



Integration Guide | PUBLIC
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Portugal eInvoice Setting Up SAP Cloud Integration (SAP S4HANA Cloud) - Neo Environment

Content

- 1 Introduction. 3**
- 2 Configuration Steps in SAP Cloud Integration. 4**
 - 2.1 General Information 4
 - 2.2 Copying Integration Flows. 4
 - 2.3 Configuring Integration Flows. 5
 - Configuring Portugal: Send Invoice. 5
 - Configuring Portugal: Receive Message. 7
 - 2.4 Service Provider. 7
 - Creating Technical User. 8
 - Creating Custom Role. 8
 - Sharing Details with the Service Provider. 10
 - Creating Credentials. 11
- 3 Configuration Steps for SAP S/4HANA Cloud. 12**
 - 3.1 Configure Communication System. 12
 - 3.2 Configuring Communication Arrangement. 15

1 Introduction

You use SAP Cloud Integration 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 Cloud Integration tenant so that the integration between the systems works.

The setup steps are typically done by an SAP Cloud Integration consulting team, which is responsible for configuring the SAP S/4HANA Cloud tenant and the connection with SAP Cloud Integration. This team may be also responsible for maintaining the integration content and certificates/credentials on the SAP Cloud Integration tenant.

i Note

This document describes functionality that is provided by the Integration Package itself, that is, by the artifacts that are deployed in the SAP Cloud Integration tenant. It may happen, however, that in 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.

2 Configuration Steps in SAP Cloud Integration

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

2.1 General Information

The package **SAP Document and Reporting Compliance: Electronic Invoicing for Portugal** contains the following integration flows:

Integration Flows for Electronic Documents for Portugal





Integration Flow Name in WebUI	Project Name/Artifact Name
Portugal Send Invoice	com.sap.GS.Portugal.SendInvoice
Portugal Receive Message	com.sap.GS.Portugal.ReceiveMessage

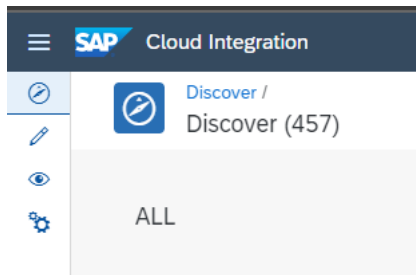
2.2 Copying Integration Flows

Context

Copy all integration flows in the package SAP Document and Reporting Compliance: Electronic Invoicing for Portugal to the target tenant as follows:

Procedure

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



3. Search for **SAP Document and Reporting Compliance: Electronic Invoicing for Portugal**.
4. Select the Package and choose *Copy*.

2.3 Configuring Integration Flows

Provides instructions for configuring integration flows.

You configure the package that you have copied as described in the step before.

There are 2 *Artifacts* in the integration package SAP Document and Reporting Compliance: Electronic Invoicing for Portugal:

- Portugal: Send Invoice
- Portugal: Receive Message

i Note

Not all external parameters exist for each integration flow. Configure only the ones which are available.

2.3.1 Configuring Portugal: Send Invoice

Provides instructions for configuring integration flow for Portugal: Send Invoice.

Procedure

1. Choose ► *Actions* ► *Configure* ► *More* ► tab (in some versions it may be *Externalized Parameters*)
 - Use the *Mode* parameter to set up the integration package usage mode:

Value	Description
TEST	To use the test system of the service provider.

Value	Description
PROD	To use the productive (that is, legally binding) system of the service provider.

- Use the `Enable Logging` parameter to configure whether you want to activate logging functionally for all the messages:

Value	Description
true	The system adds log files to a message.
false	Logging disabled.

- Use the `PROD_API_URL` and `TEST_API_URL` parameters to configure the URL address of the service provider API endpoint for productive and test system respectively.

Configure "Portugal Send Invoice"

Sender **More**

Type:

Enable Logging:

Mode:

PROD_API_URL:

TEST_API_URL:

2. Choose the *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.

Configure "Portugal Send Invoice"

Sender More

Sender:

Adapter Type:

Connection

Address:

3. Choose *Save* and *Deploy* to deploy it actively to server. Note down the URLs of the endpoints for each service.

2.3.2 Configuring Portugal: Receive Message

Provides instructions for configuring integration flow for Portugal: Receive Message.

Procedure

1. Choose **Actions > Configure > More** tab (in some versions it may be *Externalized Parameters*)
 - Select *Partner_PushMessage* as sender.
 - Under Connections, use *DCPortugal.ReceiveMessage* as user role.

Note

If you choose a user role other than *DCPortugal.ReceiveMessage*, then ensure that you use the same role name when you create a custom role.

The screenshot shows a configuration form with the following fields:

- Sender:** Partner_PushMessage
- Adapter Type:** HTTPS
- Address:** /PortugalReceiveMessages
- Authorization:** User Role
- User Role:** DCPortugal.ReceiveMessage (highlighted with a red box)

A **Select** button is located to the right of the User Role field.

2. Choose **Save** and **Deploy** to deploy it actively to server. Note down the URLs of the endpoints for each service.

2.4 Service Provider

Provides a description of the service provider.

Saphety is one of the registered service providers for signing eInvoices in Portugal. SAP establishes communication with Saphety.

eSPAP (Entidade de Servicos Partilhados da Administracao Publica, I.P.) is the Portuguese government organization responsible for eInvoice. It provides the formats of eInvoice for Portugal.

A customer is an organization with tax identification. A customer is identified in Saphety's network by its country code and tax identification, for example: PT123456789. Handling multiple tax identifications is possible. Each tax identification is a different customer.

Each customer requires a provisioning process.

2.4.1 Creating Technical User

Provides a description of how a service user enables the service provider to access the SAP Cloud Integration tenant.

Context

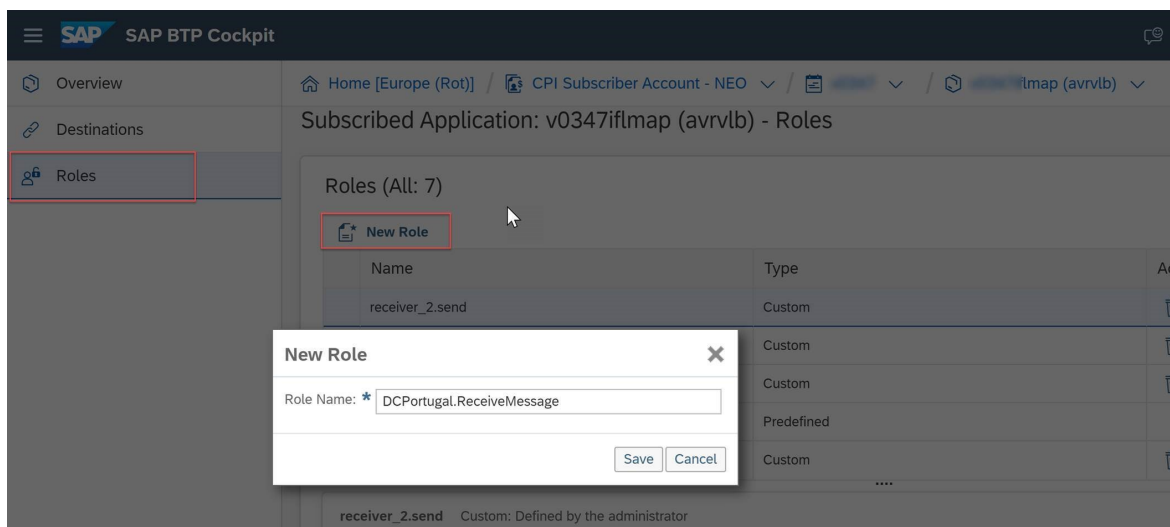
Users can be maintained in two ways in SAP Cloud Integration:

- The default settings where CPI authenticates itself with SAP ID Service. Follow these instructions: <https://help.sap.com/viewer/368c481cd6954bd5d0435479fd4eaf/Cloud/en-US/f489d66b6edc4eb682e65076e0d873f8.html>
- The custom settings where CPI authenticates itself against the custom SCP Identity Authentication Service (IAS). Follow these instructions: <https://help.sap.com/viewer/6d6d63354d1242d185ab4830fc04feb1/Cloud/en-US/348deef7f29b40909b151c8dc9a11d53.html>

2.4.2 Creating Custom Role


Provides a description of how to authorize the technical user to access the endpoint.

1. Access the SAP BTP cockpit and navigate to your subaccount (tenant) page.
2. Choose the [Subscriptions](#) link to display the subscriptions of your subaccount.
3. Choose the subscription with suffix **iflmap** as it corresponds to your worker node within SAP Cloud Integration. Alternatively use the URL e-mailed to you with your SAP Cloud Integration subscription details. The URL has the following format **https://xxx.hana.ondemand.com/itspaces**.
4. Choose [Roles](#) to display the roles for your SAP Cloud Integration worker node.
5. Choose [New Role](#) and enter the role name **DCPortugal.ReceiveMessage**. Choose [Save](#).



6. Choose the created role and [Assign](#)

Roles (All: 6)

 **New Role**

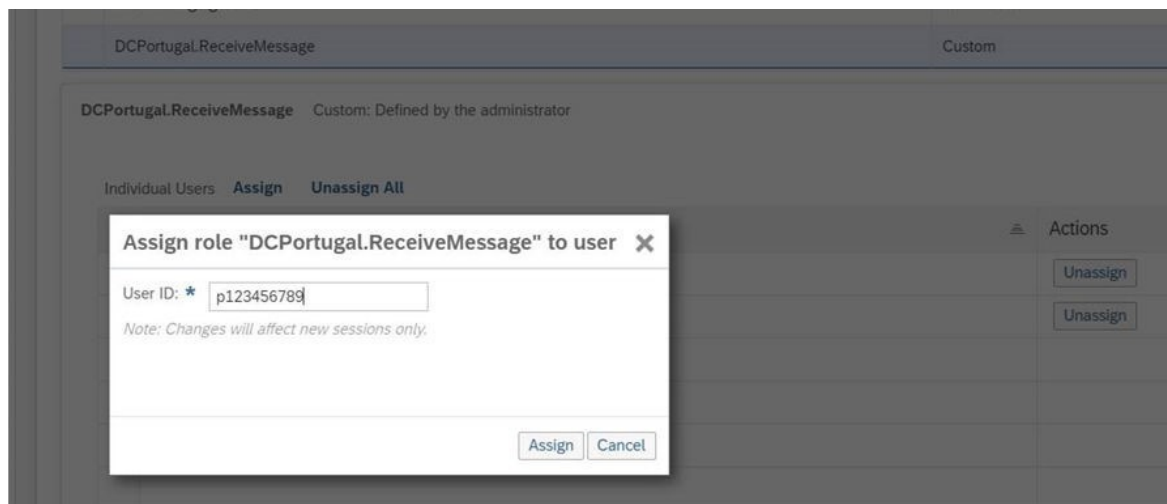
Name
receiver_2.send
receiver_1.send
receiver_3.send
ESBMessaging.send
DCPortugal.ReceiveMessage

DCPortugal.ReceiveMessage Custom: Defined by the administrator

Individual Users **Assign** Unassign All

User ID
p1942022097
p2001673469

7. Enter the ID of the technical user.



The screenshot shows the SAP role assignment interface. A modal dialog titled "Assign role 'DCPortugal.ReceiveMessage' to user" is open. It contains a text input field for "User ID" with the value "p123456789" entered. Below the input field is a note: "Note: Changes will affect new sessions only." At the bottom of the dialog are "Assign" and "Cancel" buttons. In the background, the role configuration page is visible, showing the "DCPortugal.ReceiveMessage" role and a table with "Unassign" buttons for each user.

i Note

Make sure that no other access is granted to the technical user.

2.4.3 Sharing Details with the Service Provider

Provides a description of how to share details with the service provider.

In SAP Cloud Integration, go to ► [Operations](#) ► [Manage Integration Content](#) ► [All](#) and search for *Portugal Receive Message*.

Share the following details with the service provider: Service URL (see highlighted part in screenshot), Technical User ID, Password.

Portugal Receive Message [Restart](#) [Undeploy](#) [Download](#)

Deployed On: [redacted] ID: com.sap.GS.Portugal.ReceiveMessage
Deployed By: [redacted] Version: 1.0.0

Package: SAP Document Compliance: Electronic Invoicing for Portugal

[Endpoints](#) [Status Details](#) [Artifact Details](#) [Log Configuration](#)

https://[redacted] hana.ondemand.com/cxf/PortugalDeleteMessages	
WSDL	
WSDL without policies	
https://[redacted] hana.ondemand.com/http/PortugalReceiveMessages	
https://[redacted] hana.ondemand.com/cxf/PortugalPullMessages	
WSDL	
WSDL without policies	

⚠ Caution

- If the service provider informs you with the error code "404", check if the integration flow was successfully deployed and the URL is available to receive the messages
- If the service provider informs with the error code "403", check the following details:
 - The technical user is assigned with an appropriate role (DCPortugal.ReceiveMessage)
 - The user credentials are correct.

2.4.4 Creating Credentials

Provides a description of how to enter the credentials from the service provider in SAP Cloud Integration.

Context

To get access to the webservices provided by the service provider, the credentials received from the service provider are entered in SAP Cloud Integration.

Procedure

1. Access the SAP BTP cockpit and navigate to your subaccount (tenant).
2. Choose the *Subscriptions* link to display the subscriptions in your account.
3. Use the URL emailed to you with your SAP Cloud Integration subscription detail . The URL has the following format **https://xxxxx.hana.ondemand.com\itspaces**.
4. Navigate to the *Manage Security* section and choose *Security Material*.
5. Choose *Add User Credentials* and enter the following data and choose *Deploy* to save the changes.

Option	Description
<i>Name</i>	<VAT_code>_<SystemType> where <VAT_code> is the company's VAT in the SAP system <SystemType> is TEST or PROD depending on the type of your tenant Example: PT123456789_TEST
<i>Description</i>	Enter the name of the company.
<i>User</i>	Enter the username from the service provider.
<i>Password</i>	Enter the password received from the service provider.

6. Choose *Deploy* to save the changes.

3 Configuration Steps for SAP S/4HANA Cloud

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

3.1 Configure Communication System

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

Prerequisites

- Live SAP Cloud 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 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 Integration tenant.

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

1. From the menu on the left, choose *Monitor*.
2. Select *Manage Integration Content* (All).
3. Search for the integration flow for the scenario you are configuring.
4. Find the host name 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/soapui/	
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:

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

- Select an authentication method, which is used in connecting to your SAP Cloud Integration 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', 'SSL Client Certificate', 'OAuth 1.0', 'OAuth 2.0', and 'None'. 'User Name and Password' is selected.
- *User Name:** A text input field.
- *Password:** A text input field.

- If you select the authentication method *User Name and Password*, enter the name and password of your SAP Cloud Integration tenant user that allows communicating with SAP S/4HANA Cloud.

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.

- If you select the authentication method *SSL Client Certificate*, select the *Default Client Certificate* type and choose *Create*.

New Outbound User

*Authentication Method: SSL Client Certificate ▼

Certificate Type: Default Client Certificate ▼

Create Cancel

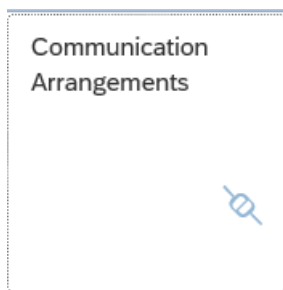
8. Choose *Save*.

3.2 Configuring 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 *eDocument - Portugal Invoice Integration* (SAP_COM_0631). This scenario is the one designated for communication with the tax authority via SAP Cloud Integration package and an Arrangement Name. For Communication Arrangement name it is recommended to choose a name like `SAP_COM_0631_<name of SAP Cloud Integration tenant>`.

New Communication Arrangement

*Scenario: 🔍

Arrangement Name: Enter Communication Arrangement Name

Create Cancel

4. Choose [Create](#).
5. In the new window, choose the communication system created in the previous step 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.

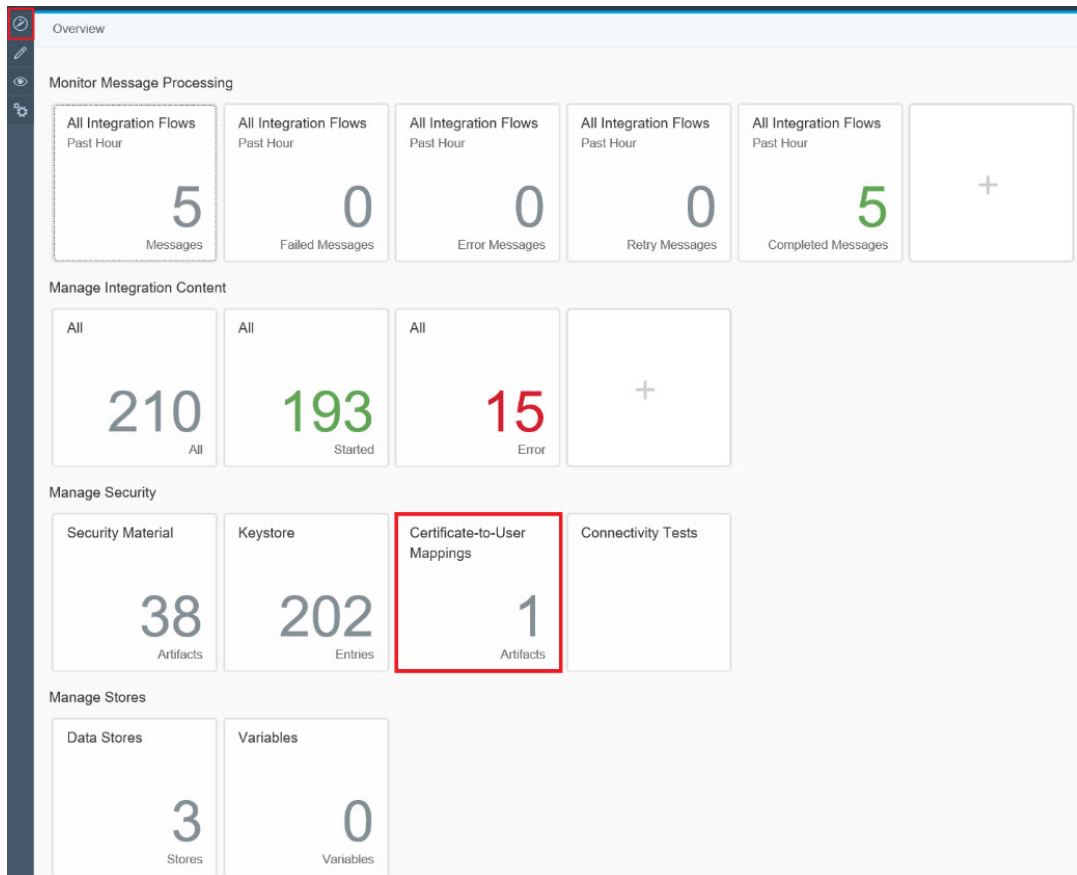
The screenshot shows a configuration form with two main sections: 'Common Data' and 'Outbound Communication'. In the 'Common Data' section, there are fields for 'Arrangement Name', 'Own System' (with value 'OLO8B8N'), and '*Communication System'. In the 'Outbound Communication' section, there are fields for '*User Name' and 'Authentication Method' (with value 'User ID and Password'). There are also 'Download' and 'Supported Authentication Methods' links in the 'Outbound Communication' section.

- If the authentication method is Default Client Certificate, you need to map the certificate to a user of your tenant with the the `ESBMessaging.send` role.

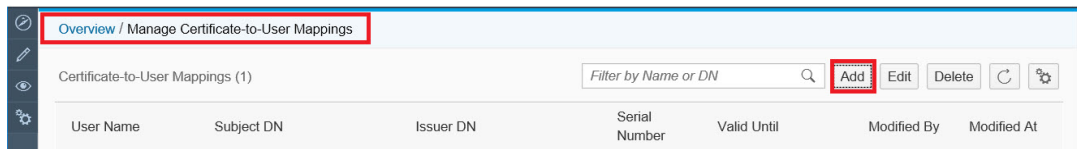
1. Download SSL Client Certificate here and save it locally.

The screenshot shows a configuration form similar to the previous one, but with 'Own System' set to '0MB85VI'. In the 'Outbound Communication' section, the 'Authentication Method' is 'SSL Client Certificate'. The 'Download' link in the 'Outbound Communication' section is highlighted with a red box. The '*Certificate' field is set to 'Default Client Certificate'.

2. Choose [Overview](#) [Certificate-to-User Mappings](#).



3. Choose *Add*.



4. Enter a user name with `ESBMessaging.send` role, upload the SSL Client certificate from Communication Arrangement and choose *OK*.

Add Certificate-to-User Mapping

*User Name:

*Certificate:

OK Cancel

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

Portugal einvoice: Send Invoice Version 1.0 Download WSDL/Service Metadata	
Service Status: <input checked="" type="checkbox"/> Active Application Protocol: SOAP Port: 443	Path: /cxflPortugalSendInvoice Service URL: https://v0347-ffmap.avtsbhf.eu1.hana.ondemand.com:443/cxfl/... Use WSRM: <input type="checkbox"/>
Portugal einvoice: Send Credit Note Version 1.0 Download WSDL/Service Metadata	
Service Status: <input checked="" type="checkbox"/> Active Application Protocol: SOAP Port: 443	Path: /cxflPortugalSendInvoice Service URL: https://v0347-ffmap.avtsbhf.eu1.hana.ondemand.com:443/cxfl/... Use WSRM: <input type="checkbox"/>
Portugal einvoice: Pull and Delete Message Version 1.1 Download WSDL/Service Metadata	
Service Status: <input checked="" type="checkbox"/> Active Application Protocol: SOAP Port: 443	Path: /cxflPortugalPullAndDeleteMessage Service URL: https://v0347-ffmap.avtsbhf.eu1.hana.ondemand.com:443/cxfl/... Use WSRM: <input type="checkbox"/>
Portugal einvoice: Delete Message Version 1.0(Deprecated) (Deprecated with 2308) Download WSDL/Service Metadata	
Service Status: <input checked="" type="checkbox"/> Active Application Protocol: SOAP Port: 443	Path: / Service URL: https://v0347-ffmap.avtsbhf.eu1.hana.ondemand.com:443/ Use WSRM: <input type="checkbox"/>

i Note

The outbound service **Portugal Invoice: Delete Message Version 1.0 (Deprecated)** will be deprecated as of release SAP S/4HANA Cloud 2308. Later, it will also be removed from the communication arrangement.



7. Choose *Save*.

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