

**SAP HR Integration with ELSTER ERiC for Germany**  
***HR Tax Integration for Germany (SAP HR Tax Integration***  
***for Germany (LStA, LStB, ELStAM)***

**SAP Cloud Integration Configuration**





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## 1. OVERVIEW AND PREREQUISITES

This integration package enables you to transfer German tax-specific notifications to the authority. The following notifications are supported: LStA, LStB, and ELStAM.

For the transfer, the integration package applies specific requirements for message security, which are set by the German authorities. Therefore, the integration package uses the mandatory ERiC Libraries. The functionality is valid for German customers only. On-Premise System (ERP) and Employee Central Payroll (ECP): Minimum Release 6.00

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

### 1.1 Configure SAP CLOUD INTEGRATION

#### 1.1.1 Initial Configuration of the Cloud Integration Tenant

SAP CLOUD INTEGRATION test and productive tenants are live and users in the tenants have sufficient rights and privileges to copy the integration package and to configure and deploy the integration flow. To deploy the security content, role 'AuthGroup.Administrator' is required.

Set up and configure the Cloud Integration tenant as described in the *Get Started* documentation for SAP Cloud Integration. <https://help.sap.com/viewer/368c481cd6954bd0435479fd4eaf/Cloud/en-US/e7b1eaa2246641b3a6188233cf219ab8.html>

For the subsequent configuration of HR (On Premise + ECP), note down the URL of the tenant (the TMN URL you received when the tenant was provisioned).

#### 1.1.2 ELSTER certificates for SAP Cloud Integration

To exchange data with the authority, you need one or more certificates from the authority. These certificates can be obtained from the ELSTER Online-Portal. If you already use the data exchange with the authority and you want to switch communication from middleware SAP Business Connector (BC) or SAP Process Integration/SAP Process Orchestration to SAP Cloud Integration, you must use the existing certificates.

The ELSTER certificates are files in PFX format (<filename>.pfx) and are password-protected.

For subsequent configuration, make sure that the certificate file and password are available.

## 2 SETUP STEPS IN SAP CLOUD INTEGRATION

### 2.1 Copy Published Package 'SAP HR Integration with ELSTER ERiC for Germany' to your Package

Go to the 'Discover' chapter of your tenant and find the package 'SAP HR Integration with ELSTER ERiC for Germany':

Click on package name, then click 'Copy' in the upper left corner.

Note: the package version on the screenshot may differ from the current one.

## 2.2 Configure Integration Flow for HR Data

These steps are optional. Steps 2.2 and 2.2.1 are only necessary if the package is copied more than once or if it was not possible to use the default URL for the connection between HR (on Premise or ECP).

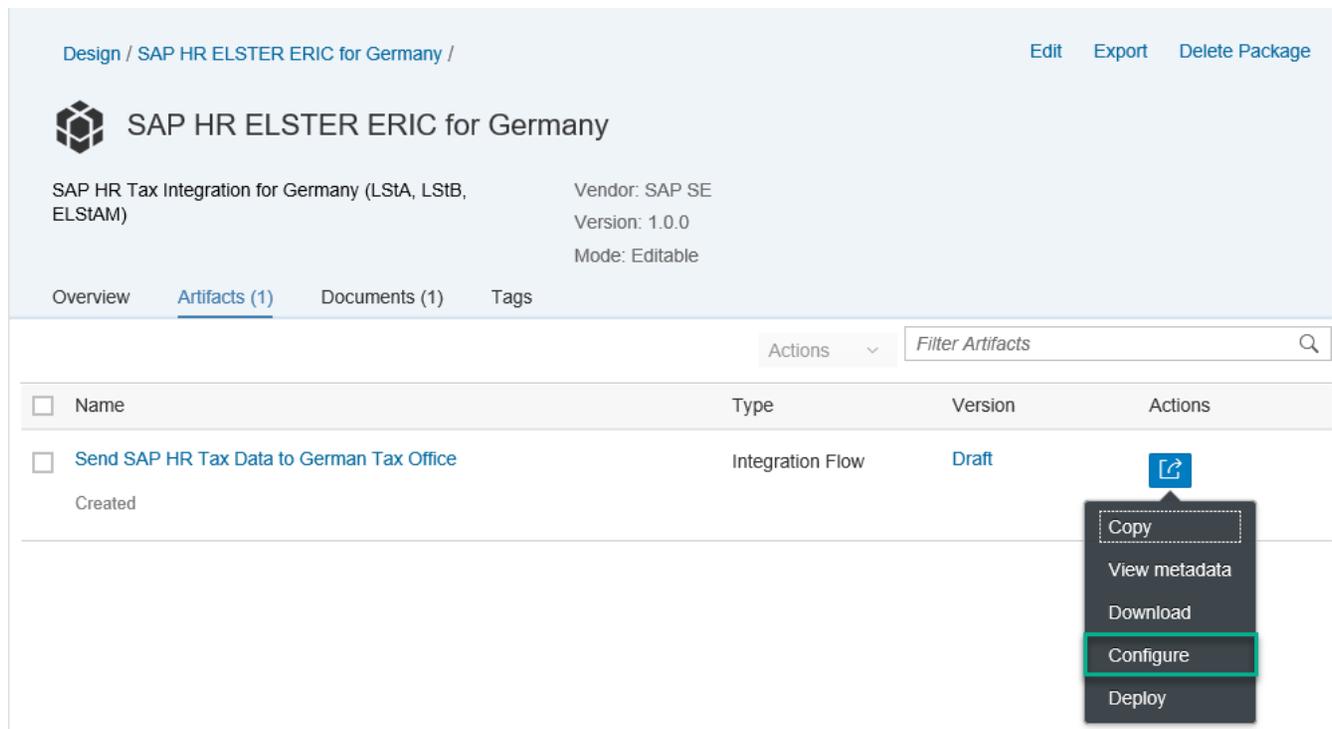


Figure 1. ELSTER integration package "Artifacts" tab

### 2.2.1 Configure Sender Tab

**Address:** Update the connection address to a name that allows you to differentiate between different packages (for example, /ELSTER\_HTTP\_Sender\_1). As previously mentioned, you should only change this default value if absolutely necessary.

**User Role:** If you want to use a specific role for the ELSTER Integration Flow you can select a user role different from ESBMessaging.send. This role must be created in Cloud Cockpit. You should only change this default value if absolutely necessary.

Configure "Send HR Tax Data"

---

**Sender**

Sender:

Adapter Type:

**Connection**

Address:

User Role:

Figure 2. "Send SAP HR Tax Data to German Tax Office" iFlow - Sender adapter properties

### 3. DEPLOY CERTIFICATES FOR SAP CLOUD INTEGRATION

The certificates for the data exchange with the authority are stored in the SAP Cloud Integration Keystore. Therefore, add certificate <filename>.pfx provided from the authority to the SAP Cloud Integration Keystore.

1. Navigate to the keystore. Overview -> Manage Security -> Keystore

Figure 3. Monitor Keystore

2. Add the PFX-file with the certificate to the keystore. Choose Add -> Keystore

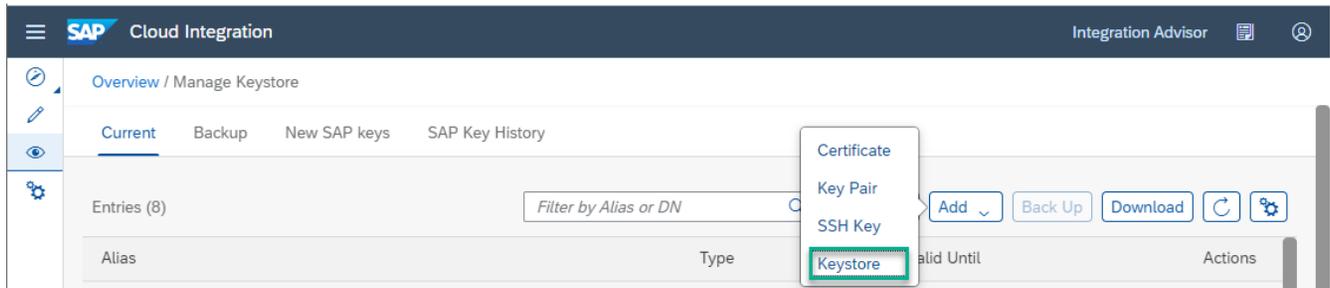


Figure 4. Add PFX-File to the keystore

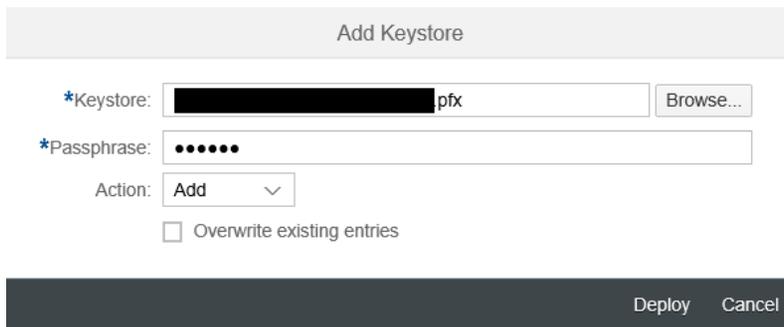


Figure 5. Add PFX-File to the keystore

After adding the PFX-file to the SAP Cloud Integration Keystore, you will find two new entries in the certificate list of the keystore. The new entries are called *encryptionkey* and *signaturekey*.

3. Rename the new entries

One of the certificates in the PFX-file is for the encryption and one is for the signature.

Rename entry *encryptionkey* to *elster\_hcm\_ag\_enc* and entry *signaturekey* to *elster\_hcm\_ag\_sig*.

**Remarks:**

- The suffix *\_enc* and *\_sig* are obligatory and cannot be changed.
- If you use a name other than *elster\_hcm\_ag<suffix>*, you must customize this value in the corresponding HR system.
- The value *elster\_hcm\_ag* is the default value set in the HR system. If SAP Cloud Integration is used for different companies with different certificates, avoid entries with *elster\_hcm\_ag<suffix>*. Otherwise a HR system with incomplete Customizing could send and request data belonging to a different customer from

the authority.

For more information about certificate deployment in SAP Cloud Integration, see SAP Note 2469460 "Key-store management in SAP Cloud Integration for process services".

### 3.1 Using Multiple Certificates for Different Companies

If it is necessary to use different certificates for multiple companies, you must upload these pfx-files to the SAP Cloud Integration keystore. Make sure that you rename each of the two different keys with suffix `_enc` and `_sig`. Avoid entries with the default name `elster_hcm_ag<suffix>`.

Example:

Company ABC (DE010001)	Company XYZ (DE020001)
elster_hcm_ag_DE010001_enc	elster_hcm_ag_DE020001_enc
elster_hcm_ag_DE010001_sig	elster_hcm_ag_DE020001_sig

In the corresponding Customizing in the HR system, the name of the keystore entry has to be maintained in supapplication LSTK. Details are given in step HR - *Using Multiple Certificates for Different Companies*.

## 4. SETUP OF THE HR PAYROLL SYSTEM

In the HR (on Premise or ECP) system, you need to configure the HTTPS connection to the SAP Cloud Integration solution and some additional Customizing tables.

### 4.1 Set up HTTPS Connection to SAP Cloud Integration System

To set up the HTTPS connection, you need the URL of the tenant (the TMN URL you received when the tenant was provisioned). You can also find the URL in the SAP Cloud Integration Overview -> Manage Integration Content by clicking on the Integration Content.

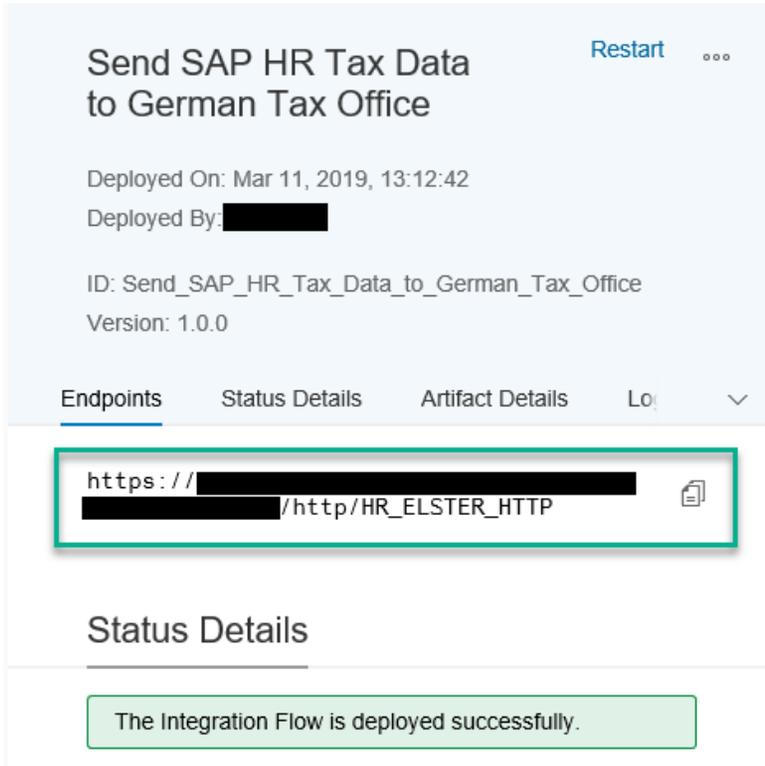


Figure 6. Manage Integration Content - Details Send SAP HR Tax Data to German Tax Office

To setup a secure HTTPS connection between the application system (HR/FI) and the Cloud Integration tenant, add the load balancer root certificate to the HR/FI trust store. Further details are available in *blog How to setup secure http inbound connection with client certificates*. <https://blogs.sap.com/2017/06/05/cloud-integration-how-to-setup-secure-http-inbound-connection-with-client-certificates/>

1. Start transaction SM59.
2. To create a new connection, select Edit-> Create.
3. For the RFC destination, enter value *HR\_DE\_ELSTER* (or if necessary another value) for the connection name. (If you use the default name *HR\_DE\_ELSTER*, no additional Customizing for constant RFCDE is required in later steps.)
4. Set connection type G (http connection to external serv).
5. Enter *ELSTER HTTPS – CI connection* in the *Description* field.
6. On the *Technical Settings* tab, enter the following values:
  - a. *Target Host*: < IFLMAP URL for the CI tenant>  
Note: Make sure that you don't enter https:// in the field *Target Host*  
Example: 1234567890-iflmap.hcisbp.eu3.hana.ondemand.com
  - b. *Service No.*: 443
  - c. *Path Prefix*: /http/HR\_ELSTER\_HTTP
  - d. *http Proxy Options* <Enter own proxy values>  
HR ECP-Customers: No entries are necessary. The proxy settings are preconfigured by SAP in the global proxy settings.

Example:

The screenshot shows the configuration for an RFC Destination named 'HR\_DE\_ELSTER'. The 'Connection Test' button is visible. The 'RFC Destination' is set to 'HR\_DE\_ELSTER' and the 'Connection Type' is 'G HTTP Connection to External Serv'. Below this, there are three 'Description' fields. The 'Administration' tab is selected, and the 'Technical Settings' sub-tab is active. Under 'Target System Settings', the 'Host' is redacted, the 'Port' is '443', and the 'Path Prefix' is '/http/HR\_ELSTER\_HTTP'. Under 'HTTP Proxy Options', the 'Global Configuration' button is highlighted. The 'Proxy Host' is redacted, 'Proxy Service' is '8080', 'Proxy User' is empty, and 'Proxy PW Status' is 'is initial'.

Figure 7. Transaction SM59 - Customizing HTTPS Connection

## 7. Logon & Security tab

There are two options for setting up the authentication: basic authentication or client certificate-based authentication. The more secure option is to use client certificates.

### Basic Authentication

- Create a user in Cloud Integration and assign the ESBMessaging.send role. More information can be found in the documentation in chapter *Defining Permissions for senders to Process Messages on the Runtime Node*. <https://help.sap.com/viewer/368c481cd6954bd0435479fd4eaf/Cloud/en-US/24585cc503334e6c917ef383efb5558a.html?q=ESBMessaging.send>

In the Logon & Security tab enter:

- a. Logon with user: Choose *Basic Authentication* and enter a valid user and password for logging on to SAP Cloud Integration
- b. Logon with ticket: Select *Do Not Send Logon Ticket*

c. Security options: Select *SSL Active* and *SSL Certificate Default SSL Client (Standard)*

Example

**RFC Destination HR\_DE\_ELSTER**

Connection Test

RFC Destination: HR\_DE\_ELSTER

Connection Type: G HTTP Connection to External Serv Description

Description

Description 1	ELSTER HTTPS – CPI connection
Description 2	
Description 3	

Administration | Technical Settings | **Logon & Security** | Special Options

**Logon Procedure**

**Logon with User**

Do Not Use a User

Basic Authentication

User:

PW Status: saved

**Logon with Ticket**

Do Not Send Logon Ticket

Send Logon Ticket Without Ref. to a Target System

Send Assertion Ticket for Dedicated Target System

System ID:  Client:

**Security Options**

**Status of Secure Protocol**

SSL:  Inactive  Active

SSL Certificate: DFAULT SSL Client (Standard) Cert. List

Authorization for Destination:

Figure 8. Transaction SM59 - Customizing HTTPS Connection

## Client certificate-based authentication

- Set up the client certificate in the HR/FI system and upload to Cloud Integration in the certificate-to-user mapping as described in the blog *How to setup secure http inbound connection with client certificates*. <https://blogs.sap.com/2017/06/05/cloud-integration-how-to-setup-secure-http-inbound-connection-with-client-certificates/>

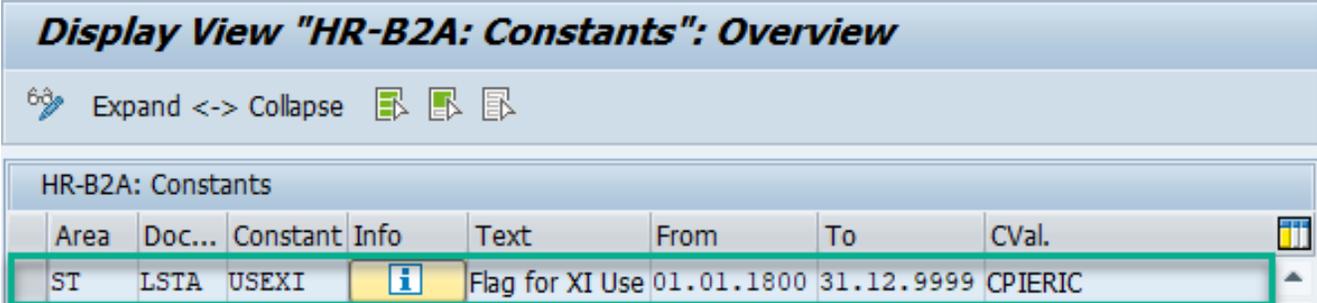
## 4. 2 Customizing V\_T50BK

### 4.2.1 Constant USEXI

Use constant USEXI to enable the usage of SAP Cloud Integration ERIC for communication with the authority. For all three tax types, constant USEXI must be set to value *CPIERIC*.

Area	Document Type	Constant	From	To	Value
ST	LSTA	USEXI	01.01.1800	31.12.9999	CPIERIC
ST	LSTB	USEXI	01.01.1800	31.12.9999	CPIERIC
ST	E2AE	USEXI	01.01.1800	31.12.9999	CPIERIC

Example:



**Display View "HR-B2A: Constants": Overview**

Expand <-> Collapse

HR-B2A: Constants

Area	Doc...	Constant	Info	Text	From	To	CVal.
ST	LSTA	USEXI		Flag for XI Use	01.01.1800	31.12.9999	CPIERIC

Figure 9. View V\_T50BK

### 4.2.2 Constant RFCDE

Use constant RFCDE to set the HTTPS connection, which is used to connect to the SAP Cloud Integration system. If there is no value provided for the constant, the system uses HR\_DE\_ELSTER for the connection. To use a connection different to HR\_DE\_ELSTER, set the connection name as the constant value for RFCDE. In this case, constant RFCDE must be set for all three tax types.

Area	Document Type	Constant	From	To	Value
ST	LSTA	RFCDE	01.01.1800	31.12.9999	
ST	LSTB	RFCDE	01.01.1800	31.12.9999	
ST	E2AE	RFCDE	01.01.1800	31.12.9999	

Example:

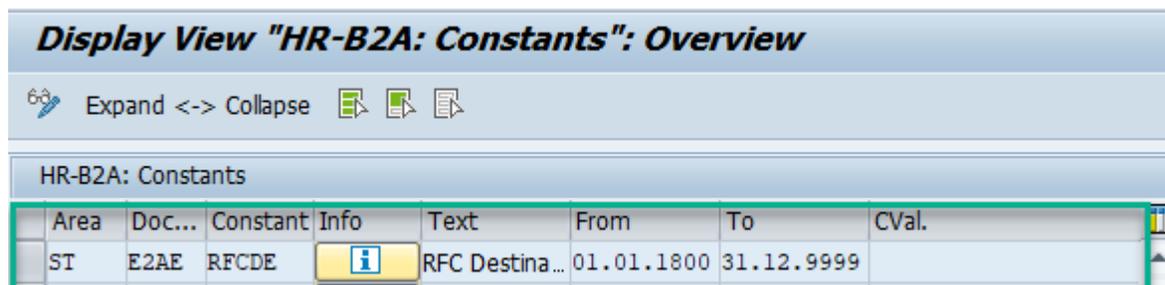


Figure 10. View V\_T50BK

In this case (no constant value provided), the system uses HR\_DE\_ELSTER to connect to the SAP Cloud Integration system.

### 4.3 HR - Using Multiple Certificates for Different Companies

The tax authority provides the employer with a certificate. Technically you do not have to use more than one certificate to exchange data from one HR system (On Premise or ECP) with the tax authority. In the HR system, you can define one company as the data provider. The tax authority has issued the certificate for this data provider. The data provider is defined in subapplication LSTD *Employment Tax Statement - Data Provider* in View V\_T596M.

If only one data provider is used, it is sufficient to upload the corresponding certificate with alias elster\_hcm\_ag<suffic> to the SAP Cloud Integration certificate store. As elster\_hcm\_ag is the default name for the certificate, no further Customizing for the certificate is necessary in the HR system.

If different certificates should be used for different data providers (companies), the following Customizing steps are necessary:

1. Ensure that the different data providers are defined in subapplication LSTD.
2. Upload the different company certificate with different aliases (for example, elster\_hcm\_ag\_DE010001<suffic>, elster\_hcm\_ag\_DE020001<suffic>) to the certificate store.
3. Maintain the different aliases in subapplication LSTK, View V\_T596M.

Example:

**Change View "Data from Personnel Area Reporting": Overview**

Expand <-> Collapse    New Entries    Delimit

Subapplication: Employment Tax Statement - Data Provider

Pe...	Su...	Start Date	End Date	A..	Address...	T...	U...	U...	Pers.No.	Position	T536C
DE01	0001	01.01.1800	31.12.9999				<input type="checkbox"/>	<input checked="" type="checkbox"/>			
DE02	0001	01.01.1800	31.12.9999				<input type="checkbox"/>	<input checked="" type="checkbox"/>			

Figure 11. Customizing subapplication LSTK

**Display View "Data from Personnel Area Reporting": Overview**

Expand <-> Collapse

Subapplication: Employment Tax Notification/Statement/ELStA...

Pe...	Su...	Assignmnt	Start Date	End Date	A..	Address...	T...	U...	U...	Pers.No.	Position	T536C	Identification for Certificate
DE01	0001	AGKEY	01.01.1800	31.12.9999				<input type="checkbox"/>	<input type="checkbox"/>	0	0		elster_hcm_ag_DE010001
DE02	0001	AGKEY	01.01.1800	31.12.9999				<input type="checkbox"/>	<input type="checkbox"/>	0	0		elster_hcm_ag_DE010002

Figure 12. Customizing subapplication LSTK

## 5. TESTING

For testing, use program Test Report for Communication ETNotif./ETStnt/ELStAM (RPUTX7D0).

1. Go to transaction SA38 or SE38.
2. Enter the report name RPUTX7D0 and choose the Execute (F8) button.
3. On the selection screen, you can choose the tax type you want to test. Make sure that you test all three tax types. There are also additional fields on the selection screen. These fields are optional and may only be used for specific tests.
4. Start the report. The report sends XML test data to the authority and also checks if the authority receives this data.

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## 6. EXTERNAL INFORMATION AND LINKS

### Overview: Cloud Integration - Usage of the ELSTER Adapter

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