if you want to perform consistency checks on your electronic documents in Spain. For more information on Consistency Checks for Spain, see [Consistency Checks](#).

### Context

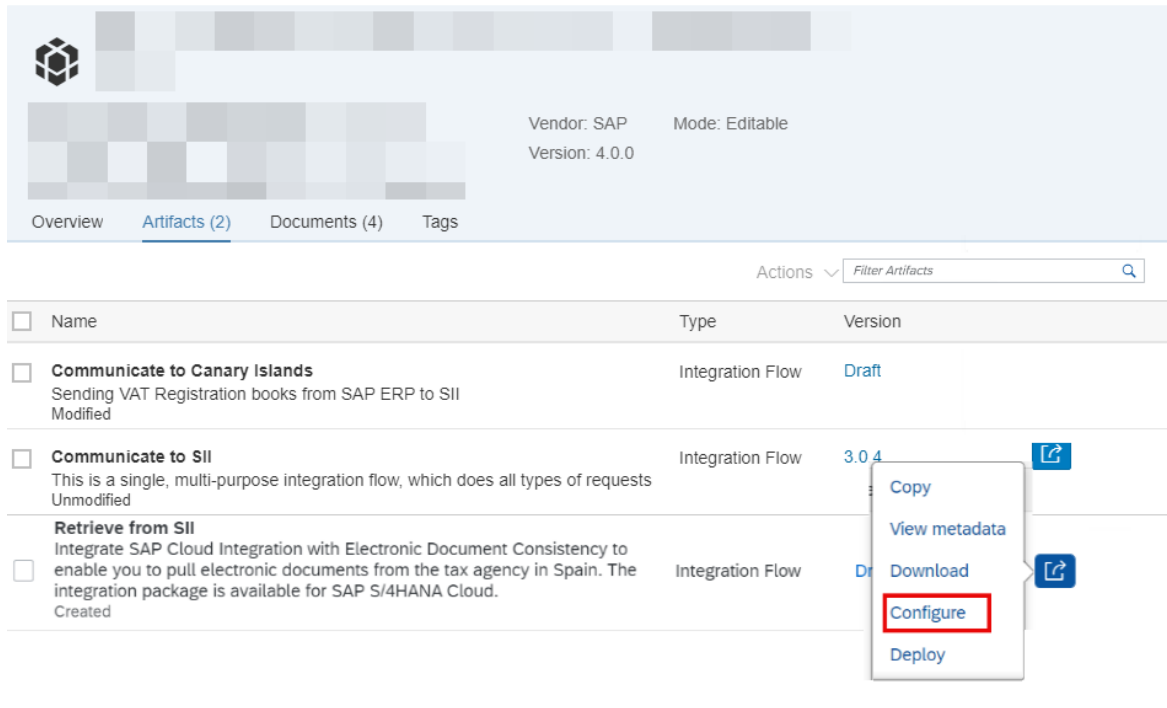
You must repeat the steps below for every package that you copied as described in section [Copy Published Package \[page 8\]](#).

## Note

Currently, you can only check for the consistency of your documents for mainland Spain in the [SAP Document and Reporting Compliance: Tax Register Books for Spain](#) business scenario.

## 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: Tax Register Books for Spain](#) package.
3. Go to the [Artifacts](#) tab page.
4. Choose **Actions** > [Configure](#) for the [Retrieve from SII](#) integration flow.



The screenshot shows the SAP Integration Suite interface. At the top, there is a header with the SAP logo and a navigation bar with tabs: Overview, Artifacts (2), Documents (4), and Tags. Below the header, there is a section for the selected artifact, showing 'Vendor: SAP' and 'Mode: Editable' with 'Version: 4.0.0'. Below this, there is a table of artifacts. The table has columns for Name, Type, and Version. The 'Retrieve from SII' artifact is selected, and a context menu is open over it, showing options: Copy, View metadata, Download, Configure (highlighted with a red box), and Deploy. The 'Retrieve from SII' artifact description reads: 'Integrate SAP Cloud Integration with Electronic Document Consistency to enable you to pull electronic documents from the tax agency in Spain. The integration package is available for SAP S/4HANA Cloud. Created'.

Name	Type	Version
<input type="checkbox"/> <b>Communicate to Canary Islands</b> Sending VAT Registration books from SAP ERP to SII Modified	Integration Flow	Draft
<input type="checkbox"/> <b>Communicate to SII</b> This is a single, multi-purpose integration flow, which does all types of requests Unmodified	Integration Flow	3.0.4
<input type="checkbox"/> <b>Retrieve from SII</b> Integrate SAP Cloud Integration with Electronic Document Consistency to enable you to pull electronic documents from the tax agency in Spain. The integration package is available for SAP S/4HANA Cloud. Created	Integration Flow	Draft

## Note

The version of your artifact may differ from the one shown on the figure above.

5. Choose the [Sender](#) tab and make settings as follows:
  - Update the connection address to a name that can be linked easily to the company code that uses it (for example, [/SpainsIIConsistency](#) for your Spain SII company code).

Sender    More

---

Sender:  ▾

Adapter Type:  ▾

**Connection**

Address:

- *Authorization* field: Select the required authorization (**User Role** or **Client Certificate**) that has been configured for the connection between the system and the tenant.
  - For the *User Role* authorization, select the relevant user role (for example, **ESBMessaging.send**):

**Connection**

Address:

Authorization:  ▾

User Role:

- For the *Client Certificate* authorization, provide the certificate credentials, for example:

**Connection**

Address:

Authorization:  ▾

Subject DN	Issuer DN
<input type="text"/>	<input type="text"/>

6. Choose the *More* tab and make settings as follows:

**Note**

- In some versions, this tab may have the title *Parameters*.
- The layout under this menu tab may differ from the screenshot provided.

- In the *Private Key Alias* field, update the name to match the name that you have defined in section [Add Certificate for Client Certificate Authentication \[page 5\]](#).
- In the *addNifftoKeyAlias* 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 [Add Certificate for Client Certificate Authentication \[page 5\]](#).  
The system will concatenate the *keyAliasSuffix* field with the NIF of your company automatically. By default, the *addNifftoKeyAlias* field is set to **NO**. In that case, you must also update the *keyAliasSuffix* field with the name that matches the name that you have defined in section [Add Certificate for Client Certificate Authentication \[page 5\]](#).



Sender [More](#)

Type: All Parameters

addNiftoKeyAlias: NO

keyAliasSuffix: spainsiiprivatekey

UsageMode: Test

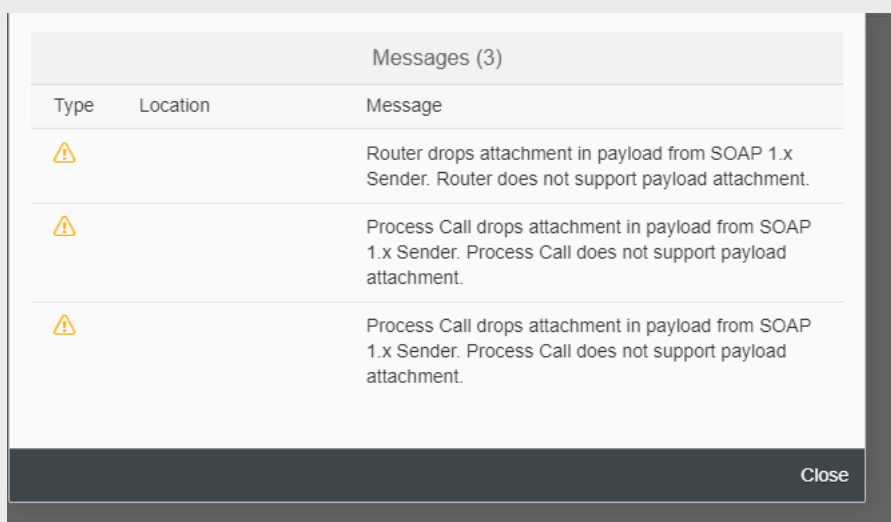
- Use the *usageMode* field to set up the integration package usage mode:

Value	Acceptable aliases (not case sensitive)	Description
TEST	TEST, TESTING	Uses the test system of the tax agency
TEST-ELECTRONIC SEAL	TEST-SEAL, TESTING-SEAL, TEST-ESEAL, TESTING-ESEAL	Uses the Test system that accepts certificate of the electronic seal
PROD	PRODUCTION, PROD, PRODUCTIVE,	Uses the productive (that is, legally binding) system of the tax agency
PRODUCTION- ELECTRONIC SEAL	PROD-SEAL, PRODUCTION-SEAL, PRODUCTION-ESEAL, PROD-ESEAL, ESEAL, E-SEAL	Uses the productive system that accepts certificate of the electronic seal

- Select *Save* and *Deploy* to save your configuration and to deploy it actively to server, respectively.

### Note

On some tenants, depending on their version, after pressing these buttons, a screen with warning messages may occur, similar to the one below. Ignore these messages, and press the *Close* button, as they are related to the payload attachments; currently the SII process either does not support or require message attachments (for example, scanned copies of invoices) in any stage of processing and communication.



# 5 Configuration Steps for SAP S/4HANA Cloud

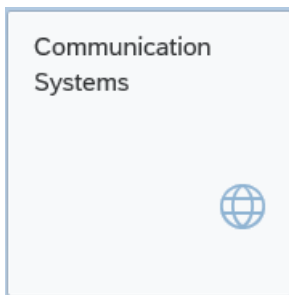
The following sections tell you the necessary configuration you do in SAP S/4HANA Cloud.

## 5.1 Configure Communication System

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

### Procedure

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



3. Choose *New*, and in the pop-up window, enter the *System ID* and *System Name*. Naming convention of *System ID* is SCPI\_SII\_<name of SAP Integration Suite tenant>, for example, if the tenant host name is *example-tmn.avt.eu1.hana.ondemand.com*, then System ID is *SCPI\_SII\_EXAMPLE*.

4. Choose *Create*.
5. On the next page, enter the host name and port of your tenant. Host name can be entered by looking up in the SAP Integration Suite Web UI.

SCPI\_SII\_EXAMPLE  
SCPI\_SII\_EXAMPLE

Changed By: Example Administrator    Editing Status: Draft  
Changed On: 11/21/2019, 16:00

General ▾    Users for Inbound Communication    Users **+** Outbound Communication    Business Partners    Communication Arrangements

---

**General Data**

\*System ID:     Notes:

\*System Name:

---

**Technical Data**

**General**

\*Host Name:     UI Host Name:

Logical System:     Business System:

Port:

Is Hub System:

6. Scroll down, and choose + next to User for *Outbound Communication*.

**Contact Information**

Contact Person Name:     Phone Number:

E-Mail:

---

**OAuth 2.0 Identity Provider**

Enabled:

---

**User for Inbound Communication** +

Authentication Method	User Name
	No data

---

**User for Outbound Communication** +

Authentication Method	User Name/Certificate/Client ID
	No data

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

**New Outbound User**

\*Authentication Method:  ▾

\*User Name:

\*Password:

User Name and Password

SSL Client Certificate

OAuth 1.0

OAuth 2.0

None

Cancel

- 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 screenshot shows a dialog box titled "New Outbound User". It contains three fields:
 

- \*Authentication Method:** A dropdown menu with "User Name and Password" selected.
- \*User Name:** An empty text input field.
- \*Password:** An empty text input field.

 At the bottom right, there are two buttons: "Create" and "Cancel".

- 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](#).

The screenshot shows a dialog box titled "New Outbound User". It contains two fields:
 

- \*Authentication Method:** A dropdown menu with "SSL Client Certificate" selected.
- Certificate Type:** A dropdown menu with "Default Client Certificate" selected.

 At the bottom right, there are two buttons: "Create" and "Cancel".

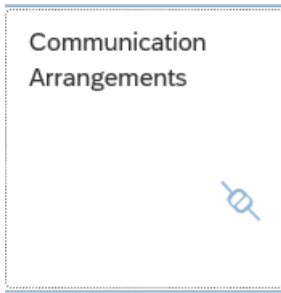
8. Choose *Save*.

## 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_0225` (which is the one designated for communication with the Spanish tax authorities via SAP Integration Suite package) and an [Arrangement Name](#). For arrangement name, it is recommended to choose a name like `SAP_COM_0225_<name of SAP Integration Suite tenant>`, for example, `SAP_COM_0225_EXAMPLE` for tenant host name beginning with `example-tmn`.

4. Choose [Create](#).
5. In the new window, choose the communication system created in the previous step (for example, `SCPI_SII_EXAMPLE`) and the authentication method, relevant to the communication system.

#### Note

- If you use SSL certificate-based authentication, download the certificate using the [Download](#) button and upload it to SAP Integration Suite under [Manage Keystore](#).
- You may need multiple communication arrangements for the same scenario ID but for different company code values. For example, your company works with multiple regions that have different company code setup. In this case, use the [Company Code](#) parameter to specify the company code for which you are configuring the communication arrangement.

## SAP\_COM\_0225

Scenario ID: [SAP\\_COM\\_0225](#)  
Scenario:

Draft Last Changed By: Example Administrator  
Draft Last Changed On:

Editing Status: Draft

### Common Data

Arrangement Name:

Own System:

\*Communication System:  [Display](#)

### Additional Properties

Property Name	Property Value
Company Code	<input type="text"/>

### Outbound Communication

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

\*User Name:

Authentication Method:

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

### Outbound Services

#### Spain SII Incoming Invoices

Service Status:  Active

Application Protocol: SOAP

Port:

Path:

Service URL:

#### Spain SII Outgoing Invoices

Service Status:  Active

Application Protocol: SOAP

Port:

Path:

Service URL:

#### Spain SII: Outgoing Payment for Vendors with VAT Cash Accounting

Service Status:  Active

Application Protocol: SOAP

Port:

Path:

Service URL:



7. Choose [Save](#).

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