

Document Version: 1.1 – 2021-03-25

SAP Solution for eWay Bill India - Integration of SAP ERP or SAP S/4HANA with GST Suvidha Provider: Neo



Typographic Conventions

Type Style	Description
<i>Example</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.

Document History

Version	Date	Change
1.0	2020-06-12	First release of the GSP Integration Guide
1.1	2021-03-25	<ul style="list-style-type: none">• Updated the section Prerequisites with the master note details and SAP Help document for Initial Setup of SAP Cloud Integration for Neo environment.• Rearranged the sequence of the content in the section Configuration Steps in SAP Cloud Integration.• Added a new section Useful Links• Updated the complete document to reflect the latest SAP Branding changes for SAP Business Technology Platform(BTP), SAP Cloud Integration and Integration Flow.

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1 Glossary

The table below lists the terms and abbreviations used throughout this document:

Term	Description
GST	Goods and Services Tax
GSP	GST Suvidha Provider
GSTIN	Goods and Services Taxpayer Identification Number
NIC	National Informatics Centre
SAP BTP	SAP Business Technology Platform

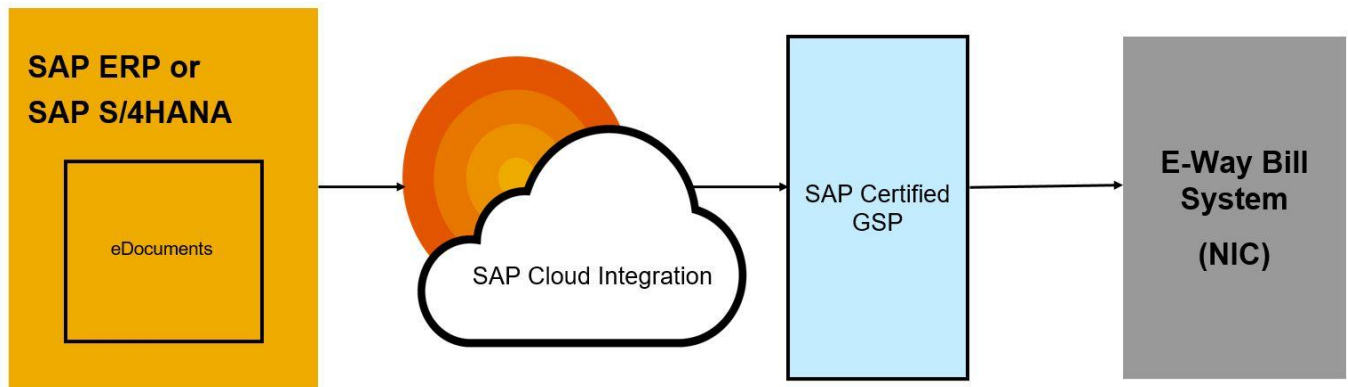
2 Introduction

Using the SAP solution for eWay Bill India, you can generate eWay bill number as per the legal compliance in India. The eWay bill solution requires the integration between SAP ERP or SAP S/4HANA and GSP(s). This following documentation describes the steps to adapt and deploy SAP Integration Flow to establish communication between SAP ERP or SAP S/4HANA and GSP(s).

Note

* If you are using SAP certified GSP, you get the GSP specific pre-built integration flow and the documentation to implement the integration flow from your respective GSP(s). We recommend that you use the document provided by your GSP to implement the integration flows. To view the list of SAP certified GSPs use the SAP Note [2889709](#).

* If you are using non-SAP certified GSP, use this document to adapt the *GSP Integration Template* as per your company needs.



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.

3 Prerequisites

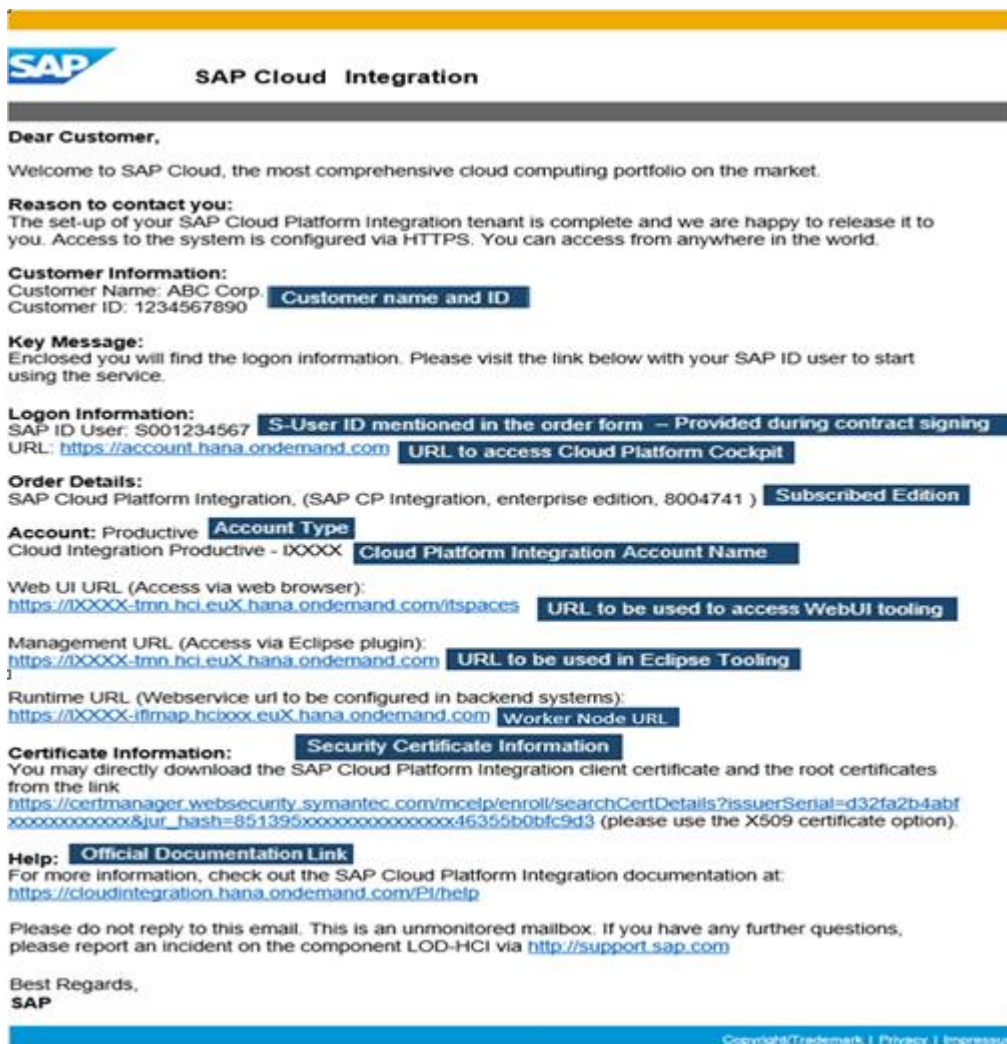
Before you start with the activities described in this document, ensure that the following prerequisites are met.

1. You have installed in the test and productive systems all necessary SAP Notes for the eWay Bill Solution. Refer note: [2631687](#)
2. You have performed all initial setup steps described in [Initial Setup of SAP Cloud Integration in the Neo Environment](#).
3. You have received the following information from your *GST Suvidha Provider (GSP)*:
 - o GSP Integration Manual
 - o Certificates for SSL handshake

Note:

With SAP eWay bill solution, you get two SAP Cloud Integration tenants.

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



4 Configuration Steps in SAP Cloud Integration

Perform the following steps:

1. [Import SSL Certificates from GSP to SAP Cloud Integration Tenant](#)
2. [Deploy NIC User Credentials per GSTIN.](#)
3. [Deploy NIC Public Key Certificate](#)
4. [Adapt and Deploy SAP Integration Flow](#)
5. [Client Certificate-based Authentication Settings](#)

Note:

The SSL certificate upload, setting-up of user credentials, NIC Public Key Certificate Upload and authentication setup are all required to be done only during the initial set up of the eWay Bill Integration scenario. Subsequently, if there is an updated version of integration flow delivered, it is required to repeat only Step 4. However, in case there is a change in certificate from GSP or NIC, then step 1 or step 3 needs to be done accordingly.

4.1 Import SSL Certificates from GSP to SAP Cloud Integration Tenant

To set up an SSL connection between the SAP Cloud Integration Tenant and GST Suvidha Provider (GSP), you must import the required security certificates into SAP Cloud Integration Tenant Keystore.

Note

You receive these certificates from your GSP. The GSP should provide the certificate in the .CER format.

Procedure

1. Access the SAP Cloud Integration Tenant.

In the welcome mail, you will receive the Web UI url, for example, <https://IXXXtmn.hci.euX.hana.ondemand.com/itspaces>
Use this URL to go to the WebUI of the tenant.

2. To logon, enter your S user.

Ensure the following:

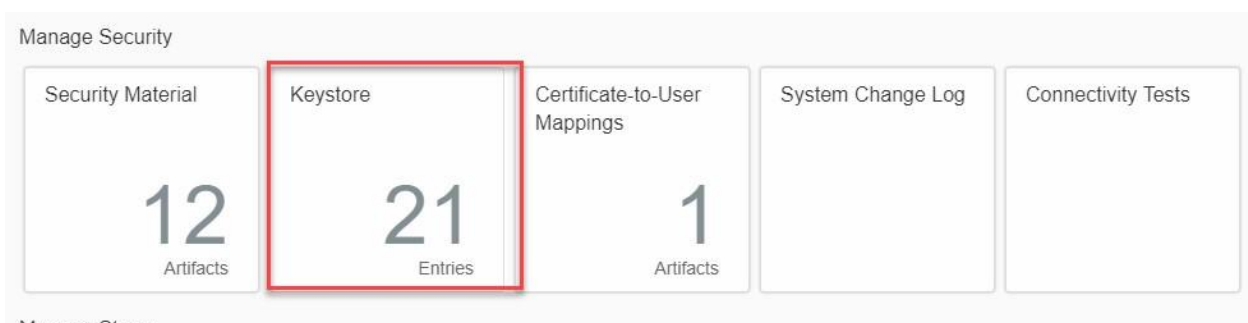
- You should assign ESBMessaging.Send role to the S user
- In case you have created additional user and using it for setting up the connection between SAP ERP or SAP S/4HANA and SAP Cloud Integration, you have to assign the ESBMessaging.Send role to it.

If you get *HTTP Status 403* error, then send a mail to service@sap.com.

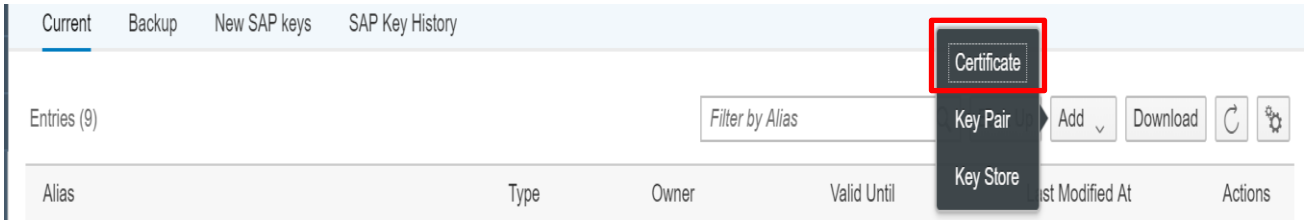
3. After successful login, from the menu in the upper left corner, choose *Monitor*.



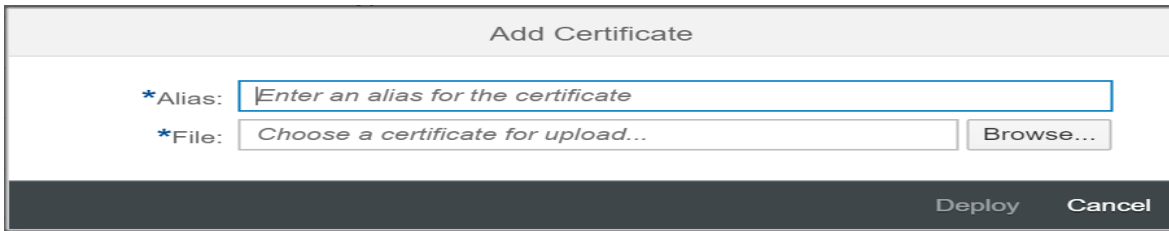
4. Choose *Manage Security* and then *Keystore*.



5. Click Add > **Certificate** > **Add Certificate**



6. Enter an alias to identify the certificate. Browse the GSP SSL certificate from local desktop and then Deploy.



Note

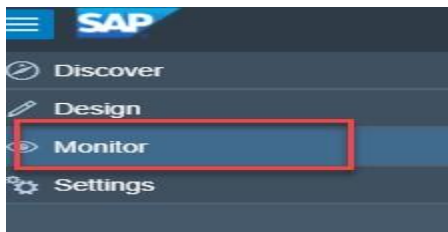
To perform the above operation, you need to be a tenant administrator with role **AuthGroup.Administrator**. The certificate should be in Base-64 encoded X.509(.CER) format. Refer [here](#).

7. Check the connectivity with GSP.

You can perform the Connectivity test with the GSP by using the feature TLS Connectivity Test as mentioned [here](#).

1. Run connectivity test using the *Monitor-> Manage Security- >Connectivity Tests*.
2. *Enter the GSP Base URL without http(s). Enter port.*
3. **Click Send**

On successful connection, system displays successful response message.



Manage Security

Security Material 3 Artifacts	Keystore 20 Entries	Certificate-to-User Mappings 0 Artifacts	Connectivity Tests
--	----------------------------------	---	--------------------

Manage Stores

Discover Design Monitor Settings

Overview / Test Connectivity

TLS SSH SMTP IMAP POP3

Request

*Host *the GSP hostname without https (e.g: myserver.api.mygsp.in)*

*Port

Authenticate with Client Certificate

Validate Server Certificate

Send

Response

Successfully reached host at myserver.api.mygsp.in:443

Client Certificate Used No

4.2 Deploy NIC User Credentials per GSTIN

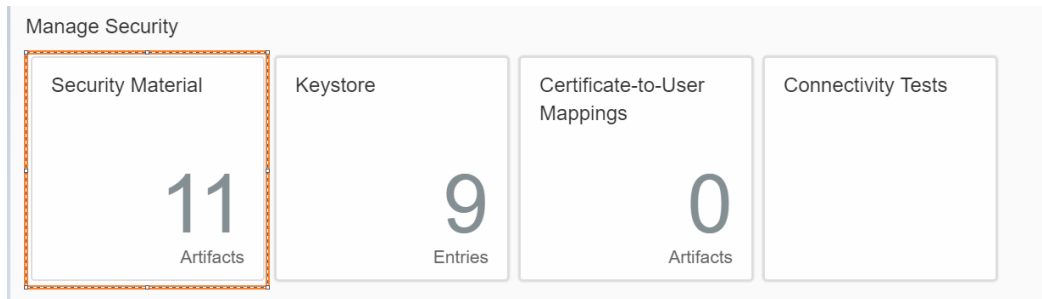
Add NIC User Credentials entries per GSTIN to the User Credentials Service of SAP Cloud Integration tenant by following the process mentioned [here](#)

Note

To perform the above operation, you need to be a tenant administrator with role **AuthGroup.Administrator**. Refer [GSP Registration on NIC Portal](#) for details.

To add NIC User Credentials per GSTIN to SAP Cloud Integration:

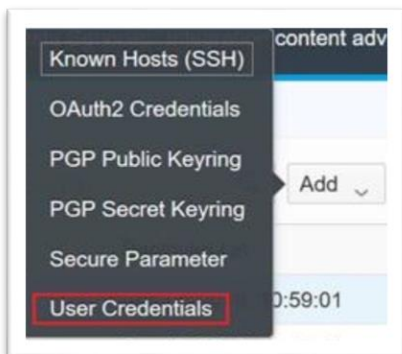
1. Navigate to Monitor > Manage Security > Security Material.



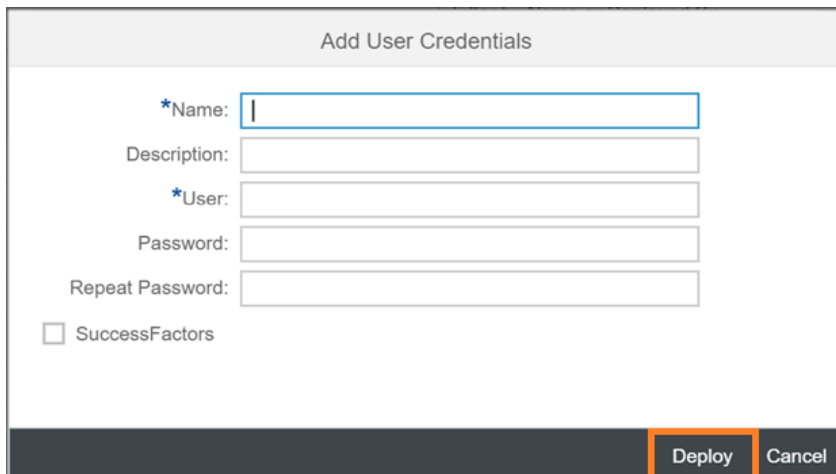
2. Add a new user credential.



3. Click User Credentials



4. Add and Deploy the user credentials



The screenshot shows the 'Add User Credentials' form with fields for Name, Description, User, Password, and Repeat Password. The 'SuccessFactors' checkbox is unchecked. The 'Deploy' button is highlighted in orange.

Note:

In the Name field, enter the GSTIN of the business place to which the user belongs.

If the user credentials are created explicitly for eWay bill, then, maintain the name field with the suffix '_ewb' (Ex : 27AAAPI3182M002_ewb).

The suffix (_ewb) is case sensitive.

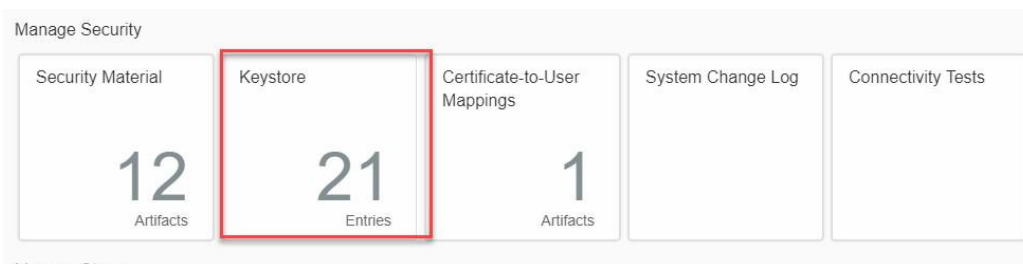
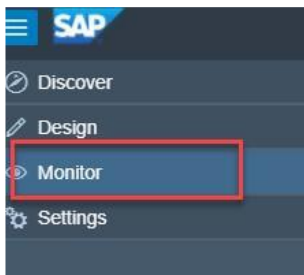
Name	GSTIN of the business place to which the user belongs / GSTIN of the business place with suffix '_ewb'
Description	Any relevant text (optional)
User	API User ID created in NIC portal (production) or received from GSP (pre-production)
Password/ Repeat password	Password

4.3 Deploy NIC Public Key Certificate

You need to add the NIC Public Key Certificate. You get this certificate from your GSP.

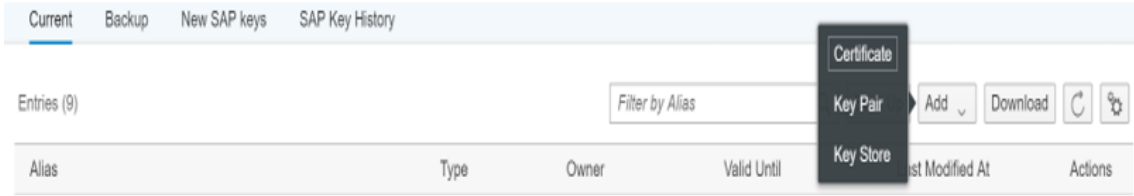
Follow the below steps to add the NIC Public Key Certificate to the SAP Cloud Integration KeyStore.

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



2. Click Add > **Certificate > Add Certificate**





3. Enter an alias(**niccert**) to identify the certificate. Browse the NIC Public Key Certificate from local desktop.

Add Certificate

*Alias:

*File:

4. Click **Deploy**

Note

To perform the above operation, you need to be a tenant administrator with role **AuthGroup.Administrator**. The certificate should be in Base-64 encoded X.509(.CER) format. For more information, see [here](#).

4.4 Adapt and Deploy SAP Integration Flow

Use the following steps to adapt the integration flows as per your company needs.

1. Logon to SAP Cloud Integration through your S user.
If you get *HTTP Status 403* error, then send a mail to service@sap.com.
2. After successful login, from the menu in the upper left corner, choose *Discover. Click All*.
3. In the subsequent screen, search for *ERP Integration with GST Suvidha Provider for India e-Way Bill* catalog package .
The system displays the *ERP Integration with GST Suvidha Provider for India e-Way Bill* catalog package.
4. Click *Copy*.
The system copies the package content to the tenant account.
5. From the menu in the upper left corner, choose *Click to work with content packages*.
The system displays the Design screen.
6. Click on the package *ERP Integration with GST Suvidha Provider for India e-Way Bill* and in the subsequent screen choose ARTIFACTS.
The system displays different Integration Flows. *The ERP Integration with GST Suvidha Provider for India e-Way Bill* content catalog package contains the following integration flows.

Integration Flow Name in Web UI	Description
GSP Integration Template	Template Integration Flow to be adapted to specific GSP
Router Integration Template	Routes e-Way Bill request from SAP ERP or SAP S/4HANA to specific GSP Integration Flow

7. Select the GSP Integration Template Integration Flow and adapt it. You adapt the template to use it for your GSP. For more information, see [Adapt and Deploy GSP Integration Template Integration Flow](#)
8. Deploy the updated 'GSP Integration Template' Integration Flow
9. Deploy 'Router Integration Template' Integration Flow

Result

You have established the connection between *SAP ERP or SAP S/4HANA and your GST Suvidha Provider (GSP)*.

- Choose the connection tab. In the Address field replace the system populated GSP name with your company specific GSP name. Note that you should use the same GSP name as in the above screen in EDOINEWBGSPV view in SAP ERP or SAP S/4 HANA.
- Click **Configure**.
The system displays the Integration Flow screen. Choose the Externalized Parameters tab and modify the parameters as shown below:

Integration Flow	
General Runtime Configuration Error Configuration Resources Externalized Parameters Problems	
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	██████████
nic_token_expiry	300
nicpkalias	<NIC_public_key_alias>

Note:

- In field nicpkalias, you enter the alias(**niccert**) of NIC Public Key Certificate.
You have already deployed NIC Public Key Certificate in KeyStore as described in section [Deploy NIC Public Key Certificate](#)
- You receive details about other fields from your GSP.

- Save your changes.
- Click **Deploy** to deploy the modified integration flow.

4.4.2 Deploy Router Integration Template

This integration flow routes e-Way Bill request from SAP ERP or SAP S/4HANA to specific GSP Integration Flow.

1. Select the Router Integration Template Integration Flow.
2. Click **Deploy** to deploy the integration flow.

Note

After the deployment, check if the integration flow is in **Started** state. You can check this in the Web UI by choosing [Monitor->Manage Integration Content](#).

After successful deployment, the endpoint URL is <https://<Tenant Runtime URL>/cxf/indiaewaybilledoc>
This URL needs to be maintained in the SOAManager configuration.

The screenshot shows a wizard titled "New Manual Configuration of Logical Port for Consumer Proxy 'CO_EDO_IN_EWB_TRANS'". The wizard has six steps: 1. Logical Port Name, 2. Consumer Security, 3. HTTP Settings (current step), 4. SOAP Protocol, 5. Identifiable Business Context, and 6. Operator. Below the steps are buttons for "Back", "Next", "Finish", and "Cancel".

URL Access Path

Complete URL URL components

* URL:

Logon Language:

Proxy

Name of Proxy Host:

Port Number of Proxy Host:

User Name for Proxy Access:

Password of Proxy User:

Transport Binding

Make Local Call:

* Transport Binding Type:

Maximum Wait for WS Consumer:

4.5 Client Certificate-based Authentication Settings

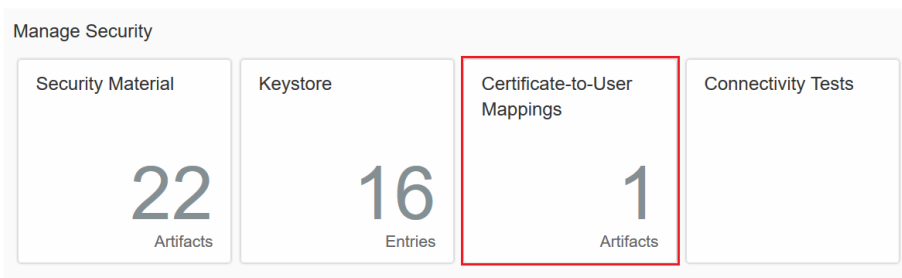
For inbound HTTP connections to SAP Cloud Integration, you define Authorization options for the communication user associated with the sender system to define how it accesses the Cloud Integration components. We recommend that you use Client-Certificate with certificate-to-user mapping. Using this option, 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.

To enable certificate-based authentication between source system to SAP Cloud Integration, the certificate presented by source system should be signed by one of the Certification Authorities (CA) approved by SAP load balancer component. Self-signed certificates cannot be used.

Refer to the below SAP help document on the list of supported CAs.

[Load Balancer Root Certificates Supported by SAP.](#)

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



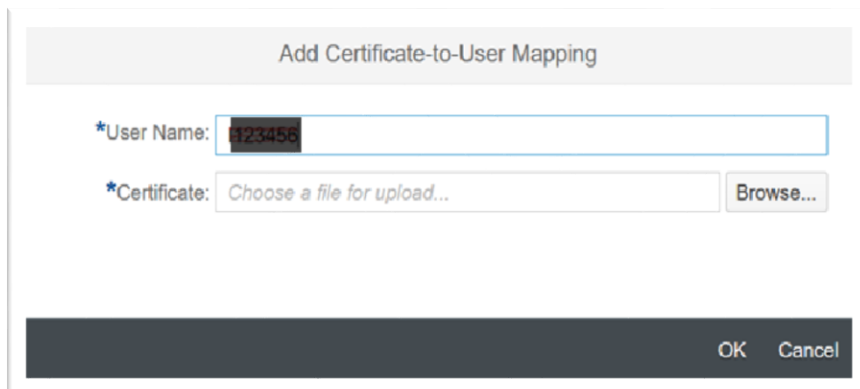
2. Click **Add**.

3. 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](#).



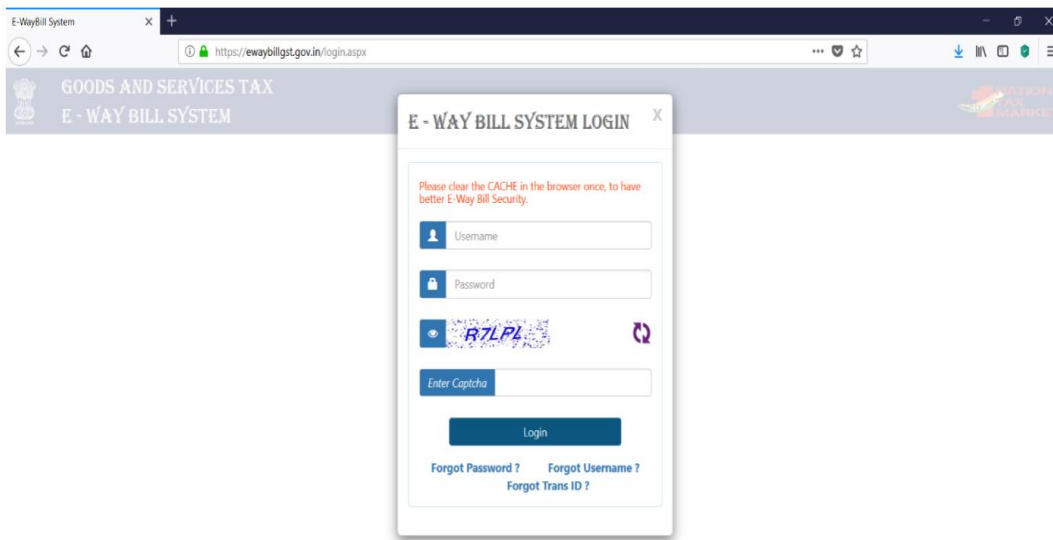
5 Appendix

5.1 GSP Registration on NIC Portal

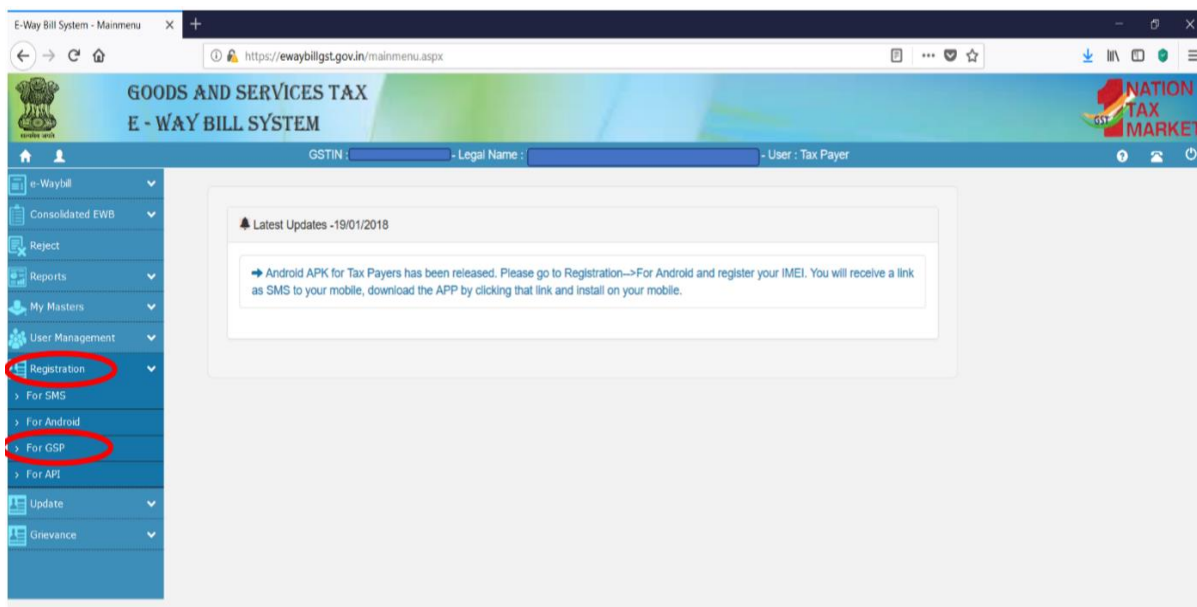
To register your login credentials for e-Way Bill API access through GSP in NIC portal.

Procedure:

1. Login to NIC web portal (<https://ewaybill.nic.in>)



2. On the Menu bar in the left side margin of the webpage, click on Registration and then click on "For GSP"

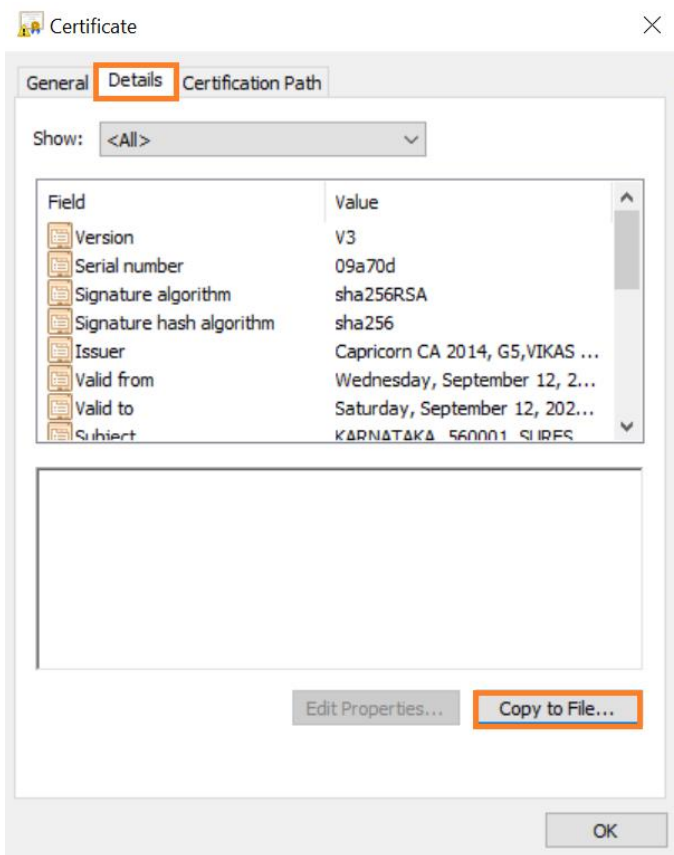


- The system displays existing GSP (if any login credentials were already created for API access through GSP). Click on the radio button "Add/New"

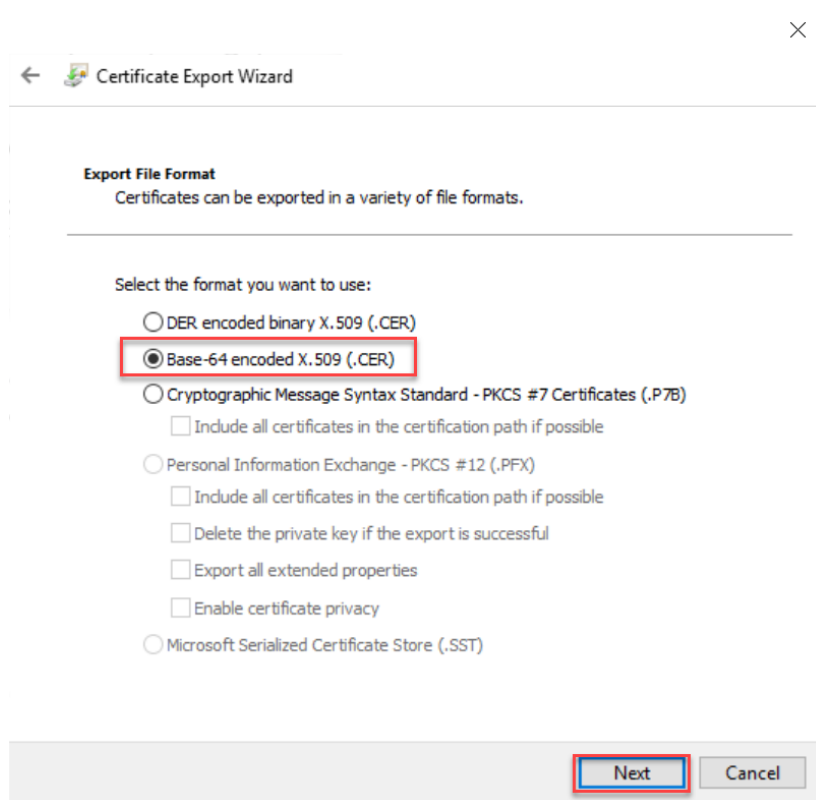
- Click on GSP Name dropdown box and select the appropriate GSP from the dropdown list of GSPs. Next, enter your username, password. Choose "Add" to register your login credentials for E-way Bill API access through appropriate GSP.

5.2 Exporting Certificate as Base-64 encoded X.509(.CER) format.

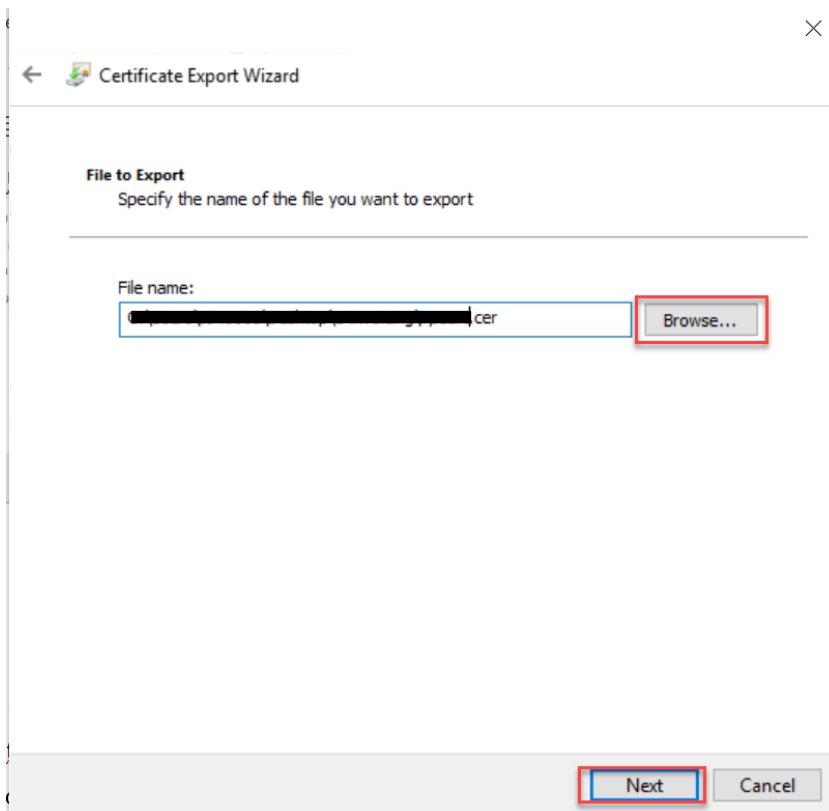
- Double click the certificate. Goto Details -> Copy to File
A new window opens. Click **Next**.



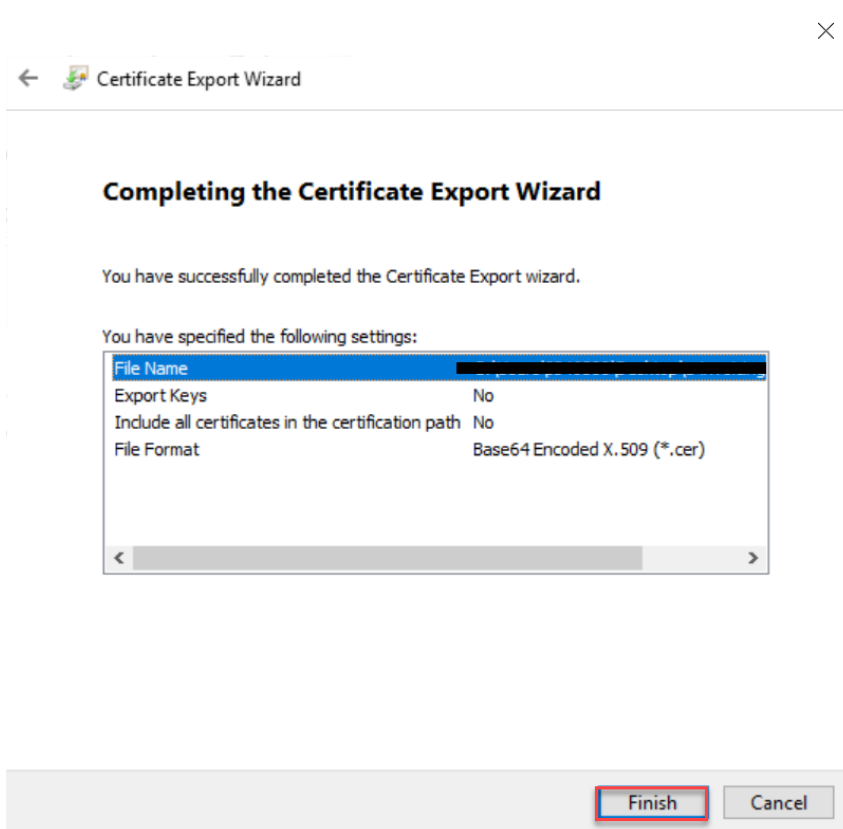
2. Select Base-64 encoded X.509(.CER) and click **Next**



3. Browse the path where the certificate has to be saved and click **Next**.



4. Click **Finish**. Certificate will be saved in the selected location.



5.3 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/368c481cd6954bd5d0435479fd4eaf/Cloud/en-US/4b4ba1c553474259b5be661f4ef0702c.html>
- SAP Cloud Integration – User Credentials:
<https://help.sap.com/viewer/368c481cd6954bd5d0435479fd4eaf/Cloud/en-US/6912d63bbbc64aee8bbd4ff10314c60c.html>
- SAP Cloud Integration – Importing a Keystore:
<https://help.sap.com/viewer/368c481cd6954bd5d0435479fd4eaf/Cloud/en-US/0db193a325a94675928e717c9310734a.html>
- SAP Cloud Integration – Importing a Certificate:
<https://help.sap.com/viewer/368c481cd6954bd5d0435479fd4eaf/Cloud/en-US/03cf78a217574e7abd75bfba990c085.html>

www.sap.com/contactsap

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