SAP Business One
How-To Guide

PUBLIC

How to Implement and Use Electronic Documents with SAP Business One

Release Family 8.8

Applicable Releases:

SAP Business One 8.81, PL07 and Higher

Mexico

English

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Electronic Documents for Mexico

This document describes how to implement and use electronic documents with SAP Business One. The software for electronic documents is relevant for companies that run SAP Business One with localization for Mexico. This is document is relevant for SAP Business One 8.81, patch level 07 (PL07) and higher.

Scope and Limitations

The electronic marketing document, also known as Comprobante Fiscal Digital (CFD), is a legal change of the Fiscal Federal Code of Mexico (Código Fiscal de la Federación). An evolutionary model of the CFD is the Comprobante Fiscal Digital por Internet (CFDI) model, which describes similar electronic marketing document management with an additional valid online certification. The valid online certification is relayed by the local tax authorities of Mexico (SAT) to officially designated suppliers, PAC (Proveedor Autorizado de Certificación de CFDI).

As of January 1, 2011, all companies in Mexico are required to provide taxpayers with digital marketing documents (CFD or CFDI) that contain the digital seal of the issuing tax payer, which must be covered by a certificate.

The procedures described in this how-to guide refer to the CFD and the CFDI model, which are supported in SAP Business One by new functionality for the above-mentioned releases. For both models, the SAT issues a certificate for a requesting company with private and public keys. As part of the certification, the company using the CFD model also receives numbering ranges for electronic documents with approval to use them. Per the CFDI model, companies send the XML files of the documents to the PAC to receive certification and document numbering.

SAP Business One supports the requirement for electronic documents with additional software, settings, and reports that cover the following accounts receivables (A/R) documents: A/R invoice, A/R down payment invoice, A/R credit memo, and A/R debit memo.

In addition to the software changes to support electronic documents, SAP Business One includes runtime and designer functionality for managing electronic files. As part of the releases mentioned above, SAP provides Electronic File Manager (EFM), originally developed for SAP Business One 8.81, as a replacement of an add-on format definition tool for creating and editing electronic file formats.

As part of the CFDI model, SAP Business One Integration Framework is used to manage sending and receiving electronic documents via the Internet to and from PAC.

Glossary

Term	Description
certificate	Electronic document that uses a digital signature to bind together a key with an identity. The certificate can be used to verify that a key belongs to an individual or a company.
digital signature	Security mechanism for protecting digital data
electronic document	Digital marketing document or digital marketing receipt, such as an invoice

For More Information

For more information about Electronic File Manager, see the online help, SAP Note 1531223, and *How to Design an Electronic File Format in Electronic File Manager: Format Definition* in the documentation area of SAP Business One Customer Portal at http://service.sap.com/smb/sbocustomer/documentation.

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For more information about B1i, see the *Administrator's Guide for the Integration Component* in the *Documentation* folder on your product DVD, or visit the Channel Partner Portal (http://channel.sap.com/sbo/innovations.)

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Using Electronic Documents (CFD Model)

This section describes how to use electronic documents according to the CFD model.

Getting Ready to Use Electronic Documents (CFD Model)

To enable the generation of electronic documents, the SAP Business One key user or administrator must ensure that the software has been installed with the appropriate configuration and settings by:

- Assigning a certificate received from the taxing authority SAT to an SAP Business One company database. The certificate is stored in Microsoft Windows certificate storage.
- Selecting the default electronic document export format and defining a folder for electronic document files.
- Creating at least one document numbering series for electronic documents based on the numbering ranges received from the taxing authority SAT.

Assigning a Certificate to the SAP Business One Database

Certificates received from the taxing authority SAT usually have a validity timeframe of one or two years. Assigning a certificate is done only when a new certificate is received, when a current certificate expires, or when a certificate is no longer valid.

Prerequisites

Certificate from SAT is available in the Microsoft Windows certificate storage of each Windows user that creates electronic documents.

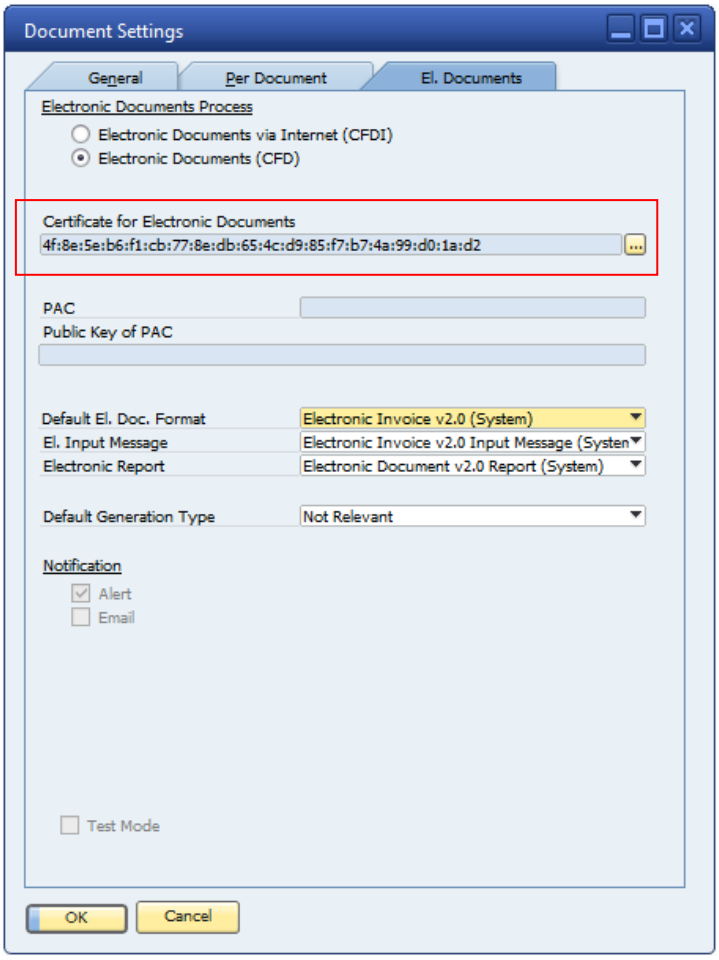
Procedure

1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*

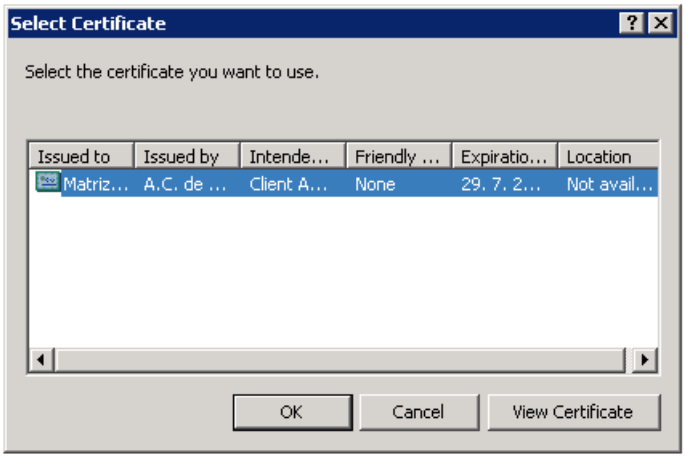
   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.

NOTE

The certificate information shown in this document is used to illustrate user interface features only. The information is from a certificate that SAT provided for testing purposes only.



3. To the right of the *Certificate for Electronic Documents* field, click the […] icon.
   The certificate selection window appears with a list of available certificates.



4. To select a certificate, click the relevant certificate and then click the *OK* button.
   Information about the certificate is copied to the *Certificate for Electronic Documents* field.

Selecting Default Electronic Document Export Format and Defining a Folder for Electronic Documents

The taxing authority SAT requires you to generate two types of files:

- XML files for A/R invoices, A/R down payment invoices, A/R credit memos, and A/R debit memos
- TXT file for reporting all electronic documents generated during one calendar month

SAT defines the specific structure of the XML file for electronic documents and the TXT file for the monthly report.

SAP Business One includes the default format files for electronic documents and the default format file for the report, which are created with Electronic File Manager.

NOTE

You can modify the default format definition file for electronic documents or for the monthly report with additional fields or create a new format definition file for specific business partners (see Creating and Modifying Format Definition Files).

Prerequisites

A certificate is linked to the SAP Business One company database.

Several format definition files from SAP are available in a directory that you define in *Administration* → *Setup* → *General* → *Electronic File Manager* → *Setup* (format for local currency documents, format for foreign currency documents, format for input message, and format for report of electronic documents).

Procedure

1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*

   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.
3. To select the default format file for electronic documents, select the format file to the right of the *El. Document Export Format* field and click *OK*.

   This format file is now valid for all relevant marketing documents (invoices, down payment invoices, credit memos, and debit memos).
4. To define a folder in which XML files generated for electronic documents are stored, choose *Administration* → *System Initialization* → *General Settings*.
5. In the *Path* tab, specify a folder in the relevant field.

Creating a Document Numbering Series for Electronic Documents

In addition to providing your company a certificate for generating electronic documents, the taxing authority SAT provides numbering series that you use when creating electronic documents. To generate electronic documents, you must define at least one numbering series for electronic documents. You can specify a default numbering series and change the default value, for example, when the original default series reaches the last number.

The primary key for numbering electronic documents is a prefix plus a number defined in a numbering series. Because the prefixes are different, numbers can be repeated and can overlap in several series.

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Prerequisites

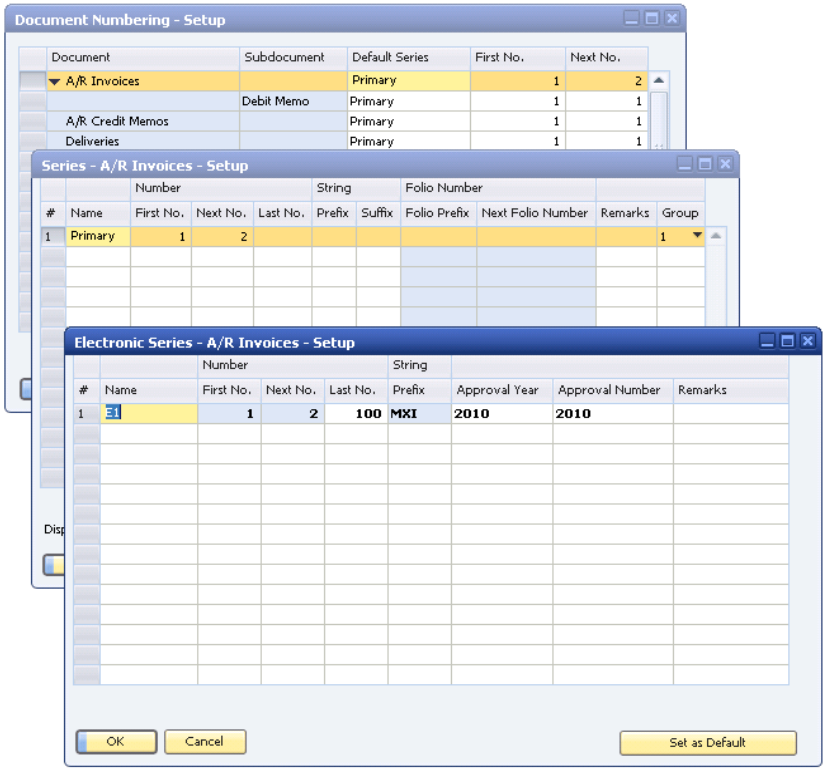
A certificate is linked to the SAP Business One company database, a default file format for electronic documents is selected for your company, and a folder has been defined to store XML files created for electronic documents.

Procedure

1. In SAP Business One *Module* tab, choose *Administration* → *System Initialization* → *Document Numbering.*

   The *Document Numbering - Setup* window appears.

2. To access the *Electronic Series - A/R Invoices - Setup* window, double-click the series name in both the *Document Numbering - Setup* window and the *Series - A/R Invoices - Setup* window.



3. In the *Electronic Series - A/R Invoices - Setup* window specify the following:

Field	Description
Name	Name of numbering series
First No.	Starting number of the series
Next No.	Next number to be used in the series; calculated automatically as for standard numbering functionality
Last No.	Final number of the series If the last number is reached during the generation of an electronic document, the system does not automatically assign a number from a different numbering series. An error message appears that the last number has been reached. You can specify another numbering series, if one exists, or create a new numbering series.
Prefix	Optional: Prefix of the numbering series

Field	Description
Approval Year	Year when the taxing authority approved the numbering series
Approval Number	Number of the approval for the numbering series from the taxing authority
Remarks	Comments about the numbering series
Set as Default	If more than one numbering series exists for electronic documents, determines that this numbering series is used as default when an electronic document is created.

4. To save the electronic numbering series, click the *OK* button.

Result

Once you have created at least one numbering series for electronic documents, you can generate electronic documents for your company.

When you generate an electronic document SAP Business One assigns an internal number and an electronic document series number (prefix of the numbering series and a number) to the document. The electronic document number assigned to each created electronic document continues as per the numbering series. Any gap in the internal number, which may be due, for example, to the manual creation of an electronic document, does not change or influence the assignment of the numbers for the electronic document.

Example

Internal numbering series is “Primary” with numbers from 1–10. For internal number 5 and internal number 8, the electronic documents have already been created, with electronic invoice number XX-1001 and electronic invoice number XX-1002 respectively.

Electronic numbering series is “Electronic” with *Prefix* XX and *Next No.*1003.

The following documents are created:

Internal No.	Electronic No.
1	XX-1003
2	XX-1004
3	XX-1005
4	XX-1006
6	XX-1007
7	XX-1008
9	XX-1009
10	XX-1010

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Assigning a File Format to a Specific Business Partner

You can modify the default format file for electronic documents or create a new format definition file to meet the needs of specific business partners. You then assign the modified or new file to one or more business partners.

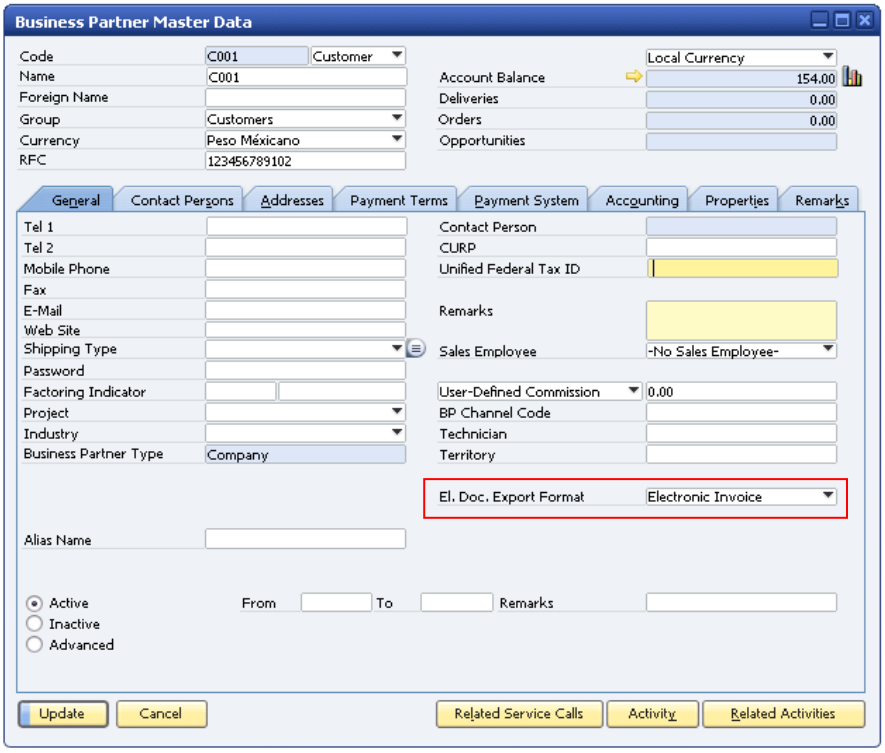
Prerequisites

A new `.spp` format definition file has been created using Electronic File Manager, is stored in the folder that has been defined for format definition files, and is uploaded to EFM (see Creating and Modifying Format Definition Files).

Procedure

1. In the SAP Business One *Modules* tab, choose *Business Partners* → *Business Partner Master Data.*

   The *Business Partner Master Data* window appears.



2. In the *General* tab, for the *El. Doc. Export Format* field, select the BP-specific EFM format definition file and click *Update*.

   This new format file is now valid for the business partner.

   When generating an electronic document for an invoice, down payment invoice, credit memo, or debit memo, SAP Business One uses the format definition file specified on the document (Electronic Document tab). As a default value system first checks the existence of a default format definition file for a specific business partner and then checks if a format definition file exists for whole company.

Creating and Modifying Format Definition Files

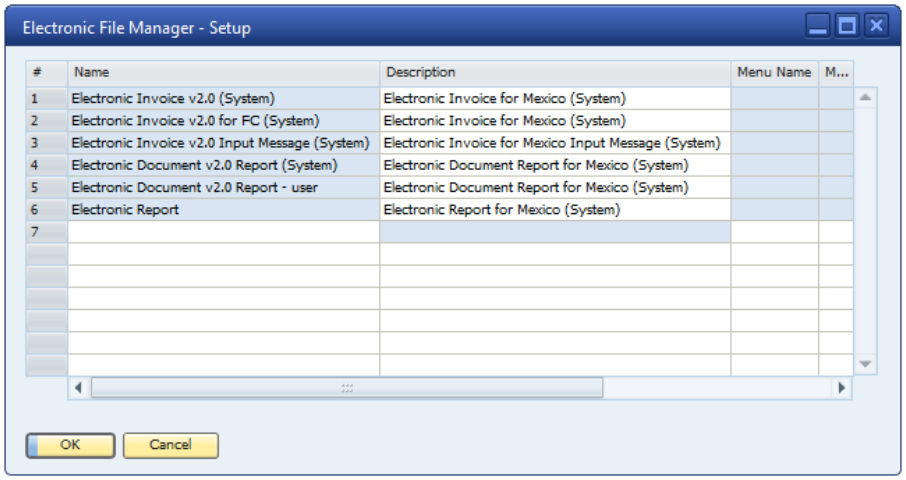
You can enhance the default format definition file for electronic documents and for the monthly report that you file with the taxing authority. For example, the taxing authority may require additional fields

that are specific to your type of business or your industry. Your parent company may require you, as a subsidiary, to create an XML file with additional company-specific information. You can also create new format definition files to meet the business needs of specific business partners.

For more information about Electronic File Manager, see the online help, SAP Note 1531223, and *How to Design an Electronic File Format in Electronic File Manager: Format Definition* in the documentation area of SAP Business One Customer Portal at http://service.sap.com/smb/sbocustomer/documentation.

1. To modify the default format definition files or to create a new file, you use the Electronic File Manager: Format Definition add-on.
2. To make the modified file or the new file available to SAP Business One, use EFM file management functionality. To access this functionality, in the SAP Business One *Modules* tab choose *Administration* → *Setup* → *General* → *Electronic File Manager*.

   The *Electronic File Manager - Setup* window appears. It contains the default document format file and the default report file.



   For each report the *Format Type* column displays one of two formats; both have an `.spp` file extension.

   - *Electronic Document* is used for the creation of electronic files from marketing documents. There can be multiple items of this type.
   - *Electronic Authority Report* is used for the report to the taxing authority that summarizes the electronic documents created within a specific month. There can be only one item of this type.
3. To upload the modified file or the new file, right-click the *Name* column and select *Upload*.
4. Specify a description and select *Update*.

NOTE

The system files cannot be replaced, so it is necessary to make a copy, adjust, save and upload new file.

Result

After format definition files are created and available in the Electronic File Manager, they can be used for creating the XML file for documents and for generating the monthly report to the taxing authority.

NOTE

The data source for EFM mapping includes all the information from the source documents. However, different documents are stored in different tables in SAP Business One. For this reason a general naming convention was created, as shown in the following example.

Data Source	A/R Invoice	A/R Credit Memo
ODOC	OINV	ORIN
DOC1	INV1	RIN1
DOC2	INV2	RIN2
…	…	…

Note

The data source includes all database fields and user-defined fields related to the database tables of marketing documents. If the database structure is updated, you can regenerate the data source and update it in the Electronic File Manager. To regenerate the data source, choose *Tools* → *Customization Tools* → *Generate EFM XML Datasource* in the menu bar.

Generating Electronic Documents

SAP Business One supports electronic document generation for A/R invoices, A/R down payment invoices, A/R credit memos, and A/R debit memos.

You can generate electronic documents:

- Automatically when you manually create and post invoices, down payment invoices, credit memos, and debit memos
- In a batch run after the accounting posting of the relevant documents
- During the creation of documents using the Document Generation Wizard together with the accounting posting of the relevant documents

NOTE

If a document is generated also as an electronic document, a “standard” folio number cannot be assigned to the document. Standard folio numbering functionality is available only for documents printed on paper and marked as “not relevant” for electronic document creation.

In general, if an electronic document is created then you cannot print the document as a paper document. You can, however, print the electronic document using a specific print layout with specific information as required by the taxing authority SAT.

In case that document has status “Not Relevant” and Manual Folio Number is assigned it is not possible to change the status to “Generate Later” and create electronic document.

The *Electronic Document* tab for the invoice, down payment invoice, credit memo, and debit memo contains the *Generation Type* field in which you specify when and if electronic documents are generated. The following table provides details about the three options.

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Option	Action	Result	Comment
Generate	Create an electronic document	Electronic document number is assigned and XML file is created and stored in XML directory when invoice, down payment invoice, credit memo, or debit memo is added.	If the standard document (invoice, down payment invoice, credit memo, or debit memo) is created in the standard series with a defined and linked electronic document numbering series, then the default value is set to *Generate*. You can change the default value to *Generate* or *Not Relevant*. Once the XML file is generated automatically you cannot modify any input fields.
Generate later	Defer the creation of an electronic document to a batch run	Electronic document number is not assigned and XML file **is not** generated when the document is added. Electronic number **is** assigned and XML file **is** created later when you use the document printing functionality.	This is the default setting when using Document Creation Wizard. As long as the XML file is not generated you can change the following fields: *Generation Type*, *Electronic Doc. Number*, *El. Document Export Format*, *Orig. Input Message*, and *Encrypted Char. Chain*. Once the XML file is generated automatically you cannot modify these fields.
Not relevant	Do not create an electronic document	This is the default value when no electronic numbering series has been defined. Once you have defined an electronic numbering series, you can change this value. When the invoice, down payment invoice, credit memo, or debit memo is generated, the standard folio number is assigned and no XML file is generated.	If a document is added without creating an XML file then the *Generation Type* field is not blocked for editing. Between the time that the original document is added and an electronic document file is generated, you can change the option from *Not Relevant* to *Generate - Later*.

You can specify a default value for the generation type. To do so, choose *Administration* → *System Initialization* → *Document Settings* and make your selection for the *Default Generation Type* field.

Prerequisites

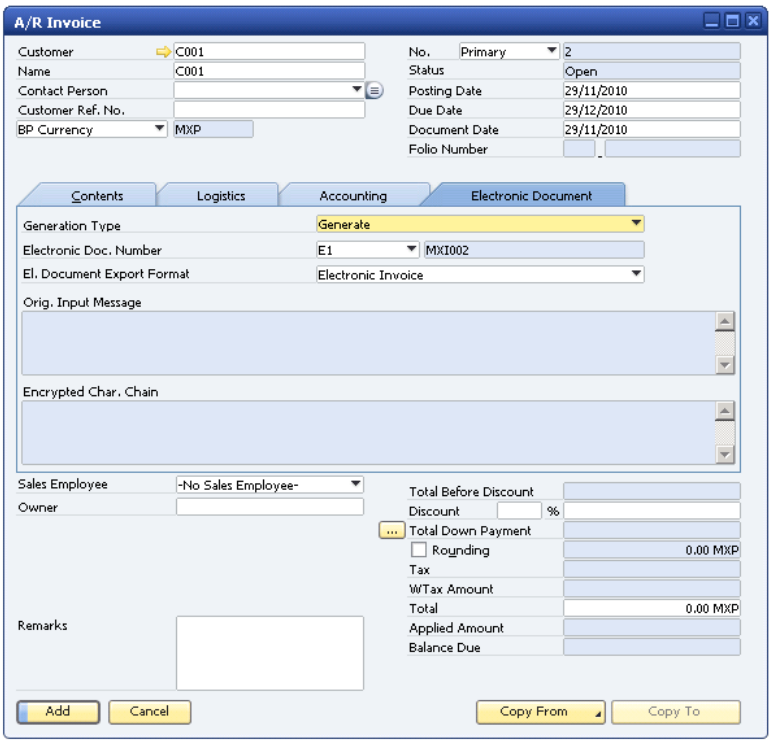
A certificate is linked to the SAP Business One company database, a default file format for electronic documents is selected for your company, and a folder has been defined to store XML files created for electronic documents.

Generating an Electronic Document When You Create a Standard Document

When you create an A/R invoice, A/R down payment invoice, A/R credit memo, or A/R debit memo, you can decide if you want to create an electronic document immediately, at a later time, or not at all.

The following procedure describes an example of electronic document creation for an A/R invoice. The procedure for A/R down payment invoices, credit memos, and debit memos is similar.

1. In the SAP Business One *Modules* tab, choose *Sales* → *AR Invoice*.
   The *A/R Invoice* window appears.



2. In the *Electronic Document* tab, review and modify the following fields as required:
   a. *Generation Type* displays the default option for generating an electronic document. You can change this option to better suit your needs.
   b. *Electronic Doc. Number* displays the automatically assigned number as defined by the default electronic numbering series (see Creating a Document Numbering Series for Electronic Documents).
      If you have defined more than one electronic numbering series, you can change this default number. To do so, select a different electronic series name from the dropdown list. When you select a different electronic series name, the next available number (from the *Next No.* field) is filled in the second part of the *Electronic Doc. Number* field.
   c. *El. Document Export Format* displays the default export file format. If you have defined a BP-specific export file format or another export file format, select that file from the list.
   d. *Orig. Input Message* is blank and is not editable. After you select the *Add* button (and you have “Generate” status selected), it displays the digital signature of the original document.
   e. *Encrypted Char. Chain* is blank and is not editable. After you select the *Add* button (and you have “Generate” status selected), it displays the encrypted digital signature of the original document.
3. Select *Add*.

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If the *Generation Type* field displays the *Generate* option, SAP Business One takes the following actions:

- The digital signature is created from the original document and displayed in the *Orig. Input Message* field. It is then encrypted and displayed in the *Encrypted Char. Chain* field.
- The XML file is created based on the default format definition file (see Selecting Default Electronic Document Export Format and Defining a Folder for Electronic Documents) unless you have specified a different format definition file for the electronic document or for the business partner (see Assigning a File Format to a Specific Business Partner).
- The XML file for the electronic document is generated in the standard path for XML files, which is defined in *Administration* → *System Initialization* → *General Settings* → *Paths* tab. The file name consists of your RFC and the electronic document number.

EXAMPLE

The file name for electronic document XX-1004 for taxpayer (RFC) XXXX010101000 is `XXXX010101000XX1004.xml`.

Generating Electronic Documents in a Batch Run

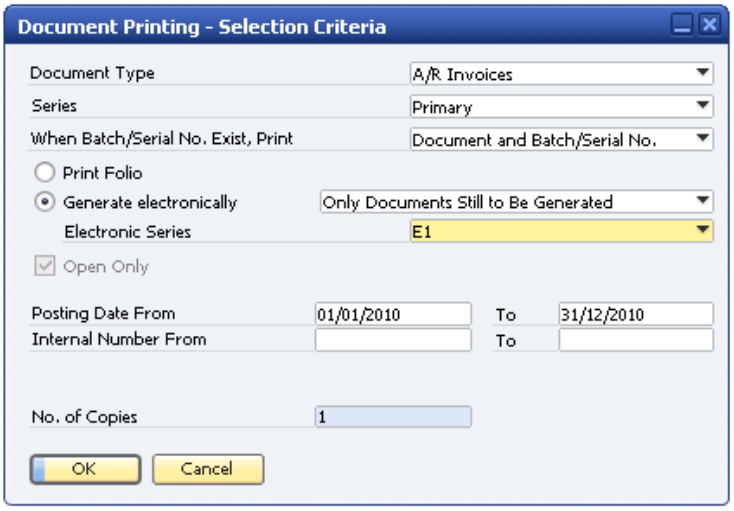
If the *Generation Type* field for an invoice, down payment invoice, credit memo, or debit memo is set to *Generate - Later* when the document was created originally, you use the document printing functionality to print the electronic document.

The standard functionality for printing documents provides several options for generating electronic documents:

- Generate documents for the first time (new XML documents are created).
- Re-create documents that were generated previously (XML documents were created already and you need to re-create the originally generated document).
- Re-create documents finished with errors (XML documents were generated with errors and you need to re-create the documents)
- Mark documents as faulty (to mark a large number of documents as faulty and be able to re-create these documents)

To create or re-create electronic documents using the document printing functionality:

1. In the SAP Business One *Modules* tab, choose *Sales* → *Document Printing.*
   The *Document Printing - Selection Criteria* window appears.



2. The following fields are relevant for generating or regenerating electronic documents:

Field	Description
Generate electronically	To generate documents electronically, select the radio button. From the dropdown list select *Only Documents Still to Be Generated*. To re-create previously generated electronic documents, select the radio button. From the dropdown list select *Re-generate Only*. To re-create documents that have not been generated successfully, select the radio button. From the dropdown list select *Re-create Documents Finished with Errors*. To mark a large number of documents as faulty, select the radio button. From the dropdown list select *Mark as Faulty*.
Electronic Series	Displays the default electronic numbering series. If more than one numbering series is defined, you can change the numbering series to use when generating electronic documents; the next number in the numbering series is assigned.

3. Click *OK*.

   The *Print A/R Invoices* window appears with a list of documents ready to be generated as electronic documents.

4. Select the documents for which you want to generate electronic invoices and click *Generate*.

   An electronic document number is assigned automatically from the numbering series specified in the *Electronic Series* field to each document generated.

   For more information about what happens when electronic documents are created, see step 3 in the procedure “Generating an Electronic Document When You Create a Standard Document.”

Generating Electronic Documents When Using the Document Generation Wizard

When you use the Document Generation Wizard to create invoices you have the option to specify that electronic documents should be generated when the relevant documents are posted.

In the second step of the Document Generation Wizard, when you select the target document type (A/R invoice, for example), you specify two additional fields related to the generation of electronic documents:

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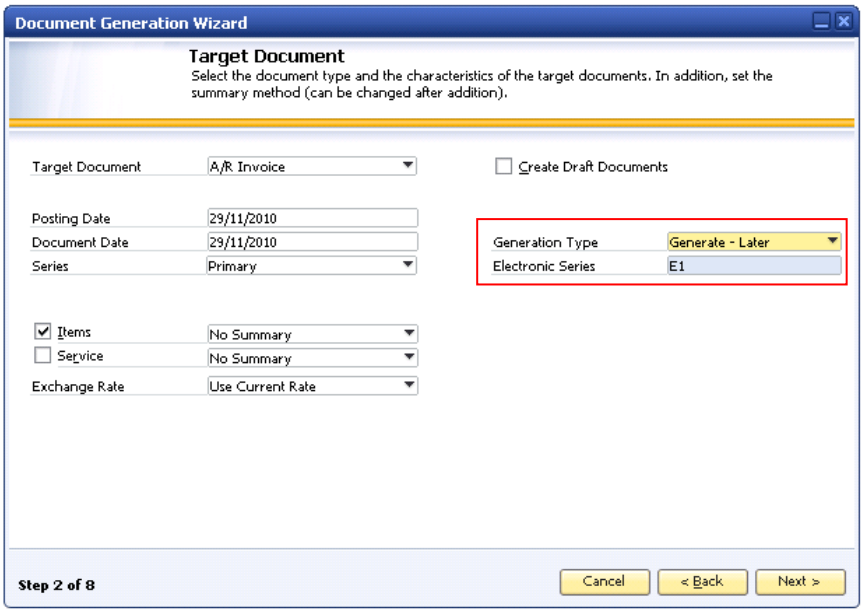


- *Generation Type* – Displays the default value for generating electronic documents using the Document Generation Wizard, which is *Generate - Later*. You can change to one of the other options for this field: *Generate* or *Not Relevant*.
- *Electronic Series* – Displays the default electronic numbering series. If more than one numbering series is defined, you can change the numbering series to use when generating electronic documents; the next number in the numbering series is used.

Creating the Report of Generated Invoices

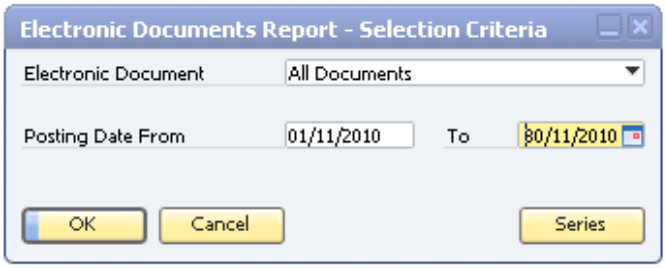
The taxing authority SAT requires companies to send a monthly list of generated electronic documents. SAT has specified the format and required content.

SAP Business One provides the standard format definition file for creating the report file (TXT file) for the taxing authority. You can adjust the format (see Creating and Modifying Format Definition Files).

You can add user-defined fields (UDFs) from a marketing document header to the result screen of the report. The UDFs are also part of the export if they are defined in the respective EFM format definition file.

Procedure

1. In the SAP Business One *Modules* tab, choose *Reports* → *Financials* → *Accounting* → *Electronic Documents Report*.
   The *Electronic Documents Report - Selection Criteria* window appears.



2. Specify the criteria for generating the report:

- To generate a report for all electronic documents (A/R invoices, A/R down payment invoices, A/R credit memos, and A/R debit memos) generated for the month, from the *Electronic Document* dropdown list select *All Documents*.
- To identify the reporting period (month), in the *Posting Date From* field specify the first day of the month and in the *To* field specify the last day of the month.

NOTE

If you specify a date range that is less than a month, you can generate a report (see step 3) but you cannot export the report (see step 4). You may want to generate a report without exporting it to review all electronic documents generated for a week, for example.

3. To generate the report, click *OK*.

   A report is generated and displayed.

   The following columns appear in the report by default.

Column	Description
Electronic Document	Displays the type of documents you specified in the selection field.
Date From *Date To*	Displays the time period during which the electronic documents were created.
RFC of Customer	Fiscal ID of business partner
Series	Prefix code derived from the document numbering series
Folio of Tax Voucher	Electronic document number assigned when the electronic document was generated, based on an electronic numbering series
Approvals Number	Approval number of the certificate issued by the taxing authority
Date and Hour of Issue	System time and date when the electronic document was created
Operation Amount	Total amount of the electronic document in local currency (LC)
Tax Amount	Amount of value-added tax of the electronic document in local currency
State of the Voucher	Status of the electronic document. The status is always “1”, which is “active.”

4. To export the report, click *Export*.

   Fields on the result screen are exported to a TXT file.

   If one of the following conditions occurs, the fields are not exported to the results file (TXT file):

   - The field is available on the result screen of the report but is not defined in the EFM format definition file.
   - The field is defined in the EFM format definition file but is not in the result screen of the report.

Result

The TXT file is created and saved in the standard XML folder. The file name consists of:

- The number 1 (The number 2 is reserved for those who issue electronic documents through third-party providers.)
- RFC
- Month and the year of the report, formatted as MMYYYY

EXAMPLE

The file name of the November 2010 report for RFC XXXX010101000 is `1XXXX01010100012006.txt`.

Using Electronic Documents (CFDI Model)

This section describes how to use electronic documents according to the CFDI model.

Note

SAP Business One supports the major authorized CFDI certification suppliers (PAC) in Mexico. To see which PAC are supported, choose *Administration* → *System Initialization* → *Document Settings*. The dropdown list to the right of the *PAC* field, shows the suported PAC.

PAC called “XML” is a virtual PAC for a specific case when company wants to generate only unsigned document and the process of official certification via official PAC is handled outside SAP Business One system. As a result of “XML” PAC system creates and stores electronic document as xml file on the hard drive.

Prerequisite

To be able to use electronic documents according to the CFDI model, you must have SAP Business One 8.81 PL07 or higher installed.

Getting Ready to Use Electronic Documents (CFDI Model)

To enable the generation of electronic documents, the SAP Business One key user or administrator must ensure that the software has been installed with the appropriate configuration and settings by:

- Selecting an electronic documents process
- Assigning a certificate received from the taxing authority SAT to an SAP Business One company database. The certificate is stored in Microsoft Windows certificate storage.
- Specifying the company responsible for handling electronic documents
- Selecting the default electronic document export format and defining a folder for electronic document files.
- Creating at least one document numbering series for electronic documents based on the numbering ranges received from the taxing authority SAT.

To enable communication between SAP Business One and the PAC Web service, the SAP Business One key user or administrator must ensure that the B1 integration framework and platform has been installed with the appropriate configuration and settings. For more information, see the *Administrator’s Guide for the Integration Component* in the *Documentation* folder on your product DVD, or visit the Channel Partner Portal (http://channel.sap.com/sbo/innovations.)

Selecting an Electronic Documents Process

Companies can provide taxpayers with digital marketing documents according to the CFD or CFDI model.

1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*

   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.
3. Under *Electronic Documents Process*, select whether to use the CFD or CFDI model.
4. To save your selection, choose the *OK* button.

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Assigning a Certificate to the SAP Business One Database

Certificates received from the taxing authority SAT usually have a validity timeframe of one or two years. Assigning a certificate is done only when a new certificate is received, when a current certificate expires, or when a certificate is no longer valid.

Prerequisites

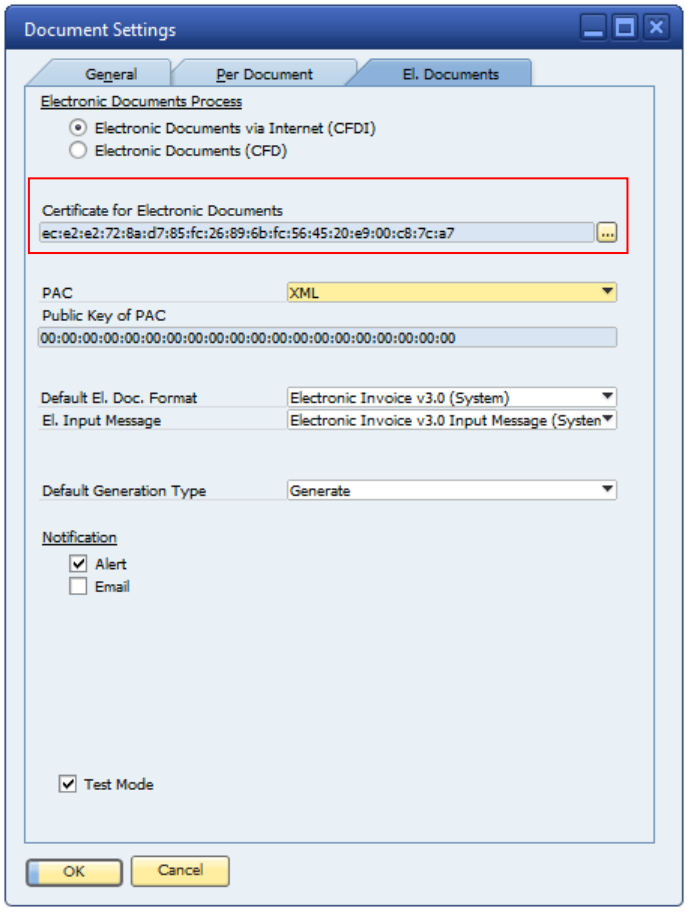
Certificate from SAT is available in the Microsoft Windows certificate storage of each Windows user that creates electronic documents.

Procedure

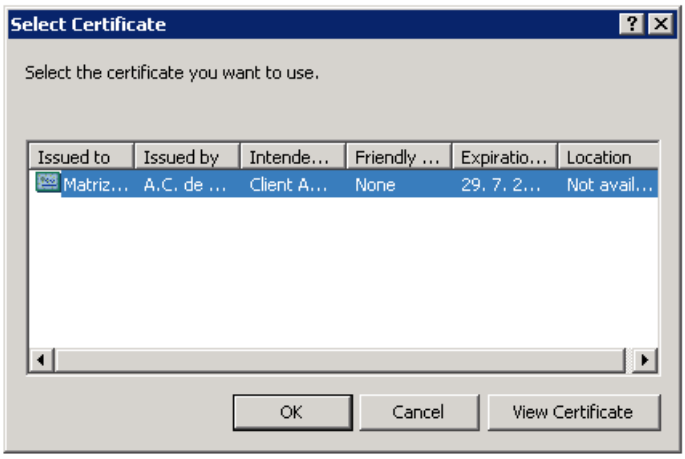
1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*
   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.

   Note

   The certificate information shown in this document is used to illustrate user interface features only. The information is from a certificate that SAT provided for testing purposes only.



3. To the right of the *Certificate for Electronic Documents* field, click the […] icon.
   The certificate selection window appears with a list of available certificates.



4. To select a certificate, click the relevant certificate and then click the *OK* button.
   Information about the certificate is copied to the *Certificate for Electronic Documents* field.

Test Mode

Currently SAP supports three PACs: Edicom, Levicom, and Tralix. The connection requirements to each test environment are described below.

Prerequisites

- The B1 company and the PAC have agreed on the testing period.
- The PAC has agreed to provide the B1 company with certification of their electronic documents.
- The PAC has agreed to provide the test package (link to the Web service, user name, password, testing certificate, and so on).

> **Recommendation**
>
> To set up and test the connection, and to transfer documents, create a test copy of a real productive database of the B1 company and select the Test Mode checkbox in the Document Settings window.

The B1i package includes a prepared connection to the test environments of the three PACs that SAP supports, in the following way:

- **Edicom**: Edicom uses the testing interface to its WS. The package includes a specific link to the testing environment, but the test user name and password should be specified in the B1i environment.
- **Levicom** and **Tralix**: The testing environment is identified only according to the test user and its password. This setting needs to be defined in B1i scenario settings. In test mode, the Test user and password are verified, and then the document is certified for testing purposes only.

> **Note**
>
> When a document is created, it is possible to see whether it was created in “Test Mode”. As such, the response from PAC is not official and the certification of the document is not real, so such a document is officially not signed. However, such a document is still displayed in the system, for example, in reports.

Specifying the Authorized CFDI Certification Supplier (PAC)

When using the CFDI process, you must specify the authorized CFDI certification supplier (PAC) that your company uses for handling electronic documents and communicating with the taxing authority SAT.

Procedure

1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*

   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.
3. In the *PAC* field, select the name of the company responsible for handling electronic documents.

   Recommendation

   SAP Business One provides a mock PAC, called *XML PAC*, which can be used to support third-party products that send and receive the electronic documents to and from the PAC to the company.
4. To save your settings, choose *OK*.

Defining an XML Repository for Electronic Documents

The taxing authority SAT requires you to generate XML files for A/R invoices, A/R down payment invoices, A/R credit memos, and A/R debit memos and defines the specific structure of the XML file for electronic documents.

SAP Business One includes the default format files for electronic documents and the default format file for the report, which are created with Electronic File Manager.

Note

You can modify the default format definition file for electronic documents with additional fields or create a new format definition file for specific business partners (see Creating and Modifying Format Definition Files).

Prerequisites

A certificate is linked to the SAP Business One company database.

The two format definition files from SAP are available in a directory that you define in *Administration* → *Setup* → *General* → *Electronic File Manager* → *Setup* (Electronic Invoice v3.0 (System) and Electronic Invoice v3.0 Input Message (System)*)*.

Procedure

1. In the SAP Business One *Modules* tab, choose *Administration* → *System Initialization* → *Document Settings.*

   The *Document Settings* window appears.
2. Choose the *El. Documents* tab.
3. To select the default format file for electronic documents, select the format file to the right of the *El. Document Export Format* field and click *OK*.

   This format file is now valid for all relevant marketing documents (invoices, down payment invoices, credit memos, and debit memos).
4. To define a folder in which XML files generated for electronic documents are stored, choose *Administration* → *System Initialization* → *General Settings*.

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Note

This is only relevant for XML files generated by *XML PAC*.

5. In the *Path* tab, specify a folder in the relevant field.

Enabling Numbering Series for Electronic Documents

You must specify whether a numbering series is relevant for the generation of electronic documents.

Prerequisites

A numbering series has been defined.

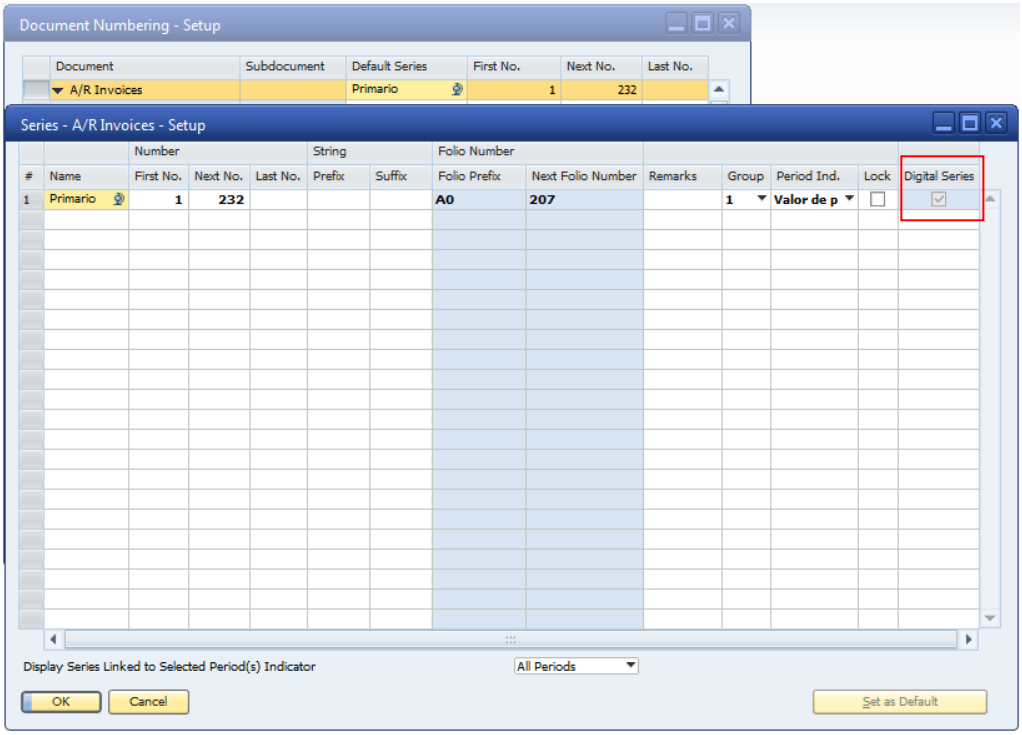
A certificate is linked to the SAP Business One company database and a default file format for electronic documents is selected for your company. In addition, if you generate XML files using *XML PAC* a folder has been defined to store XML files created for electronic documents.

Procedure

1. In SAP Business One *Module* tab, choose *Administration* → *System Initialization* → *Document Numbering.*

   The *Document Numbering - Setup* window appears.

2. To access the *Electronic Series - A/R Invoices - Setup* window, double-click the series name in both the *Document Numbering - Setup* window and the *Series - A/R Invoices - Setup* window.



3. In the *Electronic Series - A/R Invoices - Setup* window, select the *Digital Series* checkbox for the numbering series that are relevant for electronic document generation.
4. To save your settings, click the *OK* button.

NOTE

If a company switches from the CFD to the CFDI model, the standard numbering series with electronic series, the Digital Series checkbox will be automatically enabled.

Assigning a File Format to a Specific Business Partner

You can modify the default format file for electronic documents or create a new format definition file to meet the needs of specific business partners. You then assign the modified or new file to one or more business partners.

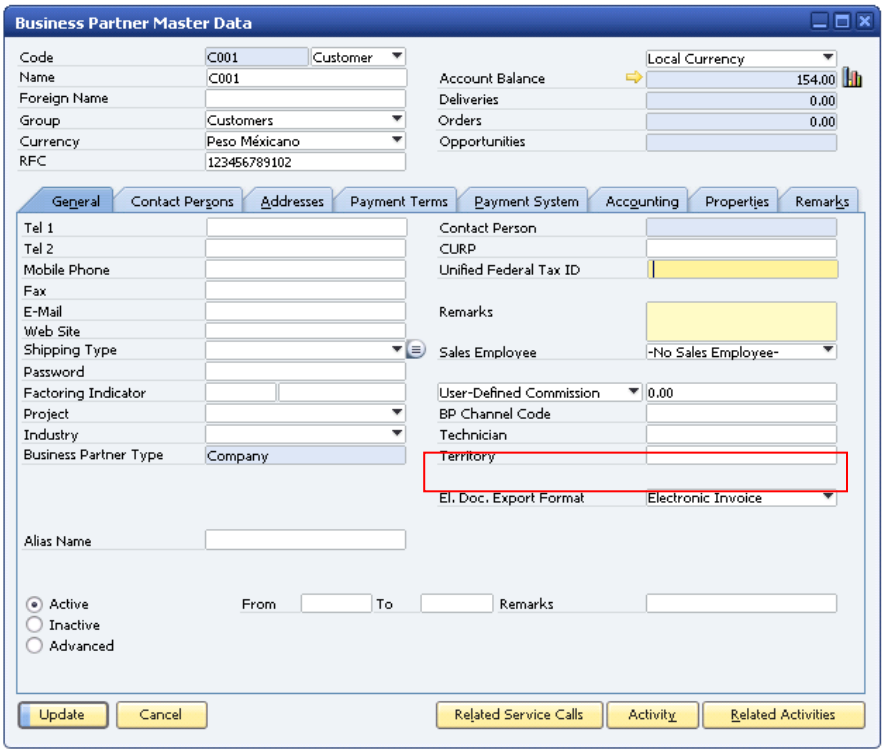
Prerequisites

A new `.spp` format definition file has been created using Electronic File Manager, is stored in the folder that has been defined for format definition files, and is uploaded to EFM (see Creating and Modifying Format Definition Files).

Procedure

1. In the SAP Business One *Modules* tab, choose *Business Partners* → *Business Partner Master Data.*

   The *Business Partner Master Data* window appears.



2. In the *General* tab, for the *El. Doc. Export Format* field, select the BP-specific EFM format definition file and click *Update*.

   This new format file is now valid for the business partner.

   When generating an electronic document for an invoice, down payment invoice, credit memo, or debit memo, SAP Business One uses the format definition file specified on the document. As a default value system first checks the existence of a default format definition file for a specific business partner and then checks if a format definition file exists for whole database.

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Setting Up SAP Business One integration (B1i)

SAP Business One Integration (B1i) is a component enabling communication between SAP Business One and the PAC Web service The SAP Business One key user or administrator must ensure that the B1 integration framework and platform has been installed with the appropriate configuration and settings. For more information, see the *Administrator's Guide for the Integration Component* in the *Documentation* folder on your product DVD, or visit the Channel Partner Portal (http://channel.sap.com/sbo/innovations.)

After successful standard installation of B1i user can manually setup/adjust all relevant connections to the database and PAC via Integration Framework interface.

Steps:

1) Run Tomcat server setup from "c:\Program Files\SAP\SAP Business One Integration\B1iServer\Tomcat\bin\tomcat6w.exe". Change JVM to default (Java->Use Default (default path is C:\Program Files (x86)\Java\jre6\bin\client\jvm.dll)

   For 64bit platform need to setup manually to 64bit Java, standard path should be: C:\Program Files\Java\jre6\bin\server\jvm.dll.

2) Import PAC's CA certificates and Copy cacerts from attachment cacerts.zip in SAP Note 1580236 to "c:\Program Files\Java\jre6\lib\security" (valid for standard JAVA installation path). Restart the SAP Integration Server service

3) The *B1i eInvMX scenario package com.sap.eInvMX.1.0.0.zip* is available as part of B1i installation.
   a. Check Company DB SLD via SLD tab (after setup, try the *Testing* buttons to recheck the connection).

      See example for demo database MX_DEMO2:

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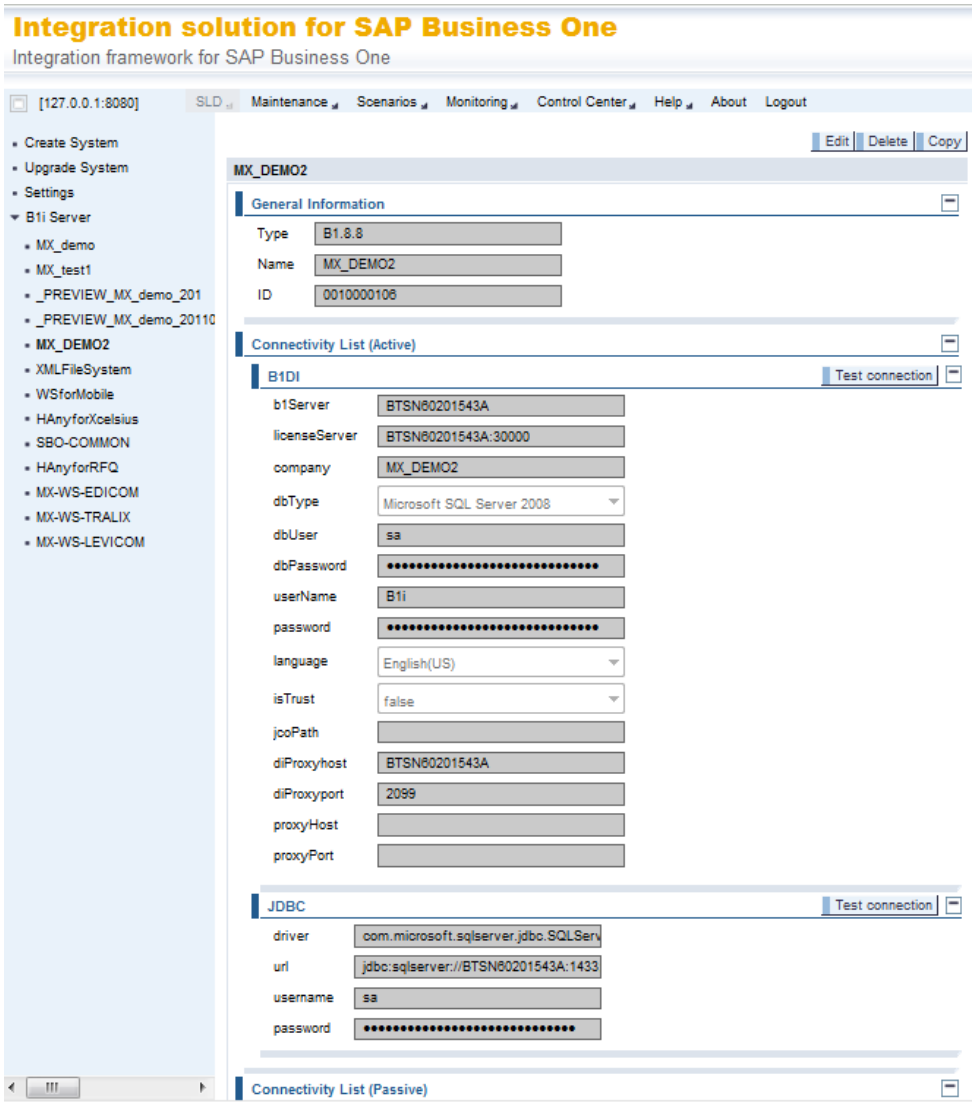


b. Check PAC's SLD (after setup try Testing button to recheck the connection) The example of the setup of SLD data for testing environment of three delivered PACs is following (Please note that the real connection data will be provided by your PAC):

   i. Edicom

Type H.AnySystem

Name <name> (e.g. WS-Edicom)

destProtocol https

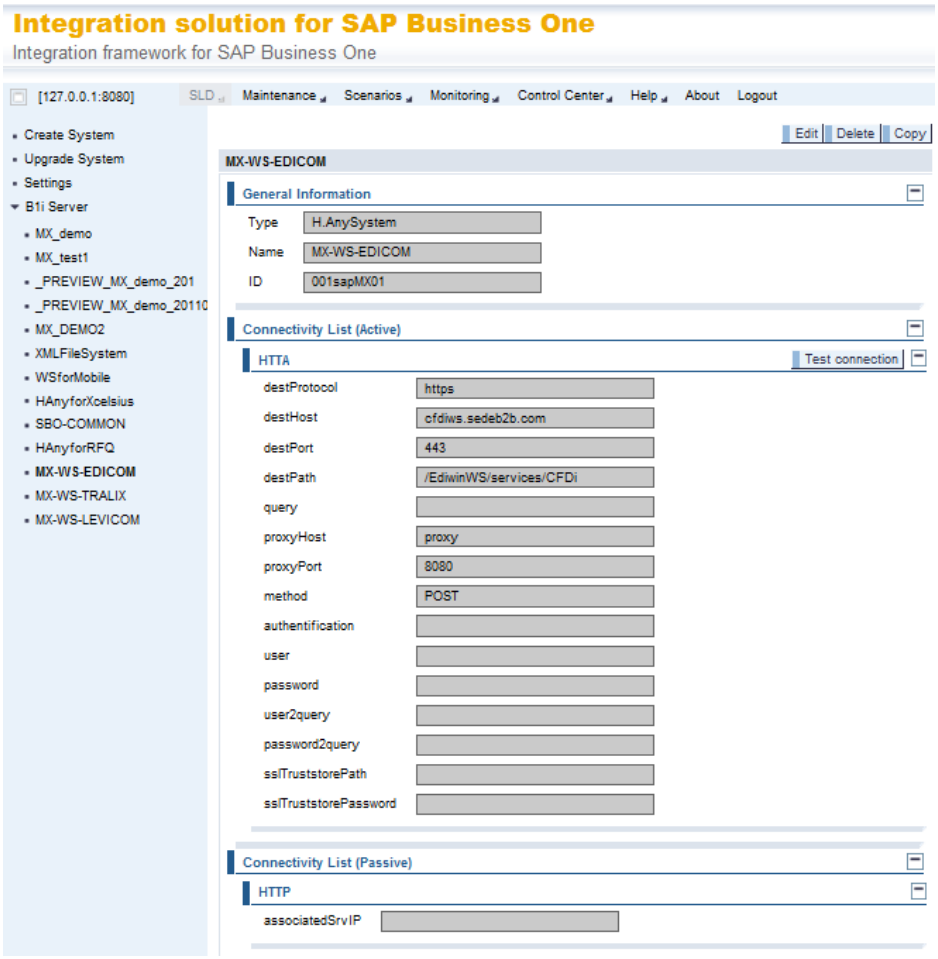
destHost cfdiws.sedeb2b.com

destPort 443

destPath /EdiwinWS/services/CFDi

method POST

See example:



ii. Tralix

Type H.AnySystem
Name <name> (e.g. WS-Tralix)
destProtocol https
destHost pruebastfd.tralix.com
destPort 7070
destPath /
method POST

iii. Levicom

Type H.AnySystem
Name <name> (e.g. WS-Levicom)
destProtocol http
destHost wwwsqa.cen.biz
destPort 80
destPath /monitor/cfdiwebservice/CFDIService.asmx
method POST

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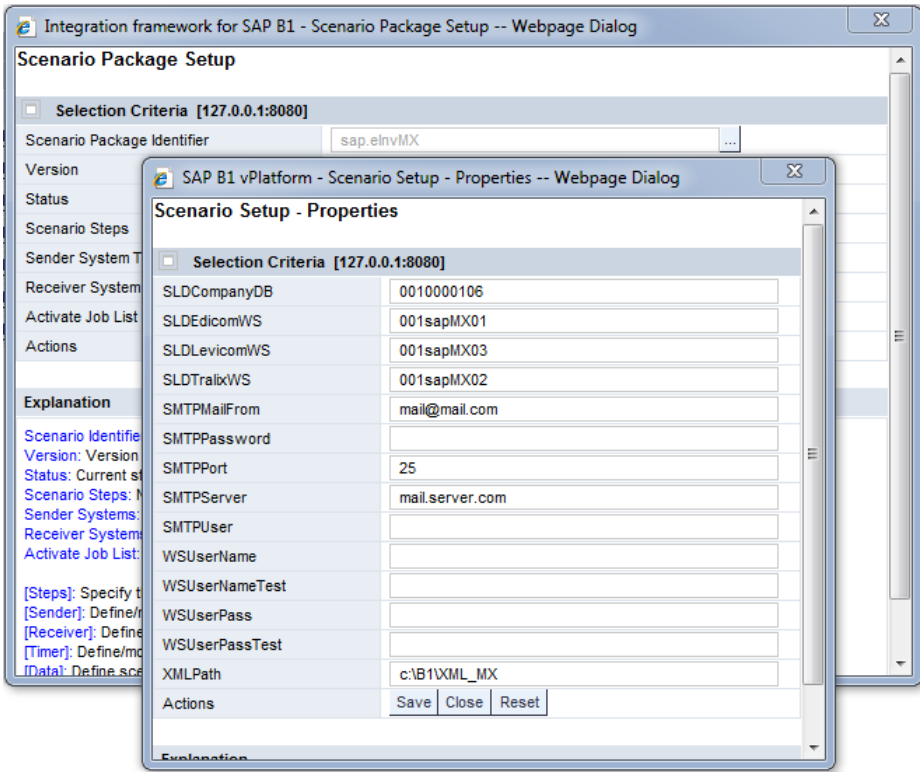
c. Setup eInvMsg scenario package Properties Scenarios->Setup->[Choose sap.eInvMX Package]->[Data Mgt.]->Properties->[Select]

Property	Value
SLDCompanyDB	SLD ID of Company DBs (in case of more DBs separate each ID by comma)
SLDEdicomWS	SLD ID of Edicom SLD
SLDLevicomWS	SLD ID of Levicom SLD
SLDTralixWS	SLD ID of Tralix SLD
SMTPMailFrom	Error message sender e-mail
SMTPPassword	SMTP Authentication password if required
SMTPPort	SMTP Server port number
SMTPServer	SMTP Server hostname
SMTPUser	SMTP Authetication user name if required
WSUserName	PAC's WebService Authentication user name if required (EDICOM)
WSUserNameTest	PAC's WebService Authentication user name if required (EDICOM)
WSUserPass	PAC's WebService Authentication user password if required (EDICOM)
WSUserPassTest	PAC's WebService Authentication user password if required (EDICOM)
XMLPath	Final XML storage path

See example:



4) Press *All Activate*, *All Generate* and *Save*.

   a. Activate the eInvMX package in *Scenarios* → *Control.*

The scenario package and also some additional information is available in SAP Note 1580236.

The XML files that are created when saving a document are sent to PAC for verification and are sent back to the company with the appropriate certificate and numbering. Sending and receiving the documents is handled in the background by the integration framework. SAP Business One integration (B1i) saves the documents received from PAC in the database.

If an error occurs in the processing of electronic document or in the connection with PAC, B1i sends an e-mail or alert to the user who created the problematic XML file if specified in the Document Settings. The user e-mail must be defined in the *User – Setup* window. If no user emails are defined, the notification is sent to all superusers defined in the database.

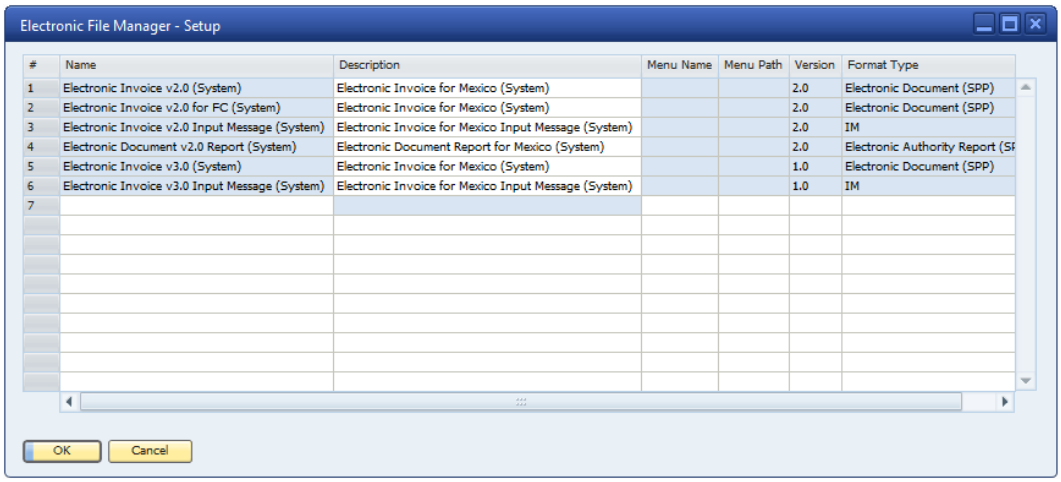
Creating and Modifying Format Definition Files

You can enhance the default format definition file for electronic documents. For example, the taxing authority may require additional fields that are specific to your type of business or your industry. Your parent company may require you, as a subsidiary, to create an XML file with additional company-specific information. You can also create new format definition files to meet the business needs of specific business partners.

For more information about Electronic File Manager, see the online help, SAP Note 1531223, and *How to Design an Electronic File Format in Electronic File Manager: Format Definition* in the documentation area of SAP Business One Customer Portal at http://service.sap.com/smb/sbocustomer/documentation.

1. To modify the default format definition files or to create a new file, you use the Electronic File Manager: Format Definition add-on.

2. To make the modified file or the new file available to SAP Business One, use EFM file management functionality. To access this functionality, in the SAP Business One *Modules* tab choose *Administration* → *Setup* → *General* → *Electronic File Manager*.
   The *Electronic File Manager - Setup* window appears. It contains the default document format file.



3. To upload the modified file or the new file, right-click the *Name* column and select *Upload*.
4. Specify a description and select *Update*.

Result

After format definition files are created and available in the Electronic File Manager, they can be used for creating the XML file for documents.

NOTE

The data source for EFM mapping includes all the information from the source documents. However, different documents are stored in different tables in SAP Business One. For this reason a general naming convention was created, as shown in the following example.

Data Source	A/R Invoice	A/R Credit Memo
ODOC	OINV	ORIN
DOC1	INV1	RIN1
DOC2	INV2	RIN2
…	…	…

Generating Electronic Documents

SAP Business One supports electronic document generation for A/R invoices, A/R down payment invoices, A/R credit memos, and A/R debit memos.

You can generate electronic documents:

- Automatically when you manually create and post invoices, down payment invoices, credit memos, and debit memos
- In a batch run after the accounting posting of the relevant documents
- During the creation of documents using the Document Generation Wizard together with the accounting posting of the relevant documents

NOTE

If a document is generated also as an electronic document, a “standard” folio number cannot be assigned to the document. Standard folio numbering functionality is available only for documents printed on paper and marked as “not relevant” for electronic document creation.

In general, if an electronic document is created then you cannot print the document as a paper document. You can, however, print the electronic document using a specific print layout with specific information as required by the taxing authority SAT.

In case that document has status “Not Relevant” and Manual Folio Number is assigned it is not possible to change the status to “Generate Later” and create electronic document.

The *Electronic Document* tab for the invoice, down payment invoice, credit memo, and debit memo contains the *Generation Type* field in which you specify when and if electronic documents are generated. The following table provides details about the three options.

Option	Action	Result	Comment
Generate	Create an electronic document	A temporary XML file is stored in the database when an invoice, down payment invoice, credit memo, or debit memo is added. At certain intervals, which you can define based on your company’s needs, B1i sends the generated XML file to the PAC Web service. PAC validates the files, sends the certificate and document number or an error message, if any errors occur. The certified XML file is saved in the database and a copy is saved in the XML folder defined by the properties in B1i.	If the standard document (invoice, down payment invoice, credit memo, or debit memo) is created in the standard series with a defined and linked electronic document numbering series, then the default value is set to *Generate*. You can change the default value to *Generate* or *Not Relevant*. Once the XML file is generated automatically you cannot modify any input fields.
Generate later	Defer the creation of an electronic document to a batch run	XML file **is not** generated when the document is added. XML file **is** created later when you use the document printing functionality.	This is the default setting when using Document Creation Wizard. As long as the XML file is not generated you can change the following fields: *Generation Type*, *Electronic Doc. Number*, *El. Document Export Format*, *Orig. Input Message*, and *Encrypted Char. Chain*. Once the XML file is generated automatically you cannot modify these fields.

Option	Action	Result	Comment
Not relevant	Do not create an electronic document	This is the default value when no electronic numbering series has been enabled. Once you have enabled an electronic numbering series, you can change this value. When the invoice, down payment invoice, credit memo, or debit memo is generated, the standard folio number is assigned and no XML file is generated.	If a document is added without creating an XML file then the *Generation Type* field is not blocked for editing. Between the time that the original document is added and an electronic document file is generated, you can change the option from *Not Relevant* to *Generate - Later*.

You can specify a default value for the generation type:

Choose *Administration* → *System Initialization* → *Document Settings* and make your selection for the *Default Generation Type* field.

Prerequisites

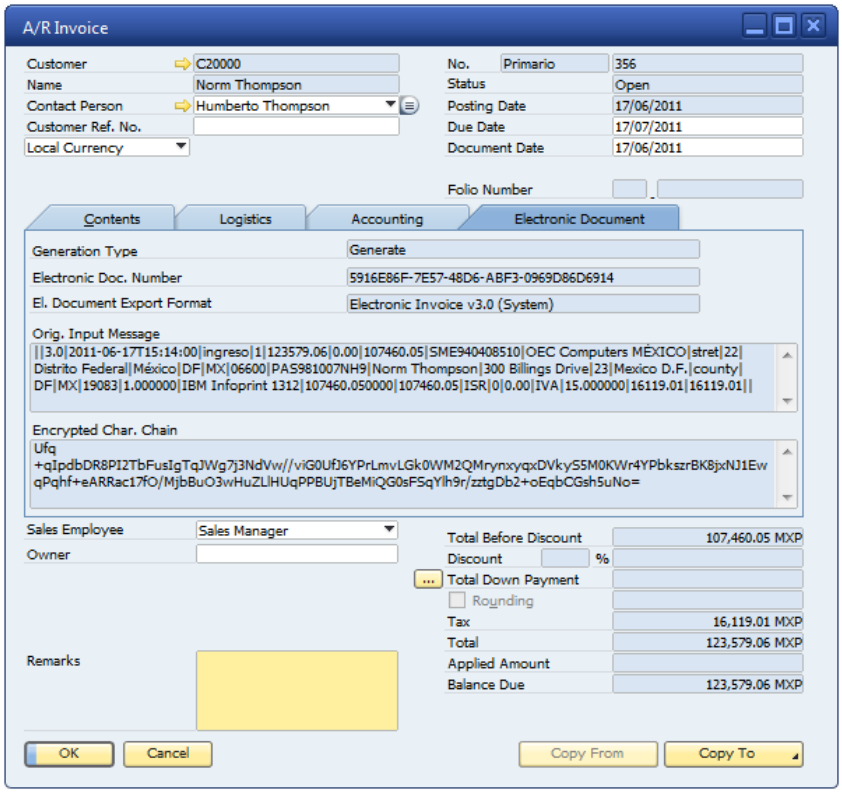
A certificate is linked to the SAP Business One company database, a default file format for electronic documents is selected for your company, and a folder has been defined to store XML files created for electronic documents.

Generating an Electronic Document When You Create a Standard Document

When you create an A/R invoice, A/R down payment invoice, A/R credit memo, or A/R debit memo, you can decide if you want to create an electronic document immediately, at a later time, or not at all.

The following procedure describes an example of electronic document creation for an A/R invoice. The procedure for A/R down payment invoices, credit memos, and debit memos is similar.

1. In the SAP Business One *Modules* tab, choose *Sales* → *AR Invoice*.
   The *A/R Invoice* window appears.



2. In the *Electronic Document* tab, review and modify the following fields as required:
   a. *Generation Type* displays the default option for generating an electronic document. You can change this option to better suit your needs.
   b. *El. Document Export Format* displays the default export file format. If you have defined a BP-specific export file format or another export file format, select that file from the list.
   c. *Orig. Input Message* is blank and is not editable. After you select the *Add* button (and Generation Type is “Generate”), it displays the digital signature of the original document.
   d. *Encrypted Char. Chain* is blank and is not editable. After you select the *Add* button (and Generation Type is “Generate”), it displays the encrypted digital signature of the original document.
3. Select *Add*.

   If the *Generation Type* field displays the *Generate* option, SAP Business One takes the following actions:

   - The digital signature is created from the original document and displayed in the *Orig. Input Message* field. It is then encrypted and displayed in the *Encrypted Char. Chain* field.
   - The XML file is created based on the default format definition file (see Selecting Default Electronic Document Export Format and Defining a Folder for Electronic Documents) unless you have specified a different format definition file for the electronic document or for the business partner (see Assigning a File Format to a Specific Business Partner).
   - The XML file for the electronic document is sent to PAC. If you use *XML PAC*, the XML file is generated in the standard path for XML files, which is defined in *Administration* → *System Initialization* → *General Settings* → *Paths* tab. The file name consists of your RFC and the electronic document number (UUID).

EXAMPLE

The file name for electronic document XX-1004 for taxpayer (RFC) XXXX010101000 is `5916E86F-7E57-48D6-ABF3-0969D86D6914.xml (related to the screen above)`.

Note: Field Electronic Doc. Number includes the following information:

- Information about status of the processing
  - "Waiting for processing" – if document is waiting in the queue to be send to PAC
  - "Processing" – if the document is processed by B1i
- Error code and description of the error in the tooltip if the error in processing occurred
- Electronic Document Number - UUID – if the document was successfully processed by PAC

Generating Electronic Documents in a Batch Run

If the *Generation Type* field for an invoice, down payment invoice, credit memo, or debit memo is set to *Generate - Later* when the document was created originally, you use the document printing functionality to print the electronic document.

The standard functionality for printing documents provides the following options for generating electronic documents:

- Generate documents for the first time (new XML documents are created).
- Re-create documents that were generated previously (XML documents were created already and you need to re-create the originally generated document).
- Re-create documents finished with errors (complete regeneration of the XML file, which will be sent to PAC again). Errors may occur in the following cases:
  - In the documents or
  - In the communication with PAC

  Recommendation

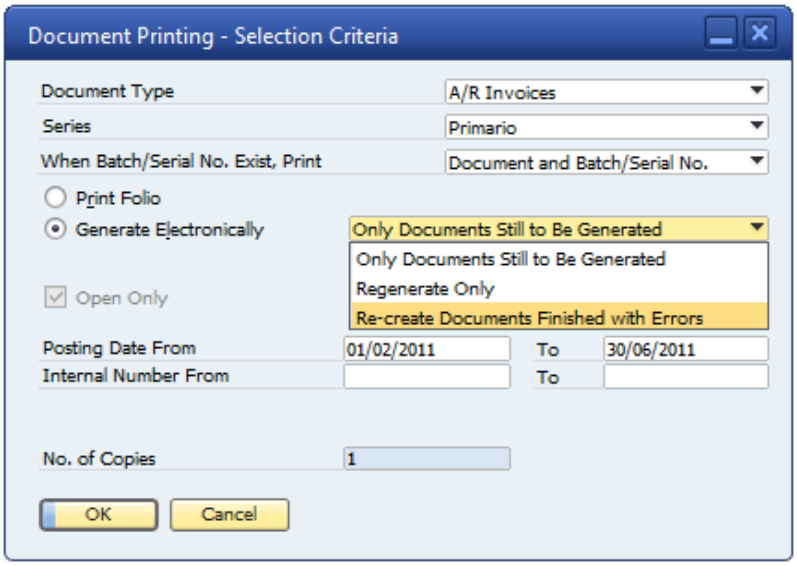
  If any errors occur in the communication with PAC, we recommend the following:
  - Analyze the error based on the error code (see examples below)
  - Analyze the error together with PAC if not clarified in point 1 (e.g. error code 999 – Unexpected error below)
  - Correct the error if it is possible in SAP Business One (e.g. adjust RFC in case of error code 402 below)
  - Re-create document via the Document Printing functionality

  - Examples of error codes include:
    - 301 – The XML doesn't use the standard of W3C or it's not constructed by the rules defined in the XSD
    - 302 – The CSD of the user it's invalid
    - 303 – The RFC in the CSD and the RFC in the invoice doesn't match
    - 304 – The CSD has been revoked
    - 305 – The date of creation established in the invoice doesn't match with the period of the CSD
    - 306 – The invoice is using the FIEL, instead of the CSD

- 307 – The invoice already has a node “TimbreFiscalDigital”
- 308 – The CSD used in the invoice was not been generated by the SAT
- 401 – The invoice is older than 72 hours
- 402 – The RFC doesn’t appear in the authorized list published by the SAT
- 403 – The date in the invoice is before of January 1st 2011
- 901 – The creator of the invoice is not registered in the system
- 902 – We cannot sign the invoice
- 999 – Unexpected error

To create or re-create electronic documents using the document printing functionality:

1. In the SAP Business One *Modules* tab, choose *Sales* → *Document Printing.*
   The *Document Printing - Selection Criteria* window appears.



2. The following fields are relevant for generating or regenerating electronic documents:

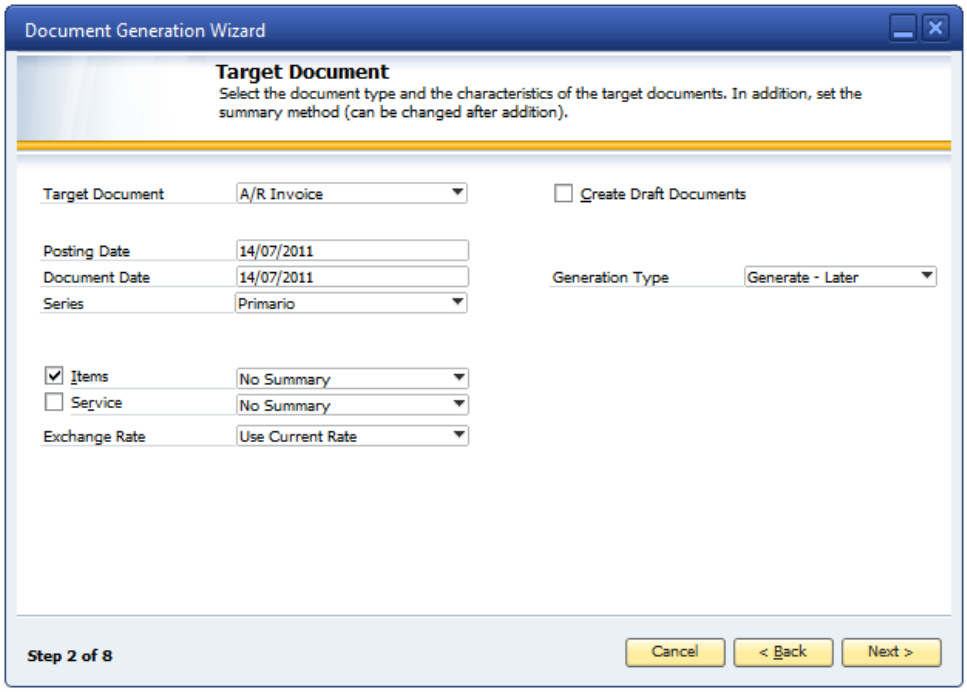
Field	Description
Generate electronically	To generate documents electronically, select the radio button. From the dropdown list select *Only Documents Still to Be Generated*. To re-create previously generated electronic documents, select the radio button. From the dropdown list select *Re-generate Only*. To re-create documents that have not been generated successfully, select the radio button. From the dropdown list select *Re-create Documents Finished with Errors*.

3. Click *OK*.
   The *Print A/R Invoices* window appears with a list of documents ready to be generated as electronic documents.
4. Select the documents for which you want to generate electronic invoices and click *Generate*.
   For more information about what happens when electronic documents are created, see step 3 in the procedure “Generating an Electronic Document When You Create a Standard Document.”

Generating Electronic Documents When Using the Document Generation Wizard

When you use the Document Generation Wizard to create invoices, down payment invoices, credit memos, and debit memos, you have the option to specify that electronic documents should be generated when the relevant documents are posted.

In the second step of the Document Generation Wizard, when you select the target document type (A/R invoice, for example), you specify two additional fields related to the generation of electronic documents:



- *Generation Type* – Displays the default value for generating electronic documents using the Document Generation Wizard, which is *Generate - Later*. You can change to one of the other options for this field: *Generate* or *Not Relevant*.

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