

Ohio Department of Public Safety

Technical Specifications for Scrap Metal Daily Transaction Submissions

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1 Revision History

Technical Specifications for Daily Transaction Submissions		
Date	Version	Description
07/31/2013	1.0 Draft	Original document
02/07/2014	1.0 Final	First release version
03/28/2014	2.0	Updated with weights for individual items
5/23/14	2.1	Included Alabama in State Codes
5/28/14	2.2	Updated field title from "Required/Optional" to "Required/Optional/Conditional" in 4.3 Field Specifications
7/8/14	2.3	Added error code 129 Added ValidateScrapDealerTransaction in 4.2 & 4.2.3 Added Section 5.5 and 5.6 for Validate Transaction Submission and Response
2/13/15	2.4	Updated the description of the error code 124 and include explanation for 404 type errors. Updated Images section. Updated the example about how to pass the image as byte[]. Removed the Soap Envelope Section entirely. Removed the wsdl attached at the bottom and replaced it with wsdl link.
08/05/2016	2.5	Service URI section updated.

2 Introduction

Ohio Revised Code 4737.04(E)(1) (b) requires Scrap Metal and Bulk Merchandise Container Dealers (Scrap Dealers) to prepare a daily electronic report, the content and format of which shall be established in rules adopted by the director, listing all retail transactions that occurred during the proceeding day and contains the information described in division (C) of this section or division (A) of section 4737.012 of the Revised Code as applicable. The dealer shall electronically transfer, by twelve noon eastern standard time, the report for inclusion in the registry created pursuant to division (E) of section 4737.045 of the Revised Code.

As required by the ORC, ODPS provides the dealer two different means of electronically transferring daily transactions for inclusion in the registry. For the dealers with limited number of transactions there is functionality on the Scrap Metal Dealers web portal that allow them to enter their transactions one at a time. For other dealers a web service would be available that could be used to receive transactions in bulk.

The objective of this document is to provide technical specifications that detail how to consume the Scrap Metal Daily Transaction submission Web Service hosted by ODPS that allows scrap dealers to perform bulk uploads of their daily transactions. Scrap dealers will be responsible for developing functionality within their application to call the ODPS web service and submit daily transactions.

3 Overview

The Scrap Metal Daily Transaction submission web service provides a secure transport mechanism to accept electronic records from the Scrap Dealer. For a Scrap Dealer to submit daily transaction, they will need to send pre-formatted SOAP records over HTTP through the public internet. The structure of the XML/SOAP record and definitions is described in this document. These records will contain all of the information necessary to verify the dealer sending the records and the appropriate records to process the requested transaction.

3.1 How does it work?

Scrap Dealers will need to register their facilities first as a Scrap Dealer or Bulk Merchandise container dealership and must be approved by the Department of Public Safety. The Division of Homeland Security is responsible for registering Scrap Dealers. Transactions that are submitted must contain the Facility Number provided by the Ohio Department of Public Safety at the time of registration. The Scrap dealer will submit the transactions through a web service call. The system will accept the transactions after validating the dealer, facility and user.

3.2 Authentication

Each registered dealer facility would have at least one authorized user that was registered as part of their initial setup. The user's credential will need to be provided as part of the initial call to the authentication method. The authentication method returns a token that is valid for 300 seconds, this token has to be utilized to submit transactions.

3.3 Images

The submission specification contains fields that are images. All images have to be in the "JPG" format and should not exceed 1 MB in size. Convert the image to byte array while passing to the web service.

.Net Example:

```
byte[] idCardImage = File.ReadAllBytes(@"\idCardImage.jpg");
```

4 Web Service Specification

4.1 Service URI

Important Note:

The service URI has been moved to a new environment. Old URI will be decommissioned on **Jan 31st 2017**. Software vendors should update their software with the new URI before this date. It is suggested to make the URI setting as configurable to support any future environment upgrades.

New

<https://services.dps.ohio.gov/ScrapDealerServices/TranWebService.asmx?wsdl>

Old

<https://ext.dps.state.oh.us/ScrapDealerTranService/ScrapDealerWebService.asmx?wsdl>

4.2 Service Description

```
public class TranWebService
{
    [WebMethod]
    public string Authenticate(
        string username,
        string password);

    [WebMethod]
    public int ScrapDealerTransaction(
        string authToken,
        string facilityRegNumber,
        string txnNumber,
        string firstName,
        string middleName,
        string lastName,
        string suffix,
        string add1,
        string add2,
        string city,
        string state,
        string zip,
        string txnDateTime,
        byte[] idCardImage,
        byte[] photoOfSeller,
        string bulkContainerDesc,
        string numberOfBulkContainers,
        string weightOfBulkContainers,
        byte[][] bulkContainerPhoptos,
        string licensePlateNumner,
        string licensePlateIssueState,
        string metalArticlesNotRecyclableDesc,
        string weightOfMetalArticlesNotRecyclable,
        string recycMaterilasNotSpecialPurchaseArticles,
```

```
string recycMaterialsSpecialPurchaseArticles,
byte[][] recycMaterialsSpecialPurchaseArticlePhotos)

[WebMethod]
public int ValidateScrapDealerTransaction(
    string authToken,
    string facilityRegNumber,
    string txnNumber,
    string firstName,
    string middleName,
    string lastName,
    string suffix,
    string add1,
    string add2,
    string city,
    string state,
    string zip,
    string txnDateTime,
    byte[] idCardImage,
    byte[] photoOfSeller,
    string bulkContainerDesc,
    string numberOfBulkContainers,
    string weightOfBulkContainers,
    byte[][] bulkContainerPhotos,
    string licensePlateNumner,
    string licensePlateIssueState,
    string metalArticlesNotRecyclableDesc,
    string weightOfMetalArticlesNotRecyclable,
    string recycMaterilasNotSpecialPurchaseArticles,
    string recycMaterialsSpecialPurchaseArticles,
    byte[][] recycMaterialsSpecialPurchaseArticlePhotos)
}
```

4.2.1 Authentication (Method)

- This method must be called before calling ScrapDealerTransaction.
- The scrap dealer's user ID and Password should be passed to this method.
- The system will validate the supplied registered scrap dealer's credentials and return an authentication token in a string format.
- If authentication fails, the system will return an error code 101. For more information about the error codes and their corresponding messages, see section [4.4.4](#).
- The authentication token supplied will expire after 300 seconds. An example of a sample authentication token is below:

5892e17-80f6-415f-9c65-7395632f0223

4.2.2 Scrap Dealer Transaction (Method)

- This method should be supplied with all the details related to the scrap dealer transaction.
- The authentication token must be passed every time this method is called. The same authentication token can be passed when this method called in a loop for bulk transactions.
- If any of the required field is missing or if an invalid value is supplied, this method will return an error code. For more information about the error codes and their corresponding messages, see section [4.4.4.](#)
- If the supplied details are valid, the transaction will be complete and the system will return a success code of 1.

4.2.3 Validate Scrap Dealer Transaction (Method) – *To be used for testing purposes*

- This method should be supplied with all the details related to the scrap dealer transaction.
- The authentication token must be passed every time this method is called. The same authentication token can be passed when this method called in a loop for bulk transactions.
- If any of the required field is missing or if an invalid value is supplied, this method will return an error code. For more information about the error codes and their corresponding messages, see section [4.4.4.](#)
- If the supplied details are valid, the system will return a validation success code of 1.

4.3 Field Specifications

Field Name	Type	Description & Format	Required/ Optional/ Conditional	Size	XML Field Name
Authentication Token	Text	Token returned by authenticate method	R	50	authToken
Facility Registration Number	Text	Facility registration number	R	17	facilityRegNumber
Transaction No	Text	Transaction number	R	20	txnNumber
Seller's Information					

Field Name	Type	Description & Format	Required/ Optional/ Conditional	Size	XML Field Name
First Name	Text	The first name of the seller (the person who is selling the containers)	R	33	firstName
Middle Name	Text	The middle name of the seller	O	31	middleName
Last Name	Text	The last name of the seller	R	33	lastName
Suffix	Text	If applicable, the suffix in the seller's name	O	5	suffix
Address 1	Text	The street address of the seller	R	40	add1
Address 2	Text	The street address of the seller	O	40	add2
City	Text	The seller's city of residence	R	30	city
State	Text	The seller's state of residence For the allowed values, see section 4.4.3, State Codes .	R	2	state
Zip Code	Text	The seller's zip code of residence	R	9	zip
License Plate Number	Text	The license plate number of the seller's motor vehicle	O	20	licencePlateNumner
License Plate Issue State	Text	The state that issued the license plate of the seller's motor vehicle For the state codes, see section 4.4.3, State Codes	O	2	licensePlateIssueState
Date and Time	Text	The date and time of the sale (when the dealer purchased the containers) The format of the date time should be 'MM/DD/YYYY HH:MM:SS AM/PM'.	R		txnDateTime

Field Name	Type	Description & Format	Required/ Optional/ Conditional	Size	XML Field Name
Image of ID Card	Image	Image of the seller's state issued identification card, driver's license or military identification card. Image should be in JPEG format and the size should not exceed 1MB.	R		idCardImage
Photograph of Seller	Image	Photograph of the seller Photo should be in JPEG format and the size should not exceed 1MB.	R		photoOfSeller
Bulk Container Information					
Description of the Container(s)	Text	A description of the container(s)	C	255	containerDesc
Number of Containers	Text	The number of containers purchased from the seller	O	3	numberOfContainers
Weight of Container(s)	Text	Supply comma separated codes list from the list of Container number along with weight (in LBs) of each Container in the list separated by hyphen. Example: 1-20.12,2-30.34	C	200	weightOfBulkContainers
Photograph of each Container Multiple Images	Images	A photograph of each container purchased from the seller. The number of container photos must match the 'Number of containers' field Photos should be in JPEG format and the size of each photo should not exceed 1MB.	C		containerPhotos
Metal Articles – Not Recyclable					

Field Name	Type	Description & Format	Required/ Optional/ Conditional	Size	XML Field Name
Description of Metal Articles that are not Recyclable	Text	Full and accurate description of each article purchased or received by the dealer. Include identifying marks, letters written, inscribed, or otherwise included on the article. Include the name and manufacturer of the article if known	O	255	metalArticlesNotRecyclableDesc
Weight of Metal Articles	Text	Total weight of the Metal Articles that are not Recyclable	C	7	MetalNonRecycWeight
Recyclable – Not Special Purchase					
Recyclable Articles that are not Special Purchase Articles Multiple Values	Text	Supply comma separated codes list from the list of recyclable materials that are not special purchase articles along with weight (in LBs) of each material in the list separated by hyphen. Example: 1-20,2-30 (i.e. Number 1 Copper of 20 LB + Number 2 Copper of 30 LB = Total Weight Of Articles - 50 LB) For a list of articles, see section 4.4.1 Code Lists Recyclable Materials That Do Not Qualify as Special Purchase Articles	O	200	recycMaterilasNotSpecialPurchaseArticles
Recyclable – Special Purchase					

Field Name	Type	Description & Format	Required/ Optional/ Conditional	Size	XML Field Name
Recyclable Articles that are Special Purchase Articles Multiple Values	Text	Supply comma separated codes list from the list of recyclable materials that are special purchase articles along with weight (in LBs) of each material in the list separated by hyphen. Example: 1-20.12 (i.e. Beer Keg of 20 LB) For a list of articles, see section. 4.4.2	O	200	recycMaterialsSpecialPurchaseArticles
Photograph of Each Recyclable Article that is a Special Purchase Article Multiple Images	Images	List of photographs of each of the recyclable materials that are special purchase articles. The number of container photos supplied must be matching to the 'Recyclable Materials that are special purchase articles' (above) supplied field. Photos should be of JPG format and size of each photo should not exceed 1MB.	C		recycMaterialsSpecialPurchaseArticlePhotos

4.4 Code Lists

4.4.1 Recyclable Materials That Do Not Qualify as Special Purchase Articles

Code	Description
1	Number 1 Copper
2	Number 2 Copper
3	Sheet Copper
4	Insulated Copper Wire
5	Aluminium or Copper Radiators
6	Red Brass
7	Yellow Brass
8	Aluminium Sheet
9	Aluminium Extrusions
10	Clean Aluminium Wire
11	Cast Aluminium
12	Unclean Aluminium Wire
13	Aluminium Exterior
14	Contaminated Aluminium
15	Stainless Steel
16	Large Appliances
17	Steel Structural
18	Miscellaneous Steel
19	Sheet Irons
20	Motor-Vehicles Non-body Parts
21	Catalytic Converters
22	Lead
23	Electric Motors
24	Electronic Scrap

4.4.2 Recyclable Materials That Qualify as Special Purchase Articles

Code	Description
1	Beer kegs;
2	Cable, wire, electrical components, and other equipment used in providing cable service or any utility service, including, but not limited to, copper or aluminium coverings, housings, or enclosures related thereto
3	Grave markers, sculptures, plaques, and vases made out of metal, the appearance of which suggests that the articles have been obtained from a cemetery
4	Guard rails for bridges, highways, and roads; highway and street signs; street light poles and fixtures; worker access hole covers, water meter covers, and other similar types of utility access covers; traffic directional and control signs and light signals, metal marked with the name of a political subdivision of the state, and other metal articles that are purchased and installed for use upon authorization of the state or any political subdivision of the state
5	Historical, commemorative, and memorial markers and plaques made out of metal
6	Four-wheel metal carts, commonly referred to as "grocery carts," that are generally used by individuals to collect and transport consumer goods while shopping
7	Four-wheel metal carts, commonly referred to as "metal bossies," that are used to transport or merchandise food products that are stored in crates, shells, or trays
8	Railroad material, including journal brasses, rail spikes, rails, tie plates, frogs, and communication wire
9	Metal trays, merchandise containers, or similar transport containers used by a product producer, distributor, retailer, or an agent of a product producer, distributor, or retailer as a means for the bulk transportation, storage, or carrying of retail containers of milk, baked goods, eggs, or bottled beverage products
10	"Burnt wire," which is any coated metal wire that has been smelted, burned, or melted thereby removing the manufacturer's or owner's identifying marks

4.4.3 State Codes

Code	Description
AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Georgia
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York

Code	Description
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming

4.4.4 Error Codes and Messages

Error Code	Error Code Message
101	Invalid user name or password supplied.
102	Authentication code is missing.
103	Authentication code is expired.
104	Facility registration number is either missing or invalid.
105	Transaction number is either missing or too long (more than 20).
106	Seller's first name is either missing or too long (more than 33).
107	Seller's middle name is either missing or too long (more than 31).
108	Seller's last name is either missing or too long (more than 33).
109	Seller's suffix is too long (more than 5).
110	Seller's address1 is either missing or too long (more than 40).
111	Seller's address2 is either missing or too long (more than 40).
112	Seller's city is either missing or too long (more than 40).
113	Seller's state is either missing or invalid.
114	Seller's zip code is either missing, too long (more than 9), or is not numeric.
115	Dealer's purchase date and time is either missing or the date supplied is invalid.
116	Image of the seller's state issued identification card is either missing, or the file is too large (more than 1mb).
117	Photograph of the person from whom the containers were purchased is either missing or the file is too large (more than 1mb).
118	Description of the container(s) is either missing or too long (more than 255). This field is required only if the number of containers is missing.
119	Number of containers purchased from the seller is too long (more than 5).
120	Photographs of the containers purchased from the seller is either missing or less than the number specified in the 'Number of Containers' field, or the file is too large (more than 1mb).
121	Weight of the containers with the articles received in pounds as determined by a licensed

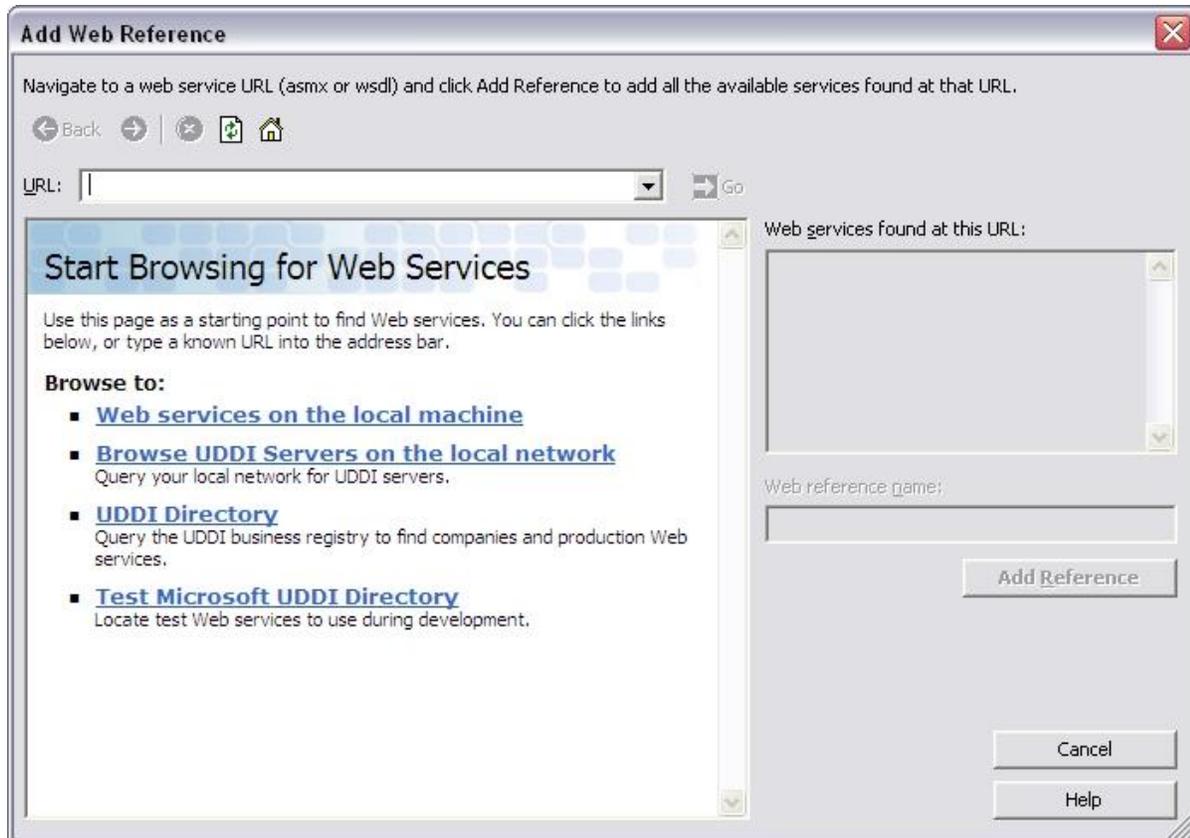
Error Code	Error Code Message
	commercial scale is either missing or is too long (more than 5).
122	The license plate number of the seller's motor vehicle is too long (more than 20).
123	The state that issued the license plate of the seller's motor vehicle is too long (more than 2) or is invalid.
124	<p>This error could be returned due to one of the following reasons.</p> <ul style="list-style-type: none"> • Metal articles not recyclable materials description is given but the length is exceeding 255 characters. • Metal articles not recyclable materials description is given but metal articles not recyclable weight is missing. • Metal articles not recyclable materials description is missing but metal articles not recyclable weight is given. • Metal articles not recyclable materials description is given but metal articles not recyclable weight is not greater than zero.
125	Recyclable materials that are not special purchase materials are either missing or invalid code supplied.
126	The code(s) for the recyclable materials that are special are invalid.
127	Photographs of the recyclable materials that are special purchase articles are either missing or less than the number of item codes supplied (for recyclable materials that are special purchase articles), or the file is too large (more than 1mb).
128	<p>Information about the article that is missing. Transactions for the articles listed below must include at least one piece of information about the article:</p> <ul style="list-style-type: none"> • Bulk containers • Metal – Non Recyclable • Recyclable – Not Special Purchase • Recyclable – Special Purchase.
129	Duplicate Transaction Number Provided
404<number>	Any error code starting with 404 means web service failed internally to submit the transaction due to an exception. Try and if problem persist contact the system administrator.

5 Consuming the Web Service

5.1 Consuming the Web Service Using .NET

Service URI: <https://services.dps.ohio.gov/ScrapDealerServices/TranWebService.asmx?wsdl>

Using Visual Studio .NET IDE, add web service to the project by adding **Add Web Reference**. This allows you to enter the Web service's location (using one of the methods from the list). In addition, you may use the WSDL.exe tool included with the .NET Framework installation.



The steps below outline how to use a Web service:

1. Locate the Web service with a file or URL.
2. Create the Web service's proxy class using WSDL.exe or your favorite IDE.
3. Compile the proxy class using the appropriate compiler (or IDE).
4. Use the proxy class in the code to take advantage of the Web service.

Below is a sample C# Code to consume the generated proxy class:

```
// Create instance of the generated proxy class
ScrapDealerServiceClient client = new ScrapDealerServiceClient();
```

```
// First call the authenticate method to get the authentication token
String authToken = client.Authenticate(userid,password);

// Loop through all the dealer transactions in a batch
foreach (DealerTransaction dealerTransaction in dealerTransactions)
{
    try
    {
        // Convert the image to byte array
        byte[] idCardImage = File.ReadAllBytes(@"\idCardImage.jpg");

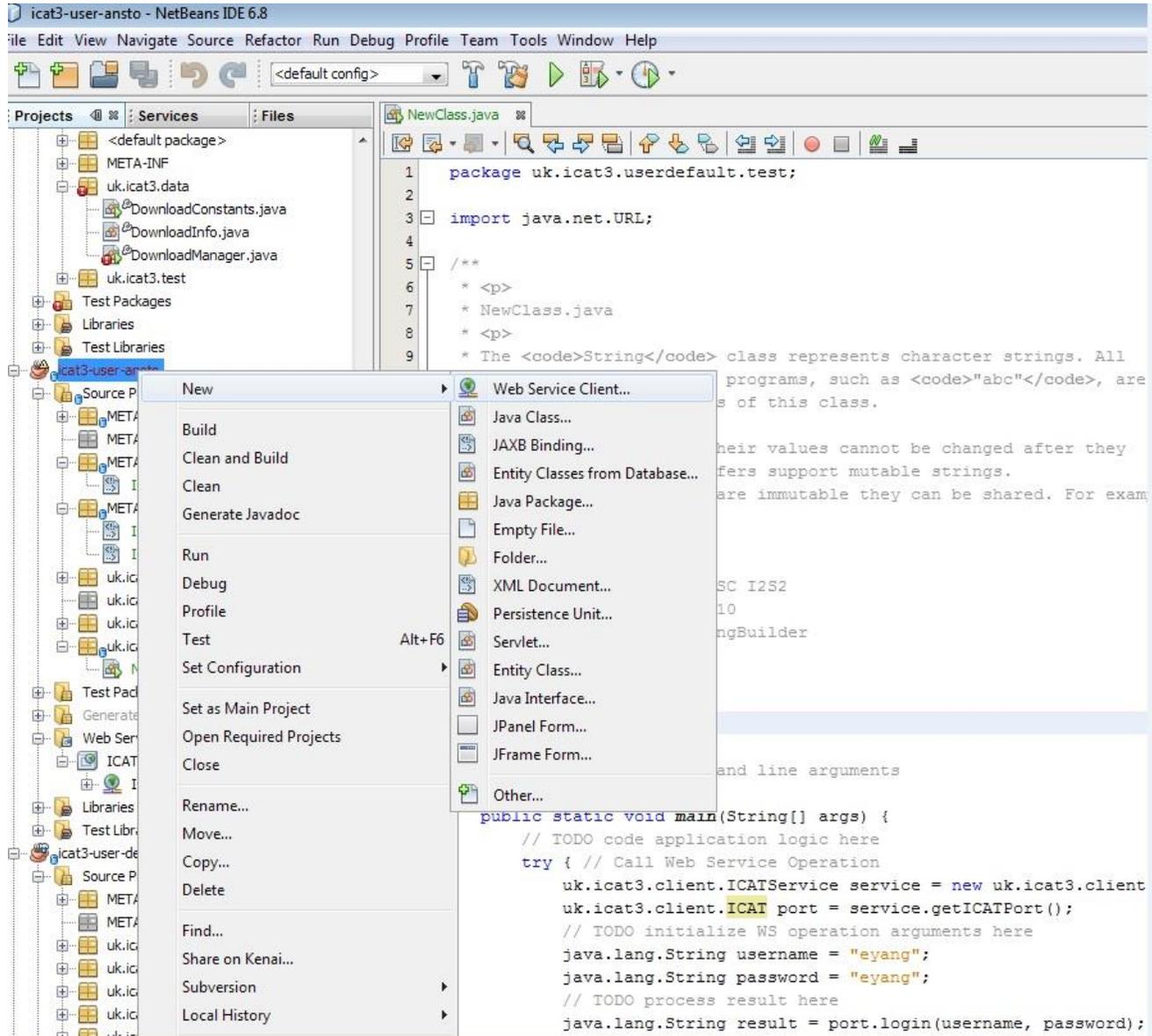
        // Call each Scrap Dealer Transaction
        Int result = client.ScrapDealerTransaction(
            dealerTransaction.AuthToken,
            dealerTransaction.TxnNumber,
            dealerTransaction.FirstName,
            dealerTransaction.LastName,
            .....
            idCardImage,
            .....);

        // If the error code returned is not 1, then there is some invalid data supplied
        // log the failed transaction so invalid data can be corrected and resubmitted
        If(result != 1)
        {
            LogError(txnNumber,result)
        }
    }
    catch (Exception ex){
        // Handle any communication or other exceptions
    }
    finally {
        // Close the client
        Client.Close();
    }
}
}
```

5.2 Using Non .NET Technologies to Consume the Web Service

5.2.1 Using Java

Netbeans IDE can be used to consume the Web service.



5.2.2 Using PHP

The example below displays using PHP code to call the Web service.

```
<?php

try{
    $client = new
SoapClient("https://services.dps.ohio.gov/ScrapDealerServices/TranWebService.asmx
?wsdl");

// Set parameters
$params['CompMember']['MemberID'] ="";
...
...

// Call web service PassMember method
$webService = $client-> Authenticate ($parms);
$wsResult = $webService-> AuthenticateResult();

$webService = $client-> ScrapDealerTransaction ($parms);
$wsResult = $webService-> ScrapDealerTransactionResult();

        } catch (Exception $e) {
            echo 'Caught exception:', $e->getMessage(), "\n";
        }
// -----
?>
```

5.2.3 Using the WSDL.exe Tool

As stated earlier in the document, you may use the WSDL.exe tool included with the .NET Framework installation to generate the auto generated proxy.

WSDL:

<https://services.dps.ohio.gov/ScrapDealerServices/TranWebService.asmx?wsdl>

6 Glossary of Terms

The following terms are used throughout this document or are related to Scrap Metal transaction processing:

- SOAP Message – The SOAP protocol will be used to wrap all XML documents and attachments within the SOAP message. This includes the data streams and JPG documents. A SOAP message is a form of XML (or it can be said, SOAP is a subset of XML)
- WSDL - The Web Services Description Language is an XML-based interface description language that is used for describing the functionality offered by a web service