ONESOURCE™ TAX INTEGRATION FOR SAP (US) CONFIGURATION GUIDE

TAX INTEGRATION FOR SAP (US) IFLOW

Version 1

THOMSON REUTERS®

COPYRIGHT NOTICE

DOCUMENT HISTORY

VERSION NUMBER	VERSION DATE	SUMMARY
1	08/06/2019	Initial Release

TABLE OF CONTENTS

PREFACE

Definition

This configuration guide describes necessary configuration steps for the iFlow component of the ONESOURCE Tax Integration for SAP (US). The iFlow component provided by Thomson Reuters is executed within SAP Cloud Platform Integration Services (CPI) and is responsible for the communication between SAP S/4HANA systems and ONESOURCE Determination.

Intended Audience

This guide is intended to be used by both technology and application consultants.

Structure

The structure of this configuration guide follows the sequence of steps required to configure and integrate ONESOURCE Tax Integration for SAP (US) with SAP S/4 HANA Cloud, using SAP Cloud Platform Integration Services (CPI).

Additional Documentation

List of related documentation

SAP Cloud Platform: https://help.sap.com/viewer/product/CP/Cloud/en-US

SAP S/4HANA Cloud: https://help.sap.com/viewer/p/SAP_S4HANA_CLOUD

INTRODUCTION

ONESOURCE Tax Integration for SAP (US) package has four iFlows. The SAP Cloud Platform Integration Services (CPI) package is needed to connect S/4 HANA Cloud environment to ONESOURCE Tax Integration for SAP (US).

OVERVIEW

Prerequisites

List of required steps

PREREQUISITE	DOCUMENTATION
1. SAP Cloud Platform Integration Services (CPI) tenant	
2. SAP S/4HANA Cloud	
3. Configure Communication Scenario COM_0177 in SAP S/4HANA Cloud.	SAP NOTE 2598888 https://launchpad.support.sap.com/#/notes/2598888
4. Get the SAP Cloud Platform Integration Services (CPI) iFlow Package from ONESOURCE	

PACKAGE INSTALLATION PROCESS

The figure below shows the system landscape that is used for the Integration Scenarios for ONESOURCE Tax Integration for SAP (US) with S/4 HANA Cloud using SOAP Adapter in SAP Cloud Platform Integration Services (CPI).
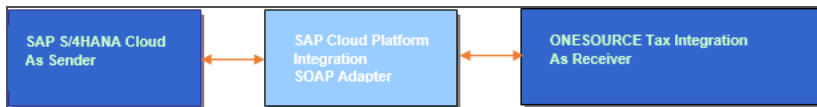
Installing the SAP Cloud Platform Integration Services (CPI) Integration Package for ONESOURCE Tax Integration for SAP (US)

From your CPI Tenant Instance install the iFLow package.

Example Link https://<CPI Tenant>-tmn.hci.us3.hana.ondemand.com/itspaces/shell/design

Click on Design View Icon.

Click on Import and select the CPI package from ONESOURCE Tax Integration for SAP (US) .

There should be four iFlows.

CONFIGURING AND DEPLOYING INTEGRATION SCENARIO

This section documents the steps required to configure the ONESOURCE Integration Scenarios. The integration scenario(s) to be configured are:

- ONESOURCE_USTaxAPI_Calculate_Tax

- ONESOURCE_USTaxAPI _Determine_Jurisdiction

- ONESOURCE_USTaxAPI _Update

- ONESOURCE_USTaxAPI_Force_Update

Configuration Parameters

iFlow Contents

All iFlows are identical in terms of content and resources. The change is in the Endpoints. Each iFlow has a unique endpoint.

Import S/4HANA Cloud Certificate

In Each iFlow Edit Mode Click on SOAP Connector for Sender.

In Connection Tab Choose Authorization as Client Certificate.

In Client Certificate Authorization: Press the Select Button.

Import the S/4HANA SSL Certificate that was saved before from S/4HANA Cloud setup.

There are some additional parameters that are needed to complete the iFlow setup.

Endpoint_from_S4HC

It is the Endpoint that was configured in S/4HANA cloud environment in the Communication Arrangement.

For example, S/4HANA Cloud has /cxf/TaxCalc in the path then iFLow has /TaxCalc for Calculate Tax Endpoint.

Similarly, other iFlows follow the same pattern. Another Example for Determine Jurisdiction. If path in S/4HANA Cloud is /cxf/DTJC then Jurisdiction iFlow will have /DTJC as the address.

Issuer and Subject

This should already be filled with the S/4HANA Cloud Certificate from previous step.

OAUTH_TAXENGINE

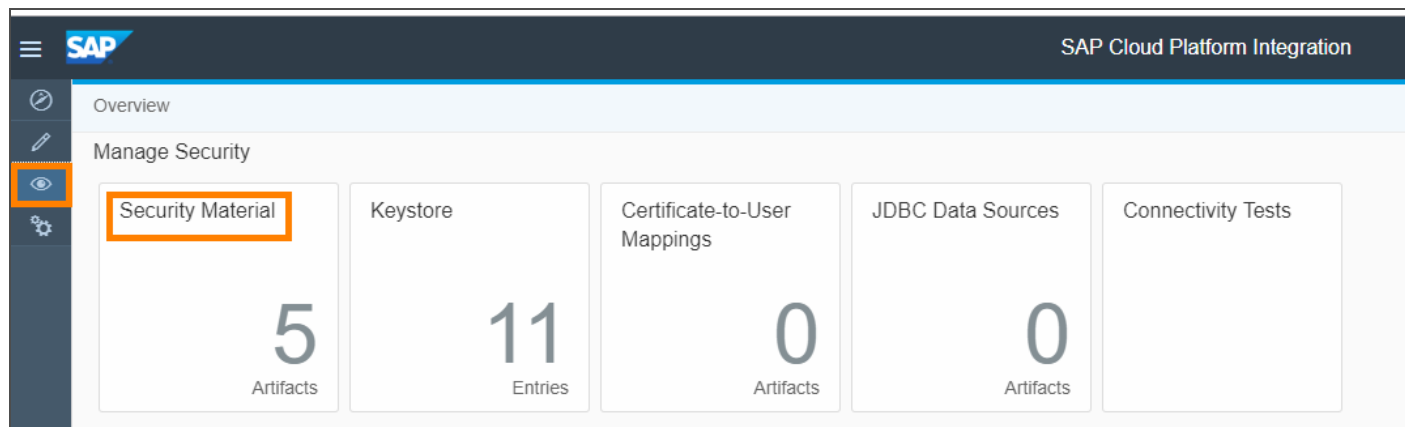Alias Name for Credential stored for ONESOURCE in SAP Cloud Platform Integration Services (CPI).
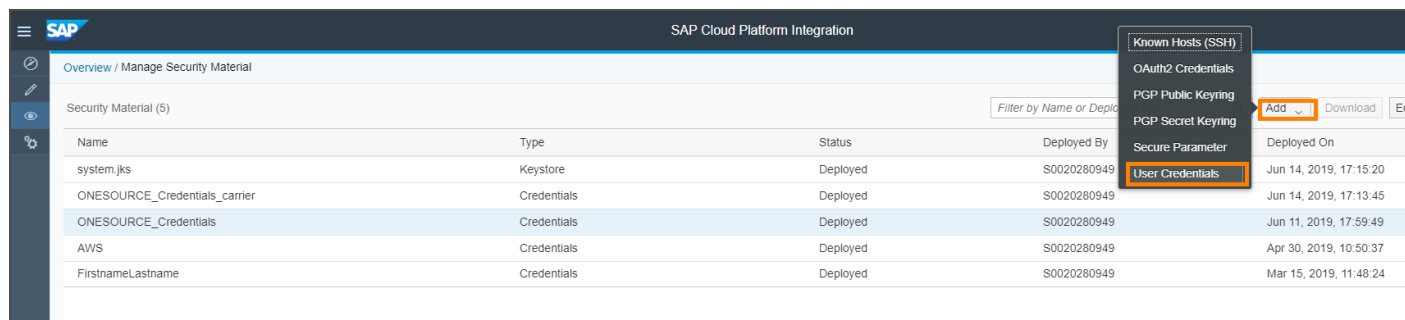
In Operations View Under Manage Security Choose Security Material Tile

Store a new credential with name as ONESOURCE_Credentials.

This is a one-time activity and need not be repeated for each iFlow.
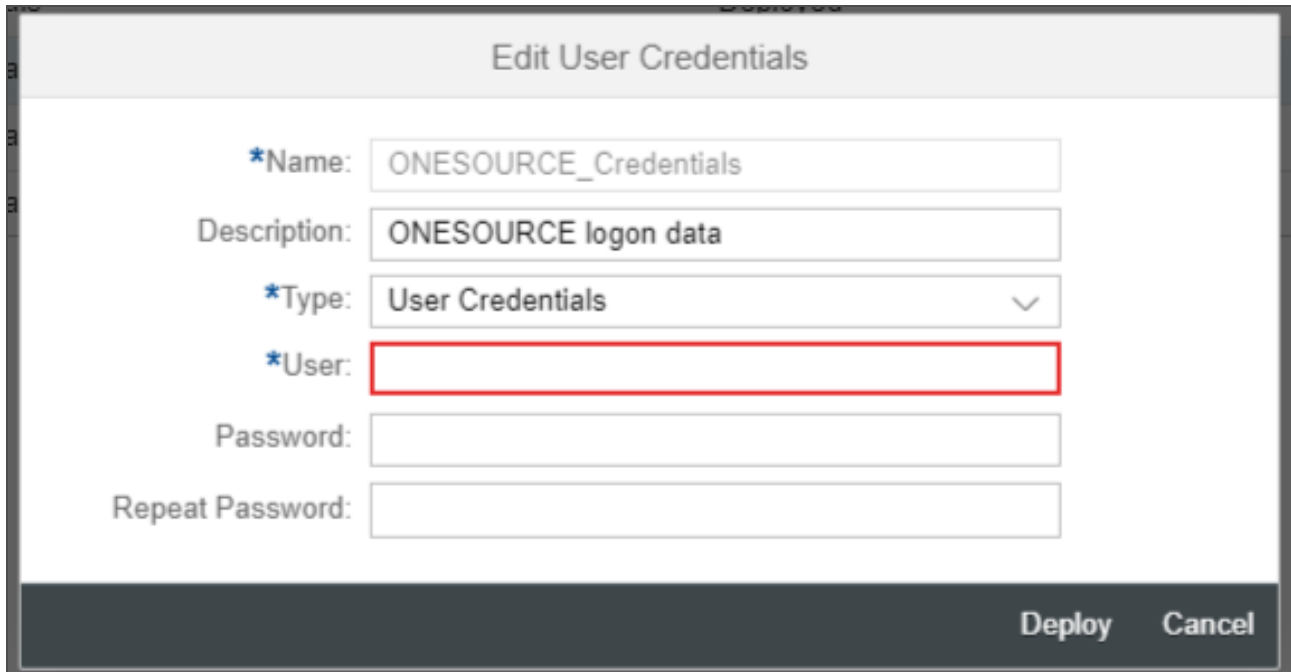
Choose User Credentials

Name it as ONESOURCE_Credentials

Use the User name and Password for ONESOURCE Tax Engine

ONESOURCE_RECEIVER

Add the ONESOURCE URL for ONESOURCE Determination Tax Engine.

External Company PREPEND

External Company Prepend is an identifier which will be provided to you by your ONESOURCE Indirect Tax implementation team.

For EXTERNAL COMPANY PREPEND there is a new XML tag which will be added to the message from

S/4 HANA Cloud.

This is a constant and can be configured in individual iFlows by customer.

To configure this, choose the Configurable Field called ONESOURCE_PREPEND and enter the EXTERNAL COMPANY PREPEND here.

This is a mandatory field and needs a value.

Integration Flow

| General | Runtime Configuration | Error Configuration | Resources | Externalized Parameters | Problems |

Name	Value
Endpoint_from_S4HC	/TaxCalc
issuer	cn=digicert baltimore ca-2 g2,ou=www.digicert.com,o=digicert inc,c=us
OAUTH_TAXENGINE	ONESOURCE_Credentials
ONESOURCE_PREPEND	INTSAPDEV_
ONESOURCE_RECEIVER	https://usapi-sap-dev-use1.3300.aws.thomsonreuters.com/SapSoapIntegration/2018-1...
Request	true
Response	true
Subject	cn=my302840d.s4hana.ondemand.com,ou=sap cloud managed services,o=sap se,l=w...

Groovy Script to add the ONESOURCE_PREPEND value is called ModifyMessage.

Prepend Groovy Script

```
import com.sap.gateway.ip.core.customdev.util.Message
        import groovy.xml.XmlUtil
        import groovy.util.*

        def Message processData(Message message) {

        def messageText = message.getBody(java.lang.String) as String
        def messageLog = messageLogFactory.getMessageLog(message)
        if(messageLog != null){
        //Body with new attributes
        def root = new XmlParser().parseText(messageText)
        //Get properties
        def Properties = message.getProperties()
        def Prepend    = Properties.get("EXTERNAL_COMPANY_PREPEND")
        root.appendNode("EXTERNAL_COMPANY_PREPEND", [:], Prepend)
        rootxml = XmlUtil.serialize(root)
        message.setBody(rootxml)

        }
        return message
        }
```

The Request from SAP XML has a new TAG called <EXTERNAL_COMPANY_PREPEND> which shows the value stored in ONESOURCE_PREPEND.

Overview / Monitor Message Processing / Message Processing Log Attachments

Artifact Name: ONESOURCE_USTaxAPI_Update   Status: Completed   Processing Time: 600 ms
Last Updated at: Sep 05, 2019, 09:22:15   Log Level: Info

Log   Request from SAP: Response from Tax Engine:

```
    <INTERF_VERSION>TAXDOC00</INTERF_VERSION>
    <SYST_NAME>QVZ</SYST_NAME>
    <CLIENT>100</CLIENT>
    <COMP_CODE>1710</COMP_CODE>
    <TID>0AB41C584EC05D710C060001</TID>
    <DOC_NUMBER>1700000002  </DOC_NUMBER>
    <CURRENCY>USD</CURRENCY>
    <CURR_DEC>002</CURR_DEC>
    <TXJCD_L1>04</TXJCD_L1>
    <TXJCD_L2>05</TXJCD_L2>
    <TXJCD_L3>04</TXJCD_L3>
    <TXJCD_L4>01</TXJCD_L4>
    <TAX_PER_ITEM>X</TAX_PER_ITEM>
    <NR_LINE_ITEMS>000001</NR_LINE_ITEMS>
 </UPDATE_HEADER>
 <UPDATE_ITEM>
    <ITEM_NO>000001</ITEM_NO>
    <POS_NO>000001</POS_NO>
    <COUNTRY>US</COUNTRY>
    <QUANTITY>            0</QUANTITY>
    <APAR_IND>V</APAR_IND>
    <TAX_TYPE>1</TAX_TYPE>
    <TAX_DATE>2019-09-05</TAX_DATE>
    <TXJCD_ST>USGA30315XXXX0</TXJCD_ST>
    <TXJCD_SF>USGA6000272020</TXJCD_SF>
    <TXJCD_POA>USGA6000272020</TXJCD_POA>
    <TXJCD_POO>USGA30315XXXX0</TXJCD_POO>
    <AMOUNT>        100000</AMOUNT>
    <GROSS_AMOUNT>        100000</GROSS_AMOUNT>
    <FREIGHT_AM>            0</FREIGHT_AM>
    <EXEMPT_AMT>            0</EXEMPT_AMT>
    <REP_DATE>2019-09-05</REP_DATE>
    <CREDIT_IND>1</CREDIT_IND>
    <ACCNT_NO>0017300001</ACCNT_NO>
    <COST_OBJECT>0017101101</COST_OBJECT>
    <POPUP_FIELDS>
       <TAX_POPUP_FIELDS_S>
          <WBS_ELEMENT>00000000</WBS_ELEMENT>
       </TAX_POPUP_FIELDS_S>
    </POPUP_FIELDS>
    </UPDATE_ITEM>
    <EXTERNAL_COMPANY_PREPEND>INTSAPDEV </EXTERNAL_COMPANY_PREPEND>
</n0:TAX_UPDATE_SEND>
```

ONESOURCE Custom logs

ONESOURCE has its own logs feature. These logs are optional and can be turned off.

These logs are in addition to standard logs that are generated by SAP Cloud Platform Integration Services (CPI) itself.

ONESOURCE logs are controlled by configurable flags called Request and Response.

Request When the value is set to 'true' Then "Request from SAP:" log is saved in attachment section.

Similarly, for Response Logs

Response When the value is set to 'true' Then "Response from Tax Engine:" log is saved in attachment section.

Name	Type	Modified At	Size	Actions
Request from SAP:	text/plain	Aug 02, 2019, 08:43:19	4 KB	↓
Response from Tax Engine:	text/plain	Aug 02, 2019, 08:43:24	3 KB	↓

Attachments

Groovy Scripts for ONESOURCE logs

Request From SAP

```
import com.sap.gateway.ip.core.customdev.util.Message
def Message processData(Message message) {
def messageLog = messageLogFactory.getMessageLog(message)
def Properties = message.getProperties()
def Logging    = Properties.get("Enable_Logging_Request")
if(messageLog != null && Logging == 'true'){
def messageText = message.getBody(java.lang.String) as String
messageLog.setStringProperty("Log 1", "Printing Payload As Attachment")
messageLog.addAttachmentAsString("Request from SAP:", messageText,
"text/plain")
}
return message
}
```
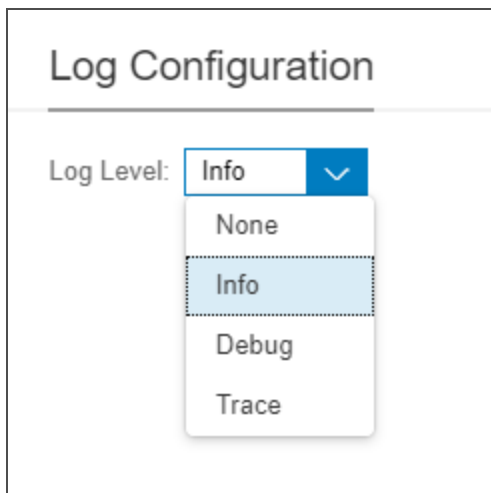
Response from Tax Engine

```
import com.sap.gateway.ip.core.customdev.util.Message
import java.util.HashMap
def Message processData(Message message) {
def messageText = message.getBody(java.lang.String) as String
def messageLog = messageLogFactory.getMessageLog(message)
def Properties = message.getProperties()
def Logging    = Properties.get("Enable_Logging_Response")
if(messageLog != null && Logging == 'true'){
messageLog.setStringProperty("Log 2", "Printing Payload As Attachment")
messageLog.addAttachmentAsString("Response from Tax Engine:", messageText,
"text/plain")
}
return message
}
```

Standard SAP Cloud Platform Integration Services (CPI) logs are at four levels

Reference Link from SAP:

https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/4e6d3fc3f34544f6ac5289268b653ad1.html

These log levels can be set for each Integration Flow.

You can choose the following log levels:

1. None: No Data is recorded during message processing and no data is shown in data monitoring.

2. Info: Basic information is recorded during message processing. The header is always displayed and in case of failed messages, additional detailed information about the last 50 steps is retained and displayed in the message processing log.

3. Debug: Detailed information is recorded for all steps during message processing. The header and additional information about the last 100 steps are displayed in the message processing log.

4. Trace: Detailed information is recorded for all steps and in addition, the message content is tracked . The trace function expires after a certain time (default value: 10 minutes). After expiry the log level switches back to the log level set before. The recorded message content is also retained for a certain time (default value: 1 hour).

Store ONESOURCE Certificate in KeyStore

This is a one-time activity and need not be repeated for each iFlow.

Download the SSL Certificate from ONESOURCE URL by clicking on Lock Icon in the address bar.
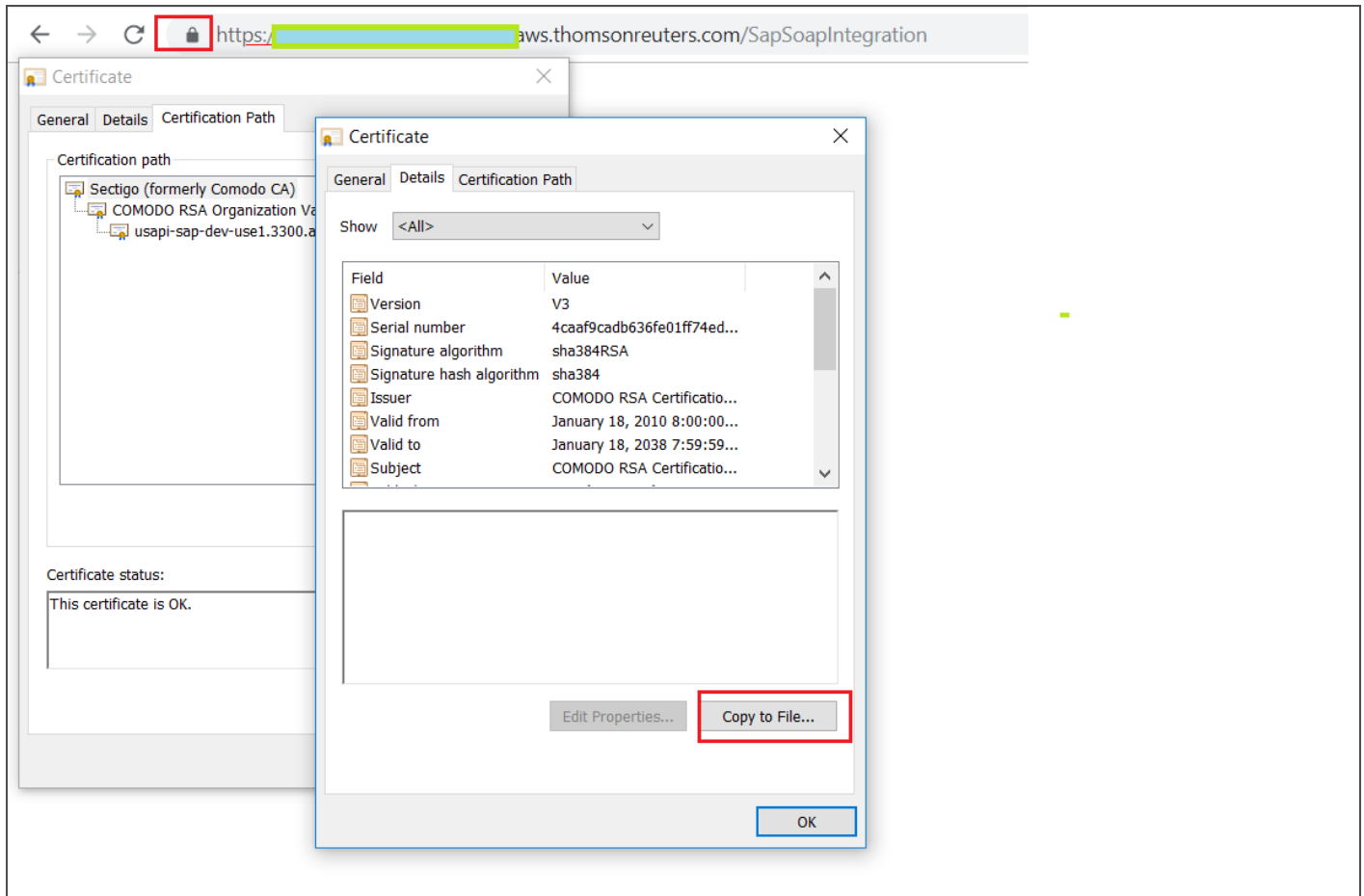
In Operations View under Manage Security choose Keystore Tile.
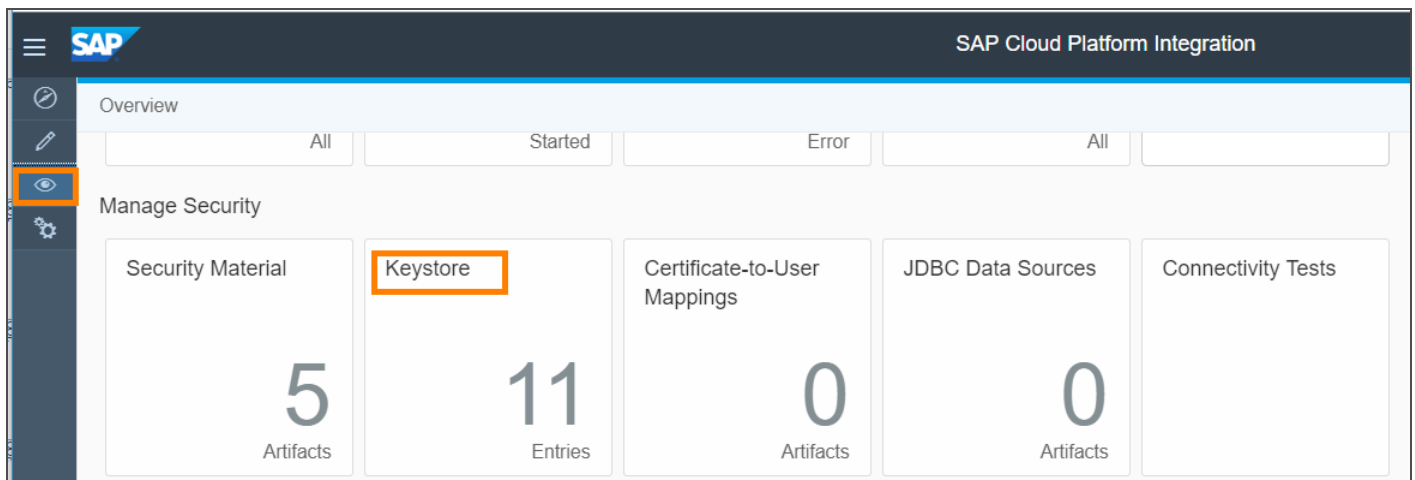
Click on Add Button and Choose the Certificate Option.
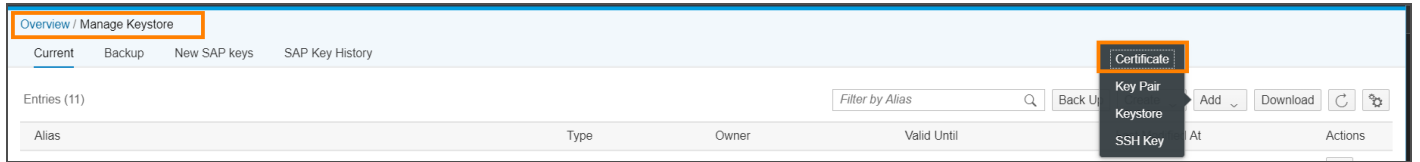
Alias can be ONESOURCE Certificate. Choose the SSL Certificate from ONESOURCE URL using Browse and Hit Deploy.
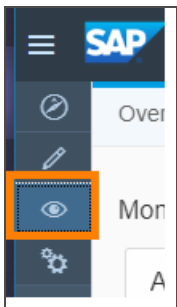
Deploy the iFlows

Save and deploy the iFlows. Make sure the Integration Flow is deployed successfully.

Executing and Testing

Run a few sample tax calculation scenarios from S/4HANA Cloud and check the message processing log section.

Under Operations View...

...check the Monitor Message Processing section.