TNT Express

ExpressLabel Documentation

ExpressLabel
User Guide

Version 1

Revision History

Date	Version	Description
13-09-2010	1.0	Document created

Table of Contents

1. Introduction

This document describes ExpressLabel and an example tool that has been developed to provide employees of the CIT implementation teams insights in the working of ExpressLabel.

ExpressLabel is a service which generates routing information and is available via Internet. This function, which is traditionally done by the depot, expedites consignment processing. ExpressLabel does not have a User Interface and can only receive and return XML messages.

This manual can be used in addition to the technical guide that is available on:

https://express.tnt.com/expresslabel-website/app/expresslabelrequest.html

ExpressLabel works as follows:

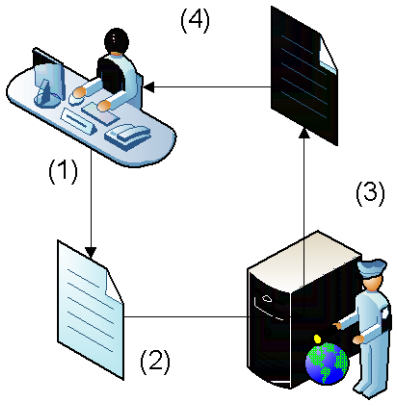

Figure 1: ExpressLabel process and Label Example

1. The customer builds an XML File containing the needed data.

2. This XML File is sent through an “HTTP Post” to ExpressLabel.

3. The XML file is split up in data elements which are used to perform a Route Validation.

4. The result of this validation is then sent in an XML response to the customer. The customer uses the returned XML response to create a TNT Routing Label. This rendering of the returned XML into a printable routing label needs to be coded by the customer based on the example that is provided in the technical manual. The Label is a “Common Label”. Then the routing label can be printed by the customer.

1.1 Customers

The ExpressLabel tool is interesting for customers who are able to build custom software that communicates with ExpressLabel, especially customers who cannot use the UniLab plug-in (e.g. due to no windows environment).

1.2 Prerequisites

Before using ExpressLabel, one should make sure the following prerequisites are in place:

- Technical User Manual (https://express.tnt.com/expresslabel-website/app/expresslabelrequest.html)
- Line of Business Codes:
  L:\CIT\Product Information\ExpressLabel\Common codes - lines of business
- ExpressLabel test site:
  https://express.tnt.com/expresslabel-website/app/expresslabelrequest.html
- Access to ExpressLabel (username and password) by filling in the Access Document:
  L:\CIT\Product Information\ExpressLabel\Documentation\Internal
- XSD documents for rendering the returned xml data.
  L:\CIT\Product Information\ExpressLabel\Documentation\Internal

2. Advantages and disadvantages of ExpressLabel

Advantage: nothing needs to be installed at the customer. This takes away the dependency of TNT Software that needs to be installed at the customer. This used to be an obstacle for customers where Unicom was proposed.

Advantage: central support (Atherstone), when problems occur this is logged in Atherstone. That is why there should always be someone available to help if problems occur. Because of the global impact of the system, the priority should be high.

Disadvantage: There is not much experience with this product within CIT. Though experience will grow over time, in the beginning solutions may come slow.

Disadvantage: ExpressLabel does no validation on weight and volume for specific destinations.

Disadvantage: Documentation contains code, but Java only. Though at this moment there is also code available in C# and VB.

Disadvantage: There is a chance that the response of ExpressLabel is slower than with Unicom. Not only because it uses the internet, also because the infrastructure is setup to handle 4-5 different requests at a time. The Atherstone SLA is 1.3 sec per request (from the moment XML is posted to the moment XML is returned)

Disadvantage: Logging is only viewable for Atherstone

Disadvantage: Instead of Division + Product, a Line Of Business Code must be sent. The table of this for Benelux is provided in the appendix (A) of this document. This is a comprehensive list that must be used when choosing a certain TNT Express Service..

3. Quick notes

This chapter summarizes a few notes that were encountered during the development of the test application. This may help other developers when creating an application for ExpressLabel.

- Maximum of **5 consignments** per labelRequest. This allows batching of consignment routing label requests. Each consignment element contains the set of information needed to generate routing labels for the consignment referenced.

- Non-ascii characters work in the test environment, but not in the production environment: We have managed to make **non-ascii characters** work for some other customers. We should update the documentation to reflect this. To get it to work we have to set Content Type to text/xml: `Content-Type=text/xml`. Not the 'charset' in the http headers but make sure the data itself is encoded using utf8. We have got this to work for some German town names with Umlauts etc.

- A problem that was encountered at a customer doing development to print labels from ExpressLabel, is the following: the customer prints the barcode in "EAN 128" format, while it should be "Code 128 Subset C", probably because the documentation says "EAN 128C" (paragraph 6.1.23 on page 32 in v1.8). May I suggest dropping the "EAN" and use "Barcode 128 Subset C" or "Barcode 128C" instead (in this and other locations, if any)?

- The ExpressLabel application will be replaced by a new corresponding PWS service. We expect customers will wish to transfer to the new service to take advantage of the features and so we will be able to reduce the use of ExpressLabel. I suspect that ExpressLabel will be available for many years but will not be enhanced. The current view of ExpressLabel is: "**We can launch EL as it currently works but we will not make a big noise about it. We will develop a new EL service that is a "real" web service as part of the PWS and should be used once it is ready. EL will still live with us for 20-24 months as it stands today. This is something you need to keep in mind if you implement it. You will have to upgrade to the PWS EL in a couple of years time."**

- The error: "**The request was aborted: The request was canceled**" could imply that non-ASCII characters are used. So the XML message should be checked for this.

4. The test application in C#

4.1 Installation

The installation files for the ExpressLabel Test application can be found at:

L:\CIT\Product Information\ExpressConnect\Express Connect Tools\Installation Files

The tool should be installed on a HDD on which the user has administrator rights. This could be e.g. the D:\ instead of C:\. The reason for this is that some of the tools create xml files on the HDD and therefore need read/write access. Otherwise the program will show errors when creating files.

After the installation is complete shortcuts are automatically created in the Windows start menu: **All Programs/ TNT Express CIT /**

Before the program is able to run, one should make sure the .NET Framework 4 is installed. This is available (free) at:

http://www.microsoft.com/net/

(Click on download and the window like figure 2 pops up)

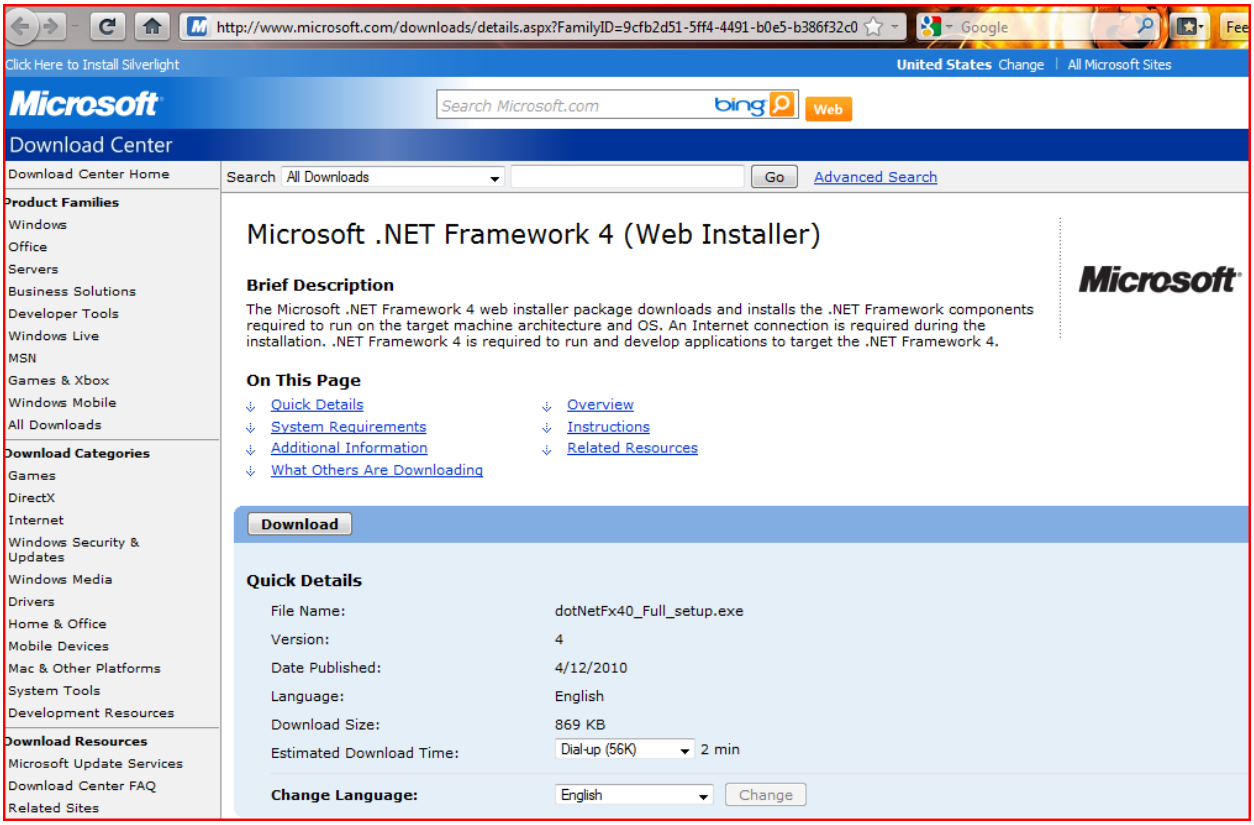

Figure 2: Download .NET Framework 4

4.2 Test tool

The test application was developed to provide insights in XML data that is sent and the XML data that is received from ExpressLabel. The location of the ExpressLabel example tool can be found on the L disk**:** **L:\CIT\Product Information\ExpressLabel\Test Application** After double clicking setup.exe the application can be installed locally.

Please note: The application only shows the returned xml data, the output is not transformed into a printable label.

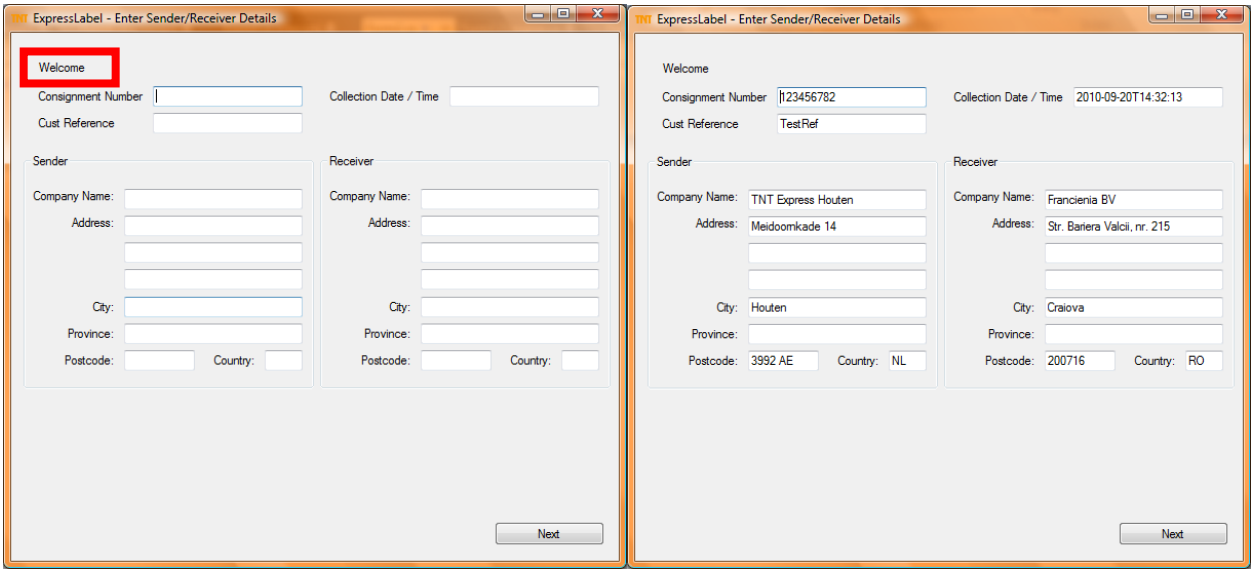

Figure 3: Form 1 – Address details

When clicking on “Welcome” (red square), the form is automatically filled with data. This saves time when you want to “quick test” ExpressLabel. Since the goal of ExpressLabel is to provide printable labels, no deviating sender / receiver address can be provided because the label only contains data regarding the physical collection and delivery address.

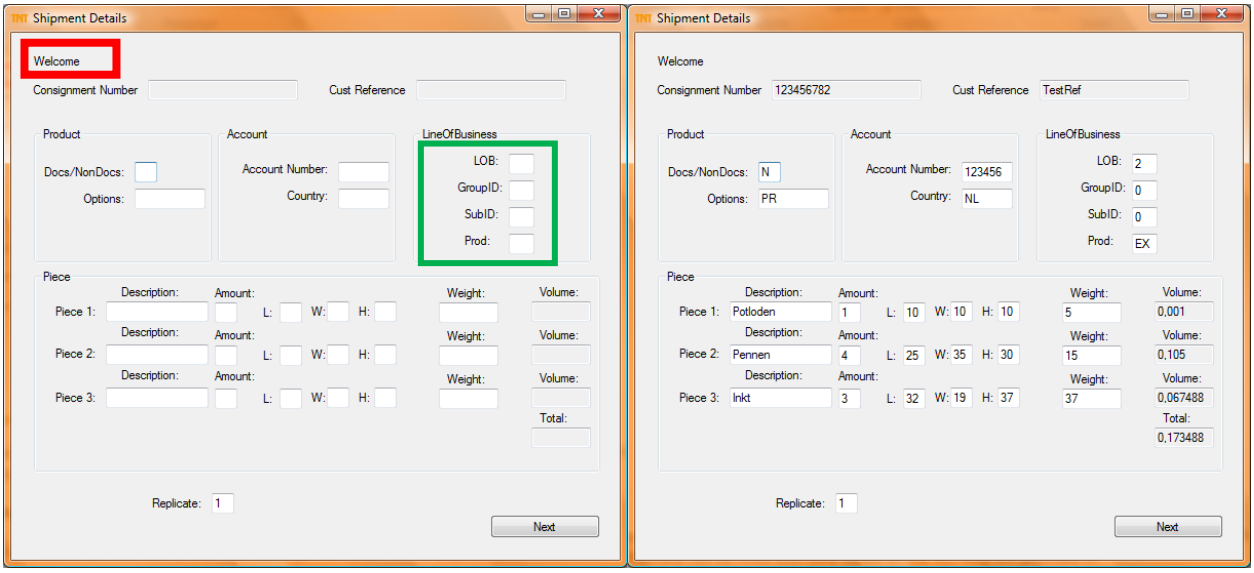

Figure 4: Form 2 – Details regarding shipment

In the second form, one can also click on the Welcome button to fill the textboxes with test data. The Line of Business can be filled with data based on the XLS diagram provided in

L:\CIT\Product Information\ExpressLabel\Common codes - lines of business

Furthermore, the replicate can contain a number of 1-5. This makes sure the consignment is multiplied to 1-5. Technically, this means that instead of 1 consignment in the XML file, multiple consignments (containing the same data) are sent to ExpressLabel.

The 3rd and final form shows an overview of the XML message that is sent to the ExpressLabel site and an overview of the XML that is received from ExpressLabel. Furthermore, it provides information regarding the time it took to create/send/receive the XML data. The button Resend Requests makes sure the XML that is in written in the upper left corner is resend. The result will be displayed in the Received XML text field and the Time information will be updated.

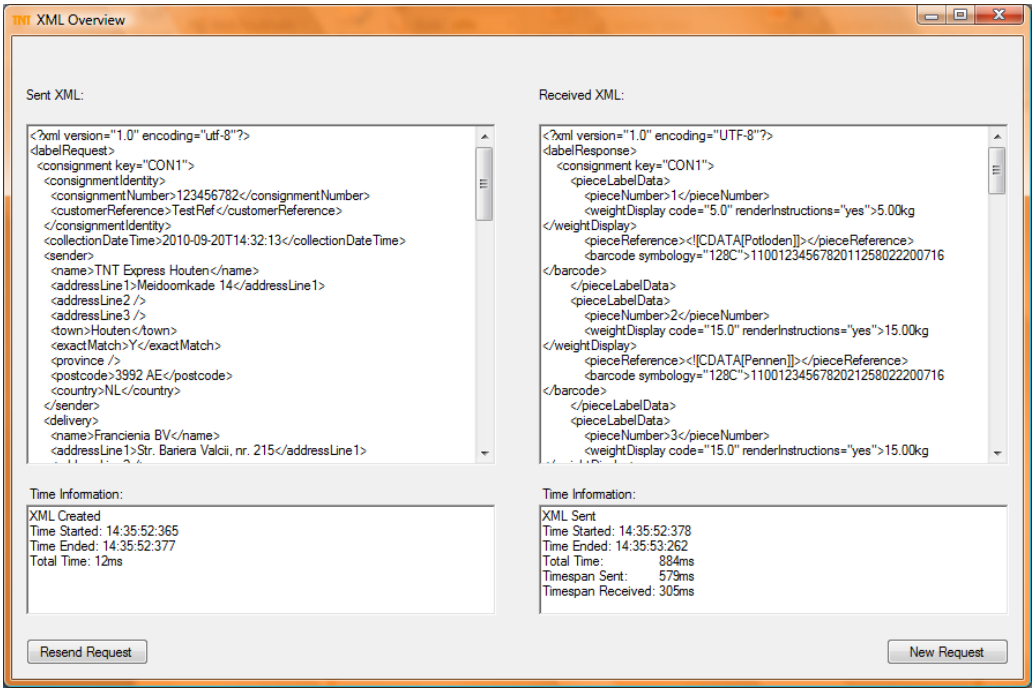

Figure 5: Form 3 – Results

To test the performance of ExpressLabel in specific, the following statistics are measured:

XML Sent:

The **Time started** tells the starting time of when the typed form data was put into a string that is to be sent to ExpressLabel.

The **Time ended** tells the finishing time.

The **Total time** is the sum of these; the total time it took to create an XML message in a string from the form data input. The time for this depends on the speed of the pc it runs on.

XML Received:

The **Time started** tells the starting time of after the XML data was posted and a new xml is created and returned by ExpressLabel.

The **Time ended** tells the ending time of the created xml and returning by ExpressLabel.

The **Time span sent** is the total time the sending took to post the request to the ExpressLabel server, the **Time span Received** is the total time for receiving the XML data after it was posted.

Appendix A: Overview BeNeLux 15N, 15D, 48N, 12N, etc.

LOB	CC Product	Description	Doc/Non	Country	Description	Dom/Int	Legacy	Legacy
540	EC	Economy Express	NONDOC	NL	NETHERLANDS	INT	F	48N
204	EE	Easy Express	DOC	NL	NETHERLANDS	INT	E	15D
204	EE	Easy Express	NONDOC	NL	NETHERLANDS	INT	E	15N
200	EX12	12:00 Express	DOC	BE	BELGIUM	INT	G	12D
200	EX12	12:00 Express	NONDOC	BE	BELGIUM	INT	G	12N
200	EX	Express	DOC	BE	BELGIUM	INT	G	15D
200	EX	Express	NONDOC	BE	BELGIUM	INT	G	15N
200	EC	Economy Express	NONDOC	BE	BELGIUM	INT	G	48N
200	EX12	12:00 Express	DOC	NL	NETHERLANDS	INT	G	12D
200	EX12	12:00 Express	NONDOC	NL	NETHERLANDS	INT	G	12N
200	EX	Express	DOC	NL	NETHERLANDS	INT	G	15D
200	EX	Express	NONDOC	NL	NETHERLANDS	INT	G	15N
200	EC	Economy Express	NONDOC	NL	NETHERLANDS	INT	G	48N
800	EX	Express	DOC	NL	NETHERLANDS	INT	M	15D
800	EX	Express	NONDOC	NL	NETHERLANDS	INT	M	15N
204	EX12	12:00 Express	NONDOC	NL	NETHERLANDS	INT	P	12N
204	EX	Express	DOC	NL	NETHERLANDS	INT	P	15D
204	EX	Express	NONDOC	NL	NETHERLANDS	INT	P	15N
204	EC	Economy Express	NONDOC	NL	NETHERLANDS	INT	P	48N
201	EX12	12:00 Express	DOC	NL	NETHERLANDS	INT	YA	12D
201	EX	Express	DOC	NL	NETHERLANDS	INT	YA	15D
201	EX	Express	NONDOC	NL	NETHERLANDS	INT	YA	15N
201	EC	Economy Express	NONDOC	NL	NETHERLANDS	INT	YA	48N
200	EX12	12:00 Express	DOC	LU	LUXEMBOURG	INT	G	12D
200	EX12	12:00 Express	NONDOC	LU	LUXEMBOURG	INT	G	12N
200	EX	Express	DOC	LU	LUXEMBOURG	INT	G	15D
200	EX	Express	NONDOC	LU	LUXEMBOURG	INT	G	15N
200	EC	Economy Express	NONDOC	LU	LUXEMBOURG	INT	G	48N