United States Postal Service
Web Tool Kit User's Guide

Administrative Guide for
Application Programming Interfaces

Information and Procedures Prior to Installation

Document Version 2.4 (7/1/02)

To Our Customers

In the e-mail that accompanied this guide you received a password and user ID that will allow you to begin sending calls to the "test server" when you are ready. Any additional documentation or contact with you will be made through the contact person indicated on the registration form.

If you require technical support, contact the USPS Internet Customer Care Center (ICCC). This office is manned from 7:00AM to 11:00PM EST.

E-mail: icustomercare@usps.com

Telephone: 1-800-344-7779 (7:00AM to 11:00PM EST)

USPS Customer Commitment

The United States Postal Service fully understands the importance of providing information and service anytime day or night to your Internet and e-commerce customers. For that reason, the USPS is committed to providing 7 x 24 service from our API servers, 365 days a year.

Thank you for helping the U.S. Postal Service provide new Internet services to our shipping customers.

Internet Shipping Solutions Team
U.S. Postal Service
475 L'Enfant Plaza, SW
Washington, DC 20260-2464

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Introduction

The USPS Web Tool Kit Application Program Interfaces (APIs) allow developers of web-based and shrink-wrapped applications access to the on-line services of the United States Postal Service (USPS). They provide easy access to shipping information and services for your customers. By integrating these APIs into your web site, your customers can utilize the functions provided by the USPS without ever leaving your web site. Once the APIs are integrated into your web site, the USPS Shipping API Server communicates over HTTP using XML (Extensible Markup Language).

Implementing these APIs requires experienced programmers who are familiar with Internet and web site development tools and techniques.

This document provides guidance and step-by-step instructions for installing the USPS APIs, as well as fulfilling various administrative requirements. The administrative requirements vary between different APIs (e.g., submitting samples of labels for some APIs, signing a licensing agreement for certain software, etc.), and this document provides guidance to navigate through the process for the API you are implementing. *It is imperative that developers read this manual first, as it provides necessary information and procedures prior to installation.*

There is a *Web Tool Kit User's Guide* for each API listed below available to registered users at http://www.uspswebtools.com/. These user guides provide examples of the XML transactions to the USPS Shipping API server and guidance for installation.

1. Domestic Rates Calculator
2. International Rates Calculator
3. Track/Confirm
4. Delivery Confirmation
5. Signature Confirmation
6. Electronic Merchandise Return Service
7. Courtesy Reply Label for Returning Merchandise
8. Priority Mail Service Standards
9. Package Services Service Standards
10. Electronic Merchandise Return Service with Delivery Confirmation
    (All instructions contained in this document for the Electronic Merchandise Return Service API also apply to the Electronic Merchandise Return Service with Delivery Confirmation API.)

User ID and Password Restrictions

The user ID and password that you have received is for you or your company to use in accordance with the Terms and Conditions of Use to which you agreed during the registration process. *This user ID and password is not to be shared with others outside your organization, nor is it to be packaged, distributed, or sold to any other person or entity.* Please refer to the Terms and Conditions of Use Agreement for additional restrictions on the use of your user ID and password, as well as this document and the APIs contained herein.

Warning: If the U.S. Postal Service discovers use of the same user ID and password from more than one web site, all users will be subject to immediate loss of access to the USPS server and termination of the licenses granted under the Terms and Conditions of Use.

The documentation and sample code contained in the *Web Tool Kit User Guide* series may be reused and/or distributed to your customers or affiliates to generate awareness, encourage web tool use, or provide ease-of-use. However, it is your responsibility to ensure that your customers do not use your password and user ID. Direct them to www.uspswebtools.com so that they can register, agree to the Terms and Conditions of Use agreement, and receive their own unique password and user ID.

Note to Software Distributors: The User ID and password restrictions discussed above are intended for e-tailers that use the USPS Web Tools exclusively within their own web sites. If you plan to distribute software with the USPS Web Tools embedded, you must refer to the "Software Developers' Terms and Conditions of Use" available at http://www.uspswebtools.com.

For more information regarding the USPS Web Tool Kit password and user ID policy, or for questions regarding the distribution of documentation, send e-mail to icustomercare@usps.com.

XML Overview

The exchanges presented in this document are presented in XML, since that is how the actual data will be structured and transmitted, and it is also a convenient method to document this interface. XML uses a hierarchical (tree) element structure. Each element consists of a start tag of the form `<Name>`, and an end tag of the form `</Name>`, between which can be data and other elements. `<Name/>` is shorthand for `<Name></Name>`, an element with no data. Attributes such as USERID and PASSWORD can be included in the start tag. *All data and attribute values in this document are for illustration purposes and are to be replaced by the actual values.* Developers must use the order and case for tag names of the sample code contained in this document. However, the tabs and carriage returns in the XML structures are for readability only; there is no need for white space in the actual transmissions.

The XML API offers an interface that enables both request(s) and responses to be fully structured. As shown in the following example, XML's set of self-defining tags allows multiple packages to be tracked with a single request. The ID field is used to match a particular entity in the request with the corresponding entity in the response.

For the latest information on XML from Microsoft and other leading vendors, browse:

- http://www.microsoft.com/xml/
- http://www.w3.org/XML
- http://www.xml.com

USPS Corporate Branding Guidelines

The U.S. Postal Service requests that it is referenced and acknowledged as the source of information for all U.S. Postal Service data that has been acquired through the Internet and/or

from other sources. However, this is not mandatory. The following guidelines should be followed for those that want to authenticate and/or validate the data displayed from the U.S. Postal Service.

Preferred Reference

Use one of the following when the USPS is the only referenced source:

- "Information provided by www.usps.com"

  or

- use the official USPS corporate logo or USPS product-specific logos.

Digital copies of USPS corporate trademarks/logos are available through the U.S. Postal Service, Public Policy and Communications Department, Washington, D.C. You can request the USPS corporate logo and/or product-specific logos by e-mailing ilogo@email.usps.gov. Requests will be responded to by e-mail within 10 days. We will review your web site, and if appropriate, provide the logo for usage in accordance with these guidelines and the license grant contained in the Terms and Conditions of Use for Internet Shipping Application Program Interfaces (APIs). If your web page is not available over the Internet, please provide a screen shot of the page where the logo will reside.

When requesting logo(s) you must provide the following information:

- company name
- URL and page where logo will reside
- type of business
- how and where the logo will be used
- contact name
- telephone number
- e-mail address
- desired graphic format, e.g., GIF, TIF, JPEG, etc.
- logo desired:
  ____USPS Corporate Eagle Logo
  ____Priority Mail
  ____Express Mail
  ____other (describe)

Alternative Reference

Use one of the following when the USPS is listed with other shipping carriers or web sites:

- United States Postal Service
- U.S. Postal Service
- U.S.P.S. (use period after each initial)

The above alternatives are listed in the order of U.S. Postal Service preference.

Examples:

"U.S. Postal Service delivery standard is two days."

"U.S.P.S. Priority Mail rate is $3.95."

Registered Trademarks

The USPS trademarks listed on page i, as well as any logos requested from USPS Public Policy and Communications Department, should not be altered or abbreviated. You can request product-specific logos by e-mailing mailto:ilogo@email.usps.gov.

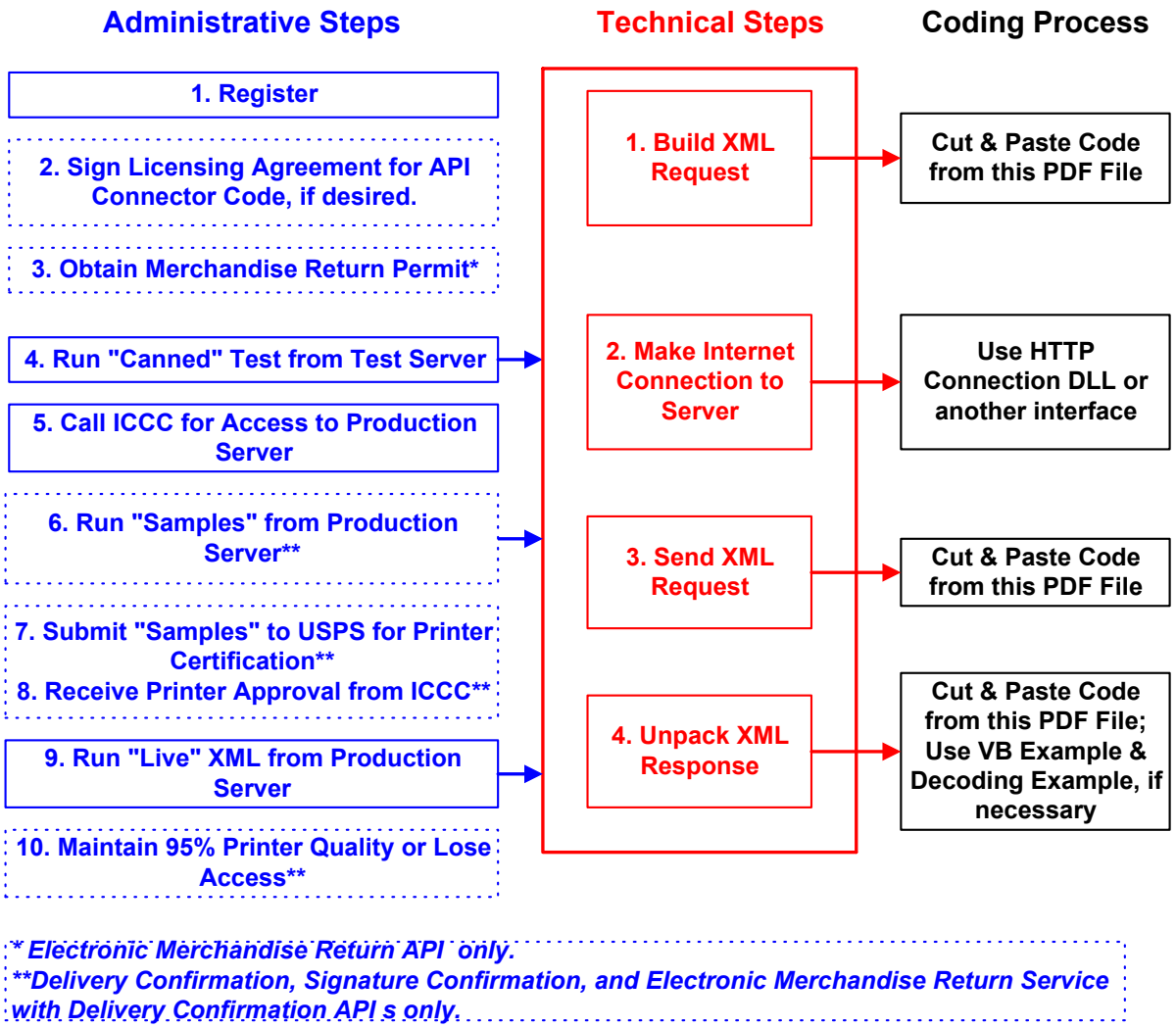
Trademark Ownership and Use

USPS trademarks are trademarks owned solely and exclusively by USPS and may be used only in the form, manner and with appropriate legends prescribed by USPS. All advertising and other uses of USPS trademarks must include a legend indicating that USPS trademarks are the property of USPS and that they are being used under license from USPS, together with any other legends or marking that may be required by law. Nothing contained in this document shall be deemed to convey any title or ownership interest to any user except for the nonexclusive rights granted under the Terms and Conditions of Use for Internet Shipping Application Program Interfaces and this document. All use of USPS Trademarks shall inure to the benefit of USPS.

Getting Started

As shown below, implementing USPS Shipping APIs requires a series of *Administrative Steps*. By focusing on the administrative requirements, which vary between different APIs (e.g., submitting samples of labels for some APIs, signing a licensing agreement for certain software, etc.), this document provides necessary information and procedures prior to installation.

The illustration also shows the *Technical Steps* required to run XML transactions to either the test server or the production server. Finally, the illustration also points out the *Coding Process* to be followed for each *Technical Step*. Step-by-step instructions for both the Technical Steps illustrated below, as well as the Coding Process shown, are provided in the *Web Tool Kit User's Guide* for each API. As each step is presented throughout the user guides, appropriate portions of the illustration below will be repeated as a reference point in the implementation process.



Administrative Steps

For each step described below, it is indicated which of the nine APIs listed in the *Introduction* requires the action(s) in the step. Many of the steps apply to all nine APIs.

Step 1: Register

Applicable APIs: All

To use the USPS APIs you must be a registered user. Completing the registration process resulted in the receipt of your user ID, password, and test API server URL. Please refer to page ii for an important notice regarding the use of your user ID and password.

If you have not registered, go to www.uspswebtools.com and follow the instructions to register for the APIs.

Step 2: Sign Licensing Agreement

Applicable APIs: All

To make the Internet connection from an NT system, it is recommended that you use software from the USPS called the HTTP Connection DLL. This software, created specifically for the USPS API implementation, provides e-tailers with a thread-safe sockets interface to submit XML requests and receive XML responses from the API server.

If you choose to use other software to make the Internet connection, you can skip this step. If you are implementing the Electronic Merchandise Return Service API, proceed to *Step 3: Obtain a Merchandise Return Permit.* For any other API, proceed to *Step 4: Run "Canned" Test*.

To obtain this code you must submit a Licensing Agreement. Print the Licensing Agreement in the *Administrative Forms* section and fax the completed agreement to the USPS Internet Customer Care Center at 1-800-210-9512. Please e-mail a confirmation of your fax to icustomercare@usps.com.

Step 3: Obtain a Merchandise Return Permit

Applicable APIs:

Electronic Merchandise Return Service and Electronic Merchandise Return Service with Delivery Confirmation

This step is only required if you are implementing the Electronic Merchandise Return (EMR) Service API (with or without Delivery Confirmation). If you are implementing any other API, skip to *Step 4: Run "Canned" Test from Test Server.*

A Merchandise Return permit is required for Electronic Merchandise Return Service. Merchandise return service may be established at any post office in the United States and its territories and possessions, or at any U.S. military post office overseas (APO/FPO). It is not available for any foreign country.

If you do not have a valid Merchandise Return permit, you need to submit the following items to the local post office that will be delivering your return merchandise:

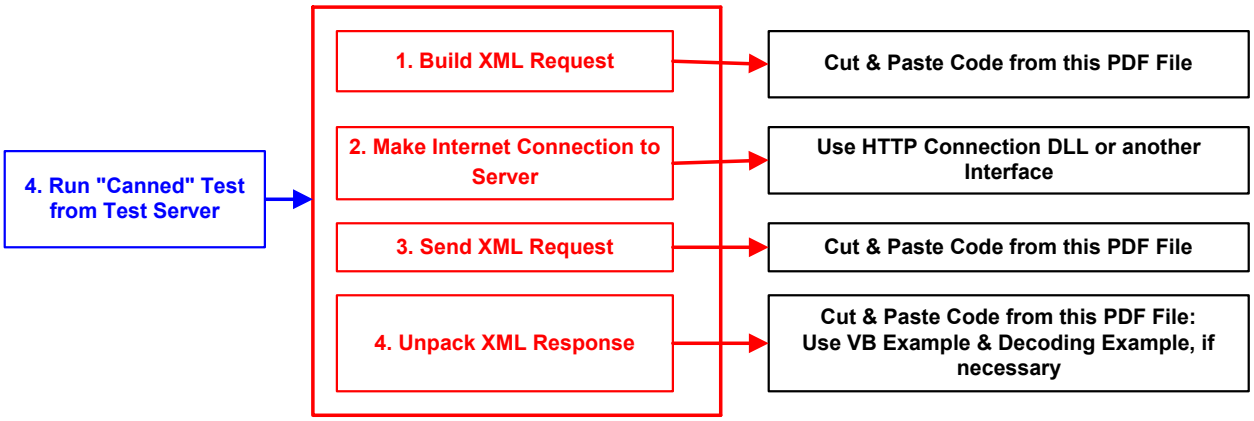
1. a completed USPS Form 3615 (available at your local post office or on the Internet at http://www.usps.com/forms/allforms.htm)
2. payment for the annual permit fee
3. the sample Electronic Merchandise Return Service Notification label provided in the *Administrative Forms* section.

Print the Notification label and submit to your local post office ***as is***. Do not alter the image.

Important: When printing PDF files with barcodes, be sure that the "Fit to Page" option in the print dialogue box of Adobe Acrobat is unchecked.

Step 4: Run "Canned" Test

Applicable APIs: All



The next step is to test your API interfaces. As a registered API user you have been granted access to the Shipping API test server. ***An important note: the test server is set up to only accept the pre-defined XML transactions and return the pre-defined XML responses provided in this document.***

If you have already successfully tested your API and have access to the production server, skip this step and proceed to *Step 6: Run "Samples" from Production Server*.

For the testing phase, follow the *Technical Steps* provided in the *Web Tool Kit User's Guide* for the API you are installing.

Step 5: Call ICCC for Access to Production Server

Applicable APIs: All

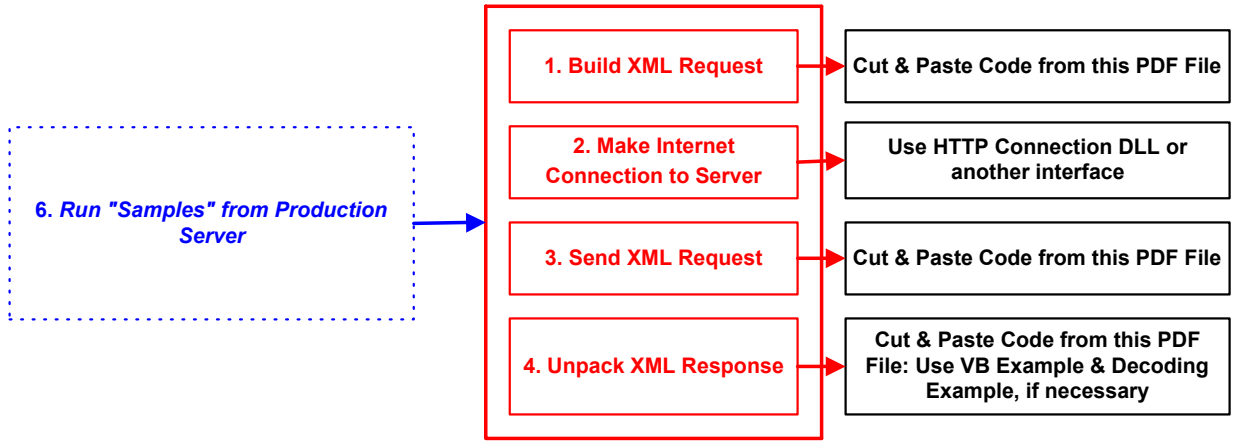
Once you have run your XML test transactions and have confirmed the XML responses, contact the Internet Customer Care Center (ICCC) (e-mail: icustomercare@usps.com; telephone: 1-800-344-7779 (7:00AM to 11:00PM EST)) and request activation to the Shipping API production server. The ICCC will validate you for production access and will provide the Shipping API production server URL.

Once you have been validated by the ICCC, you will be able to connect to the Shipping API production server. Unlike the test server, the production server will accept live data. Note that once you have access to the production server you may still test against the test server.

Step 6: Run "Samples" from Production Server

Applicable APIs:

Delivery Confirmation, Signature Confirmation and Electronic Merchandise Return Service with Delivery Confirmation



If your labels have already been approved by the USPS National Customer Support Center (NCSC), you are ready to begin sending "live" requests. If so, skip this step and proceed to *Step 9: Run "Live" XML from Production Server.* If you are implementing any API other than Delivery Confirmation, skip to *Step 9: Run "Live" XML from Production Server.*

Implementing the Delivery Confirmation, Signature Confirmation, and Electronic Merchandise Return Service with Delivery Confirmation APIs requires this additional interim step. At this stage of the process, you are only authorized to send the "Sample" data (provided in the *"Sample" Request* section in the *Web Tool Kit User's Guide* for the API you are installing) to the production server. You must have samples of the labels produced *on your printer* certified before being able to use the API in full production mode. This is to demonstrate that your printer is capable of printing legible barcodes that are readable by USPS scanning equipment.

Questions about the label printer certification process may be directed to NCSC support staff at (800) 279-2651. Be sure to mention that you are a Web Tool Kit API customer.

Step 7: Submit "Samples" to the USPS for Printer Certification

Applicable API:

Delivery Confirmation, Signature Confirmation, and Electronic Merchandise Return Service with Delivery Confirmation

Implementing the Delivery Confirmation and Electronic Merchandise Return Service with Delivery Confirmation APIs requires this additional interim step. To complete the certification process for your barcoded labels, take the following steps:

1. Send the "*Sample*" XML request provided in the *Web Tool Kit User's Guide* for the API you are installing to the Shipping API production server. Be sure to input your own "live" data in the request. The output returned to you will be a sample label for certification purposes. Repeat this 10 times with different sample data each time. You must have 10 different "*Sample*" labels with 10 different barcodes and PIC numbers.
2. Print the ten "*Sample*" labels with barcode and PIC numbers returned to you.
3. Complete the USPS API Printer Certification Submission form in the *Administrative Forms* section and mail, along with the ten barcoded labels, to:

   National Customer Support Center
   Attn: Barcode Certification - Web Tools (API)
   U.S. Postal Service
   6060 Primacy Pkwy, Suite 201
   Memphis, TN 38188-0001

   You can either print the form from this PDF file and fill out with a pen, or copy the form to a Microsoft Word file and fill out electronically before printing and signing.

Step 8: Receive Printer Approval from ICCC

Applicable APIs:

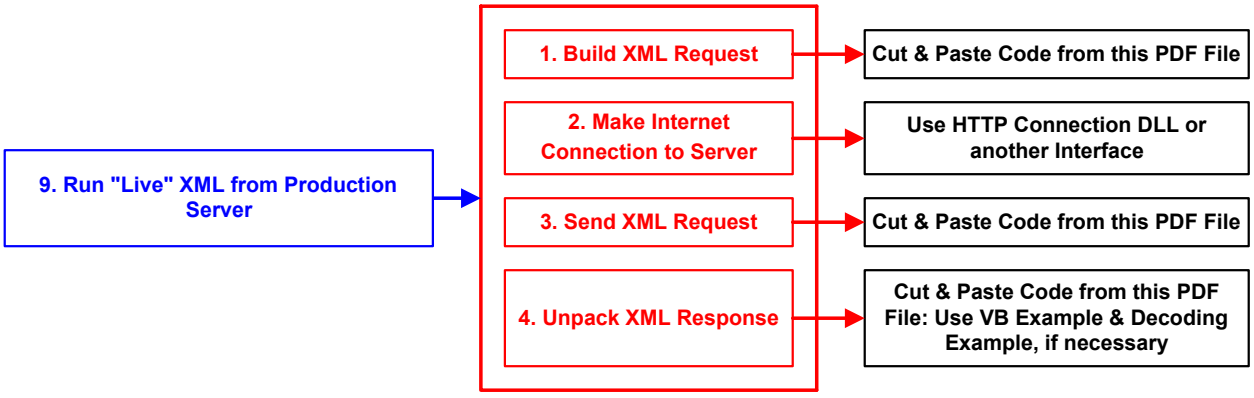
Delivery Confirmation, Signature Confirmation, and Electronic Merchandise Return Service with Delivery Confirmation

Implementing the Delivery Confirmation and Electronic Merchandise Return Service with Delivery Confirmation APIs requires this additional interim step. The NCSC will review your labels within two business days. If the labels fail the certification test, the NCSC will contact the person listed on the submission form directly. If the labels pass, you will be notified by the Internet Customer Care Center and you will be able to send XML transactions using your "live" data and receive "live" responses.

Once you are approved to generate "live" labels from the production server, and you need to print additional test labels for any reason, be sure to use the "*Sample*" XML request. Otherwise, the USPS will send a manifest of the PIC numbers issued to the USPS Postal Tracking System and will be looking for the Delivery Confirmation labels to scan.

Step 9: Run "Live" XML from Production Server

Applicable APIs: All



At this point, you have completed all testing and are now ready to send "live" data to the production server and begin full API service. Follow the *Technical Steps* provided in the Web Tool Kit User's Guide for the API you are installing.

Step 10: Maintain 95% Printer Quality or Lose Access

Applicable APIs:

Delivery Confirmation and Electronic Merchandise Return Service with Delivery Confirmation

This step only applies to the Delivery Confirmation, Signature Confirmation, and Electronic Merchandise Return Service with Delivery Confirmation APIs.

Barcodes that cannot be scanned have to be entered manually by the USPS. Delivery Confirmation users are responsible for maintaining a quality level of 95% for scannable barcodes. *If you act as a third party and provide Delivery Confirmation or Signature Confirmation to others, then you are also responsible for your customers to maintain 95% readability*. However, your end-users need not certify their printer. It is your responsibility to make certain that they print legible barcodes and maintain 95% readability.

In the event that barcode print quality falls below the 95% quality threshold, the USPS will contact the e-tailer and an effort will be made to resolve the problem. The user is given 30 days to correct the problem, after which access to the Shipping API server will be suspended pending resolution. Third-party web sites that provide labels to end-users will need to maintain files (records) of the PICs generated and sent to each customer so that they can identify customers who do not comply with the 95% quality control requirements.

Administrative Forms

The following forms are provided in this section:

1. **Licensing Agreement for the API Connector Code**

   Print the Licensing Agreement and fax the completed agreement to the USPS Internet Customer Care Center at 1-800-210-9512. Please e-mail a confirmation of your fax to icustomercare@usps.com.

2. **USPS API Printer Certification Submission Form**

   Print and complete the Printer Certification Submission form and mail, along with the ten barcoded labels, to:

   National Customer Support Center
   Attn: Barcode Certification - Web Tools (API)
   U.S. Postal Service
   6060 Primacy Pkwy, Suite 201
   Memphis, TN 38188-0001

   You can either print the form from this PDF file and fill out with a pen, or copy the form to a Microsoft Word file and fill out electronically before printing and signing.

3. **Electronic Merchandise Return Service Notification Label**

   Print the Notification label and submit to your local post office ***as is***. Do not alter the image. There is nothing to fill out or complete.

Important: When printing PDF files with barcodes, be sure that the "Fit to Page" option in the print dialogue box of Adobe Acrobat is unchecked.

Licensing Agreement (HTTP Connection DLL)

The United States Postal Service ("USPS") grants to the "API User" named below a license to use the "HTTP Connection DLL" provided by USPS only to the extent needed to use the USPS Internet Shipping Application Program Interface ("ISAPI") products according to the Terms and Conditions of Use for the USPS ISAPIs stated on the USPS's www.uspswebtools.com web site. The API User agrees that the same Terms and Conditions govern this license. This license is effective on the date of signature by an authorized representative of the API User.

The API User agrees:

(i) to hold the HTTP Connection DLL in strict confidence and not disclose it to any third parties;

(ii) to instruct all such employees using the HTTP Connection DLL regarding these obligations; and

(iii) to take all reasonable measures to protect the confidentiality of and avoid disclosure or use of Confidential Information with at least the same degree of care that the API User utilizes to protect its own confidential information, but in no case with less than a reasonable degree of care.

The obligations set forth in the immediately proceeding paragraph shall not apply to Confidential Information which (a) becomes publicly available through no wrongful act by the API User or (b) has been lawfully received by the API User from a third party who, to the best of the API User's knowledge, is not prohibited from disclosing such information or obligated to keep it confidential.

The confidential obligations of the API User hereunder shall survive for a period of five (5) years from the last date the API User used the HTTP Connection DLL.

The API User agrees that the unauthorized disclosure or use of Confidential Information will cause irreparable harm and significant injury that may be difficult to ascertain.

Signature	API User's full company name
Name (typed or printed)	Date
Title	USPS API User ID

Fax the above completed software license to the USPS Internet Customer Care Center at 1-800-210-9512.

Please e-mail a confirmation of your fax to icustomercare@usps.com.

Delivery Confirmation and Signature Confirmation API

Submission of Customer Printed Labels for Printer Certification

Ten labels must be submitted for each printer you are certifying.

Company Name/Customer Name:

Mailing Address:

City/State/ZIP+4:

Name of Contact:

Phone # of Contact: FAX: e-mail:

Web Tool, API User ID#:

Company Web site (URL), if any:

API Program Number: **805213907 (To be used by all customers)**

Instructions:

With this form, submit **10** labels from each printer used to print *Delivery Confirmation* or Signature Confirmation labels with barcodes. List the printers below with their brand names and model numbers. If certifying more than one printer, write the ***printer number*** on the first label (or attach a note) associated with the list below.

Printer #	*Printer Brand Name*	*Printer Model Number*
1		
2		
3		
4		
5		
6		
7		
8		

Signature of Contact Person Date

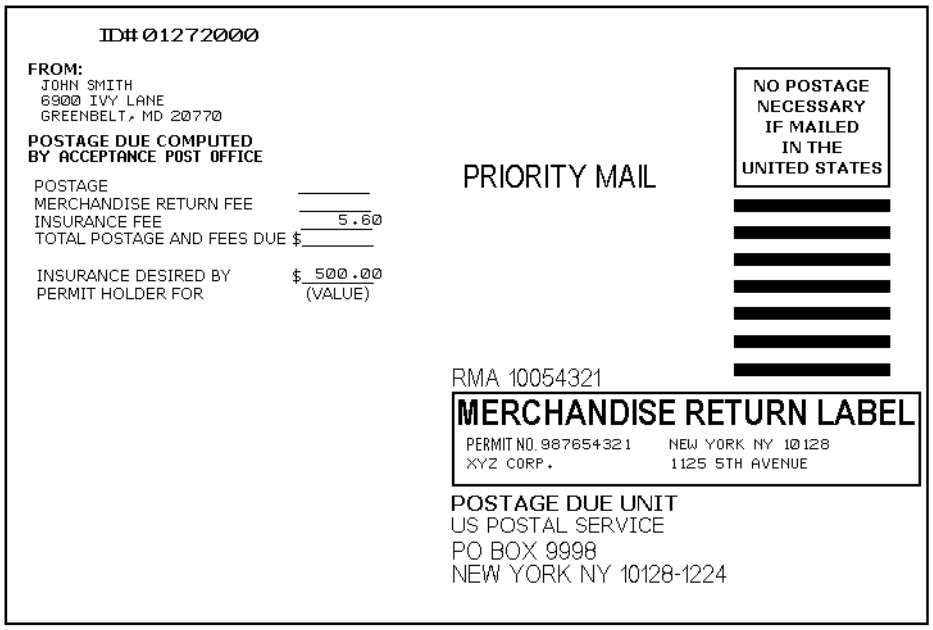
Instructions for National Customer Support Center:

Upon approval, notify the Internet Customer Care Center at (800) 344-7779 and provide customer's API User ID#.

Electronic Merchandise Return Service Notification

Attention: Postmaster/Mailing Requirements

The holder of this sample Merchandise Return label will be using the USPS Internet Shipping Application Program Interface (API) program to prepare and generate Merchandise Return labels. Please provide a Merchandise Return Permit as per DMM S923.2.1. If you need additional information regarding this program, contact the USPS Internet Customer Care Center at 1-800-344-7779.



Customer Mailing Instructions

1. Affix the label squarely onto the address side of the parcel, covering up any previous delivery address and barcode. If tape or similar material is used, it must not cover any part of the label where postage and fee information is to be recorded or where a Delivery Confirmation Barcode exists.

2. Obliterate any other addresses and barcodes on the outside of the parcel.

3. Take the parcel to a post office so that it may be handled by a USPS retail employee.

(The above image is not to scale.)