



Integration Guide | PUBLIC
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Setting up SAP Cloud Integration with External Tax Calculation Engines (SAP S/4HANA)

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1 Introduction

You use SAP Cloud Integration to establish the communication with external systems and calculate taxes in a business transaction according to the guidelines of local tax authorities. This document describes the setup steps that you must perform in your SAP S/4HANA tenant and SAP Cloud Integration tenant so that the integration between the systems works.

2 Prerequisites

Before you start with the activities described in this document, ensure that you've performed all initial setup steps described in [Initial Setup of SAP Cloud Integration in Cloud Foundry Environment](#). After completing the *Provisioning the Tenant* step, you've created your own tenant URL; that is the URL you need to complete the steps described in this guide.

3 Configuration Steps in SAP Cloud Integration

See the necessary steps to be performed in SAP Cloud Integration to configure the integration between the system and SAP S/4HANA. The setup steps are typically done by an SAP Cloud Integration consulting team, which is responsible for configuring the SAP S/4HANA 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.

General Information

The package *SAP S/4HANA Integration with External Tax Calculation Engines* contains the following integration flows:

Integration Flow Name in WebUI	Project Name/Artifact Name
Request Tax Calculation for Multiple External Engines	Request Tax Calculation for Multiple External Engines
Request Tax Calculation for Single External Engine	Request Tax Calculation for Single External Engine

3.1 Managing Security Material Keys

Context

Your tax calculation engine might require authorization to trigger the tax calculation. You can provide the authorization artifacts in the *Manage Security Material* area in SAP Cloud Integration.

Procedure

1. Contact your tax partner to identify the type of authorization that you need to provide.
2. Follow the steps described in [Managing Security Material](#).

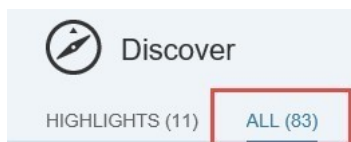
3.2 Copying Integration Flows

Context

Follow the steps to copy the integration flows that are in the package *SAP S/4HANA Integration with External Tax Calculation Engines* to your target tenant.

Procedure

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



3. Search for *SAP S/4HANA Integration with External Tax Calculation Engines*.
4. Select the package and choose **Copy**.



3.3 Configuring Integration Flows and External Tax Calculation Engines

Context

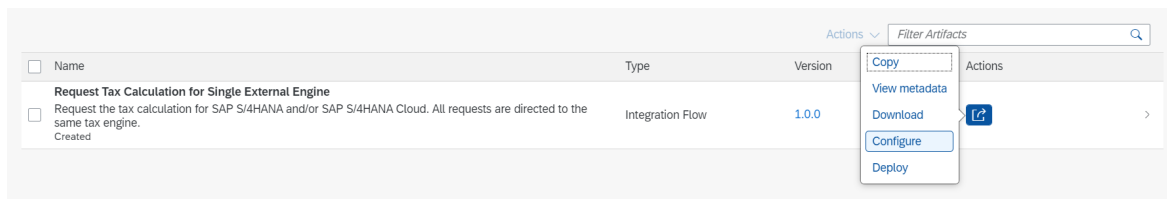
Configure the package that you have copied as described in [Copying Integration Flows \[page 6\]](#).

For the artifacts available in the integration package, see .

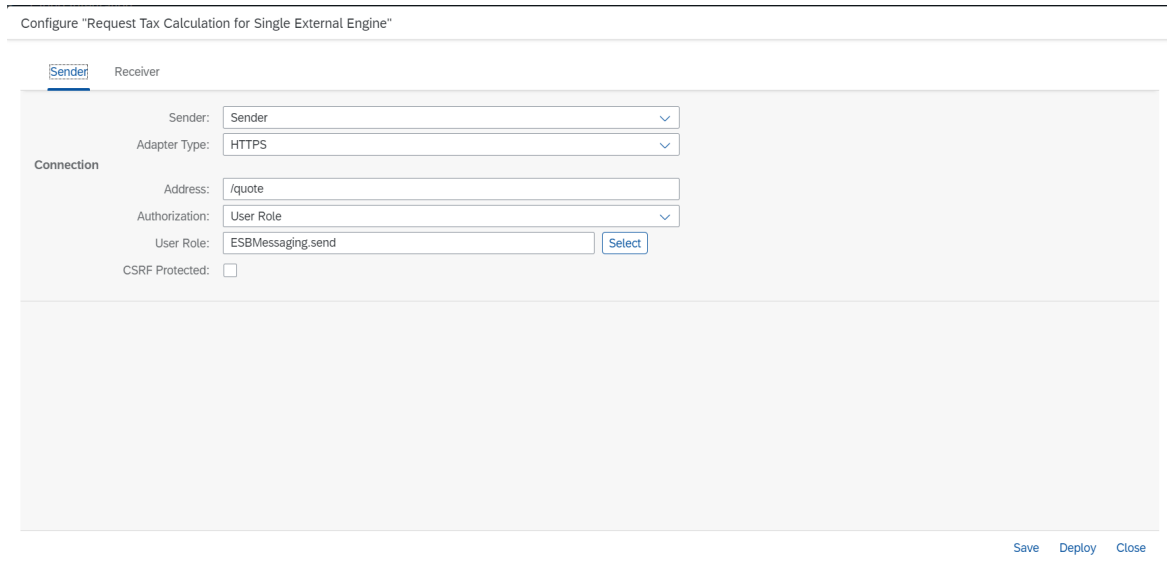
For the artifacts available in the integration package, see [Configuration Steps in SAP Cloud Integration \[page 5\]](#).

Procedure

1. In the artifact you want to configure, choose the *Action* button and choose *Configure*.



2. Select the *Sender* tab and change the fields as described below.



- a. In the *Address* field, enter the value that the system uses for the endpoint route. The `/quote` value is provided by default.

- b. In the *Authorization* field, choose the `User Role` parameter to configure the role based on which the inbound authorization is checked.
 - c. In the *User Role* field, choose the `ESBMessaging.send` user role that is provided by default.
3. Select the *Receiver* tab and change the fields as described below.

Configure "Request Tax Calculation for Single External Engine"

Sender **Receiver**

Receiver:	ExternalTaxCalculationEngine
Adapter Type:	HTTP
Connection	
Address:	<input type="text"/>
Query:	<input type="text"/>
Proxy Type:	Internet
Method:	POST
Authentication:	None
Timeout (in ms):	60000

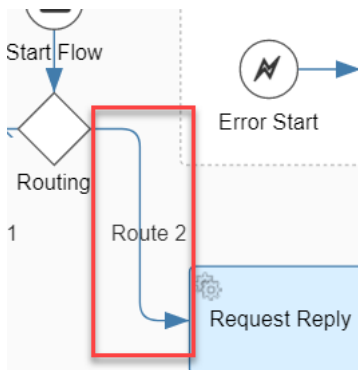
Save Deploy Close

- a. In the *Address* field, enter the value that points to the endpoint of your external tax calculation engine.
 - b. Select the *Authentication* type accordingly.
- When required, inform the key name you created in [Managing Security Material Keys \[page 5\]](#).
4. Choose *Save*.

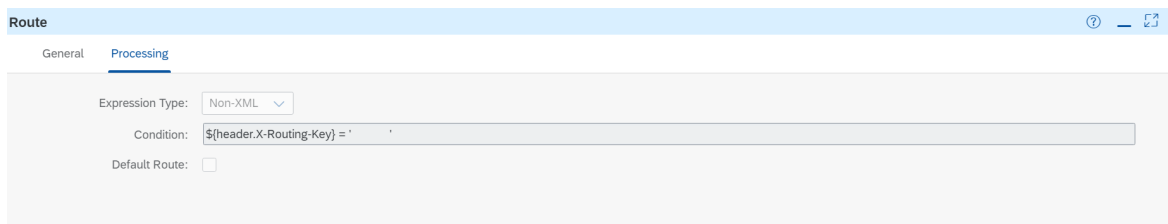
3.4 Configuring Multiple External Tax Calculation Engines Handling

Procedure

1. Select the artifact *Request Tax Calculation for Multiple External Engines*.
2. Choose *Edit*.
3. Choose the *Route 2* (nondefault route) from *Routing* to *Request Replay*.



4. Select the *Processing* tab.



5. In *Condition*, enter the name of the external tax calculation engine you want to use.

i Note

Enter the name engine in the following format: `${header.X-Routing-Key} = '<name_of_the_external_tax_calculation_engine>'`.

For more information, see [Define Router](#).

4 Configuration Steps for SAP S/4HANA

This section describes the additional configuration steps that must be carried out by customers to activate the SAP S/4HANA Integration with External Tax Calculation Engines.

Prerequisites

Assign the following business roles to your individual test users.

The following roles are provided as example roles from SAP. You can use these as templates to create your own roles.

SAP S/4HANA:

Business Role Name
S_RFC_ADM
S_OA2C_ADM

4.1 Adding Certificate to Certificate Trust List

Prerequisites

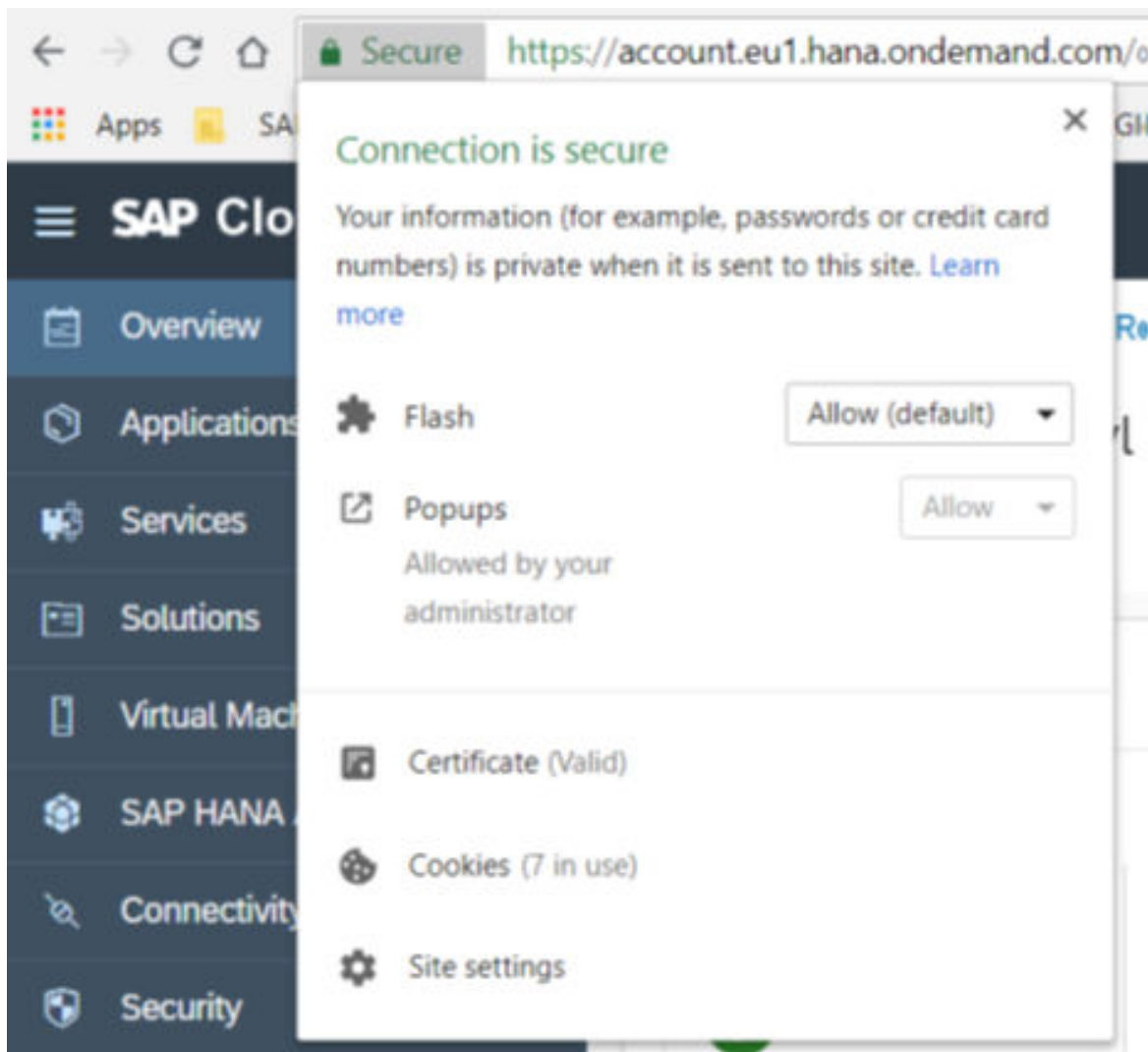
In order to carry out the following activity, you require the authorization for computing center administration (S_RZL_ADM with activity 1).

Context

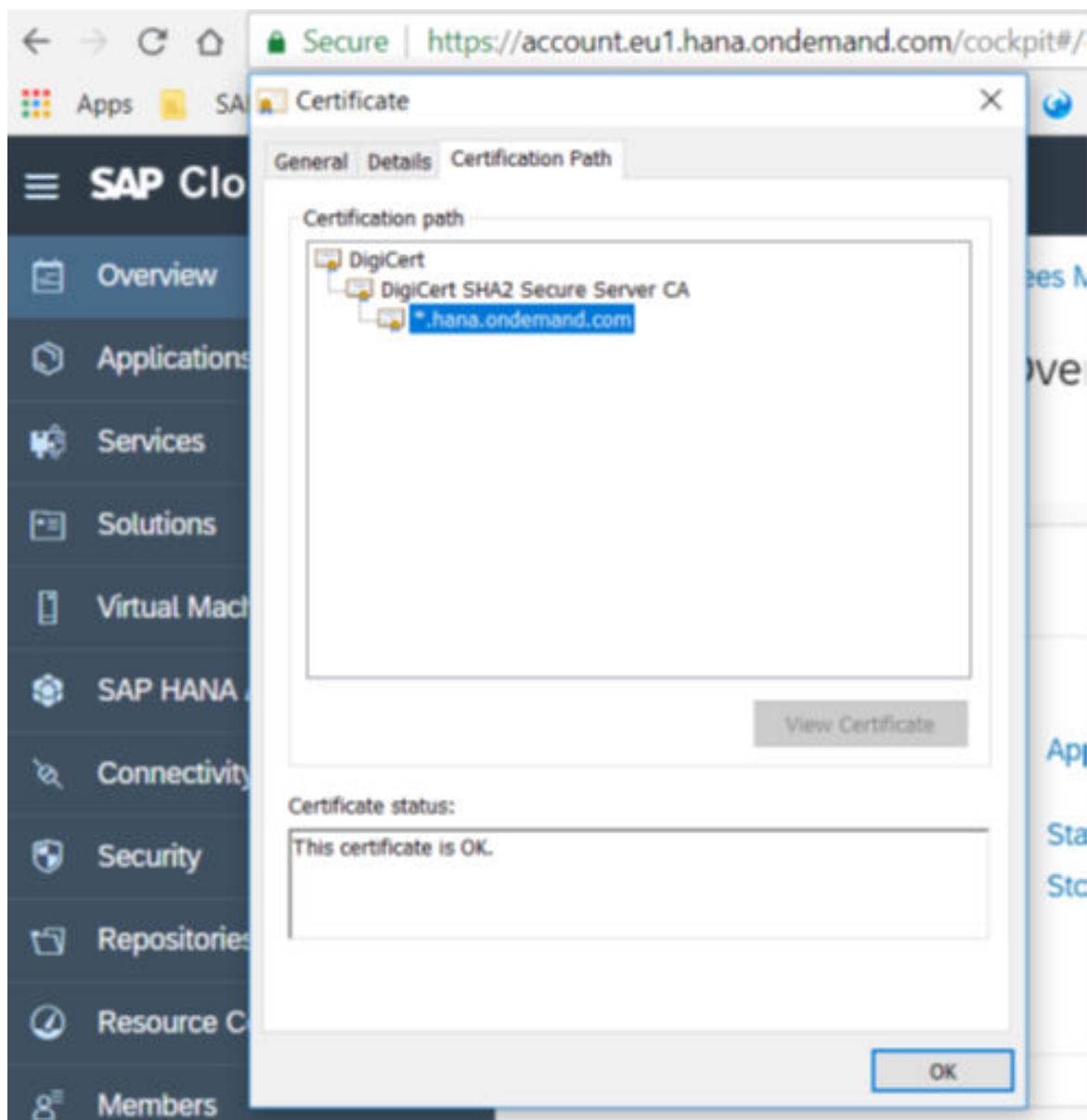
Procedure

1. Log on to the SAP BTP account where Integration with External Tax Calculation Engines is configured.

2. Choose *Secure* and *Certificate* under the site URL, as shown in the picture below:



- Export all three certificates shown in the certificate path with the *Details* tab. The export format must be **Base-64 encoded X.509 (.CER)**.



- Log on to the SAP Gui system.
- Access the *Trust Manager* (STRUST) transaction.
- Upload your new certificates.

4.2 Establishing the SSL Connection to SAP Cloud Integration

Procedure

Follow the steps described in [Establish the SSL Connection to SAP BTP](#).

4.3 Creating an RFC Connection (HTTP Connection to External Server)

Procedure

1. Go to your SAP Cloud Integration cockpit.
2. From the menu on the left, choose the *Operations* view.
3. Select *Manage Integration Content (All)*.
4. Search for the integration flow for the scenario that you're configuring.
5. Find and copy the host name in the *Endpoints* tab.

The endpoint URL is a concatenation of host name and path:

Example

https://<host name>/<path>.

6. Open your SAP GUI.
7. Access the activity using one of the following navigation options:

Option	Description
Transaction Code	SM59
Customizing Menu (in SPRO)	

8. Choose *Create (F8)*.
9. In *RFC Destination*, enter a name for your destination.
10. In *Connection Type*, choose *Possible Entries (F4)* and select HTTP Connection to external server.
11. Go to the *Technical Settings* tab.
12. In the *Host* field, enter the URL you copied previously.

13. In *Path Prefix*, enter the **path** part of the URL you copied previously.
14. **Optional:** Configure the HTTP proxy options if your network requires it.
15. In the *Logon & Security* tab, go under *Security Options* and select *SSL Active*.
16. Save your entry.

4.4 Creating a New OAuth 2.0 Client

OAuth 2 is an authorization framework that enables applications to obtain limited access to user accounts on an HTTP service.

Procedure

1. Open the **SAP GUI**.
2. Access the transaction `oa2c_config`.
This transaction opens a new internet browser window.
3. Choose *Create*.
4. Select `SAP_COM_0249_PREM` as your **OAuth 2.0 Client Profile**.
5. Enter a configuration name.
6. Enter your SAP Cloud Integration **OAuth 2.0 Client ID**.

Follow the steps to see your client ID:

- a. Access the SAP BTP cockpit.
- b. Go to your Cloud Foundry subaccount, [▶ Your Space ▶ Services ▶ Service Instances ▶ Your SAP Cloud Integration Instance ▶ Service Keys ▶](#).

The client ID is found in the field [▶ OAuth ▶ clientid ▶](#).

7. Choose *OK*.
8. In the *Details* section, go to [▶ Administration ▶ General Settings ▶](#) and enter the OAuth 2.0 Client's password in the field *Client Secret*.

Follow the steps to see your client secret

- a. Access the SAP BTP cockpit.
- b. Go to your Cloud Foundry subaccount, [▶ Your Space ▶ Services ▶ Service Instances ▶ Your SAP Cloud Integration Instance ▶ Service Keys ▶](#).

The client ID is found in the field [▶ OAuth ▶ cliensecret ▶](#).

9. Under *Authorization Server Settings*, enter the **Authorization Endpoint** and **Token Endpoint** and concatenate at the end of Token Endpoint the following parameter: " ? grant_type=client_credentials".
10. Under *Access Settings*, go to *Selected Grant Type* and choose *Client Credentials*.

11. Go to *Client Authentication* and choose *Basic*.
12. Go to *Resource Access Authentication* and choose *Header* Field.
13. **Optional:** Configure the HTTP proxy options if your network requires it.
14. Save your entry.

4.5 Activating the Integration with External Tax Calculation Engines for Procedures

Procedure

1. Open the *SAP GUI*.
2. Access the activity using one of the following navigation options:

SAP Menu	▶ Integration with Other SAP Components > Integration with External Tax Calculation Engines > Activate the Integration with External Tax Calculation Engines for Procedures >
Transaction Code	SPRO

3. Execute the customizing activity.
4. Save your entry.

4.6 Connecting with External Tax Calculation Engines

Procedure

1. Open the *SAP GUI*.
2. Access the activity using one of the following navigation options:

SAP Menu	▶ Integration with Other SAP Components > Integration with External Tax Calculation Engines > Connect with External Tax Calculation Engines >
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3. Execute the customizing activity.

→ Tip

To establish this connection, you inform the ID of the scenario delivered by SAP and the RFC connection you created in SM59



4. Save your entry.

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