

Infor LN Document Output Management User Guide

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Publication Information

Release: Infor LN 10.3

Publication date: July 16, 2013 Document code: U9792A US

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About this guide

This guide is written to get you up and running with Infor LN Document Output Management. It covers the basic features and guides you through sending your first document. It also covers the more advanced topics, where you can send documents to your own document management system.

Intended audience

This guide is intended to assist users and system administrators of Infor LN who want to use Document Output Management to send the report output to their preferred destination.

Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor" on page 7.

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at www.infor.com/inforxtreme.

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

With the introduction of Document Output Management you can automatically provide each Infor LN Report with the corporate identity of your own company and send it via e-mail to your business partners, store it in your own document management system, and/or print it to one or more printers.

By means of printing to the Document Output Management Device the system automatically detects which document must be sent; for example, an Invoice or Order Acknowledgement. With the use of variables on the report, the data values, such as customer name and/or invoice number, will be detected from the document, which can be used in a personalized e-mail.

Besides that, a copy of the document can be sent to the printer, and stored in a document management system. The destination that will be chosen for a document can be configured in the system.

Each document can have attachments, such as Terms & Conditions. Even documents that were sent earlier can be attached to a new document, for example a Reminder can have the original Invoice attached to it.

Using this guide

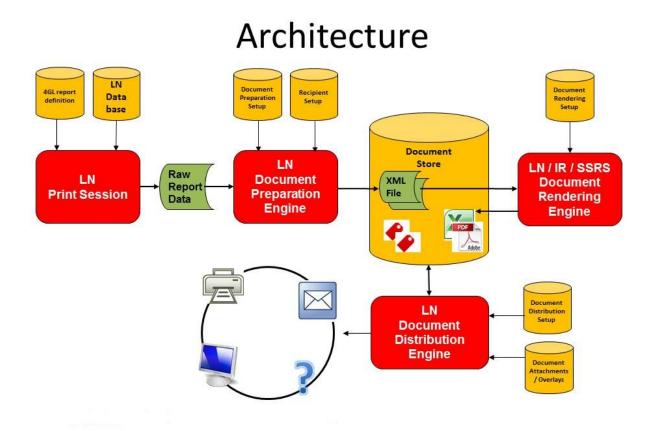
This guide explains the possibilities of the Infor LN Document Output Management, and how this can improve the way your organization delivers documents. This guide also explains how you can setup the document output for a simple Infor LN Report, but also for more complex situations and how you can send documents to your own document management system.

Chapter 2 Overview

Introduction

Document Output Management gives you an easy and very flexible solution to send the documents, where your customers define how they want to receive their documents.

This diagram shows the Document Output Management architecture:



This diagram contains five main components:

LN Print Session

The LN Print Session represents any LN Session which collects data from an LN database and produces a report output (raw report data). Document Output Management is designed in such a way, that these LN Sessions don't need any modification to support Document Output Management.

Document Preparation Engine

The LN Document Preparation Engine generates a batch of documents routing information. These documents are stored as raw document in the Document Store.

Document Store

The Document Store holds all the documents which were generated by the LN Document Preparation Engine. From the Document Store these documents can be viewed including attachments and overlays. If a document is rendered by the LN Document Rendering Engine, the final document is stored in the Document Store, where it can be distributed by the LN Distribution Engine. It is also possible to repeat a distribution for an already distributed document from the Document Store.

Document Rendering Engine

The LN Document Rendering Engine takes the raw document from the Document Store and produces this to a document in PDF or Excel format. The reporting solutions which can be used by the LN Document Rendering Engine are: Infor Reporting, SSRS Reporting and Infor LN's own PDF / Excel creation.

Document Distribution Engine

The LN Document Distribution Engine takes the document from the Document Store, applies overlays to it, adds additional attachments, and distributes it to the preferred destination: e-mail, printer, or a customer defined destination, or a combination of those destinations.

Terms and Definitions

Document

A document is a file produced by an LN print session. Each document is stored in the Document Store from where it can be used for further processing.

Batch

A batch is a group of documents produced by one print job.

Document Type

A document type is a sort of style sheet for a particular category of document. A document type is used to store the email subject and email body text, the overlay page and extra attachments which should be added to the document, etc.

You can use variables in the parts of the document type. Those variables are replaced by real report values at the moment the document is distributed.

Report Rule

A report rule is used to define the report-specific settings, such as how to split up the report in several documents and which report server or report design should be used to render the report. Also the mapping between the report fields and the document type variable is defined in the report rule. You can define multiple Report Rules for one report. Based on the outcome of an expression, one of the report rules is selected. If no expression is valid, the default report rule for that specific report is selected. A report rule links a report to a specific document type.

Receiver Type

A receiver is a person or organization who receives the document. Several types are supported:

- Business Partner
- Contact
- Employee
- User

Custom

Destination Type

A destination is the place where to send the documents to. Several types are supported:

- E-mail
- Print
- Custom

Receiver Independent Destinations

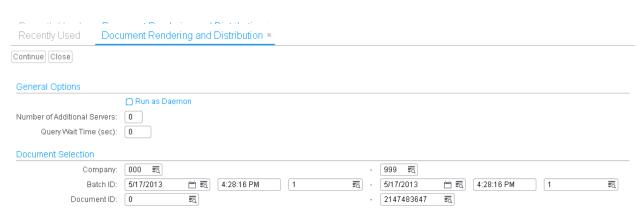
Usually the receiver type of the document type determines the destination(s) of the document. E.g. send the document to the business partner first contact. Besides that, you can also define one or more destinations, which are receiver independent. You want, for example, also store the documents on your file system. These destinations can be defined in the session Document Types (ttrpi2510m000) on Tab 'Receiver Independent Destinations'. Here you can define the destination type (Email, Print or Custom) and the destination of the documents.

Rendering and Distributing Documents

Once available in the Document Store, raw documents can be rendered to a document in PDF or Excel format and distributed to the destinations. Rendering and distributing of documents is handled by the Document Rendering and Distribution (ttrpi3210m000) session.

This session keeps track of the status of each document and the document sequence. According to the status of a document, the document is rendered to a PDF or Excel document, or merged with overlays and attachments and distributed to one or more destinations. Rendering and distribution of documents can be spread over multiple servers (bshells). This session also ensures that a main document is printed together with its subdocuments, and no other documents are printed in between to the same printer.

Overview



This session can run in two different modes:

- Run as daemon
- Run for a selection of batches or documents

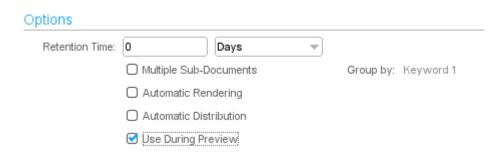
This session typically runs as daemon in an ERP LN job, started by a system administrator, where it continuously searches for new documents that must be rendered or distributed.

Viewing Documents

Once available in the Document Store, you can view the documents. You can do this by selecting a document and choosing the action 'View Document'. This will view the document including overlays. Besides this, there are two options to preview a document.

Previewing documents

Usually, documents are rendered and distributed when choosing the Document Output Management device. And afterwards, you can view the distributed document. If you want to preview the document, before it is distributed to the receiver, you have to set the 'Use During Preview' field to 'Yes' in the Document Type Details session (see the following figure).



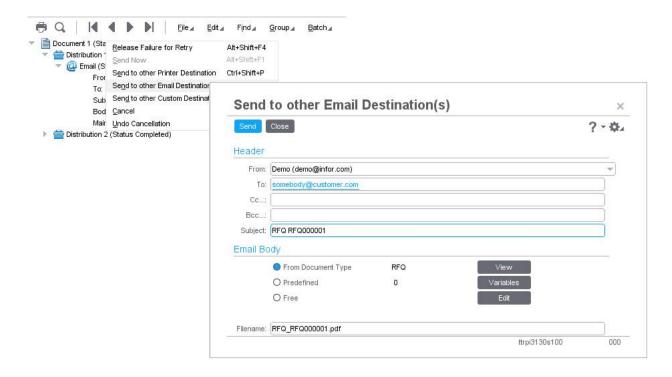
When printing the document to the Preview device, a 'Preview' batch will be created. When the preview looks fine, the preview batch can be converted to a real batch to be distributed in the normal way. Choose action 'Convert Preview Batch to Distributable Batch' in session Batches (ttrpi3500m000).

Easy overlaying

You can preview a document with overlays without defining a report rule. This is called easy overlaying, where you can preview your document with your house style in an easy way. You only have to create a document type that has the 'Split and Distribute Documents' field set to 'No'. When printing the document to the Preview device the document is stored in the Document Store, but will not be distributed to any destination. Once available in the Document Store, the document can be previewed including overlays.

Instant Distribution

A document can be sent directly to a customer or printer without the intervention of the Rendering and Distribution Engine. You can do this by selecting a document and choosing the action 'View Document'. This will start the Document Viewer. Right-click on the document and choose action 'Send to other Email Destination'. Enter a valid e-mail address and click Send.



Restarting Failed Documents

Sometimes rendering of a document fails because of an outage of the report server or the distribution of a document fails because of a connection failure to the mail server. In those cases the indicator "Failures Present" will be set to true for that document, and further actions will be blocked.

When the problem has been solved, the status of the documents can be reset and the documents can be rendered and/or distributed again. You can do this by selecting the document and choosing the action 'Release Failures for Retry'. After this action the document will be selected automatically by the rendering and distribution process. Resetting the status for a range of batches or documents can be done by session Release Failures for Retry (ttrpi3215m000). For more information, see the session help of this session.

Repeating and Canceling Distribution

Once a document is distributed, this distribution action can be repeated by going to the details of a document, selecting a distribution or destination and choosing the action 'Repeat Distributions'.

If a document is not yet distributed, its distribution can be cancelled. And if a distribution was cancelled, the cancelation can be undone.

Document Authorization

Users are only allowed to render, distribute or view documents from the Document Store if they have print authorization for the ERP LN Session, which produces the document.

Users are not allowed to do any action on a document if they do not have company authorization for the company in which the document was created.

If a user is not authorized to execute an action, the action will be disabled or a message will be displayed.

Introduction

This chapter is designed to get you up and running with Document Output Management. It covers some of the basic features and guides you through sending your first Document Output Management document. Once you have worked through this chapter, you can learn about more advanced features using the online Help, or you can continue with the next chapter.

As an example the Request for Quotation report will be send to an email recipient.

Setting up email settings

Before you can use email facilities from Infor LN, you need to complete the following steps:

- 1 Start session Service Providers (ttcmf0110m000)
- 2 Check whether the "SMTP" provider does exists
- 3 If not, create a new service provider with the properties:
 - Provider: SMTPDescription: SMTP
 - 4GL Connector: ttcmfsmtp
- 4 In the Specific menu select Provider Parameters (ttcmf0120m000). Four parameters are generated. Ask your system administrator how to fill in these company specific parameters.
- 5 Start session Address Types by Service (ttcmf0140m000)
- 6 If not available create a new Address Type "SMTP" with the properties:
 - UI Required: No
 - Resolve Capability: Yes
 - Service Name: SMTP
 - Paper: A4
- 7 Enter a valid email address (Email Type: SMTP) for the user(s) in session User Data (ttaad2500m000)

8 Check the eMessage Connection option in the session Parameters (ttrpi2100s000).

Setting up a simple document type

First step is to create a document type. A document type is used to store the email subject and email body text, the overlay page and extra attachments which should be added to the document. As an example a document type will be created for the Request for Quotation report. Two keywords are used to be able to identify the documents in the Document Store.

To create a document type for the Request for Quotation report, complete the following steps:

- 1 Start session Document Types (ttrpi2510m000)
- 2 Create new Document Type with the following properties:
 - Document Type: RFQ
 - Description: Request for Quotation
 - Split and Distribute Documents: Yes
 - Receiver Type: User

This distributes the documents to the current user running the Request for Quotation report. This is of course not the Receiver Type you will use in the final setup, but is used now to see the first results of your document type setup.

- Keyword 1, Description: RFQ
- Keyword 1, Zoom Session: tdsls4100m000
- Keyword 1, Zoom Return Field: tdsls400.orno
- Keyword 2, Description: BP
- Keyword 2, Zoom Session: tccom4500m000
- Keyword 2, Zoom Return Field: tccom100.bpid

Save this Document Type record

- 3 On the Parts Tab, create a new Part, which will be used as email subject, with the following properties:
 - Description: Subject
 - Destination Type: Email
 - Part Type: Email Subject
 - Simple Content: Request for Quotation #rfq#

Note: Variables are placed between hashes (#) and will be replaced at runtime

Save this record

4 On the Parts Tab, create a new Part, which will be used as email body, with the following properties:

Description: Body

Destination Type: EmailPart Type: Email Body

Save this record

5 On your local system create a text file with the following content:

Dear partner,
Please find attached our Request for Quotation #rfq#.
Our standard Terms & Conditions document is attached as well.
When returning please state #bp#/#rfq#.
With kind regards,
#purchaseoffice#

6 Choose action 'Upload File' from the just created Document Type Part to upload this text file and add this to the Document Type Part.

Note that the Variables Tab contains the three variables, which were used in the text file. These variables will be used later on in this chapter, where they will be mapped to report input fields.

Note that you can create an html file instead of a text file. This html file can also contain the same variables and possibly some pictures and logos.

7 On the Parts Tab, create a new Part, which will be used as filename of the attached document, with the following properties:

Description: Filename

Destination Type: All

Part Type: Document FilenameSimple Content: RFQ_#rfq#.pdf

Save this record

- 8 On the Mail From Addresses Tab, add a new Address, which will be used as From Address of the email, with the following properties:
 - Mail From Address: noreply@<your.domain>
 Replace <your.domain> with your own company domain, like infor.com
 - Mail From Name: Your Company (or any other speaking name for your company)
 - Is Default: Yes

Save this record

Setting up a report rule

Next step is to create a report rule to define the report specific settings and map variables and keywords to report input fields.

To create a report rule for the Request for Quotation report, complete the following steps:

- 1 Start session Report Rules (ttrpi2520m000)
- 2 Add a new Report Rule for the Request for Quotation report with the following properties:
 - Report: tdpur140101002
 - Is Default: Yes
 - Document Type: RFQReport Server: <empty>Render Format: PDF

Save this record

- 3 Note that on the Variables Tab, 9 variables have been created with an empty expression.
- 4 Fill the expressions like the following table, or browse and select the correct report input field.

bp	tdpur105.otbp
keyword1	tdpur105.qono
keyword2	tdpur105.otbp
keyword3	407
keyword4	""
purchaseoffice	tdpur012.dsca
receiverfield	logname\$
rfq	tdpur105.qono

splitfield	tdpur105.qono & tdpur105.otbp
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5 Click on the Validate button to validate the settings for this Report Rule and check if the Report Rule is validated and compiled successfully.

Setting up Receiver Type User

Once we have defined to use receiver type User, complete the following steps to define the e-mail addresses and if the document should be (blind) copied to other e-mail addresses as well:

- 1 Start session User Document Type Settings (ttrpi2551m100)
- 2 Add a new record with the following properties:
 - Specific User: No
 - Specific Document Type: Yes
 - Document Type: RFQ

Save this record

- 3 Double click on the just created record. This will start session User Document Type Settings (ttrpi2551m000).
- 4 Add a new record with the following properties:
 - Destination Type: Email
 - From Address Book: Yes

Save this record

5 (Optional) Double click on the just created record. This will start session User Document Type Destinations (ttrpi2552s000), where you can add extra e-mail addresses to send (blind) copies of the document.

Printing and sending the document

Once you have done all the steps above, the document can be printed and send to the e-mail recipient. Complete these steps:

- 1 Start session Request for Quotation (tdpur1501m000)
- 2 Select an already existing Request, or create a new one, and select the option to Print Request for Quotations. This will start session Print Request for Quotations (tdpur1401m000).
- 3 On the Device tab, select the Document Output Management device and click Print. This will print the Request for Quotation and create a document in the Document Store.

- 4 To distribute the document, start session Document Rendering and Distribution (ttrpi3210m000), with the following options:
 - Run as Daemon: Yes
 - Number of Additional Servers: 0
 - Query Wait Time: 10
- 5 Press Continue. This will produce a document in PDF format, and distribute this to the e-mail recipient.

Note: Usually this Document Rendering and Distribution session is running in an ERP LN Job, and will continuously search for new documents in the Document Store, which are ready to be rendered and distributed. You can use multiple additional servers to spread the work over multiple bshells.

6 Start session Batches (ttrpi3500m000) to view the status of the just created batch and its document.

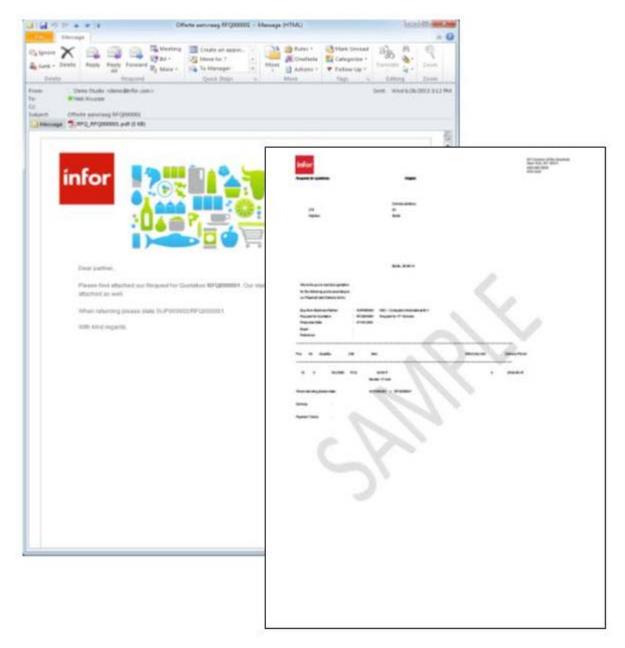


Using overlays

Overlays are used to place additional information on a document. Overlays are PDF files, which will be merged with the document before the document is sent.

For example, suppose you want to make sure that the word COPY appears on the document if the document is sent to a local printer. If the document is sent to a customer, it should contain your corporate identity.

The user can define multiple overlays for one document type. Based on the outcome of an expression, the overlay will be selected. All overlays with a valid expression will be merged to the document.



To add an overlay page to your document type:

- 1 Create a one page PDF file containing your company house style, and store it on your local PC.
- 2 Start session Document Types (ttrpi2510m000), and select and open the RFQ document type.

- 3 On the Parts tab, create a new Part with the following properties:
 - Description: HousestyleDestination Type: All
 - Part Type: Overlay

Save this record

- 4 Choose the Upload File Action, select the just created PDF file with your corporate house style and click Open.
- 5 Print and send the document as above and view the result.

Using attachments

Attachments can be added to the document type. These attachments can either be merged with the document or they can be sent as separate file.

For example, suppose you want to add a price list to your document, which will be merged with the document. And an extra terms and conditions document should to be added to the document as separate file.

The user can define multiple attachments for one document type. Based on the outcome of an expression, the attachment will be selected. All attachments with a valid expression will be merged to the document or added as separate file.

To add an attachment to your document type:

- 1 Create a PDF file containing terms and conditions, and store it on your local PC.
- 2 Start session Document Types (ttrpi2510m000), and select and open the RFQ document type.
- 3 On the Parts tab, create a new Part with the following properties:
 - Description: Terms and Conditions
 - Destination Type: EmailPart Type: File to Attach
 - Relative Position: After
 - Order: 0
 - Separate File: No

Save this record

- 4 Choose the Upload File Action, select the just created PDF file with the terms and conditions and click Open.
- 5 Print and send the document as above and view the result.

Setting up Receiver Type Business Partner

Until now we have used receiver type User and receiver field logname\$ (See: To setup a report rule). In that case we were able to send the email to the current ERP LN user. But that is not what you want if you send your request for quotation. The request for quotation should be send to the contact or business partner linked to that request.

To change the receiver type of the document type:

- 1 Start session Document Types (ttrpi2510m000), and select and open the RFQ document type.
- 2 Change the receiver type to Business Partner, and save the record.
- 3 Click on the Validate button to validate the document type.
- 4 Start session Report Rules (ttrpi2520m000), and select and open the report rule for report tdpur140101002.
- 5 On the Variables tab, change the Expression of the receiverfield variable to: tdpur105.otbp
- 6 Save the record, and click on the Validate button to validate the report rule.

On the other hand the Business Partner data should be extended, to specify the destination (e-mail, print or custom) per business partner for each document type.

To extend the business partner data:

- 1 Start session Recipient Sets (tccom6140m000)
- 2 Add a new Recipient Set for Recipient Type Business Partner and import all business partners or a selection into the recipient set.

For more information, see the session help of this session.

- 3 Start session Document Output Management Details (tccom6170m000) and add a new record with the following properties:
 - Recipient Type: Business Partner
 - Recipient Set: <recipient set>
 (enter the just created recipient set)
 - Document Type: RFQDestination Type: MailMail from Master Data: Yes

Save the record.

For more information, see the session help of this session.

After these steps, the document can be send to the business partner, which is linked to the request for quotation. See <u>Print and send a document</u>.

Using language dependent distributions

For each document type part language dependent variants can be defined, so that you send your document with an e-mail body and e-mail subject in the French language to your customers in France and customers in the USA receive their documents and e-mails in the English language.

The language that is chosen for the document type parts is the same as the language in with the Infor LN report is printed.

To add a language dependent variant to your document part:

- Start session Document Types (ttrpi2510m000), and select and open the RFQ document type.
- 2 On the Parts tab, select the Email Subject part and go to its details.
- 3 On the Language Specific Parts tab, create a new record with the following properties:
 - Language: 4
 - Simple Content: Demande de devis #rfq#

Save this record

- **4** Go back to the Document Type Parts, select the Email Body and go to its details.
- 5 On the Language Specific Parts tab, create a new record for language 4, save the record, and upload a text file or html file containing a French email body text.



Using conditions

Using other overlay for different companies

Suppose you want to use a different overlay for each company in ERP LN. So, if you print an ERP LN report in company 100, you want to use the house style for that company. However, if you print an ERP LN report in company 200, you want to use another house style.

Preparation

We will use the RFQ document type, created in the previous chapter.

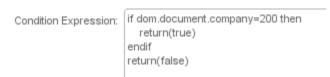
Procedure

We want to create two different house styles, and add them to the document type. Based on a condition (which ERP LN company is used) one of the two house styles is selected and merged with the document.

Complete these steps:

- 1 Start session Document Types (ttrpi2510m000), select the RFQ document type and open its details
- 2 On the Parts tab, open the already existing overlay part, which contains the house style of your company.
- 3 Add the following code in the Condition Expression field:

Save the record, and return to the Document Type



- 4 On the Parts tab, add a new record for another overlay part with the following properties:
 - Description: Housestyle company 200
 - Destination Type: AllPart Type: Overlay
 - Overlay Type: All Pages
- 5 Add the following code in the Condition Expression field:



Save this record

- 6 Create a pdf file with the house style for company 200 and upload this file to the new document type part.
- 7 Click the Validate button to validate the document type
- 8 Run the ERP LN session Request for Quotations in both company 100 and company 200, print a Request for Quotation to the Document Output Management device and view the results.

Additional information

You will notice that for each company you can use the house style of that company, without changing the report.

Using other overlay for draft invoice

Suppose you want to use a different overlay for draft invoices, so that the word DRAFT will be added as a watermark to the document.

Preparation

Create a document type and report rule for the Invoice report, or take an already existing document type.

Procedure

We want to create an extra overlay pdf file, which will be added to the Invoice report for draft invoices. Other invoice reports will not get this overlay. Based on a condition, the draft overlay is selected and merged with the document.

Complete these steps:

- 1 Start session Document Types (ttrpi2510m000), select the Invoice document type and open its details.
- 2 On the Parts tab, add a new record for another overlay part with the following properties:
 - Description: Overlay Draft
 - Destination Type: All
 - Part Type: Overlay
 - Overlay Type: All Pages
- 3 Add the following code in the Condition Expression field:

Condition Expression:

if tolower\$(#print.type#)="draft" then return(true) endif return(false) Save this record

- Create a pdf file with a draft watermark and upload this file to the new document type part.
- Click the Validate button to validate the document type.
- Note that a new variable is added to the document type, called print.type.
- Start session Report Rules (ttrpi2520m000), select the report rule for report cisli12001000, which is linked to the Invoice document type. Open the details for this report rule.
- 8 On the Variables tab, click the Refresh Variables button, to refresh the variables from the document type.
- **9** For the new variable, enter the following expression: r.print.type
- 10 Save this record, and click the Validate button to validate the report rule.
- 11 Print a draft invoice to the Document Output Management device and view the results.

Using other mail from address for different purchase office

Suppose you want to send requests for quotations from different purchase offices in different locations, where each purchase office uses its own mail-from address. E.g. use mail-from address noreply@infor.com from the purchase office in the USA, and use mail-from address noreply@infor.fr from the purchase office located in France.

Preparation

We will use the RFQ document type, created in the previous chapter.

Procedure

We want to create two different mail-from addresses, and add them to the document type. Based on the name of the purchase office one of the two mail addresses is used as mail-from address in the email message.

Complete these steps:

- Start session Document Types (ttrpi2510m000), select the RFQ document type and open its details.
- 2 On the Mail From Addresses tab add a new Address and enter a valid email address.
- Open the details of this new address to add the following expression (replace the PUR001 with your own purchase office name):

Conditional Expression: | if #purchaseofficename#="PUR001" then return(true) endif return(false)

- 4 Click the Validate button to validate the document type.
- 5 This introduced a new variable purchaseofficename, which should be mapped to a report variable. So start session Report Rules (ttrpi2520m000) and open the details of the report rule of report tdpur140101002.
- 6 On the Variables tab, click the Refresh Variables button, to refresh the variables from the document type.
- 7 For the new variable, enter the following expression: tdpur100.cofc
- 8 Save this record, and click the Validate button to validate the report rule.
- 9 Run the ERP LN session Request for Quotations, print two Request for Quotation reports for different purchase offices to the Document Output Management device and view the results.

Additional information

You will notice that different mail-from addresses can be used, based on the outcome of a condition.

Using other printer for different purchase office

Suppose some of your business partners also want to receive a hard-copy of the Request for Quotation document. And suppose your purchase offices in the different locations have its own printer to print the hard-copy.

Preparation

We will use the RFQ document type, created in the previous chapter.

Procedure

We want to create different Print Devices for each purchase office location, and add them to the document type. Based on the name of the purchase office one of the Print Devices is used to create the hard-copy of the Request for Quotation report.

Complete these steps:

- 1 Start session Document Types (ttrpi2510m000), select the RFQ document type and open its details.
- 2 On the Print Devices tab add a default Device and select one of the available Devices. This default Print Device is used if none of the other Print Devices has a valid expression.

3 Add another Print Device for each of your purchase offices, with the following expression (replace the PUR001 with your own purchase office name): Conditional Expression: if #purchaseofficename#="PUR001" then return(true) endif return(false)

- 4 Click the Validate button to validate the document type.
- 5 Run the LN session Request for Quotations, print two Request for Quotation reports for business partners who also wants a hard-copy, from different purchase offices to the Document Output Management device and view the results.

Additional information

You will notice that different printers can be used for different office locations.

Note: You can also use different print devices where each printer has its own preprinted stationary.

Using existing documents

Suppose you want to send a reminder document to your customer with the original invoice attached as additional document. The original invoice was sent earlier, and is still available in the Document Store.

Preparation

Create a document type and report rule for the Reminder report, or take an already existing document type.

Procedure

We want to add an extra part to the Reminder document type, which will be added as additional document, which contains the original invoice.

Complete these steps:

- 1 Start session Document Types (ttrpi2510m000), select the Reminder document type and open its details.
- 2 On the Parts tab, create a new part with the following properties:
 - Description: Invoice document
 - Destination Type: Email
 - Part Type: Existing Document(s)

- Expression:
- Simple Content: invoice.pdf

Relative Position: After

Order: 0

• Separate File: Yes

Save this record

- 3 Click on the Validate button to validate the document type.
- 4 Start session Report Rules (ttrpi2520m000) to map the new variables to report fields.
- 5 Click on the Validate button to validate the report rule.
- 6 Print a reminder to the Document Output Management device and view the result.

Additional information

You will notice that an extra document is attached to the e-mail, which contains the original invoice. In the expression of this new part, the existing document is read from the Document Store using the keywords. It is therefore very important to fill the keywords with proper values.

In the expression we are using the function dom.existing.document.add() to retrieve the existing invoice document from the Document Store and add this to your e-mail message. This function has the following syntax:

```
Syntax:

function long dom.existing.document.add(

string i.doctype,

string i.doc.company,

[string i.keyword1,

string i.value1,

string i.keyword2,

string i.value2,

string i.keyword3,

string i.keyword3,

string i.keyword4,
```

string i.value4])

Description:

This function retrieves an existing document from the Document Store, including overlays and adds this to the document currently processed.

Arguments:

string i.doctype

The document type of the existing document.

string i.doc.company

The company of the existing document.

string i.keyword1, i.value1, i.keyword2, i.value2, i.keyword3, i.value3, i.keyword4, i.value4

The (optional) string pairs for the keywords and their values, to search the document.

Return value:

This function returns an XML node, which contains the existing document.

We are also using function dom.add.part() to add an overlay to the document. This function has the following syntax:

Syntax:

function dom.add.part(

long i.document,

long i.sequence)

Description:

This function adds an extra overlay to the existing document.

Arguments:

long i.document

The xml node which contains the existing document.

long i.sequence

The sequence of the overlay to set

Custom Destination Types and Customer Receiver Types

Using custom destinations

Besides the currently supported destinations Email and Print, you can also create your own custom destination. This paragraph describes how this can be done and as an example a custom destination type will be created which will store documents on the server file system.

Preparation

Use an existing document type, or create a new one.

Procedure

We want to create a new library, which will store documents on the file system. This library needs to be registered as custom destination type.

Complete these steps:

1 Create a new library tccomdomdestfs with the following content:

```
tcmcs.str256m
  domain
                               g.path
 domain tcmcs.str256m g.folder
domain tcmcs.str256m g.filenames(1) based
domain tcmcs.str256m g.displaynames(1) based
                   g.nr.files
function extern long distribution.new(ref string o.error.msg)
 FunctionUsage
 Expl: Initializes distribution.
 Pre: -
 Post: -
 Input:
  Output: - o.error.msg - The error message if anything went wrong
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
  g.path = bse.dir$() & "/dom/"
 g.nr.files = 0
  return(0)
function extern long distribution.set.document.file(
              const string
                                i.filename
```

```
i.displayname,
             const string
                           i.mime.type,
             const string
             ref string o.error.msg)
 FunctionUsage
 Expl: Sets the document file to be distributed.
 Pre: -
 Post: -
                             - The file name which contains the document file
 Input:

    i.filename

     - i.displayname - The name to be displayed in the distribution - i.mime.type - The MIME type of the document
 Output: - o.error.msg - The error message if anything went wrong
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
 store.file(i.filename, i.displayname)
 return(0)
function extern long distribution.add.attachment(
             const string i.filename, const string i.displayname,
                           i.mime.type,
             const string
             ref string o.error.msg)
 FunctionUsage
 Expl: Adds additional attachment files to the distribution.
 Post: -
            - i.filename - The file name which contains the attachment
 Input:
       - i.displayname - The name to be displayed in the distribution - i.mime.type - The MIME type of the document
 Output: - o.error.msg - The error message if anything went wrong
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
 store.file(i.filename, i.displayname)
 return(0)
function extern long distribution.set.destination(
            const string i.address,
             ref string o.error.msg)
 FunctionUsage
 Expl: Sets the destination address.
 Pre: -
 Post: -
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
 g.folder = i.address
 return(0)
function extern long distribution.send(ref string o.error.msg)
 FunctionUsage
 Expl: Stores the received document and attachment on the filesystem
       in the subfolder defined in destination address.
 Post: -
  Input:
 Output:
             - o.error.msg - The error message if anything went wrong
```

```
Return: 0 if OK, otherwise the error code
 EndFunctionUsage
             tcmcs.str256m path
 domain
 long i
 long ret
 path = strip$(g.path) & strip$(g.folder)
 ret = mkdir(path)
 for i = 1 to g.nr.files
       ret = file.cp(g.filenames(1, i), path & "/" & g.displaynames(1, i))
       if ret < 0 then
             o.error.msg = "Failed to store file " & g.displaynames(1, i)
             return (ret)
       endif
 endfor
 return (ret)
function extern long distribution.end(ref string o.error.msg)
 FunctionUsage
 Expl: Finalizes a distribution.
 Pre: -
 Post: -
 Input:
            - o.error.msg - The error message if anything went wrong
 Output:
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
 g.nr.files = 0
 free.mem(g.filenames)
 free.mem(g.displaynames)
 return(0)
function extern long distribution.cancel(ref string o.error.msg)
 FunctionUsage
 Expl: Cancels and removes a distribution.
 Pre:
 Post: -
 Input:
 Output: - o.error.msg - The error message if anything went wrong
 Return: 0 if OK, otherwise the error code
 EndFunctionUsage
 return(distribution.end(o.error.msg))
function store.file(
            const string
                            i.filename,
             const string
                             i.displayname)
                             str fixed
 domain
            tcmcs.str256m
 INC(g.nr.files)
 alloc.mem(g.filenames, len(str), g.nr.files)
 g.filenames(1, g.nr.files) = strip$(i.filename)
 alloc.mem(g.displaynames, len(str), g.nr.files)
 g.displaynames(1, g.nr.files) = strip$(i.displayname)
```

- 2 Start session Custom Destination Types (ttrpi2554m000) and create a new custom destination type with the following properties:
 - Custom Destination Type: FILESYSTEM
 - Description: Filesystem Destination
 - Library: tccomdomdestfs
- 3 Use this custom destination type to send the document to the file system. How to do this depends on your receiver type:
 - If you use receiver type Contact, Business Partner or Employee: start session Document Management Output Details (tccom6170m000) and add a new record for that receiver type and your document type and destination type 'Custom' and custom destination type 'FILESYSTEM'.
 - If you use receiver type User: start session User Document Type Settings (ttrpi2551m100)
 and open the details of a specific user or all users and your specific document type. Add a
 new record with destination type 'Custom' and custom destination type 'FILESYSTEM'.
- 4 Print to the Document Output Management device and view the result. Note that the documents are stored on the file system in directory

 | path > / dom.

Additional information

You will notice that it is very easy to create your own destination type and use it for different document types and different recipients. You only have to create a library with the following functions, which will be executed by the Document Distribution Engine:

distribution.new

Svntax:

function long distribution.new(ref string o.error.msg)

Description:

Use this function to program the actions to be done before the distribution is created.

Arguments:

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.set.document.file

Syntax:

function long distribution.set.document.file(

string i.filename, string i.displayname, string i.mime.type,

ref string o.error.msg)

Description:

Use this function to program the actions to be done to add the document to the distribution.

Arguments:

i.filename: input argument with the file name of the document file.

i.displayname: input argument with the display name of the document file.

i.mime.type: input parameter with the mime type of the document file.

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.add.attachment

Syntax:

function long distribution.add.attachment(

string i.filename, string i.displayname, string i.mime.type, ref string o.error.msg)

Description:

Use this function to program the actions to be done to add an attachment to the distribution.

Arguments:

i.filename: input argument with the file name of the attachment file.

i.displayname: input argument with the display name of the attachment file.

i.mime.type: input parameter with the mime type of the attachment file.

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.set.destination

Syntax:

function long distribution.set.destination(string i.address, ref string o.error.msg)

Description:

Use this function to program the actions to be done to add a destination address to the distribution.

Arguments:

i.address: input argument with the address of the destination.

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.send

Syntax:

function long distribution.send(ref string o.error.msg)

Description:

Use this function to program the actions to be done in case the distribution is sent.

Arguments:

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.end

Syntax:

function long distribution.end(ref string o.error.msg)

Description:

Use this function to program the actions to be done before the distribution is finalized.

Arguments:

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

distribution.cancel

Syntax:

function long distribution.cancel(ref string o.error.msg)

Description:

Use this function to program the actions to be done before the distribution is cancelled.

Arguments:

o.error.msg: output parameter, which can be filled with an error message if anything went wrong.

Return value: 0 if processing without errors, otherwise the error code

Note: This technique is very useful if you want to create your own destination or send the documents to your own document management system.

Using custom receiver types

Besides the currently supported receiver types Business Partner, Contact, Employee and User, you can also create your own custom receiver type. This paragraph describes how this can be done and as an example a custom receiver type will be created which is the primary contact of the shipment's carrier.

Preparation

Create a new Document Type SHIPMENT with the necessary parts (email subject, email body, document filename, and mail from address) and create a new Report Rule for the report whinh443511000 with the necessary expressions.

Procedure

We want to create a new receiver type, to be able to send the document to the primary contact of the shipment's carrier.

Complete these steps:

1 Create a new library tcmcsdomcarr with the following content:

```
table ttccom120
                     * Buy-from Business Partners
  table ttccom140
                    * Contacts
                    * Carriers/LSP
  table ttcmcs080
#include <bic_dom>
function extern long dom.get.destinations(
       const string i.doc.type,
       const string i.receiver.type,
const string i.custom.receiver.type,
const string i.receiver.value)
 FunctionUsage
 Expl: Returns the list of destinations
 Post: -
            i.doc.type
  Input:
                             - document type
       i.receiver.type - receiver type
        i.custom.receiver.type - custom receiver type, if applicable
        i.receiver.value - receiver value as defined in the report rule
  Output:
  Return: destinations as returned by get.dom.document()
 EndFunctionUsage
 long destination
  domain tccfrw
                             carrier
  domain
             tcmail
                                email
  dom.init()
  carrier = i.receiver.value
  email = get.email(carrier)
  if not isspace(email) then
        send email to the primary contact
        destination = dom.destination.new(DOM_DESTINATION_TYPE_EMAIL)
        dom.destination.set.address(destination, email)
```

```
endif
 return (dom.get.document())
function string get.email(conststring i.carrier)
           tcmail
 domain
                      email
 email = ""
           tcmcs080.suno
 select
 from tcmcs080
 where tcmcs080._index1 = { :i.carrier }
 as set with 1 rows
 selectdo
       select
                  tccom120.ccnt
       from tccom120
       where tccom120._index1 = { :tcmcs080.suno }
       as set with 1 rows
       selectdo
                        tccom140.info:email
             select
             from tccom140
             where tccom140._index1 = { :tccom120.ccnt }
             as set with 1 rows
             selectdo
             endselect
       endselect
 endselect
 return (email)
```

- 2 Start session Custom Receiver Types (ttrpi2554m000) and create a new Custom Receiver Type with the following properties:
 - Custom Receiver Type: Carrier
 - Description: Carrier
 - Library: tcmcsdomcarr
- 3 Start session Document Types (ttrpi2510m000) and open the details of Document Type SHIPMENT.
- 4 Change the following properties:
 - Receiver Type: Custom
 - Custom Receiver Type: Carrier

Save the record and click the Validate button to validate the document type.

- 5 Start session Report Rules (ttrpi2520m000) and open the details for report whinh443511000.
- 6 Change the expression of the receiverfield variable to the following:

```
table twhinh430
select whinh430.carr
from whinh430
where whinh430._index1 = {:whinh431.shpm}
as set with 1 rows
```

```
selectdo
  return (whinh430.carr)
endselect
return("")
```

7 Change the expression of the splitfield variable to: whinh431.shpm

Save the record and click the Validate button to validate the report rule.

8 Start session Print Shipping Discrepancies (whinh4435m000), print to the Document Output Management device and view the result.

Additional information

You will notice that it is very easy to create your own receiver. You only have to create a library with the following function, which will be executed by the Document Distribution Engine:

dom.get.destinations

Syntax:

function long dom.get.destinations(

string i.doc.type,

string i.receiver.type,

string i.custom.receiver.type,

string i.receiver.value)

Description:

Use this function to add the destinations to the document.

Arguments:

i.doc.type: input argument which contains the document type

i.receiver.type: input argument which contains the receiver type

i.custom.receiver.type: input argument which contains the name of the custom receiver type, if applicable

i.receiver.value: input argument which contains the receiver value as defined in the report rule

Return value: xml node with the document, including the destinations

In this library some standard defines and functions can be used by including

bic_dom>. See
 Appendix A for a detailed description of these defines and functions.

Using custom email

Besides the currently supported CMF as email solution, you can also create your own email solution. This paragraph describes how this can be done.

Additional information

You will notice that it is easy to create your own email solution. You only have to create a library with the following functions, which will be executed by the Document Distribution Engine:

• init.mail.message

Syntax:

function long init.mail.message(

ref string o.error.message)

Description:

Use this function to initialize the email message.

Arguments:

o.error.message: output argument which contains the error message, or an empty string Return value: 0 if processing without errors, otherwise the error code

set.mail.sender

Syntax:

function long set.mail.sender (

string i.name,

string i.address,

ref string o.error.message)

Description:

Use this function to add a sender to the email message.

Arguments:

i.name: input argument which contains the name of the sender

i.address: input argument which contains the mail address of the sender

o.error.message: output argument which contains the error message, or an empty string

Return value: 0 if processing without errors, otherwise the error code

add.mail.recipient

Syntax:

function long add.mail.recipient(

string i.role,

string i.name,

string i.address,

ref string o.error.message)

Description:

Use this function to add a mail recipient to the email message. This function can be repeated to add more mail recipients.

Arguments:

i.role: input argument which contains the recipients role. Possible values: to, cc, bcc

i.name: input argument which contains the name of the recipient

i.address: input argument which contains the mail address of the recipient

o.error.message: output argument which contains the error message, or an empty string

Return value: 0 if processing without errors, otherwise the error code

set.mail.subject

Syntax:

function long set.mail.subject(

string i.subject.

ref string o.error.message)

Description:

Use this function to add a mail subject to the email message.

Arguments:

i.subject: input argument which contains the subject of the mail message

o.error.message: output argument which contains the error message, or an empty string

Return value: 0 if processing without errors, otherwise the error code

set.mail.body

Syntax:

function long set.mail.body(

string i.body.text.file,

string i.mimetype,

ref string o.error.message)

Description:

Use this function to add a mail body to the email message.

Arguments:

i.body.text.file: input argument which contains the file name of the body text

i.mimetype: input argument which contains the mime type of the body text

o.error.message: output argument which contains the error message, or an empty string

Return value: 0 if processing without errors, otherwise the error code

add.mail.attachment

Syntax:

function long add.mail.attachment(

string i.filename,

string i.displayname,

ref string o.error.message)

Description:

Use this function to add an attachment to the email message.

Arguments:

i.filename: input argument which contains the name of the file.

i.displayname: input argument which contains the name to be displayed in the message o.error.message: output argument which contains the error message, or an empty string Return value: 0 if processing without errors, otherwise the error code

set.mail.notification

Syntax:

function long set.mail.notification(

string i.notification,

ref string o.error.message)

Description:

Use this function to add a notification to the email message.

Arguments:

i.notification: input argument which contains the notification of the message. Possible values: always, never, non-delivery, delivery

o.error.message: output argument which contains the error message, or an empty string Return value: 0 if processing without errors, otherwise the error code

set.mail.priority

Syntax:

function long set.mail.priority(

string i.priority,

ref string o.error.message)

Description:

Use this function to add a priority to the email message.

Arguments:

i.priority: input argument which contains the priority of the message. Possible values: high, medium, low

o.error.message: output argument which contains the error message, or an empty string Return value: 0 if processing without errors, otherwise the error code

send.mail.message

Syntax:

function long send.mail.message(

ref string o.error.message)

Description:

Use this function to send the email message.

Arguments:

o.error.message: output argument which contains the error message, or an empty string Return value: 0 if processing without errors, otherwise the error code

• cancel.mail.message

Syntax:

function long cancel.mail.message(
ref string o.error.message)

Description:

Use this function to cancel the email message.

Arguments:

o.error.message: output argument which contains the error message, or an empty string

Return value: 0 if processing without errors, otherwise the error code

Use this troubleshooting information as a resource to help you solve specific problems you may encounter when using Document Output Management.

When you are troubleshooting, log files can help you.

To get more logging information, you can set these environment variables:

- RPI_SERVER_LOGGING=1
 Logs information from reporting or dom processes in \$BSE/log/log.rpi
- DOM_TRACE=4
 Logs information from scheduler process in \$BSE/log/log.rpi

Appendix A Standard Functions



bic_dom

The <bic_dom> include contains the following defines:

```
#define DOM_DESTINATION_TYPE_EMAIL "email"

#define DOM_DESTINATION_TYPE_PRINT "print"

#define DOM_DESTINATION_TYPE_CUSTOM "custom"

#define DOM_RECEIVER_TYPE_BUSINESS_PARTNER "bus.partner"

#define DOM_RECEIVER_TYPE_CONTACT "contact"

#define DOM_RECEIVER_TYPE_EMPLOYEE "employee"

#define DOM_RECEIVER_TYPE_USER "user"

#define DOM_RECEIVER_TYPE_USER "custom"
```

The

dom> include contains the following functions:

dom.init()

Syntax:

function void dom.init()

Description:

Initializes the document.

dom.destination.new()

Syntax:

function long dom.destination.new (
string i.destination.type,
[string i.custom.code])

Description:

Creates a new destination and adds it to the document created by dom.init(). This can be repeated to add multiple destinations to the document.

Arguments:

i.destination.type: input variable, which contains the destination type, use one of the

following values:

DOM_DESTINATION_TYPE_EMAIL
DOM_DESTINATION_TYPE_PRINT
DOM_DESTINATION_TYPE_CUSTOM

i.custom.code: input variable, which contains the custom code, if applicable (optional)

Return value:

Returns an xml node containing the newly created destination or 0 (zero) if the destination could not be created.

dom.destination.set.address()

Syntax:

function void dom.destination.set.address(

long i.destination, string i.address)

Description:

Sets the address for a given destination.

Arguments:

i.destination: input variable, which contains the destination created by dom.destination.new()

i.address: input variable, which contains the address to set

dom.destination.set.additional.address()

Syntax:

function void dom.destination.set.additional.address(

long i.destination, string i.address, boolean i.is.bcc)

Description:

Sets the additional address for a given destination. This can be repeated to add multiple additional addresses to the destination.

Arguments:

i.destination: input variable, which contains the destination created by dom.destination.new()

i.address: input variable, which contains the additional address to set

i.is.bcc: input variable (true/false) to set whether the additional address is a bcc (blind carbon copy) or a normal cc (carbon copy)

dom.get.document()

Syntax:

function long dom.get.document()

Description:

Retrieves the document.

Return value:

Returns an xml node which contains the document. In case of an error, the function will return an xml node containing the error message.

dom.errormessage.set()

Syntax:

function void dom.errormessage.set(string i.error.message)

Description:

Creates an error message for a document. Already added destinations will be removed.

Arguments:

i.error.message: input variable which contains the error message.

Appendix B Using Variables



You can use the following variables during distribution. You can use them in expressions linked to the Document Type:

- dom.document.language
- dom.document.company
- dom.document.reportcode
- · dom.batch.user
- dom.batch.session
- dom.destination.name (the name specified at the Receiver Independent Destination)
- dom.destination.type (the constant names of the ttrpi.dest domain)
- dom.destination.custom
- dom.destination.address
- You can also use the ## expression. The text between the ## is converted to a document type
 variable and must be mapped to a report variable in the report rule.

You can use these variables in expressions linked to the Report Rule:

- dom.batch.session
- dom.batch.session.pid
- dom.report.language

You can use these functions in expressions linked to the Report Rule:

- get.keyword1()
- get.keyword2()
- get.keyword3()
- get.keyword4()
- get.<report rule variable>()

Troubleshooting		