



Chile – Electronic Ledger

ERP SOAMANAGER and HCI Set-Up

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1 Introduction

The communication (Including Digital Signature) part of electronic ledger in Chile is taken care by SAP Cloud Platform Integration(CPI).

To use CPI, a number of configuration and set up activities need to be completed on both – your SAP ERP system as well your CPI tenant. CPI consulting team completes these activities. They configure the ERP-CPI connection or SAP S/4 HANA-CPI and maintain the integration content and certificates/credentials on the HCI tenant.

2 Prerequisites

- Implement all the SAP Notes relevant to Chile Journal Ledger, General Ledger, and Balance Sheet solution, in your test and/or productive systems.
 - <https://i7p.wdf.sap.corp/sap/support/notes/2661653> - DDIC Note Changes (2661653)
 - <https://i7p.wdf.sap.corp/sap/support/notes/2642797> - Common Artefacts (2642797)
 - <https://i7p.wdf.sap.corp/sap/support/notes/2661967> - Balance Sheet (2661967)
 - <https://i7p.wdf.sap.corp/sap/support/notes/2661601> - Journal Ledger (2661601)
 - <https://i7p.wdf.sap.corp/sap/support/notes/2662471> - General Ledger (2662471)
- Set up your live HCI test/productive tenants.
- Configure a connection between your SAP ERP and HCI. Please refer to this document:
<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/4037b5a5-47a5-3110-e891-f3d9dbafbe86>.

3 Configuration Procedure

3.1 Deploy the Customer Certificate and Credentials on the HCI Tenants

Request the private key used for signing the XML files and deploy the certificate (as private key with an alias) in the tenants' JAVA_KEYSTORE.

To allow the iFlows to be updated with minimal adaptation effort, the alias used for the private key and for the credential should be as follows:

Private Key alias: `chilesignaturekey`

The private key to sign and generate the DTE Digital Seal shall be created and deployed in the tenants' JAVA_KEYSTORE. The private key is generated from the CAF Authorization files received from SII per DTE type. There will be as many private keys as DTE types.

The private key should follow an alias name which is a concatenated string with values of nodes RE, TD, D, H and FA from the CAF Authorization XML received from SII.

For e.g. for the CAF XML shown in the Figure 1: SOA Manager Transport Settings, the alias name of the certificate should be:

'77777777-7339964029965012003-08-29'.

The details on how to create a private key from the CAF Authorization XML files are available in the Appendix section 5.1.2 of this document.

3.2 Download Integration Flows and Adapt Them to the Customer

The package "SAP S/4HANA Statutory Reporting for Chile" contains the following iFlows:

iFlow Name in WebUI	Project Names/Artifacts Name
Sign Mandatory Remittance	com.sap.GS.Chile.MandatoryRemittance
Sign Remittance Book	com.sap.GS.Chile.RemittanceBook

3.3 Deploy Integration Flows on Test/Productive Tenants

Deploy the iFlows on the HCI tenants. After all the iFlows are deployed, note the URLs of the endpoints for each service.

See Appendix 5.1 for information on how to change the endpoint URLs as per test and production environment.

3.4 Set up Connection with ERP on Test/Productive Tenants

If you are using basic authentication, the tenant needs to have basic authorization enabled for the test user (SCN credentials). If you are using certificate-based authentication, you need to maintain the certificates properly on the tenant keystore and on the iFlows.

3.4.1 Create Logical Ports in ERP SOAMANAGER

There are two different proxies that need to be connected to the HCI tenant via logical port. In the test system, the logical ports will be configured to connect to the test tenant. In the productive system, the logical ports will be configured to connect to the productive tenant.

The ports that should be created for each proxy and the related endpoints (configured in the iFlows) are:

Proxy Name	Port Name	Endpoint URL
CO_CL_MANDATORY_REMITTANCE	CO_MANDATORY_REMITTANCE_PORT	/cxf/s4hana/glo/chilesignmandrem
CO_CL_REMITTANCE_BOOK	CO_REMITTANCE_BOOK_PORT	/cxf/s4hana/glo/chilesignrembook

Add the following descriptions to the ports:

CO_MANDATORY_REMITTANCE_PORT: CIMandatoryRemittance

CO_REMITTANCE_BOOK_PORT: CIRemittanceBook

The port should be configured as the example below, replacing the Access URL with the tenant URL provisioned to you and the proxy settings with the ones from your ERP systems:

Configuration: Consumer Proxy 'CO_CL_MANDATORY_REMITTANCE', Logical Port 'CO_MANDATORY_REMITTANCE_PORT'

Save Edit Ping Web Service

Consumer Security Messaging **Transport Settings** Message Attachments Identifiable Business Context Operation Settings Administrative Information

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:

Optimized XML Transfer:

Compress HTTP Message:

Compress Response:

Configuration: Consumer Proxy 'CO_CL_REMITTANCE_BOOK', Logical Port 'CO_REMITTANCE_BOOK_PORT'

Save Edit Ping Web Service

Consumer Security Messaging **Transport Settings** Message Attachments Identifiable Business Context Operation Settings Administrative Information

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:

Optimized XML Transfer:

Compress HTTP Message:

Compress Response:

Figure 1: SOA Manager Transport Settings

In the test tenant, the URL Access of the HCI test tenant should be used. In the productive tenant, the URL Access of the HCI productive tenant should be used.

The “Consumer Security” tab configuration depends on the security being used for the ERP-HCI communication (basic authentication or certificate-based).

Important Note:

The URLs must be correctly maintained in the test and productive systems’ SOAMANAGER, as they point to iFlows that behave differently and contact different endpoints in the authority system (SII).

In our tests, we found it necessary to go to the “Messaging” tab in SOAMANAGER and set “Message ID Protocol” to “Suppress ID Transfer”.

4 Testing

To test the communication, the best way is to create and send an Electronic Ledger (Journal/General/Balance) from the ERP. How you can achieve this depends on how the system is configured to generate and send Electronic Ledger. You must follow the following steps:

1. Install all the notes relevant to the Full Solution for Chile((Journal/General/Balance)) and followed all the manual configuration steps.
<https://i7p.wdf.sap.corp/sap/support/notes/2661653> - DDIC Note Changes (2661653)
<https://i7p.wdf.sap.corp/sap/support/notes/2642797> - Common Artefacts (2642797)
<https://i7p.wdf.sap.corp/sap/support/notes/2661967> - Balance Sheet (2661967)
<https://i7p.wdf.sap.corp/sap/support/notes/2661601> - Journal Ledger (2661601)
<https://i7p.wdf.sap.corp/sap/support/notes/2662471> - General Ledger (2662471)
2. Create a relevant output document for electronic ledger for Chile (for example an Journal/General).
3. Select the company code for the document that was posted (example: "CL10"), check if the other selection parameters are correct and execute.
4. You can double-check if the message went through on the HCI tenant; or you can use a trace from transaction "SRT_UTIL" to look at the XMLs transmitted via web services from ERP.

5 Appendix

5.1 Generating and Importing Certificates – CAF Certificate Handling

5.1.1 Prerequisites

1. Install OPENSSL in your system (<http://slproweb.com/products/Win32OpenSSL.html>)
2. Download CMDER from the URL <http://bliker.github.io/cmdr/>. This is the utility used for generating the .crt file from the .key file. You can download the full version.
3. You can also download Keystore Explorer for creating the keystore (<http://keystore-explorer.sourceforge.net/downloads.php>).

5.1.2 Generating Private Key from CAF Authorization XML

Alternatively, create the .key file. The .key file should contain the private key contained in the CAF xml. Name the file as mentioned in the CAF naming in section 2.1.

```

1 -----BEGIN RSA PRIVATE KEY-----CRLE
2 MIIBOQIBAAJBALZDsv6KR2PnsmQfOWWBekMC0qE2y0vUMKOD1jc7vpyd52ZFZkLhCRLE
3 ...CRLE
4 KepEp6IhgSpiUd08+N3iRSpZiW5PAiEAm2MDXVCWIFGOu6k92lxU9Y6ScLQTB0HqCRLE
5 i65YJvgHsTT8mfqmkqYC1Pp2wVdw3KA/zristis=CRLE
6 -----END RSA PRIVATE KEY-----CRLE
7

```

1. Open Command prompt and go to the path where OpenSSL installed (inside Bin). Use the following OpenSSL command to convert the .key file to a .csr file:

```
openssl req -new -key <filename>.key -out <filename>.csr
```

The system will ask for below details. You will find these details in your certificate received from SII.

- Country Name(2 letter code)
- State or Province Name (full name)
- Locality Name (eg. City)
- Organization Name (eg. Company)
- Organization Unit Name (eg. Section)
- Common Name (e.g. server FQDN or Your Name)
- Email Address
- Challenge Password(Optional)

Note: Here <filename> is the name with which 'EDOC_CL_NR_XML_UPLOAD' report created file

2. Use the following OpenSSL command to create a .crt file from the .key and .csr file:

```
openssl x509 -req -days 365 -in <filename>.csr -signkey <filename>.key -out <filename>.crt
```

Note: Here <filename> is the name with which 'EDOC_CL_NR_XML_UPLOAD' report created file

3. After successful creation of key value pair certificates(<filename>.key and <filename>.crt), raise incident under 'LOD-HCI-PI-OPS' for asking to upload the key value pair in your tenant keystore. Mention that alias name should be same as .key & .crt files(<filename>). It shouldn't be changed, otherwise you will get dump in Iflow.



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