Customs & Excise

Web Services Specifications for C&E Enquiries

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Document References

Reference
1.   Customs & Excise REST Web Service Integration Guide
2.   Full list of ROS error codes

Introduction

This document details the ROS web services specification for Customs & Excise Enquiries.

These web services are built on industry standard technologies. They are available over the Internet as synchronous REST services and ensure the same level of privacy and security as the ROS web site.

This document covers the following Customs & Excise web services:

- Balance Enquiry

  A service which will return to the requester the available balances for a specific EORI number in the current period. The requester can request their own balance details using their own EORI number, or, if they have a valid C&E relationship with another trader, request the balance details of that trader providing this trader's EORI number.

- Exchange Rate Enquiry

  The service will return all currency exchange rate information for the month used in the request, as required for the purpose of determining the customs value of goods in accordance with UCC Code, Commission Implementing Regulation (EU) 2015/2447, Articles: 53(1)(a), 146(1)(a), 146(2), 146(3) and 146(4).

1 Digital Signatures

Any ROS web service request that either returns confidential information or accepts submission of information must be digitally signed. This must be done using a digital certificate that has been previously retrieved from ROS.

The digital signature must be applied to the message in accordance with the HTTP Signatures specification.

The digital signature ensures the integrity of the document. By signing the document, we can ensure that no malicious intruder has altered the document in any way. It can also be used for non-repudiation purposes.

If a valid digital signature is not attached, a HTTP status code of 401 (Unauthorised) will be returned. The message body will provide more information on the details of the problem.

Detailed specifications for digitally signing REST messages are described in Customs & Excise REST Web Service Integration Guide available on Revenue.ie website.

For REST GET requests the message to be signed is an empty string.

2 Web Services

The following sections describe the operation of each web service.

If successful, the appropriate message will be processed and a synchronous JSON response message will be returned.

If unsuccessful, the synchronous response will be either HTTP code or a *MessageAcknowledgement* containing a ROS error code.

The full web service URL consists of environment-specific URL and the service-specific endpoint, e.g.:

`https://www.ros.ie/customs/webservice/v1/rest/transactions/handshake`

Environment URLs:

Live:	https://www.ros.ie/customs/webservice/v1/rest
Public Interface Test (PIT):	https://softwaretestnextversion.ros.ie/customs/webservice/v1/rest

2.1 Transactions Handshake

Purpose:	Validate connectivity and digital signature.
Http Method:	GET
Endpoint:	/transactions/handshake
Parameters:	None

Successful response:	```
	{
	  "acknowledged": true,
	  "info": " Handshake successful!"
	}
	``

2.2 Balance Enquiry

Purpose:	Retrieve balance information for a specified trader (using the trader's EORI) in the current period
Http Method:	`GET`
Endpoint:	`/balance/enquiry/{eori}`
Parameters:	**`eori`** : the EORI number of the trader for which the balance enquiry is been performed

Successful response format:	```
	{
	  "available_defferred_balance": number,
	  "available_ede_balance": number,
	  "available_cash": number,
	  "account_holder": "string",
	  "requester": "string",
	  "date_processed": "yyyyMMddHHmm"
	
	  }
	``

Sample Response	```
	{
	   "available_defferred_balance": 103586.55,
	   "available_ede_balance": 124866.58,
	   "available_cash": 100000.02,
	   "account_holder": "IE0006286E",
	   "requester": "IE4618356U",
	   "date_processed": "202503141256"
	}
	``

Sample Errors	``` Status: 404 Body: "Error encountered while retrieving C&E balance." ``` The above error means that either the EORI provided is not found or is not linked to the requester EORI number.

2.3 Exchange Rate Enquiry

Purpose:	Retrieve exchange rate information for a particular period (month)
Http Method:	GET
Endpoint:	/exchange-rate/enquiry/{period}
Parameters:	**period** : the period being requested in yyyyMM format, e.g. 202503
Successful response format:	```[{ "currencyCode": "string", "rate": number, "validFrom": "yyyy-MM-dd", "validTo": "yyyy-MM-dd" }]```
Sample Response	```[{ "currencyCode": "USD", "rate": 1.1234, "validFrom": "2025-01-01", "validTo": "2025-01-31" }, { "currencyCode": "STG", "rate": 0.8934, "validFrom": "2025-01-01", "validTo": "2025-01-31" }]```
Sample Errors	Status: 400 Body: "Error encountered while retrieving UCC exchange rates." The above error likely means that the date provided is invalid or not in format yyyyMM.

3   ROS Error Codes

Certain unsuccessful calls may result in an XML response body with ROS error code returned to the caller, e.g.:

```
<ns2:MessageAcknowledgement
xmlns:ns2="http://www.ros.ie/schemas/customs/messageacknowledgement/v1">
      <ns2:ErrorReference>
            <ns2:ErrorCode>111008</ns2:ErrorCode>
      </ns2:ErrorReference>
</ns2:MessageAcknowledgement>
```

These responses are returned when an issue is encountered with the way the request was signed by the submitter.

Table below shows possible ROS error codes that can be returned by ROS web services.

Full list of ROS error codes is available on the Revenue website:
https://www.revenue.ie/en/customs/documents/electronic/error-spec1.txt

Code	Message
ROS-222000	Error occurred when sending the message to backend systems for processing.
111004	The digital certificate does not have the required C&E file permission.
111005	Digital certificate is expired.
111007	Message was not digitally signed.
111008	Internal system error has occurred when processing the WS request.
111013	Error occurred when processing the timestamp.
111014	The received message is expired.
111015	Digital certificate is invalid or not found.
111016	Request message is invalid or malformed.
111017	The server is temporarily unable to service your request due to maintenance downtime.