SAP e-Way bill for India - Integration with GSP (GST Suvidha Provider)

Via SAP Cloud Integration Service

in Neo environment

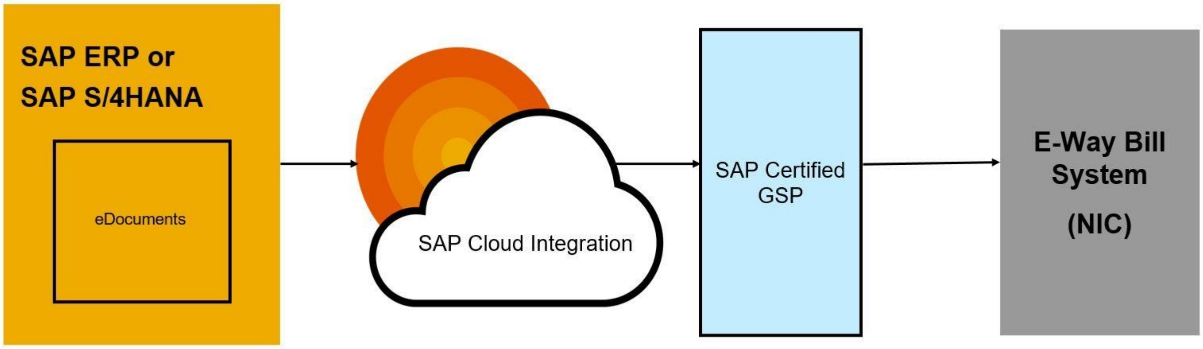
GSP Integration Set Up Guide

Contents

1. Introduction

Using the SAP Solution for eWay Bill India, you can generate eWay bill number as per the legal requirement in India.

The e-way bill solution requires the integration between SAP Business Application (SAP ERP or SAP S/4HANA) and GSPs. This document describes the steps to adapt and deploy the SAP Cloud Integration content flow to establish the communication between SAP Business Application and GSPs.



Note:

SAP offers two Cloud environments, namely **Neo** and **Cloud Foundry** and this document is intended for the setting-up of e-Way Bill India integration for Neo environment.

2. Pre-requisites (only first-time activity)

Ensure the following prerequisites are met:

- SAP eWay bill for India solution is available in your landscape. For more information on installation and implementation, see SAP note: 2631687
- Provisioned live SAP Cloud Integration production and/or pre-production tenants.
    - A sample of the URL's you'll need are:
        - Account URL: https://account.hana.ondemand.com
        - Web UI URL: https://sample-tmn.avt.eu1.hana.ondemand.com/itspaces
        - Runtime URL: https://sample-iflmap.avtsbhf.eu1.hana.ondemand.com

          Use your P-user or S-user credentials to login. If you get HTTP status 403 error, then send a mail to *service@sap.com*.
    - User role:

    - SAP Cloud Integration service user should have the ESBMessaging.Send role.
    - User should have AuthGroup.Administrator role to perform steps related to KeyStore, client certificate mapping and User credentials.

- For production access via GSP:
  I. Login to NIC web portal (https://ewaybill.nic.in/).

  II. Go to Registration > For GSP.

  The webpage displays your existing GSP if any login credentials were already created for API access through GSP. If not, continue the steps below.

  III. Click the radio button Add/New.

  IV. Choose your GSP name from dropdown list and input your user credentials in expected format.

  V. Click Add to register your login credentials for E-way Bill API access through your GSP. For more information, see FAQ 1.
- For sandbox access via GSP, request the NIC user credentials from GSP directly.
- Completed registration with GST Suvidha Provider (GSP) system and have received the following:
  - o GST Suvidha Provider (GSP) integration/set up manual.
  - o Trusted certificates from GSP for SSL handshake.
  - o NIC public key certificate (SAP Cloud Integration expects the certificate in .CER format)
  - o NIC user credentials per GSTIN.
  - o Other required technical details from GSP.
  - o Two Integration Flows (.zip files) from GSP and save to any local location in your desktop.
    - GSP integration flow [Integration Flow specific to GSP]
    - Router integration flow [Routes e-Way Bill request from SAP business application to specific GSP Integration Flow]

3. Establishing the connection between SAP Cloud Integration and GSP

3.1 Certificate set-up and connection test (only first-time activity or in case of changes in certificate from NIC/GSP)

The following steps details the procedure to establish a connection between SAP Cloud Integration and GSP:

a. Deploying SSL certificate:
   In the SAP Cloud Integration Web UI URL, go to **Monitor** > **Manage Security** > **Keystore** > **Add Certificate** (fill parameters here) > click **Deploy** > click **Ok**.

   Note: To perform the above operation, you need to have the role as AuthGroup.Administrator.

For more information, see FAQ 2.

b. Connection test (recommended):
In the SAP Cloud Integration Web UI URL, go to **Monitor** > **Manage Security** > **Connectivity tests** > enter GSP base URL without https and port > click **Send**. On successful connection, system displays a successful response message.

For more information, see FAQ 3.

c. Deploying NIC public key certificate:
In the SAP Cloud Integration Web UI URL, go to **Monitor** > **Manage Security** > **Keystore** > **Add Certificate** > browse NIC public certificate (certificate should be in .CER format) > Enter alias name as niccert > click **Deploy** > click **Ok**.

For more information, see FAQ 2.

d. Adding NIC user credentials as per GSTIN:
In SAP Cloud Integration Web UI URL, go to **Monitor** > **Manage Security** > **Security Material** > **Add** > Click **User Credentials** (fill parameters here) > click **Deploy**.

For more information, see FAQ 4.

Name	GSTIN of the business place to which the user belongs / GSTIN of the business place with suffix '_ewb'
Description	Any relevant text (optional)
User	User ID created in NIC portal under GSP registration option (production) or received from GSP (pre-production)
Password/ Repeat password	Password

e. Deploying client certificate to SAP Cloud Integration (optional but highly recommended):
Download the client certificate from source system.
In the SAP Cloud Integration Web UI URL, go to **Monitor** > **Manage Security** > **Manage Certificate-to-User Mappings** > click **Add** > Add user name as SAP Cloud Integration user name (this user must have ESBMessaging.Send role assigned) and certificate as client certificate from the source system.

For more information, see FAQ 6

3.2 Deploy Integration Flow

3.2.1 Creating content package: (one-time activity)

In the Web UI URL of the tenant, go to **Design** > **Create** > In Header, give a meaningful name (technical name), short description and click **Save**. The content package is created.

3.2.2 Updating content package

When you already have previous version of integration flow deployed in your tenant and need to replace it with new integration flow, then follow below instructions

- choose the content package under which the previous integration flow is deployed.
- Click on “Edit” button (seen in left side)
  - Go to artifacts tab, checkmark the integration flow,
  - Then click on action icon → configure. Copy the values of the fields maintained over there locally, as it can be used later if GSP confirms these parameters are valid or get the exact latest externalized parameters values. Close the configure pop-up screen.
  - checkmark the integration flow, then click on action icon → delete.

Note: Repeat this ‘Updating content package’ step for each of the router and GSP integration flows.

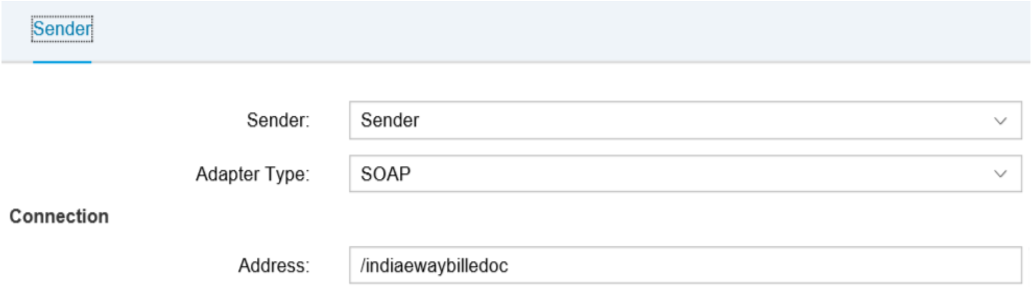
3.2.3 Deploying Router integration flow

a. Within the same content package, in artifacts tab, click **Add** > **Integration flow** > choose **Upload** > browse to the router integration flow (.zip file), give a name, description, sender, receiver > click **Ok**.

Integration flow is successfully added.

b. Select the Router integration flow. System displays the integration flow screen.

c. To configure and deploy:
In **Artifacts** screen, against the router integration flow, click **Actions** > **Configure** > verify the value as shown in the image below:



Sender: Sender

Adapter Type: SOAP

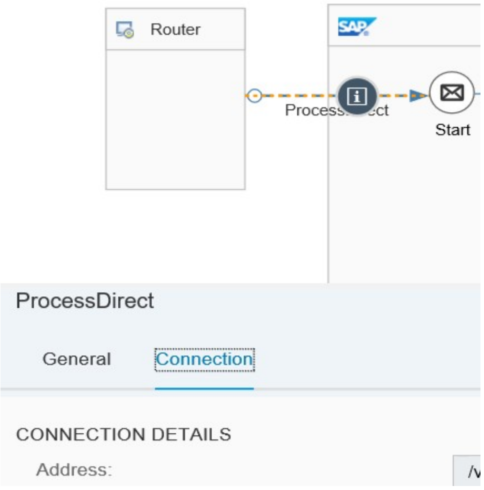
Connection

Address: /indiaewaybilledoc

d. Click **Save** then **Deploy**.

3.2.4 Deploying GSP integration flow:

In the content package, in **Artifacts** tab, click **Add** > **Integration flow** > choose **Upload** > browse to the GSP integration flow (.zip file), give a name, description, sender, receiver → click **Ok**. Now, integration flow is successfully added.
Select the GSP integration flow. System displays the integration flow screen.



ProcessDirect

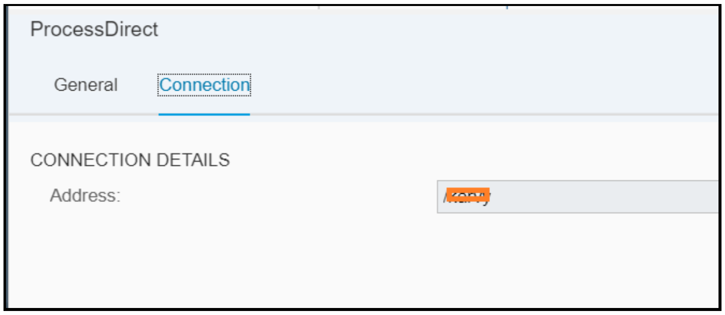
General | Connection

CONNECTION DETAILS

Address: /v

For more information, see FAQ 5.

Double click the **processdirect** > **connection details** > **address** > make note of this value (sample: /gsp)



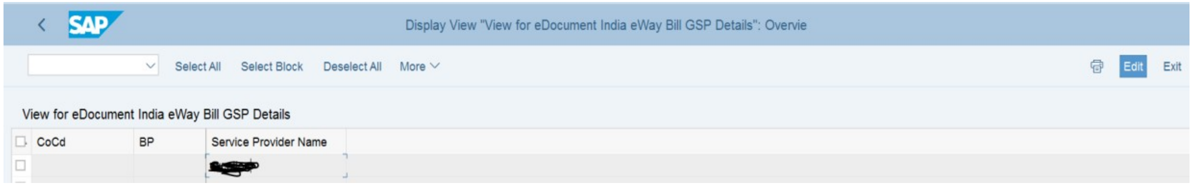
ProcessDirect

General | Connection

CONNECTION DETAILS

Address: [redacted]

Note: You should enter the service provider name as same as the address value (without slash) in the business application > sm30 > in view EDOINEWBGSPV.



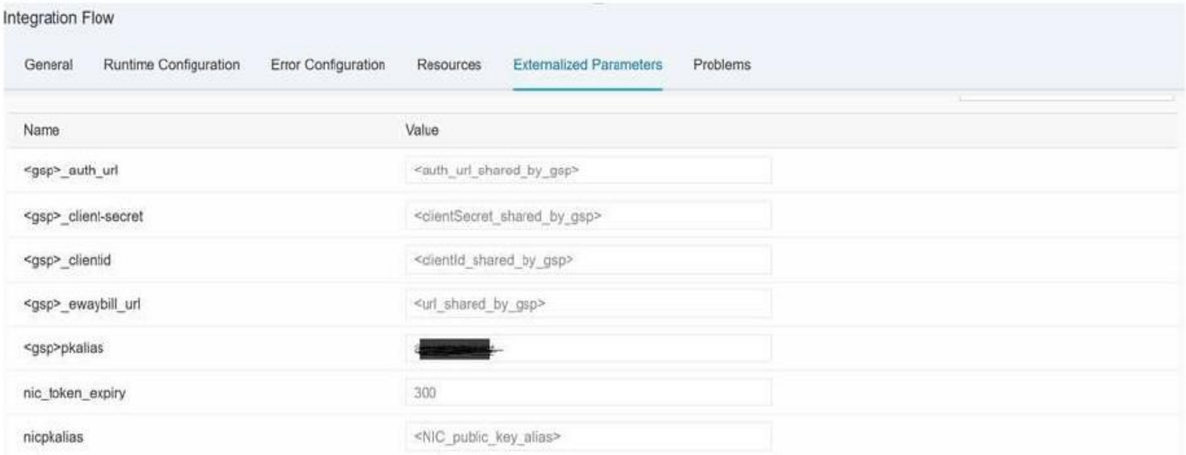
Display View "View for eDocument India eWay Bill GSP Details": Overvie

View for eDocument India eWay Bill GSP Details

CoCd	BP	Service Provider Name
		[redacted]

After that to configure and deploy:

In Artifacts screen, against the GSP integration flow, click **Actions** > **Configure** > Define the externalized parameters as provided by GSP to SAP customer. In case of updating the new integration flow, use the parameters copied as suggested in the step 3.2.2. After updating the parameters, click **Save** then **Deploy**.



Name	Value
<gsp>_auth_url	<auth_url_shared_by_gsp>
<gsp>_client-secret	<clientSecret_shared_by_gsp>
<gsp>_clientid	<clientId_shared_by_gsp>
<gsp>_ewaybill_url	<url_shared_by_gsp>
<gsp>pkalias	[redacted]
nic_token_expiry	300
nicpkalias	<NIC_public_key_alias>

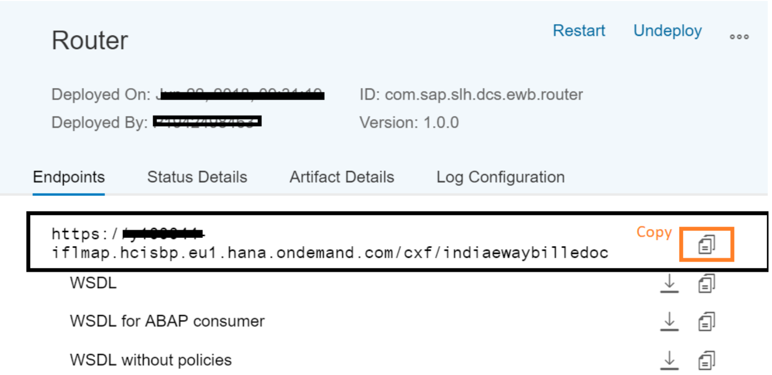
Note: NIC public key alias value is the same as the alias of the NIC public key certificate you deployed (niccert).

Important:

- After the successful deployment, verify that the integration flows are in the **Started** state by clicking **Monitor** > **Manage integration content**.
- To obtain the EndPoint URL :
  I. Click **Monitor** > **Manage integration content**

  II. Choose the Router Integration flow.

  III. The EndPoint URL can be found on the right side of the page.

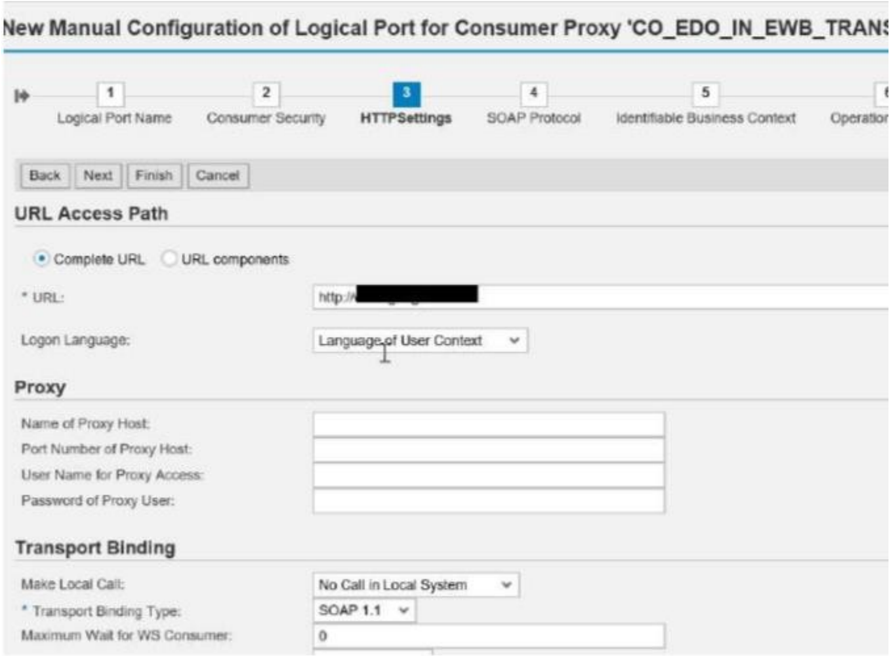


Deployed On: [redacted]
Deployed By: [redacted]
ID: com.sap.slh.dcs.ewb.router
Version: 1.0.0

```
https:/[redacted]
iflmap.hcisbp.eu1.hana.ondemand.com/cxf/indiaewaybilledoc
```

WSDL
WSDL for ABAP consumer
WSDL without policies

IV. This URL has to be configured in the SOA Manager.



New Manual Configuration of Logical Port for Consumer Proxy 'CO_EDO_IN_EWB_TRANS

URL Access Path

● Complete URL ○ URL components

* URL: http://[redacted]

Logon Language: Language of User Context

Proxy

Name of Proxy Host:

Port Number of Proxy Host:

User Name for Proxy Access:

Password of Proxy User:

Transport Binding

Make Local Call: No Call in Local System

* Transport Binding Type: SOAP 1.1

Maximum Wait for WS Consumer: 0

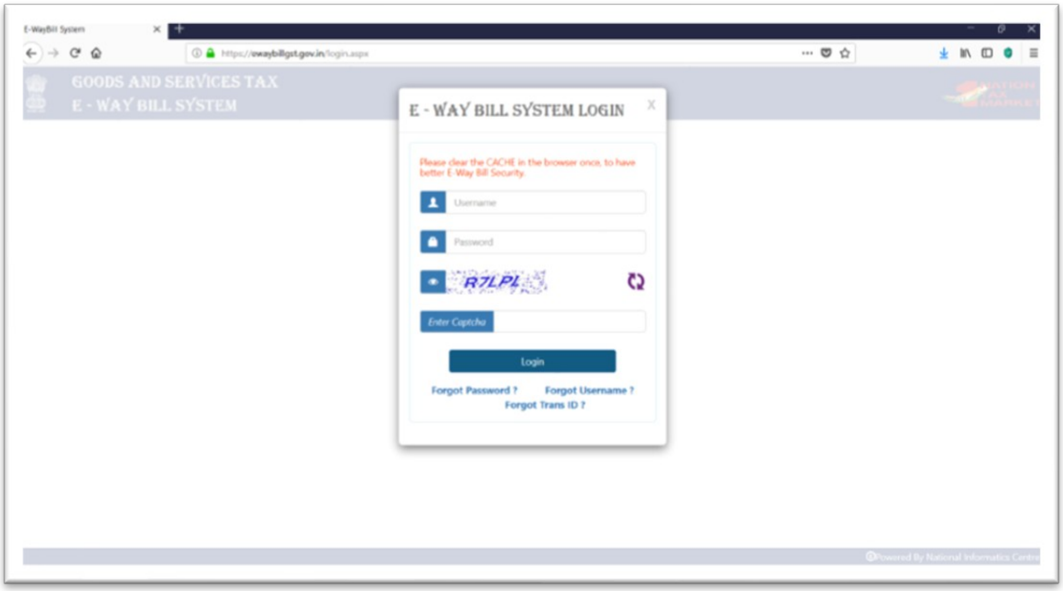
- Any issues with:
  - **SAP Cloud Integration tenant**: Report under SAP component: LOD-HCI-PI-OPS
  - **EWB**: Report under SAP component: XX-CSC-IN-EWB
  - **GSP system access**: Report through GSP defined support mechanism

FAQs:

1. Registering your Login Credentials for E-way Bill API

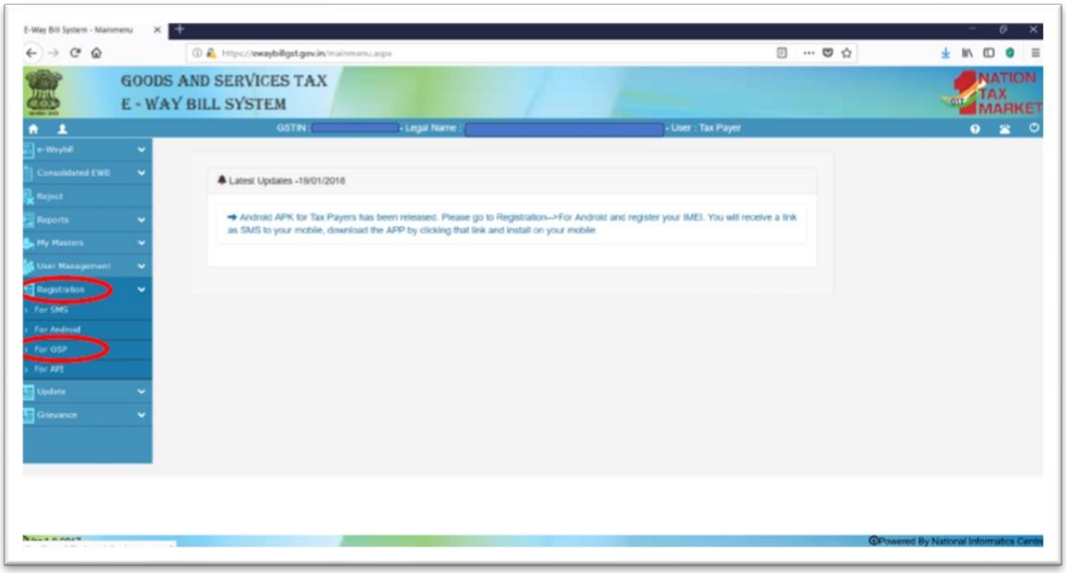
To register your login credentials for E-way Bill API, access through GSP in NIC portal.

a. Customer must login to NIC web portal (https://ewaybill.nic.in/).



Please clear the CACHE in the browser once, to have better E-Way Bill Security.

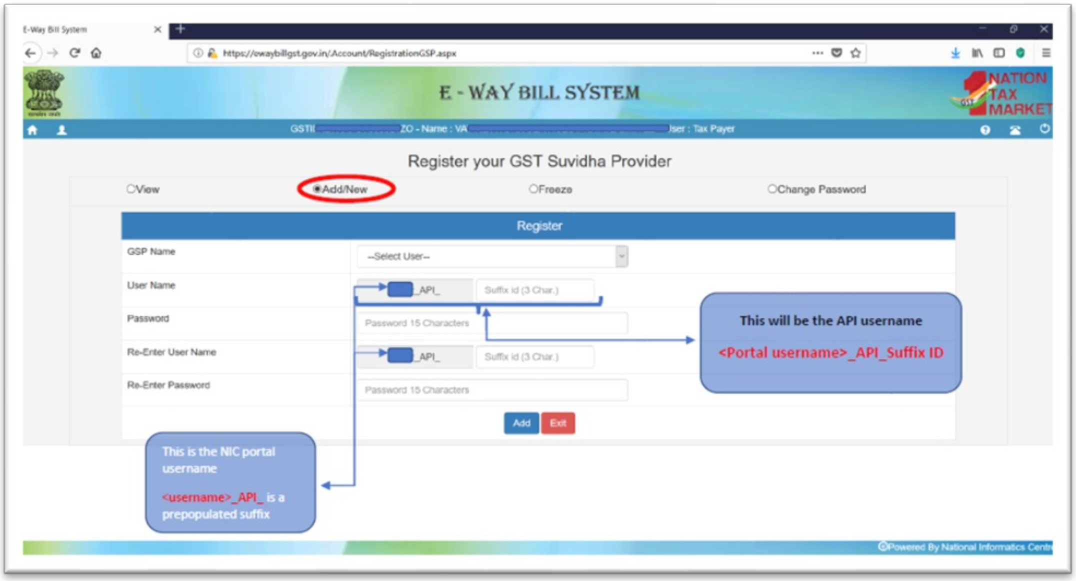
b. Go to Registration > For GSP > The webpage shall now display your existing GSP (if any login credentials were already created for API access through GSP). If not, click Add/New. Choose your GSP name from dropdown list and input your user credentials in the expected format. Click Add to register your login credentials for E-way Bill API access through your GSP.



GSTIN : [redacted] - Legal Name : [redacted] - User : Tax Payer

Latest Updates -19/01/2018

➜ Android APK for Tax Payers has been released. Please go to Registration-->For Android and register your IMEI. You will receive a link as SMS to your mobile, download the APP by clicking that link and install on your mobile.



E-Way Bill System

https://ewaybillgst.gov.in/Account/RegistrationGSP.aspx

E - WAY BILL SYSTEM

GSTI[redacted]ZO - Name : VA[redacted]Jser : Tax Payer

Register your GST Suvidha Provider

○View [✓ ●Add/New] ○Freeze ○Change Password

Register

GSP Name	--Select User--
User Name	[redacted]_API_ Suffix id (3 Char.)
Password	Password 15 Characters
Re-Enter User Name	[redacted]_API_ Suffix id (3 Char.)
Re-Enter Password	Password 15 Characters

Add Exit

This will be the API username

<Portal username>_API_Suffix ID

This is the NIC portal username

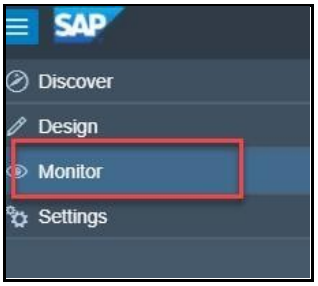
<username>_API_ is a prepopulated suffix

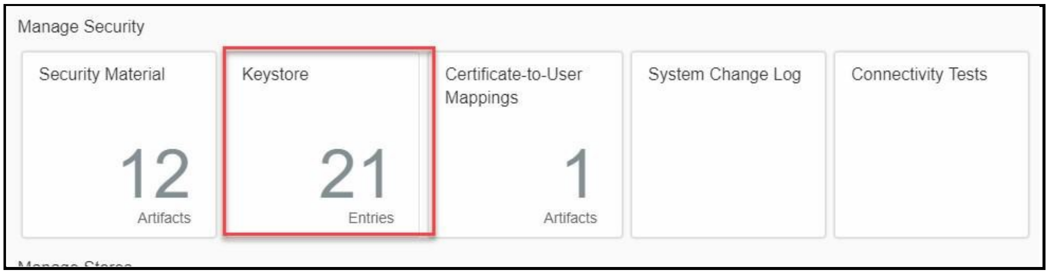
2. Adding New Certificates to the SAP Cloud Integration

You can add the security artifacts like keystore entries by following the process detailed here.

You should have Tenant Admin authorizations (AuthGroup.Administrator role) for the tenant to perform this operation.

a. Navigate to **Monitor** > **Manage Security** > **Keystore**.



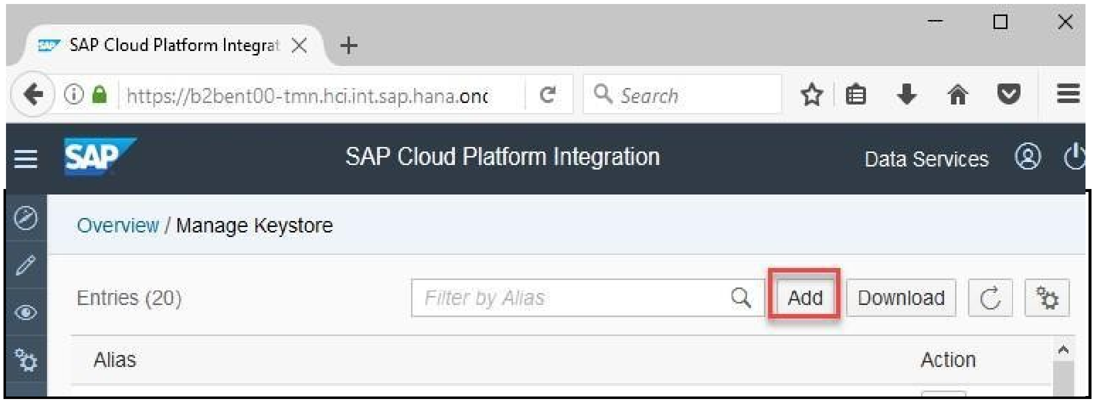


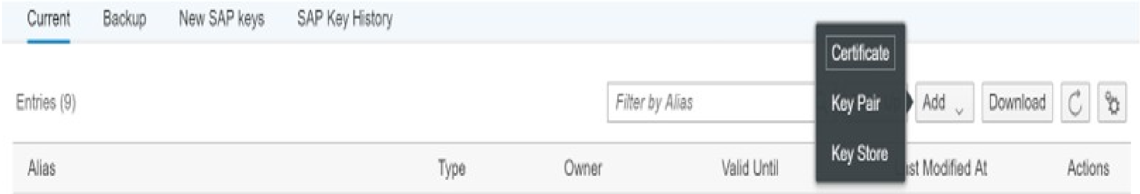
Manage Security

Security Material	Keystore	Certificate-to-User Mappings	System Change Log	Connectivity Tests
12 Artifacts	21 Entries	1 Artifacts		

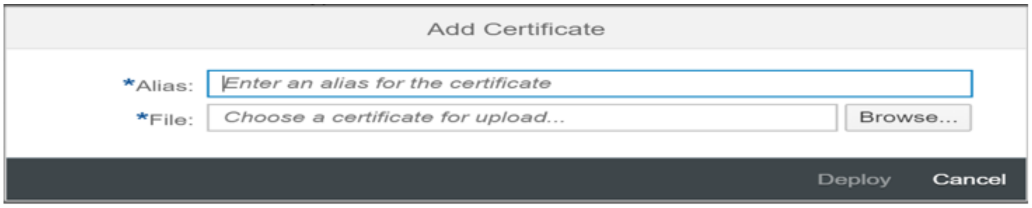
Manage Stores

b. Click **Add** > **Certificate** > **Add Certificate**.


SAP Cloud Platform Integrat
https://b2bent00-tmn.hci.int.sap.hana.onc
Search
SAP Cloud Platform Integration
Data Services
Overview / Manage Keystore
Entries (20)
Filter by Alias
Add
Download
Alias
Action



c. Enter an alias to identify the certificate. Browse the certificate from local desktop.

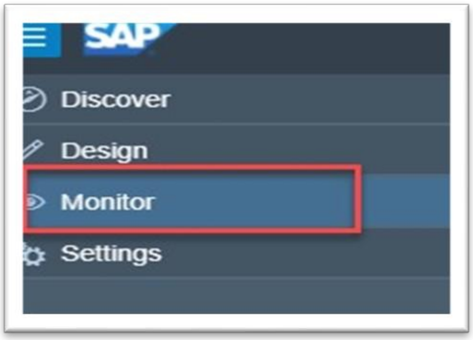

Add Certificate
*Alias:
Enter an alias for the certificate
*File:
Choose a certificate for upload...
Browse...
Deploy
Cancel

d. Click **Deploy**.

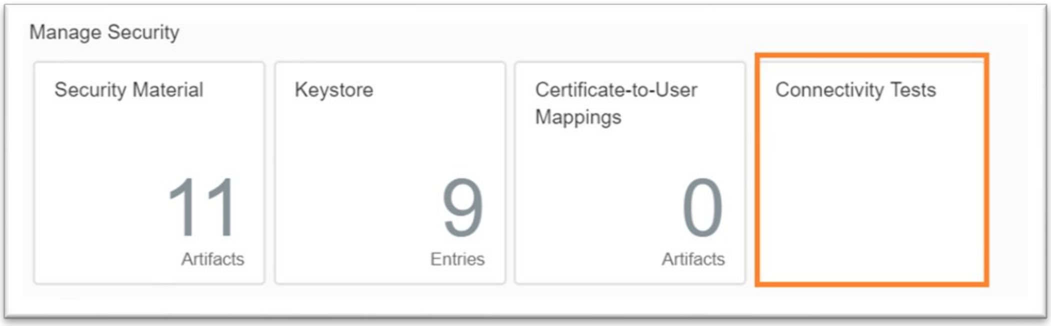
3. Connectivity Test

To check the connectivity with GSP, follow the steps:

a. Go to **Monitor**



b. Choose Manage Security > Connectivity tests



Manage Security

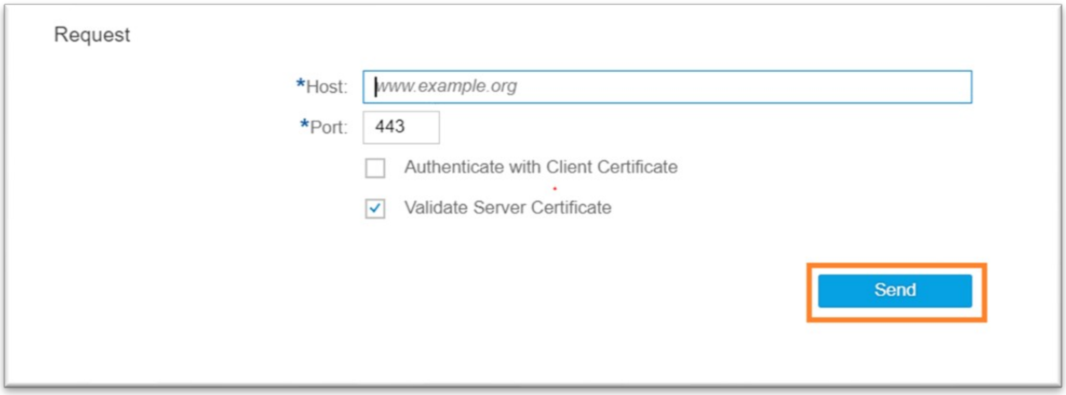
Security Material
11
Artifacts

Keystore
9
Entries

Certificate-to-User Mappings
0
Artifacts

Connectivity Tests

c. Enter the host URL without any Protocols and enter the port number. Click on **Send**.



Request

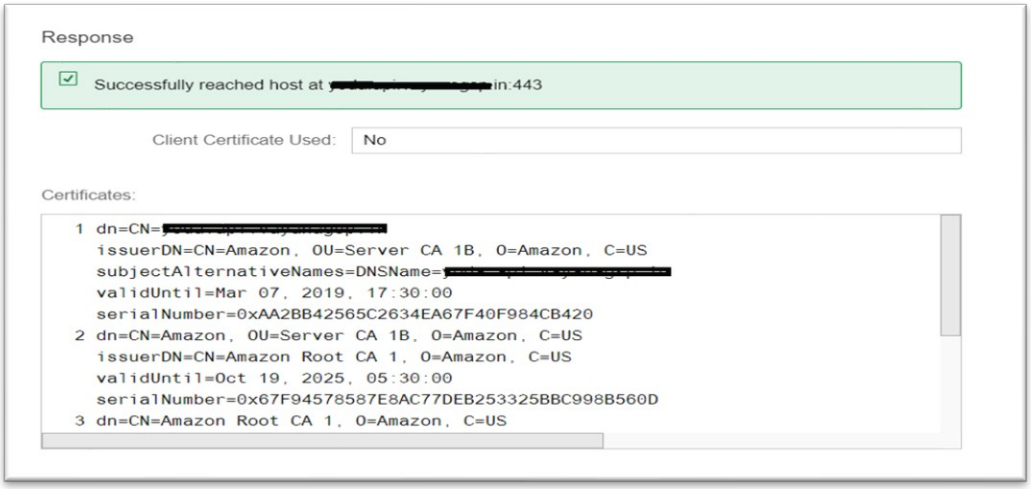
*Host: www.example.org

*Port: 443

□ Authenticate with Client Certificate

☑ Validate Server Certificate

d. On successful connection, you can see a response as shown below:



Response

☑ Successfully reached host at [redacted]in:443

Client Certificate Used: No

Certificates:

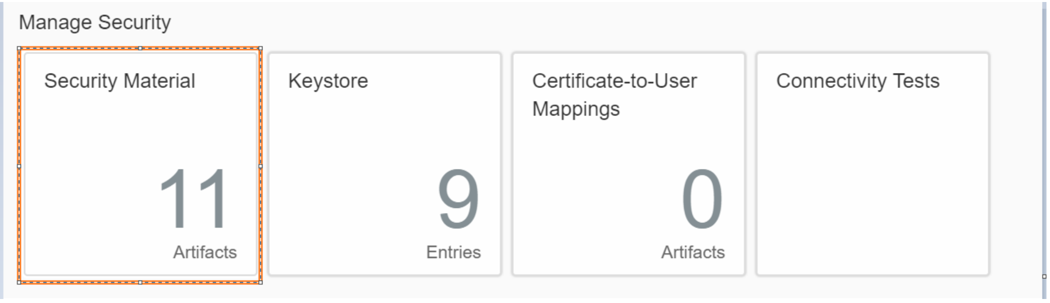
```
1 dn=CN=[redacted]
  issuerDN=CN=Amazon, OU=Server CA 1B, O=Amazon, C=US
  subjectAlternativeNames=DNSName=[redacted]
  validUntil=Mar 07, 2019, 17:30:00
  serialNumber=0xAA2BB42565C2634EA67F40F984CB420
2 dn=CN=Amazon, OU=Server CA 1B, O=Amazon, C=US
  issuerDN=CN=Amazon Root CA 1, O=Amazon, C=US
  validUntil=Oct 19, 2025, 05:30:00
  serialNumber=0x67F94578587E8AC77DEB253325BBC998B560D
3 dn=CN=Amazon Root CA 1, O=Amazon, C=US
```

4. Adding User Credentials to SAP Cloud Integration

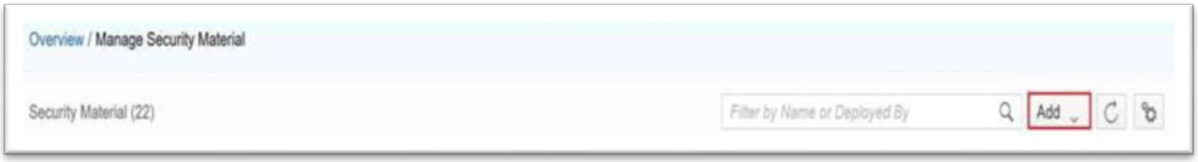
To add User Credentials (per GSTIN credentials provided by GSP/NIC) to SAP Cloud Integration:

You register the user as per the business place specified in NIC. Use the following steps to add these NIC users in SAP Cloud Integration:

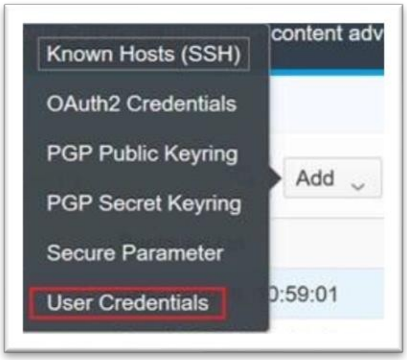
a. Go to Security material. Navigate to **Monitor** > **Manage Security** > **Security Material**.



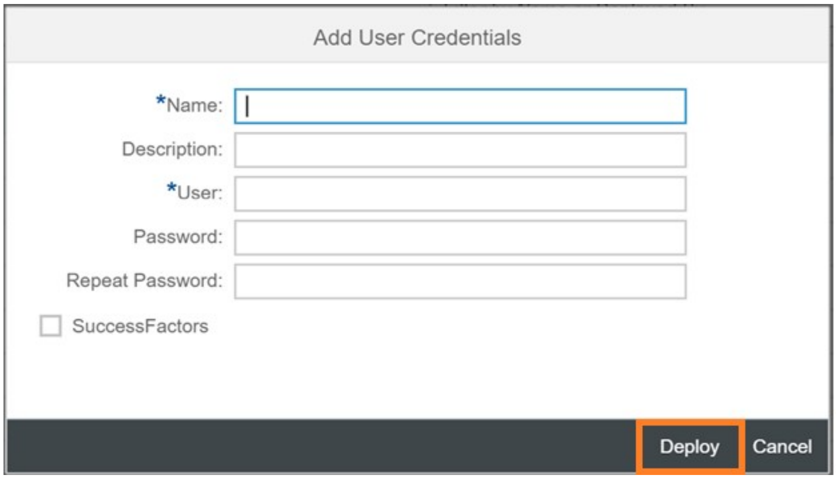
b. **Add** a new user credential.


Overview / Manage Security Material
Security Material (22)
Filter by Name or Deployed By
Add

c. Click **User Credentials**.



d. **Add** and **Deploy** the user credentials.

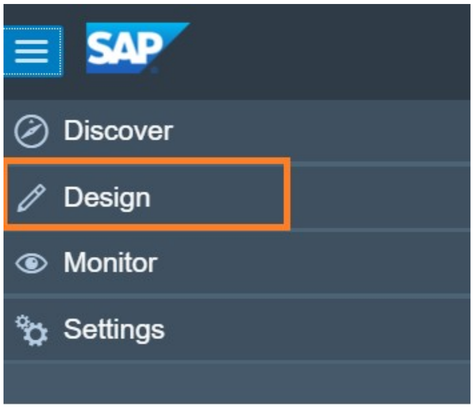


Note: in the Name field, enter the GSTIN of the business place to which the user belongs.

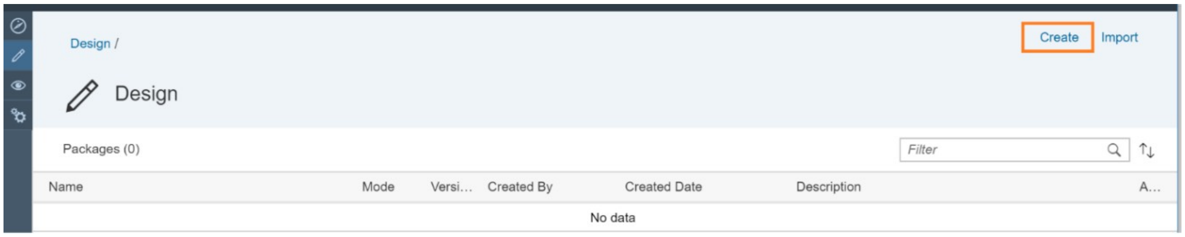
5. Creating content package and Deploying GSP integration flow

To create a content package, follow the steps:

a. Go to **Design**.

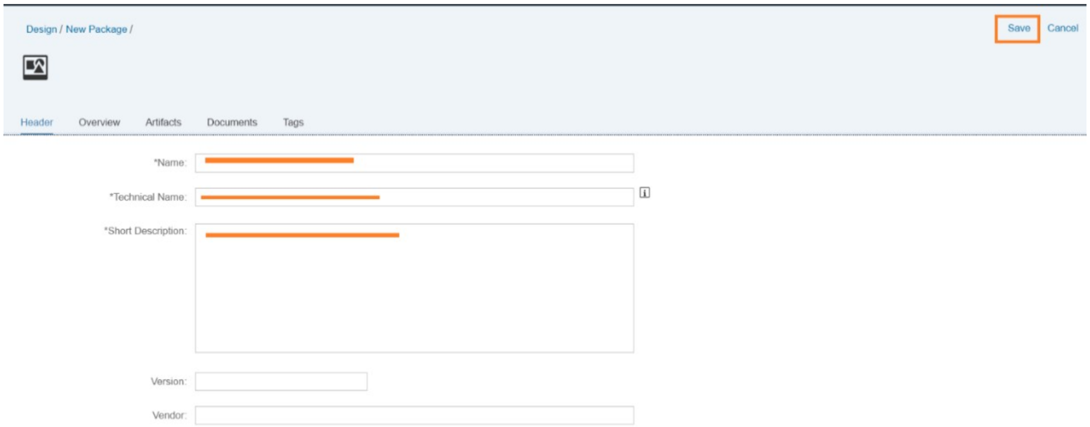


b. Choose **Create**.



Name	Mode	Versi…	Created By	Created Date	Description	A…
No data						

c. Enter appropriate **Name** and **Description** and click **Save**.



*Name:

*Technical Name:

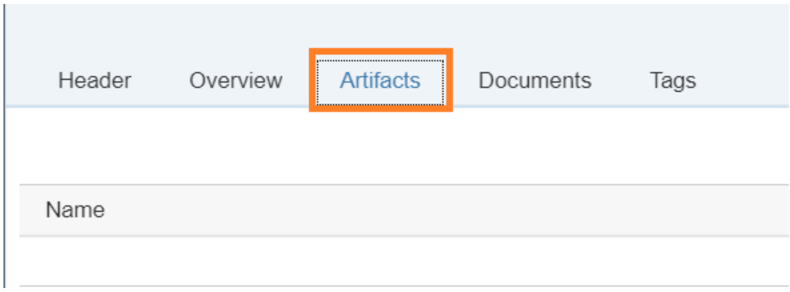
*Short Description:

Version:

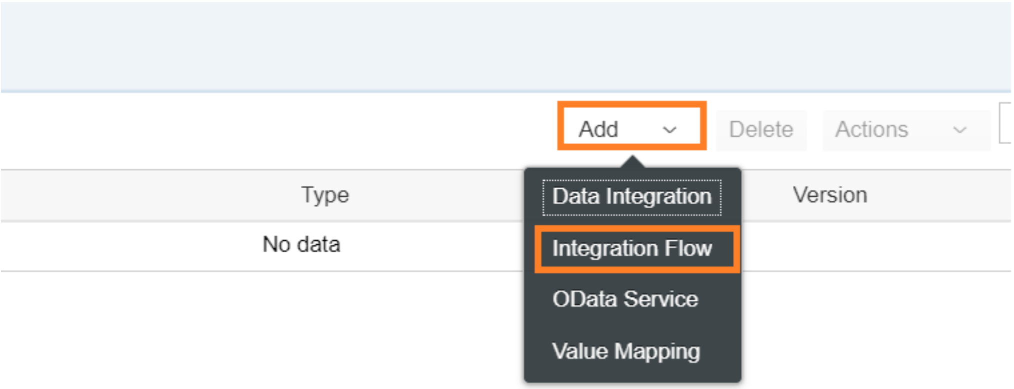
Vendor:

To deploy GSP integration flow, follow the steps:

a. Choose **Artifacts**.



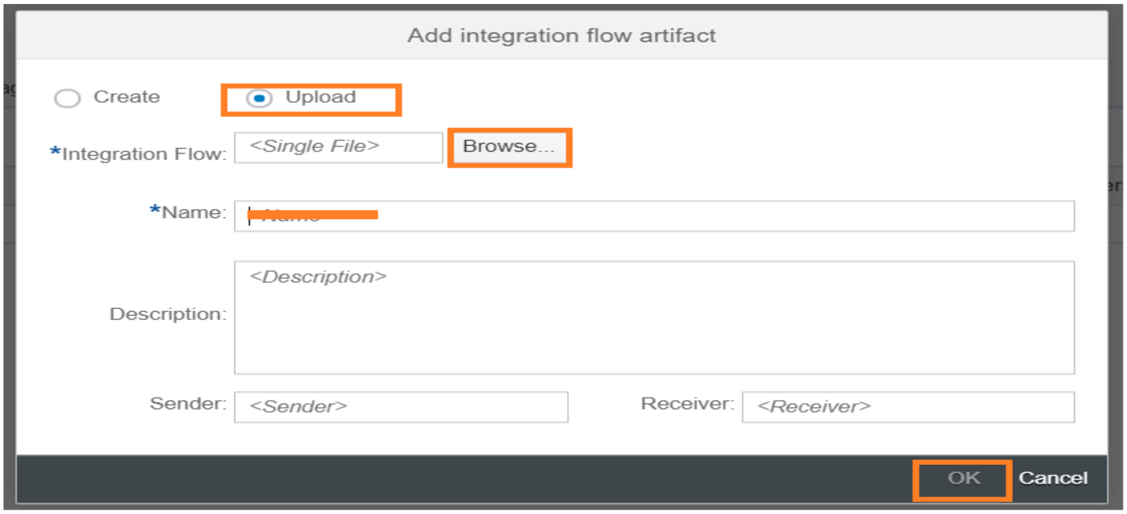
b. Click **Add** and choose **Integration Flow**.



c. Select **Upload**.

d. Browse for the appropriate Integration flow (.zip file)

e. Enter the **Name** and **Description** and click **Ok**.


Add integration flow artifact

○ Create ● Upload

*Integration Flow: <Single File> Browse...

*Name: [redacted]

Description: <Description>

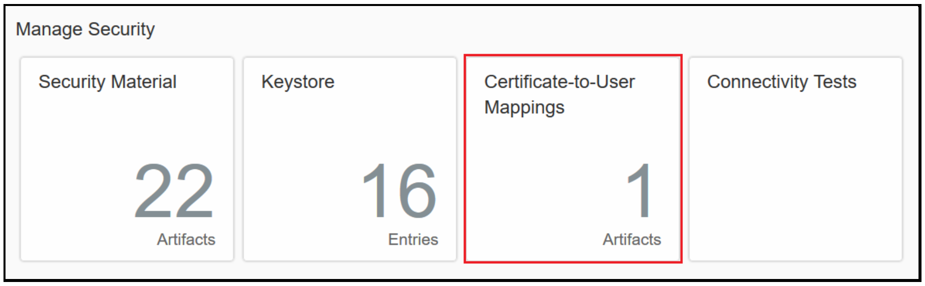
Sender: <Sender> Receiver: <Receiver>

6. Deploying Client Certificate to SAP Cloud Integration

To deploy client certificate to SAP Cloud Integration, follow the steps:

For inbound HTTP connections to SAP Cloud Integration, you define Authorization options for the communication user associated with the sender system to define how it accesses the Cloud Integration components. We recommend that you use *Client-Certificate* with *certificate-to-user* mapping. Under this option, the authentication of a sender is performed based on a client certificate. With a *certificate-to-user* mapping, the certificate is mapped to a user, whose authorizations are checked on the tenant.

a. Navigate to **Monitor** > **Manage Security** > **Certificate-to-User Mappings**.



Manage Security

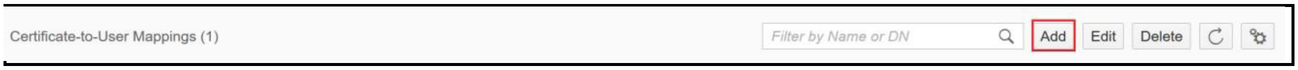
Security Material 22 Artifacts

Keystore 16 Entries

Certificate-to-User Mappings 1 Artifacts

Connectivity Tests

b. Click **Add**.

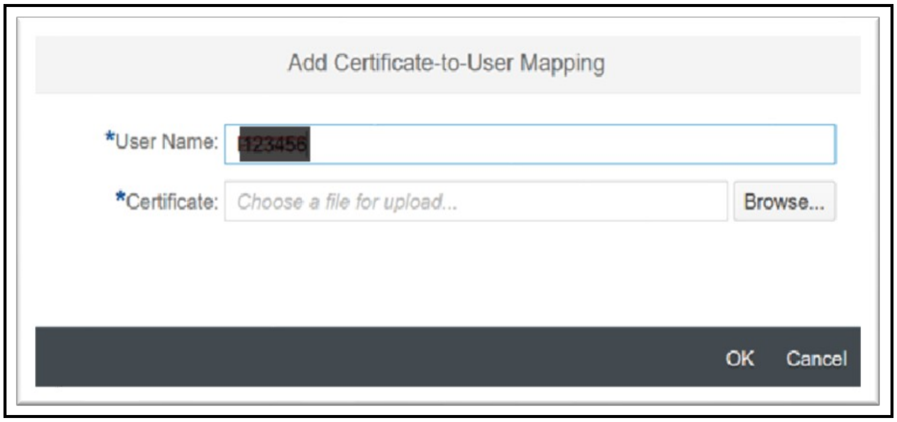


Certificate-to-User Mappings (1)

c. Enter the service user and deploy the client certificate obtained from SAP ERP.

Note: the service user should have the ESBMessaging.Send role assigned to it.

For more information on how to obtain client certificate from SAP ERP, refer the section ‘Configure Service Providers and Consumer Proxies’ in ‘eWay_Bill_Installation_and_Configurations’ document attached to SAP note: 2631687



Add Certificate-to-User Mapping

*User Name: [redacted]

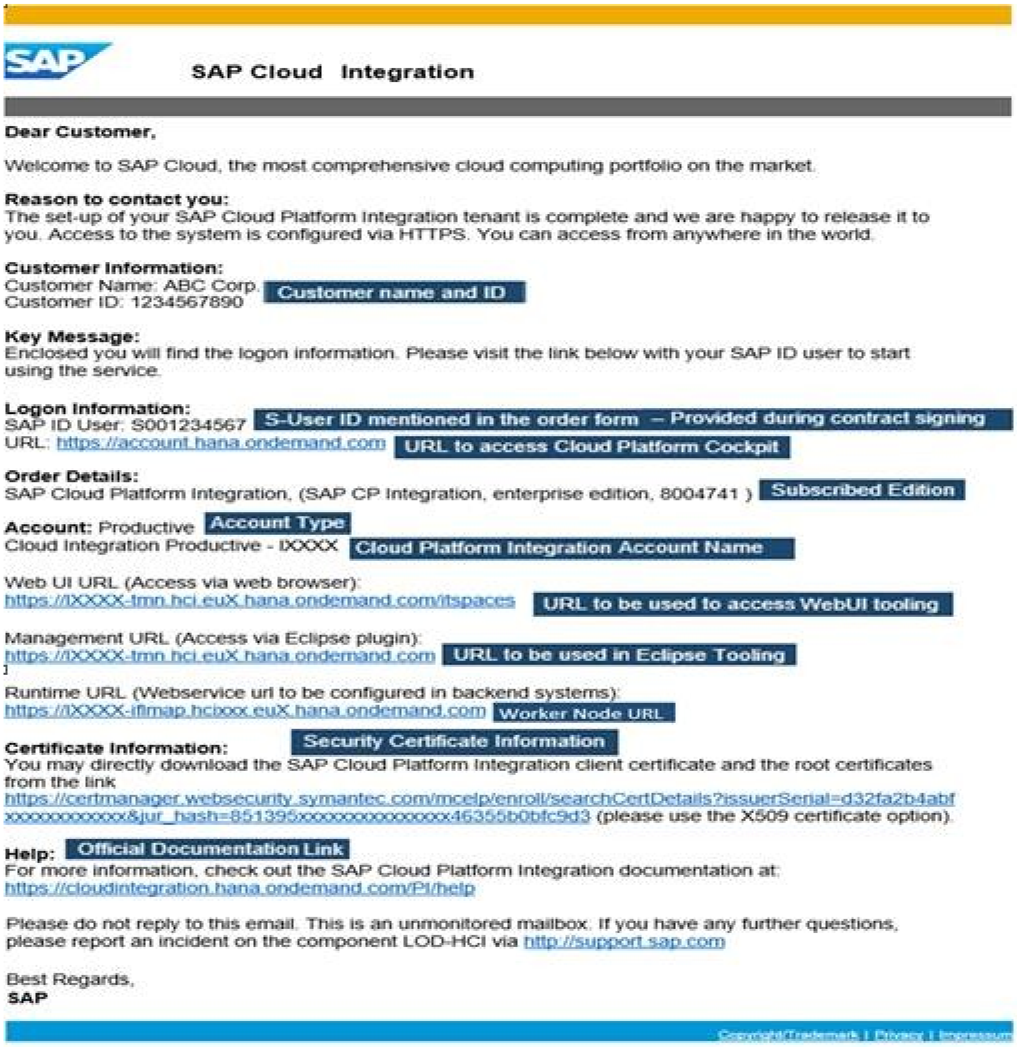
*Certificate: Choose a file for upload...

APPENDIX

About SAP Cloud Integration tenant

With SAP eWay bill solution, you get two Cloud Integration tenants. For each tenant, you get a welcome email outing the details about the tenant.

We recommend that you use one tenant for development/testing, and another for production.



SAP Cloud Integration

Dear Customer,

Welcome to SAP Cloud, the most comprehensive cloud computing portfolio on the market.

Reason to contact you:
The set-up of your SAP Cloud Platform Integration tenant is complete and we are happy to release it to you. Access to the system is configured via HTTPS. You can access from anywhere in the world.

Customer Information:
Customer Name: ABC Corp.
Customer ID: 1234567890

Key Message:
Enclosed you will find the logon information. Please visit the link below with your SAP ID user to start using the service.

Logon Information:
SAP ID User: S001234567
URL: https://account.hana.ondemand.com

Order Details:
SAP Cloud Platform Integration, (SAP CP Integration, enterprise edition, 8004741)

Account: Productive
Cloud Integration Productive - IXXXX

Web UI URL (Access via web browser):
https://IXXXX-tmn.hci.euX.hana.ondemand.com/itspaces

Management URL (Access via Eclipse plugin):
https://IXXXX-tmn.hci.euX.hana.ondemand.com

Runtime URL (Webservice url to be configured in backend systems):
https://IXXXX-iflmap.hcixxx.euX.hana.ondemand.com

Certificate Information:
You may directly download the SAP Cloud Platform Integration client certificate and the root certificates from the link
https://certmanager.websecurity.symantec.com/mcelp/enroll/searchCertDetails?issuerSerial=d32fa2b4abf xxxxxxxxxxxx&jur_hash=851395xxxxxxxxxxxxxx46355b0bfc9d3 (please use the X509 certificate option).

Help:
For more information, check out the SAP Cloud Platform Integration documentation at:
https://cloudintegration.hana.ondemand.com/PI/help

Please do not reply to this email. This is an unmonitored mailbox. If you have any further questions, please report an incident on the component LOD-HCI via http://support.sap.com

Best Regards,
SAP

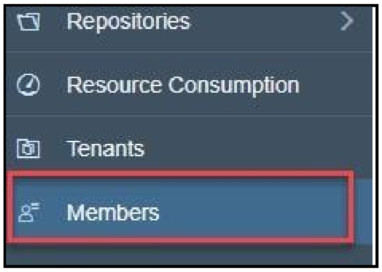
SAP
Customer name and ID
S-User ID mentioned in the order form – Provided during contract signing
URL to access Cloud Platform Cockpit
Subscribed Edition
Account Type
Cloud Platform Integration Account Name
URL to be used to access WebUI tooling
URL to be used in Eclipse Tooling
Worker Node URL
Security Certificate Information
Official Documentation Link
Copyright/Trademark | Privacy | Impressum

Adding Members to the SAP Cloud Integration Account

To add members to the SAP Cloud Integration account, follow the steps:

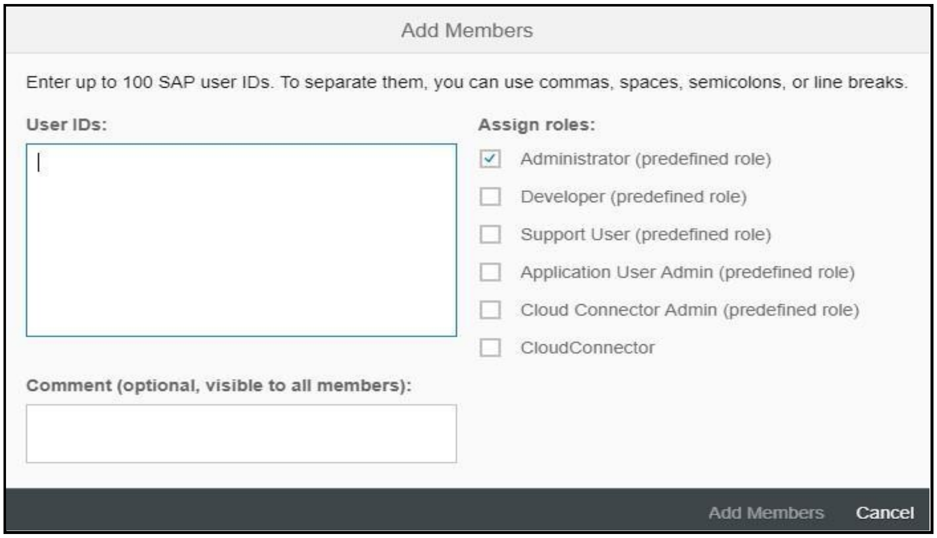
a. Logon to the Account URL with the SAP ID user provided in the mail.

b. Add members and assign roles to this account by navigating to **Members** > **Add Members**.



c. Assign the following roles.

- **Administrator**: Assign the role of *Administrator* to the user who is supposed to have the full permissions of an administrator.
- **Application User Admin**: Assign the role of *Application User Admin* to the user who is supposed to have restricted administrator privileges.



Add Members

Enter up to 100 SAP user IDs. To separate them, you can use commas, spaces, semicolons, or line breaks.

User IDs:

Assign roles:

☑ Administrator (predefined role)
□ Developer (predefined role)
□ Support User (predefined role)
□ Application User Admin (predefined role)
□ Cloud Connector Admin (predefined role)
□ CloudConnector

Comment (optional, visible to all members):

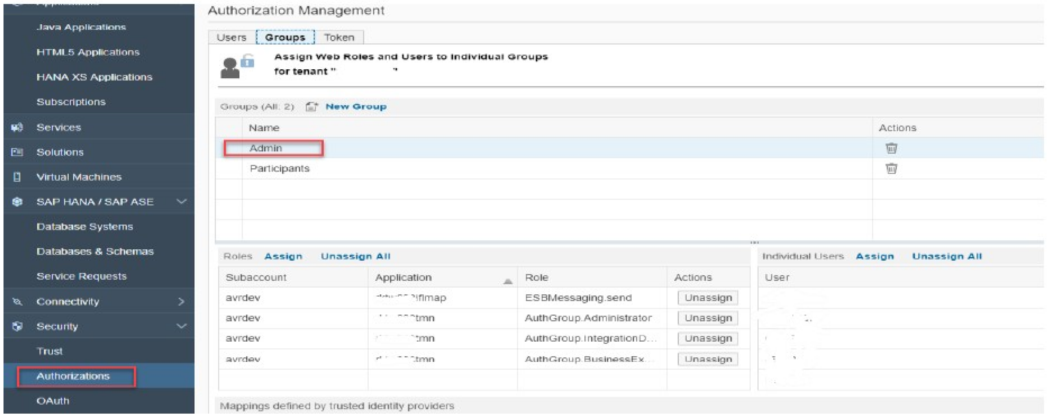
Providing authorizations to SAP Cloud Integration Users

To provide authorizations to the SAP Cloud Integration Users:

d. Logon to the Account URL with the SAP ID user provided in the mail.

e. In the **Navigation** pane, choose **Security** > **Authorizations**

f. Create a Group and assign Roles and users for this Group.



Authorization Management

Assign Web Roles and Users to Individual Groups for tenant " [redacted] "

Groups (All: 2)

Name	Actions
Admin	🗑
Participants	🗑

Roles

Subaccount	Application	Role	Actions
avrdev	[redacted]iflmap	ESBMessaging.send	Unassign
avrdev	[redacted]tmn	AuthGroup.Administrator	Unassign
avrdev	[redacted]tmn	AuthGroup.IntegrationD…	Unassign
avrdev	[redacted]tmn	AuthGroup.BusinessEx…	Unassign

Individual Users

User
[redacted]
[redacted]
[redacted]
[redacted]

Mappings defined by trusted identity providers

The authorization group AuthGroup.Administrator is designed for the administrator at customer side who administers a (customer-specific) tenant management node.

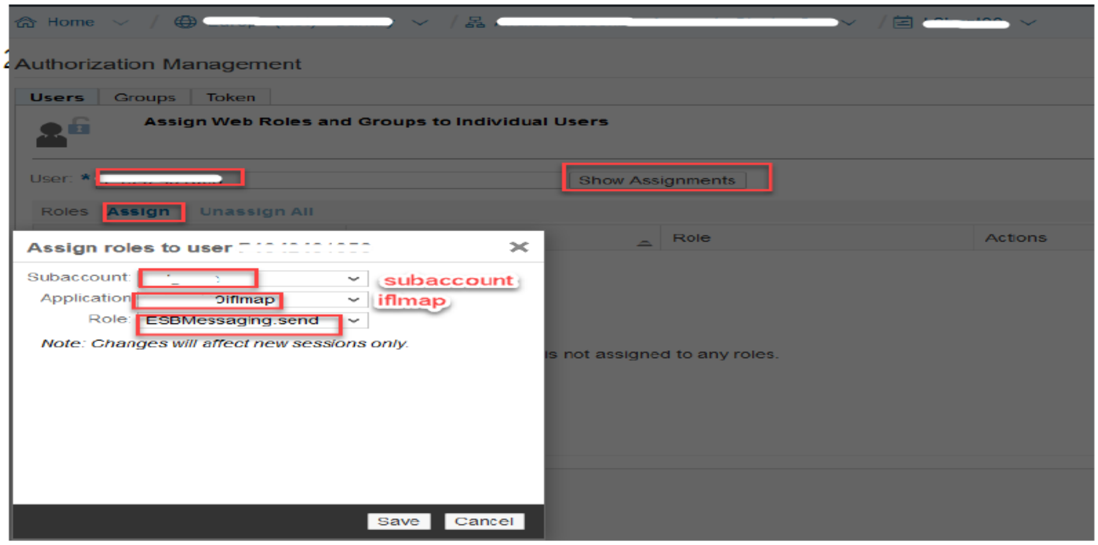
For more details refer here.

Creating a Service User in SAP Cloud Integration

To create a Service User in SAP Cloud Integration, follow the steps:

g. Register a new user at https://account.hana.ondemand.com/#/home/welcome.

h. Assign the ESBMessaging.Send role to the user.



Authorization Management

Assign Web Roles and Groups to Individual Users

User: * [redacted]

Assign roles to user [redacted]

Subaccount: [redacted]

Application: [redacted]0iflmap

Role: ESBMessaging.send

Note: Changes will affect new sessions only.

is not assigned to any roles.

Useful links:

- SAP Cloud Integration: https://help.sap.com/viewer/product/CLOUD_INTEGRATION/Cloud/en-US
- SAP Cloud Integration – overview of authorization groups: https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/2937e5ca6ef448cfb21451a2461cc2a6.html
- SAP Cloud Integration – user credentials: https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/6912d63bbbc64aee8bbd4ff10314c60c.html
- SAP Cloud Integration – Importing a keystore: https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/0db193a325a94675928e717c9310734a.html
- SAP Cloud Integration – Importing a certificate: https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/03cf78a217574e7abd75bfbba990c085.html