
eInvoice Duplicate Check Service

The eInvoice Duplicate Check service checks the e-Invoicing internal archive database for duplicate invoices. When checking the duplicate invoices, the Transaction Register is checked first for the duplicates, and then the archive database is checked.

The following table provides an overview of the eInvoice Duplicate Check service:

System Name	eInvoiceDuplicateCheck
Graphical Process Modeler (GPM) categories)	All Services and eInvoicing
Description	The eInvoice Duplicate Check service checks the Transaction Register for duplicate invoices, and then checks the internal archive database.
Business usage	This service is used by the supplier and buyer processes to determine if an invoice that is being processed was already added to the database.
Usage example	This service is called automatically by the supplier and buyer processes. It may also be called by business processes you create, if you want to check whether an invoice exists in the internal archive database.
Preconfigured?	eInvoiceDuplicateCheckService
Requires third party files?	No
Platform availability	All supported application platforms.
Related services	No
Application requirements	You must execute the e-Invoice archive install script before using this service. This script creates the necessary configuration to connect to the archive database and check in the fact models that are required by the Mapped Extraction service. During the install script execution, you must provide all information about the database that will be used as the e-Invoice archive database.
Initiates business processes?	No
Invocation	This service is invoked to run during normal processing prior to adding an invoice to the archive.
Business process context considerations	None
Returned status values	Success = No duplicate invoices were found. Error = Duplicate invoices were found.
Restrictions	None
Persistence level	System default

Testing considerations	Create a business process to call the service and fill in all the parameters. See <i>Business Process Example</i> on page 5 for a sample business process. Error (log) information for this service is located at: Operations > System > Logs > eInvoicing
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How the eInvoice Duplicate Check Service Works

The eInvoice Duplicate Check service checks Sterling e-Invoicing internal Integrated Archive database for duplicate invoices. The eInvoice Duplicate Check service is used by the supplier and buyer processes to determine if an invoice that is being processed was already added to the database, and is called automatically by the supplier and buyer processes. It may also be called by business processes you create, if you want to check whether an invoice exists in the internal archive database.

This service adds an entry to Transaction Register when it runs. This entry is checked by subsequent runs of the eInvoice Duplicate Check service before it looks at the database. The Transaction Register is always checked, regardless of the type of archive used. If the archive used is the internal Integrated Archive, it also checks the database if there is no duplicate found in the Transaction Register.

After the Duplicate Check is run, if you need to restart the Supplier process or Buyer process, the duplicate check will fail because it has already stored the primary key information in the Transaction Register. If this occurs you must clear that information from the Transaction Register, before restarting the Supplier or Buyer process.

See *Clearing Information from the Transaction Register* on page 4 for more information.

You can also change how long the invoice primary key information stays in the Transaction Register by setting the **mapper.maximumTransactionRegisterAge** property (from the **translator.properties** file) to the number of days the information should be retained. It should be noted that this will change the retention period for all Transaction Register entries, not just Sterling e-Invoicing entries.

See *Setting the Number of Days Information is Retained in the Transaction Register* on page 4 for more information on setting this property.

Implementing the eInvoice Duplicate Check Service

To implement the eInvoice Duplicate Check service, execute the e-Invoice archive install script before using this service. This script creates the necessary configuration to connect to the archive database and check in the fact models that are required by the Mapped Extraction service. During the install script execution, you must provide all information about the database that will be used as the e-Invoice archive database.

Configuring the eInvoice Duplicate Check Service

1. Select **Deployment > Services > Configuration**.
2. Search for eInvoice Duplicate Check service or select it from the list and click **Go!**
3. Click **Edit**.
4. Specify field settings in the GPM (see the description of parameters on page 3).

5. Specify field settings in the business process (see the description of parameters in the section *Parameters Passed From Business Process to Service* on page 3).
6. On the Confirm page, verify that the **Enable Service for Business Processes** check box is selected.

Setting Up the Service in the GPM

Use the field definitions in the following table to set up the service configuration in the GPM, if necessary:

Parameter	Description
ArchiveRole	Specifies which participant created the invoice. Optional.
BuyerVatID	The buyer's transaction tax code. Optional.
InvoiceDate	The date the invoice was sent. Optional.
InvoiceNumber	The number of the invoice for which you want to search. Optional.
SupplierVatID	The supplier's transaction tax code. Optional.

Parameters Passed From Business Process to Service

The following table contains the parameters passed from the business process to the eInvoice Duplicate Check service:

Parameter	Description
InvoiceNumber	The number of the invoice for which you want to search. Optional.
InvoiceDate	The date the invoice was sent. Optional.
SupplierVatID	The supplier's transaction tax code. Optional.
BuyerVatID	The buyer's transaction tax code. Optional.
ArchiveRole	Specifies which participant created the invoice. Optional.
Invoice Identifier	<p>A descriptor to uniquely identify the invoice. Optional.</p> <p>Note: You define the Invoice Identifier in the map. This allows you to decide which fields are used as the criteria to uniquely identify the invoice, and allows you to change the key based upon the particular partner, business division, and so forth. Typically, this field is a concatenation of fields such as Supplier ID, Buyer ID (or possibly VAT ID), and invoice number. If two invoices have the same Invoice Identifier, they are considered duplicates of each other. The first invoice that is archived is considered a good invoice and any invoice with the same Invoice Identifier and Role that is archived after that is considered to be a duplicate. If this field is not provided in canonical invoice, the combination of the following fields from the canonical invoice are used to uniquely identify the invoice: INVOICE_NUMBER, INVOICE_DATE, SUPPLIER_VAT_ID, BUYER_VAT_ID, and ROLE.</p>

Clearing Information from the Transaction Register

After the Duplicate Check is run, if you need to restart the Supplier process or Buyer process, the duplicate check will fail because it has already stored the primary key information in the Transaction Register. If this occurs you must clear that information from the Transaction Register, before restarting the Supplier or Buyer process.

The Transaction Register fields correspond to the following primary key information:

Transaction Register Field	Primary Key Information
FIELD1	ArchiveRole Note: When INVOICE_IDENTIFIER is in the Canonical invoice, this entry is logged in the transaction register as INVOICE_IDENTIFIER.
FIELD2	InvoiceNumber Note: When INVOICE_IDENTIFIER is in the Canonical invoice, this entry is logged in the transaction register as ArchiveRole.
FIELD3	SupplierVatID
FIELD4	BuyerVatID
FIELD5	InvoiceDate

Complete the following steps to clear the Transaction Register:

1. Select **Trading Partner > Document Envelopes > Transaction Register**.
2. In the Search area, type a value in Field 1 through Field 6 to narrow your search and click **Go!**
3. Delete the necessary records by clicking **delete** next to each duplicate record.

Setting the Number of Days Information is Retained in the Transaction Register

The application supports the use of a customer override (edit) property file to override default property settings in the property files. The customer override property file is not changed during installation of the application or the application upgrades or patches. To prevent having your customized settings overwritten, use overrides whenever possible rather than editing the actual property file.

If you have made changes to the property file, either directly or by editing the associated .in files in a previous application version, your changes may be overwritten when a patch is applied. To prevent this, create a customer_overrides.properties file and reapply your modifications using overrides to the applicable property files in the customer_overrides.properties file.

To set the number of days the information is retained in Transaction Register:

Note: This changes the retention period for all Transaction Register entries, not just Sterling e-Invoicing entries.

1. Create a **customer_overrides.properties** file.

2. Add the following line to the customer_overrides.properties file:

```
translator.mapper.maximumTransactionRegisterAge=[number_of_days_to_retain_info  
]
```

In this example, **translator** represents the translator.properties file where the original property is set, **mapper** represents the Map Editor user interface, **maximumTransactionRegisterAge** represents the number of days that the Transaction Register will retain information before being purged, and **[number_of_days_to_retain_info]** is the actual number of days (for example, if you set this parameter equal to 30, the information is retained for 30 days).

Business Process Example

The following is an example of how the eInvoice Duplicate Check service is called:

```
<process name="TestEInvoiceDuplicateCheckService">  
  <sequence>  
    <operation name="TestEInvoiceDuplicateCheckService">  
      <participant name="eInvoiceDuplicateCheck"/>  
      <output message="Xout">  
        <assign to="." from="*"></assign>  
        <assign to="InvoiceNumber">123456789</assign>  
        <assign to="InvoiceDate">2008-01-24</assign>  
        <assign to="SupplierVatID">IT123</assign>  
        <assign to="BuyerVatID">CZ123</assign>  
        <assign to="ArchiveRole">1</assign>  
      </output>  
      <input message="Xin">  
        <assign to="." from="*"></assign>  
      </input>  
    </operation>  
  </sequence>  
</process>
```

Enabling eInvoice Duplicate Check Document Tracking

When you are creating or editing your eInvoice Duplicate Check business process in the business process text editor, you can easily enable eInvoice Duplicate Check document tracking in the application by selecting the **Document Tracking** check box on the Process Levels page. Set the following options as needed and leave the rest of the business process parameters as the defaults:

- ◆ On the Deadline Settings page, set the deadline and notification options, if necessary.
- ◆ On the Life Span page, set the life span, if necessary.