



HM Revenue
& Customs

NATIONAL EXPORT SYSTEM

XML CHANNEL TECHNICAL SPECIFICATION

Status: Baseline (v1.7)

Purpose

This document is the technical specification for the National Export System (NES) XML Channel. This document is required by any third party wishing to use the NES XML Channel. The document details each of the messages that will be supported by the NES XML Channel. This document outlines new messages supported in Phase 1b of the NES project. The original message in Phase 1a remains fully supported in this version.

Version	Approved By	Date
1.5	Kevin Hawksworth - Business Manager	15/06/2009
1.5	Ryan Wilkinson – IMS Live Services Manager	15/06/2009
1.6	Dennis Dawkins – SDS Team Manager	16/01/2013
1.7	John Evans, Scott Akister - Customs Products & Processes	24/03/2020

Change History

Version No.	Date	Details of Changes included in Update	Author(s)
0.01	17/09/2001	First draft for comments.	Mohammad Khan, Dave Ayling
0.02	24/09/2001	Changes from workshop held on 18th September 2001.	Mohammad Khan, Dave Ayling
0.03	09/10/2001	Added an example XML Document and resultant changes to schema. Removed schema document into a separate 'HMCEOpenInterface.xsd' file.	Mohammad Khan, Dave Ayling
0.04	25/10/2001	Restructured the XML Schema Documents to Architecture/Message Schema's. Added response message.	Mohammad Khan, Dave Ayling
0.05	08/05/2002	Focused on embedded EDIFACT data within an XML Document.	Mohammad Khan, Dave Ayling
1	02/09/2002	Baseline	Mohammad Khan, Dave Ayling
1.1	19/11/2003	Changes made to reflect NES Phase 1b.	Mohammad Khan
1.2	04/03/2004	Minor typographical amendments	Stuart Nicol
1.3	20/05/2009	Updated following the introduction of EORI to explain how TURN fields are to be populated from UK EORI Numbers. Section 2.7.5 added and sections 2.4.2 and 3.4 amended.	John Griffith

1.4	09/06/2009	Update section 2.7.5 and 2.4.2 to reflect the fact that traders registered for NES on the 30th June 2009 should continue to quote their TURN on the GovTalk Envelope after 1st July 2009.	John Griffith
1.5	15/06/2009	Update URL in section 2.4.3 and email address in section 2.4.4.	John Griffith
1.6	16/01/2013	External links updated. Some general tidying up. Changes to reflect use of username and password for Gateway authentication.	Paul Carey
1.7	24/03/2020	Removed references to use of Digital Certificates and updated Test Service registration process. Updated external references.	Colin Wallace

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1. Introduction

1.1 Background

NES consists of three channels for traders to make export declarations etc., they are:

- e-mail Channel – the delivery of EDIFACT data over an SMTP/X.400 protocol.
- Web Channel – a browser based application available over the internet
- XML Channel – the deliver of EDIFACT data, wrapped inside an XML Document delivered over HTTPS

For more information on the National Export System please visit:

<https://www.gov.uk/guidance/export-declarations-and-the-national-export-system-export-procedures>

1.2 Overview

The XML Channel is a Business-to-Government (B2G) solution that integrates Traders systems with HM Customs & Excise export processing system (CHIEF).

The XML Channel provides an asynchronous message based dialogue that can converse application-to-application.

Some key features are: open standards of XML, HTTPS, reliable messaging, and secure messaging.

This document describes how to integrate and benefit from this solution.

1.3 Audience

This document is intended for third parties wishing to exchange data electronically with HMRC National Export System.

This is a technical document that contains the low-level details that typically architects, designers and developers would require during the software development life-cycle.

1.4 Requirement Classification

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document apply to the client application and are to be interpreted as described in RFC 2119 (see Ref.9)

1.5 Typographical Conventions

Element and attribute names are presented in italics, e.g. *CorrelationID*. Note that this applies to the names; when referring to a value, either the textual description "Correlation ID" or a term such as "the value of the *CorrelationID* element" is used.

Literal values are shown in bold. For example, "the value of the Qualifier must be set to **request**".

XPath expressions are used to identify elements. These are not full expressions, but the subset required to make it obvious which element is being referred to. For example, the type of an error is shown as Error/Type, not GovTalkMessage/GovTalkDetails/GovTalkErrors/Error/Type.

1.6 Hyperlinks

The hyperlinks provided in this document are accurate at the time of writing this document, however, these links may change and may not be maintained in this document.

1.7 Terminology

Please note the following definitions:

Term	Definition
Trader	A Trader in the context of this document is a person(s) wishing to use the NES functionality via the XML Channel. This includes, but is not exclusive to the following; Exporter, Agent, Principal, Consignor, Consignee, Declarant, Software Vendor, User, etc.

This is a technical document that uses many technical terms and acronyms. A Glossary is provided (see section 7) where applicable.

2. NES XML Channel

2.1 Data Standards & Protocols

The NES XML Channel supports open data standards and protocols.

UK Export declarations etc. are processed in CHIEF, the only data standard supported by CHIEF is EDIFACT. To maintain compatibility and support the large existing Trader base of this protocol the NES XML Channel also supports EDIFACT.

In essence the NES XML Channel is more accurately defined as the NES XML/EDIFACT Channel. The XML Document created simply "wraps" an NES EDIFACT message. This approach was a tactical decision after wide consultation internally and externally with the Trade and other Government bodies.

2.1.1 EDIFACT

This standard comes from the original EDI standard which has been established in the early 1980s. Almost as quick as networked computers became common place in the business, the need for electronic communication with trading partners arose.

In the early days of EDI implementation, the structure of the individual messages was simply agreed between trading partners. However, as proprietary structures inhibited

wider adoption with other trading partners, across industries and indeed across national barriers the need for an international standard became apparent.

By 1985 two standards had been established ANSI ASC X12 in North America and GTDI in Europe. This created difficulty for international trade and this was raised at the United Nations Working Party on the Facilitation of International Trade Procedures – a committee responsible for streamlining costly procedures and developing standard documentation. In 1986 the UN approved what is today known as EDIFACT, a single international EDI standard flexible enough to meet the needs of government and private industry. Today EDIFACT has matured and is the de facto standard for all countries undertaking international trade.

2.1.2 XML

Whilst EDI established the principle of electronic data exchange the limitation in network bandwidth meant the standard was highly codified, difficult to read and only really visible for application-to-application. Hence, the adoption of EDI is expensive and has been exclusive to the larger organisations.

With an increase in bandwidth a new standard has emerged that is much more verbose and human readable, namely XML. The origins of XML link back to SGML as with HTML. However, where HTML concentrates on presenting data, XML concentrates on representing data.

The standard of XML is published by W3C and has benefited from the success of the Internet. It is much cheaper to implement with many software components being freely available. Today this standard has many supporting standards such as, XSLT, DTD, XSD, XPATH etc.

2.1.3 HTTPS

Whilst both EDIFACT and XML are standards for representing data structures, neither relate to the vehicle by which they are sent and/or received between applications. With the success of the Internet the de-facto standard for this has become HTTP.

HTTP is a transport protocol for communicating between machines, typically a Web Site address will start with HTTP as this is the method for delivering HTML pages.

In a similar fashion the XML data is delivered over HTTP. Where a web browser would display the HTML a web application will process the XML and return the XML message.

The secure version of HTTP uses SSL/TLS to encrypt the XML data before sending. This is widely known as HTTPS.

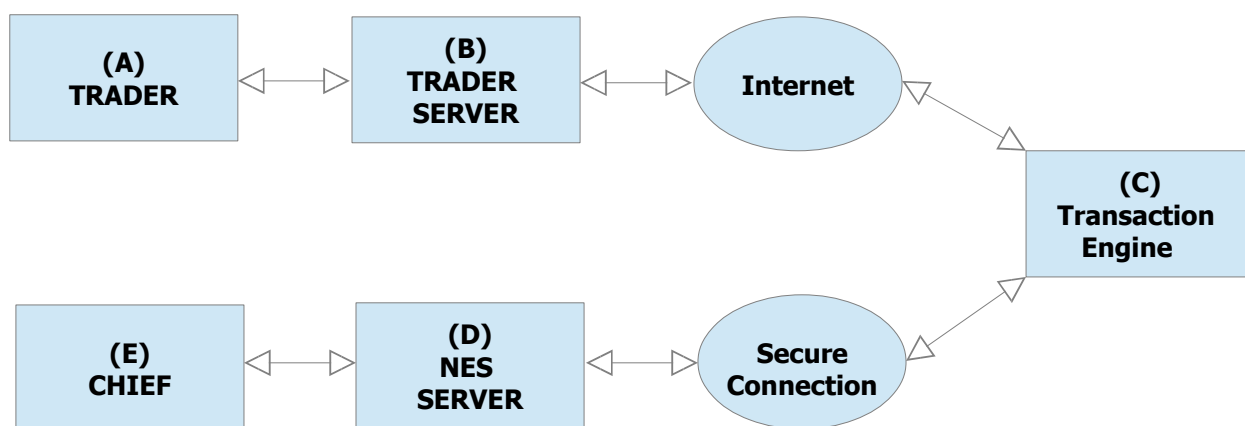
2.2 Registration Process

To use the NES Service the Trader is required to complete the registration process. The following are the major steps, for the test service some of these steps are different.

Step	Description
1	Obtain an EORI Number. All Traders must have an EORI Number, if you currently don't have an EORI Number please contact the EORI Team (for contact details see the Tariff Volume 3, Part 2 introduction).
2	Register for a CHIEF Role / Location. To obtain access to CHIEF the Trader must complete an application form. This can be obtained by emailing CHIEF operations at: chief.operations@hmrc.gov.uk . Test Service – The Trader must specify for the CHIEF Test Service, HMUT.
3	Enrol for the NES Service at GOV.UK (https://www.gov.uk/). To enrol for the NES Service the Trader is required to have two "known-facts" these are the TURN and the CHIEF Role and are acquired in steps 1 and 2 above. HMRC will automatically issue an Activation PIN. This will be addressed to the Managing Director of the registering company.
4	Activate the NES Service. The Trader will be required to log-in to the Government Gateway and "activate" the NES Service using the Activation PIN.

2.3 Components

The following diagram illustrates a logical view of the major components that comprise the NES XML Channel.



These components are bi-directional, each component is described below:

Component	Description
A	<p>Trader</p> <p>This component represents the PC based application that the Trader will use to submit NES data. The specific software used will be bespoke, either a third party product or an in-house developed application.</p>
B	<p>Trader Server</p> <p>This component will be responsible for the integration aspects between the Traders application and the Transaction Engine. Some example functionality is; building the EDIFACT data, creating the XML Document and conversing with the Transaction Engine.</p>
C	<p>Transaction Engine</p> <p>This component is the sole point of contact for sending NES data and receiving responses. The Transaction Engine implements a protocol known as the Submission Document Protocol (section 2.4.3 below). The Transaction Engine communicates with HMRC systems over a secure connection.</p>
D	<p>NES Server</p> <p>This component is a middle-ware component that integrates the incoming message to fit the back-end processing. Some example functionality is; to validate the incoming XML Document and extract the EDIFACT message ready for processing.</p>
E	<p>CHIEF</p> <p>This component is the back-end engine where all NES data is processed and responses generated.</p>

2.4 Government Gateway

The Government Gateway is a "centralised registration service for e-Government services in the UK."

When you have registered with the Government Gateway it enables you to sign up for any of the UK Government services that are available over the Internet. With a single User ID you can use a host of different Government services, from Self Assessment, PAYE, VAT to local Government services.

For more information on this and the different services please visit: <https://www.gov.uk/>

2.4.1 Transaction Engine

The Transaction Engine provides the security layer for the NES Service, both the NES Web Channel (see ref. 8) and the NES XML Channel.

To use either of these Channels the Trader is required to register at GOV.UK (<https://www.gov.uk/>).

2.4.2 GovTalk Envelope

The GovTalk Envelope is the XML Document that is created by the Traders system and sent to the Government Gateway. It contains some header information that requests the use of the NES XML Channel, authentication information and the body element which contains the EDIFACT data (e.g. a NES declaration).

An example of this document is provided in Appendix A. The following elements of this document should be noted.

Element	Description
<Class>HMCE-NES-EDIFACT</Class>	This element and value is specific for the NES XML Channel.
<GatewayTest>1</GatewayTest>	Use this element to switch between the Live Government Gateway service (0) and the Test Government Gateway service(1).
<SenderID> <i>username</i> </SenderID>	This element contains the user name that is created when you register at the Government Gateway
<Value> <i>password</i> </Value>	This element contains the password you chose when registering at the Government Gateway
<Keys> <Key Type="ROLE"> <i>role</i> </Key> <Key Type="TURN"> <i>turn</i> </Key> </Keys>	These elements are allocated during registration and used to activate the NES XML Channel.
<Body>	This is the most important element of the XML Document. The contents of this element are defined in this document.

2.4.3 Submission Document Protocol

Once registered the Trader is able to communicate with the Transaction Engine by way of this Submission Document Protocol. This protocol defines the nature and the content of the dialogue that can take place between the Traders system and the Transaction Engine.

The document defines the XML messaging that is required in submitting NES data and receiving a response.

This document MUST be read, it is available from:

www.gov.uk/government/publications/transaction-engine-document-submission-protocol

2.5 Example Development Steps

The following are example logical development steps that SHOULD be taken to complete the integration of the NES XML Channel.

Step	Description
1	Create the NES data in EDIFACT format. This format is defined in a series of CHIEF documentation, please review the CHIEF home page and the CHIEF user guides (see Ref. 10).
2	Wrap the EDIFACT inside an XML "SubmissionDeclaration" Document and populate the attributes of the Context element with the correct information. See the NES technical pack for a link to this schema: https://www.gov.uk/topic/dealing-with-hmrc/software-development
3	Create the XML GovTalk Document and append the SubmissionDeclaration element inside the Body element. See the NES technical pack for a link to this schema: https://www.gov.uk/government/collections/national-export-system-xml-channel-support-for-software-developers
4	Send the XML GovTalk Document to the Transaction Engine. Sending is done over the HTTPS protocol. The URL for LIVE is: https://transaction-engine.tax.service.gov.uk/submission . The URL for TEST is: https://test-transaction-engine.tax.service.gov.uk/submission .
5	An acknowledgement message will be received from the Transaction Engine that is a receipt for the submission. This message contains a Correlation ID that uniquely identifies the submission and MUST be retained for future reference. If the XML GovTalk Document is incorrectly formatted, or the given credentials fail authentication then this message will be rejected. An appropriate error response will be returned. See section 2.4.3 Submission Document Protocol for further information.

6	<p>At this point the message will be sent from the Transaction Engine to HMRC where the EDIFACT data will be extracted and processed within CHIEF. Whilst this is occurring the Trader system remains suspended with periodic Polls to see if a response has been received at the Transaction Engine. Once CHIEF has processed the data a response EDIFACT will be sent, wrapped in the original XML message and sent back to the Transaction Engine where it will be stored. The Trader system will be able to Poll and retrieve the response message and store it locally.</p> <p>Once the message is stored the Trader system can delete the message at the Transaction Engine.</p> <p>See section 2.4.3 Submission Document Protocol for further information.</p>
7	<p>The response EDIFACT can be extracted out of the XML Document and processed within the Trader system.</p>

2.6 The XML Schema Document

The XML Schema Document language used is defined by the W3C XML Schema Working Group and is outlined in the documents; ref. [1, 2 and 3]. Some key aspects of this are addressed here.

The XML Data Document is an instance of the XML Schema Document. The two documents are separate documents. The XML Data should reference the XML Schema Document.

2.6.1 Data Definitions

A namespace allows a mark-up vocabulary to be recognised as belonging to a certain industry/organisation. This enables attributes and elements of the same name to be distinguished. The following namespace's will be used:

```
targetNamespace="http://www.govtalk.gov.uk/schemas/businessandindustry/international
trade/exportsandimports"          xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:gt="http://www.govtalk.gov.uk/CM/govtalk/core"
xmlns="http://www.govtalk.gov.uk/schemas/businessandindustry/internationaltrade/expor
tsandimports"
```

2.6.2 Version Control

Version control will be maintained on all Schema documents. An attribute named version will exist on the root node of the schema. Released schemas will have a version number in the form n.m (e.g. 1.2), while drafts will have a version number of the form n.ma (e.g. 1.2b).

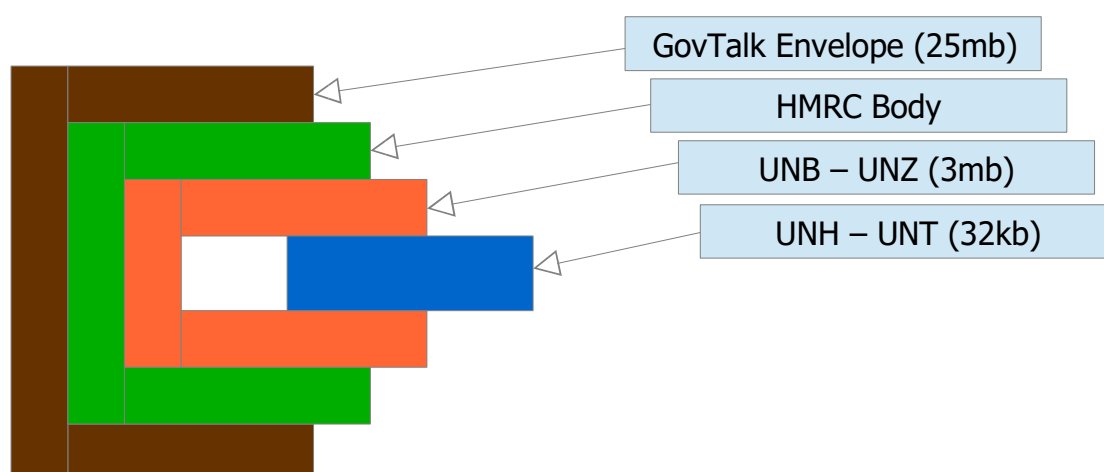
The major version number (n) will be changed when the change from the previous schema version will cause existing documents to fail validation against the new version. This could occur, for example, if a new mandatory element is added. The minor version number (m) should be updated when the change to the schema will result in all existing documents continuing to validate, for example, addition of a new optional element.

The version letter (a) should change every time a new draft is issued. In the example above, the version 1.2b is the second draft based on an existing release 1.2 and will lead to a new release 1.3 or 2.0.

Pre-release schema will have a version number in the format 0.m. Different iterations of the draft will increment the value of 'm' until a baseline version is published at version 1.

2.7 GovTalk Body Structure

The GovTalk XML Document is built up of several parts, the following diagram illustrates:



The essential part of this document is the body, this is where an NES XML document is embedded to conform to the NES schema. As we are embedding EDIFACT we have a couple of subsequent indentations. The first is the UNB-UNZ the envelope of the EDIFACT messages and then there is the UNH-UNT actual data. This last block is a repeating block.

2.7.1 Size

The XML Document has several size constraints these are as follows:

Component	Limit	Element
Transaction Engine	23.8 MB	GovTalk Envelope
NES Server (EDCS)	3 MB	UNB – UNZ

CHIEF	32k	UNH - UNT
-------	-----	-----------

A single UNH-UNT block can be up to 32k, however, many of these can be wrapped into a single UNB-UNZ block to create a maximum file size of 3Mb.

Therefore, the maximum size of a single NES message is 32k. However, if multiple NES messages were to be added to the single transmission then the maximum message size is 3Mb. It is strongly recommended that smaller files sizes of no greater than 100k SHOULD be used.

2.7.2 EDIFACT

The EDIFACT inbound, supported by this channel, MUST be formatted to UNOA standard.

Elements are separated by plus signs '+'

Sub-Elements are separated by colons ':'

2.7.3 UNH-UNT

The maximum size of a UNH-UNT block is 32k, this limit is set in CHIEF, the average size of a UNH-UNT is 500 bytes. The following is an example message:

```
UNH+2+CUSDEC:2:912:UN:109121'BGM+FDE:105:109'CST+
+EX:104:18'RFF+ABE:JOEBLOGGS'RFF+ABO:1BOX~n'LOC+28:US:162'LOC+14:LHR:156::
:EIS::109'LOC+18:0101028::109'DTM+189::~di:102'TDT+13+
+40+:::BOAT::GB'GIS+N:105:109'GIS+1:G15:109'NAD+EX+417869120000::109'NAD+C
N
++
+SMUGGLERSANDCO'NAD+DT+155313583000::109'NAD+CZ+387345516000::109'MOA+
5+123::GBP'UNS+D'CST+
+317119:117+98000000:122+9000:G23'MOA+5+123:200'MEA+AAH+
+KGM:500'MEA+AAR++G13:300'RFF+ZZ'IMD'FTX+AA+++BOOKS'DCR++IP:A999'DCR+
+DM:A2'GDS'FTX+AAZ+++NESEXPORTER'UNS+S'CNT+11:20'UNT+32+2'
```

2.7.4 UNB-UNZ

The maximum size of a UNB-UNZ block is 3Mb, this limit is set in EDCS. The following is an example:

```
UNB+UKCZ:1+UserRoleHere::UserLocHere+EDRCHIEF+010913:1240+fde1+
+CHIEFTEST++++0'
```

```
UNH....UNT
```

```
UNH....UNT
```

```
.....
```

```
UNZ+3+fde1'
```

This section of the message will be checked to ensure the ROLE and LOCATION being used is the same as those used in the Context element of the NES XML wrapper.

2.7.5 Use of TURN superseded by EORI Number

The Trader Unique Reference Number (TURN) system ceased in the UK on 30th June 2009. It has been replaced by a system called Economic Operator Registration and Identification (EORI).

The vast majority of traders with non-branch TURNs were issued EORI Numbers based on their current TURNs. Traders with branch TURNs were advised by HMRC that they need to use the EORI Number issued to their parent company.

UK EORI Numbers shall be formatted as follows:

'GB' + 12 digit Economic Operator National Identifier

The Economic Operator National Identifier field in a trader's EORI Number is populated with the Trader's current 12 digit TURN.

2.7.5.1 NES Trader Submission Declaration messages

The NES XML interface was not modified to replace TURN fields with EORI Number fields. This means that all NES Traders should populate TURN fields in NES XML messages (other than the GovTalk Envelope -see below) from the 12 numeric digits contained within the Trader's UK EORI Number (which is in effect their previous TURN).

2.7.5.1.1 Authentication and Role access for Traders registered for NES prior to 30th June 2009

NES Roles in existence on CHIEF on the 30th June 2009 will continue to operate after the 1st July 2009, irrespective of whether the TURNs associated with the Roles are full TURNs or branch TURNs.

This means that NES Traders registered for NES prior to the 30th June 2009 should CONTINUE TO QUOTE THEIR ORIGINAL TURN in the GovTalk Envelope message. For example, if a NES Trader has a branch TURN of '123456789123' on the 30th June 2009 then they should continue to quote this TURN in the GovTalk Envelope message from 1st July 2009 onwards.

The example Trader above with the branch TURN will have been informed by HMRC that they will not be issued with an EORI Number to replace their branch TURN. They will have been informed that they must use the EORI Number assigned to their parent company (GB 123456789000) for the submission of Declarations.

2.7.5.1.2 Authentication and Role access for Traders registered after 30th June 2009.

Traders registered for NES after the 30th June 2009 should populate the TURN field in the GovTalk Envelope with the 12 numeric digits contained within their UK EORI Number.

3. Schema Documents

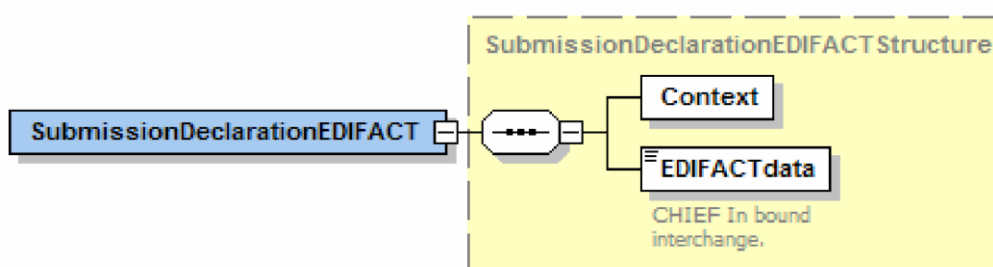
The Schema Document is represented by a single XSD.

The Schema Document represents the valid XML Messages that the NES Channel supports. The following is a listing of the XML Messages:

XML Document	Version	Description
SubmissionDeclarationEDIFACT	1.1	This is the main XML Document for wrapping EDIFACT NES data.
NESRequest	1.0	This is a new schema that supports a list of new functions. See below for further information.
NESResponse	1.0	This is a new schema that supports a list of new functions. See below for further information.

3.1 SubmissionDeclarationEDIFACT

This is essentially made up of two elements; Context and EDIFACTData.



The Context element has 7 attributes from the UNB segment of the EDIFACT message. A description of the attributes is given in the following table:

Attribute	Description
Role	CHIEF Role ID. (e.g. THSAXAX)

Location	CHIEF Location (e.g. LOCWEBAXAX)
ApplicationService	The CHIEF Application service required; Live or Test
Mode	The 'purpose' of access; Operational or Training
Date	The date (yyyy-mm-dd) the NES data was prepared.
Time	The time (hh-mm-ss) the NES data was prepared.
InterchangeControlReference	The ICR is a unique reference allocated by the sender to the interchange

The EDIFACTData element contains the EDIFACT data.

Please note the following:

- The Trader MUST be a registered user of the NES System.
- The data in the Context node MUST correspond to the data in the EDIFACTData Node.

3.2 NESRequest – E-Mail Resend

This functionality enables the request for resending e-mails. The following messages are supported:

Message	Description/Example
RequestCUSRESListing	<p>This request enables a listing of all Responses (including CUSRES) for a given period. This functionality is ONLY applicable to the CUSDECs made over the e-mail channel. The following data items need to be completed for this: role, location, fromDate, fromTime, toDate, toTime, ICR Content attribute can have the following values: Begins, Contains, Ends.</p> <pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="RequestCUSRESListing"> <RequestData> <Data Type="role">EDCANY</Data> <Data Type="location">EDCANY001</Data> <Data Type="fromDate">07/01/2000</Data> <Data Type="fromTime">00:00:00</Data> <Data Type="toDate">08/01/2000</Data> <Data Type="toTime">00:00:00</Data> <Data Type="ICR" Content="Begins">144</Data> </RequestData> </NESRequest> </Body> </pre>

RequestReportListing	<p>This request enables a listing of all the Unsolicited Reports for a given period. This functionality is applicable for CUSDECs delivered over any of the three NES Channels.</p> <p>The following data items need to be completed for this: role, location, fromDate, fromTime, toDate, toTime</p> <pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="RequestReportListing"> <RequestData> <Data Type="role">THS2ZBZ</Data> <Data Type="location">LOCEDC1ZBZ</Data> <Data Type="fromDate">01/06/03</Data> <Data Type="fromTime">00:00:00</Data> <Data Type="toDate">23/06/03</Data> <Data Type="toTime">00:00:00</Data> </RequestData> </NESRequest> </pre>
	<pre> </Body> </pre>
RequestCUSRESResend	<p>This request enables the resend of the CUSRES document. This functionality is ONLY applicable to the CUSDEC's made over the e-mail channel.</p> <p>These reports are automatically e-mailed to the Trader, however, this functionality enable re-delivery.</p> <p>The following data items need to be completed for this: role, location, record_id</p> <pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="RequestCUSRESResend"> <RequestData> <Data Type="role">EDCANY</Data> <Data Type="location">EDCANY001</Data> <Data Type="record_id">900304521:0:0:0</Data> </RequestData> </NESRequest> </Body> </pre>

RequestReportResend	<p>This request enables the resend of the Unsolicited Reports. These reports are automatically e-mailed to the Trader, however, this functionality enable re-delivery.</p> <p>The following data items need to be completed for this: role, location, record_id</p> <pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="RequestReportResend"> <RequestData> <Data Type="role">THS2ZBZ</Data> <Data Type="location">LOCEDC1ZBZ</Data> <Data Type="record_id">900304521:0:0:0</Data> </RequestData> </NESRequest> </Body> </pre>
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3.3 NESResponse – E-mail Resend

The following messages are supported:

Message	Description/Example
RequestCUSRESListing	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="CUSRESListing"> <Response>No results found for this query.</Response> </NESResponse> </Body> </pre>
	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="CUSRESListing"> <Response>Too many results returned for this query.</Response> </NESResponse> </Body> </pre>

	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="CUSRESListing"> <Report> <creation_date>07/01/2000 13:11:53</creation_date> <ICR>14463</ICR> <service>EDRCHIEF</service> <training/> <record_id>100000:1:1:1</record_id> </Report> <Report> <creation_date>07/01/2000 13:13:45</creation_date> <ICR>14464</ICR> <service>EDRCHIEF</service> <training/> <record_id>100003:1:1:1</record_id> </Report> </NESResponse> </Body> </pre>
RequestReportListing	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="ReportListing"> <Response>No results found for this query.</Response> </NESResponse> </Body> </pre>
	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="ReportListing"> <Response>Too many results returned for this query.</Response> </NESResponse> </Body> </pre>

	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="ReportListing"> <Report Type="DTI-X2"> <creation_date>02/06/2003 15:33:47</creation_date> <report_type>DTI-X2</report_type> <declaration_ucr>3GB444075753-A3199</declaration_ucr> <declaration_part_no>U</declaration_part_no> <record_id>900291642:0:0:0</record_id> </Report> <Report Type="DTI-P2"> <creation_date>02/06/2003 07:05:00</creation_date> <report_type>DTI-P2</report_type> <declaration_ucr>3GB949031319000-86025431- 29</declaration_ucr> <declaration_part_no>D</declaration_part_no> <record_id>900304521:0:0:0</record_id> </Report> </NESResponse> </Body> </pre>
RequestCUSRESResend	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="RequestReportResend"> Resend request accepted. </NESResponse> </Body> </pre>
	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="RequestCUSRESResend"> Resend request accepted. </NESResponse> </Body> </pre>

3.4 NESRequest – Amend Trader Details

This functionality enables the request for amending specific details. The following messages are supported:

Message	Description/Example	
GetTraderData	This request enables a Trader to retrieve his/her own standing data from the NES System.	
	Data Items	Description
	turn	The Trader Unique Reference Number. See section 2.7.5 for details on how to populate the TURN field.

	<pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="NES_GetTraderData"> <RequestData> <Data Type="turn">128189746000</Data> </RequestData> </NESRequest> </Body> </pre>								
AmendTraderGeneralData	<p>This request enables a Trader to amend his/her Public Broadcast SMTP E-mail address. (If you use an x.400 e-mail address please e-mail the current and revised details to chief.operations@hmrc.gov.uk)</p> <table> <tr> <th>Data Items</th><th>Description</th></tr> <tr> <td>oldPSB</td><td>The old SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.</td></tr> <tr> <td>newPSB</td><td>The new SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.</td></tr> <tr> <td>turn</td><td>The Trader Unique Reference Number. See section 2.7.5 for details on how to populate the TURN field.</td></tr> </table> <pre> <Body> <NESRequest xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="NES_AmendTraderGeneralData "> <RequestData> <Data Type="turn">128189746000</Data> </pre>	Data Items	Description	oldPSB	The old SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.	newPSB	The new SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.	turn	The Trader Unique Reference Number. See section 2.7.5 for details on how to populate the TURN field.
Data Items	Description								
oldPSB	The old SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.								
newPSB	The new SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.								
turn	The Trader Unique Reference Number. See section 2.7.5 for details on how to populate the TURN field.								
	<pre> <Data Type="oldPSB">SMTP=nes2002test@hotmail.com</Data> <Data Type="newPSB">SMTP=nes2002test@hotmail.comIETest</Data> </RequestData> </NESRequest> </Body> </pre>								

AmendTraderRoleData	<p>This request enables a Trader to amend his/her own standing data.</p> <p>For each of the CHIEF services (CIES = Live Service, HMUT = Test Service) you can:</p> <p>a) Change the e-mail address to which (e-mail, web and XML) reports and (e-mail) responses are sent, to a new SMTP address (if you want to use an X400 e-mail address please email the current and revised details to chief.operations@hmrc.gov.uk);</p> <p>b) Change the format of reports to/from Text and EDIFACT; and</p> <p>c) For EDIFACT reports define the reports to be sent as character set A or B.</p>
Data Items	Description
turn	The Trader Unique Reference Number.
role	CHIEF role
chiefService	CHIEF Service ("CIES" = Live Service, "HMUT" = Test Service)
newUSO	The SMTP e-mail address, this must be prefixed with "SMTP=" and must be a valid address.
newRptType	1=Text, 2=EDIFACT
newEdiType	0=Null (only if newRptType =1) 1=UNOA, 2=UNOB (only if newRptType =2)
channelType	EMAIL, XML, WEB
<Body> <NESRequest	

	<pre>xmlns="http://www.hmce.gov.uk/internationaltrade" RequestType="NES_AmendTraderRoleData"> <RequestData> <Data Type="turn">128189746000</Data> <Data Type="role">THSAABY</Data> <Data Type="channelType">EMAIL</Data> <Data Type="newUSO">SMTP=al@EM.com test</Data> <Data Type="newRptType">1</Data> <Data Type="newEdiType">1</Data> <Data Type="chiefService">CIES</Data> </RequestData> </NESRequest> </Body></pre>
--	---

3.5 NESResponse – Amend Trader Details

The following response messages are supported:

Message	Description/Example
RetrieveTraderDetails	<p>The response will be all the data held for the Trader.</p> <pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="TraderData"> <trader_data trader_turn="128189746000" trader_name="Read & Sutcliffe Ltd" psb_email="SMTP=andylawrence@rsboston.coma@b.com"> <trader_role trader_role="THSAABY"> <chief_service>TEST</chief_service> <role_type_description>DECLARANT</role_type_description> <channel_type_description channel_type="EMAIL"> <trader_location>LOCEDCAABY</trader_location> <uso_email>SMTP=andylawrence@rsboston.com</uso_email> <report_type>1</report_type> <edifact_type>0</edifact_type> </channel_type_description> <channel_type_description channel_type="WEB"> <trader_location>LOCWEBXXXX</trader_location> <uso_email>SMTP=graham@mayflowershipping.co.uk</uso_email> <report_type>1</report_type> <edifact_type>0</edifact_type> </channel_type_description> </trader_role> <trader_role trader_role="THSAAJD"> <chief_service>LIVE</chief_service> <role_type_description>DECLARANT</role_type_description> <channel_type_description channel_type="WEB"> <trader_location>LOCWEBXXXX</trader_location> <uso_email>SMTP=rsboston@compuserve.com</uso_email> <report_type>1</report_type> <edifact_type>0</edifact_type> </channel_type_description> </trader_role> </trader_data> </NESResponse> </Body> </pre>
NES_AmendTraderRoleData	<p>Upon completing an update the following response will be returned.</p>

	<pre> <Body> <NESResponse xmlns="http://www.hmce.gov.uk/internationaltrade" ResponseType="AmendmentDone"> </pre>
	<pre> <AmendmentMessage/> </NESResponse> </Body> </pre>

3.6 NES Error Response

The following is an example of an error message. There are two levels of errors; Transaction Engine and NES. The former relates to the document as a whole whilst the latter only concentrates on the body section of the document. (Errors can also be returned at the EDIFACT level from EDCS or CHIEF, these errors are covered in the respective specifications.)

The following is an example error message generated at the NES level. (For errors at the Transaction Engine level please see Section 6 (reference 12), the Submission Document Protocol.)

```

<?xml version="1.0"?>
<GovTalkMessage xmlns="http://www.govtalk.gov.uk/CM/envelope">
  <EnvelopeVersion>2.0</EnvelopeVersion>
  <Header>
    <MessageDetails>
      <Class>HMCE-NES-EDIFACT</Class>
      <Qualifier>error</Qualifier>
      <Function>submit</Function>
      <TransactionID/>
      <CorrelationID>6993D1ED18E245B29D62A6E20BB56640</CorrelationID>
      <ResponseEndPoint PollInterval="10">https://test-transaction-
engine.tax.service.gov.uk/submission</ResponseEndPoint>
      <Transformation>XML</Transformation>
      <GatewayTimestamp>2019-10-07T15:12:35.094</GatewayTimestamp>
    </MessageDetails>
    <SenderDetails/>
  </Header>
  <GovTalkDetails>
    <Keys/>
    <GovTalkErrors>
      <Error>
        <RaisedBy>Department</RaisedBy>

```

```

<Number>3001</Number>
<Type>business</Type>
<Text>The submission of this document has failed due to
departmental specific business logic in the Body tag.</Text>
</Error>
</GovTalkErrors>
</GovTalkDetails>
<Body>
  <ErrorResponse
xmlns="http://www.govtalk.gov.uk/schemas/businessandindustry/internationaltrade/exportsandimports">
    <Application/>
    <Error>
      <RaisedBy>HMCE</RaisedBy>
      <Number>1000</Number>
      <Type>business</Type>
      <Text>NES_STATUS_1:Trader_Failure Follows:XML Parse
Error:::Error parsing '201-08-15' as date datatype.attribute: 'Date' has an invalid value according to its data type.
_Position:0_Position:0 </Text>
      <Location/>
    </Error>
  </ErrorResponse>
</Body>
</GovTalkMessage>

```

The following errors are raised by the NES Service:

Error	Description
1000	General system error
1001	Message validation error – the data in the EDIFACT must match with the context element.
2000	User access check – the certificate used must have access to the keys noted.
3030	Failed to process, please check message and try again.

4. Support

4.1 Service Level Agreement

This service is a 24 hour 7 days a week service.

Any planned outage will be announced as soon as possible by e-mail to your Public Broadcast e-Mail address.

A single NES message will be processed within 10 minutes of submission. (Where a batch of NES messages is made, the first one will be processed within 10 minutes however a response will not be generated until the last message is processed, this may be more than 10 minutes.)

4.2 Help Desk

In the event of a problem please contact the Excise & Customs helpline. Contact details can be found on this page: <https://www.gov.uk/government/organisations/hm-revenue-customs/contact/customs-international-trade-and-excise-enquiries>

When contacting the Help Desk please clearly state that your enquiry is regarding "NES" and specifically the "NES XML Channel" and provide as much information as possible, such as your EORI(TURN), Role, Correlation ID etc.

5. Test Service Registration

A dedicated test service is available which is to be used during the development phase.

To use this service the following must be completed:

Steps	Description
1	To use the NES XML HMUT service, you must first obtain an XML Channel Test 'Role' by completing an application form, which is available from CHIEF Operations by e-mail: chief.operations@hmrc.gov.uk
2	Email the completed form to chief.operations@hmrc.gov.uk .
3	CHIEF Operations will confirm by email the Badge number, Route, Location codes and credentials.
4	Submit your XML Test documents to the following URL: https://test-transaction-engine.tax.service.gov.uk/submission

6. Reference

No.	Reference
1.	XML Schema Part 0: Primer http://www.w3.org/TR/xmlschema-0/
2.	XML Schema Part 1: Structures http://www.w3.org/TR/xmlschema-1/
3.	XML Schema Part 2: Datatypes http://www.w3.org/TR/xmlschema-2/
6.	Transaction Engine: https://www.gov.uk/government/publications/transaction-engine-document-submission-protocol
7.	World Customs Organisation: G7 documentation (accessible to members only) members.wcoomd.org
8.	NES Web Channel - https://www.gov.uk/guidance/export-declarations-and-the-national-export-system-export-procedures
9.	Key words for use in RFCs to Indicate Requirement Levels http://www.ietf.org/rfc/rfc2119.txt
10.	CHIEF & EDIFact Documentation https://www.gov.uk/government/collections/chief-user-guides-and-technical-specifications
11	Transaction Engine – Test Service for ISV https://test-transaction-engine.tax.service.gov.uk/submission
12	Submission Document Protocol This document details the dialogue between the Trader system and the Government Gateway. It is available from: https://www.gov.uk/government/publications/transaction-engine-document-submission-protocol
13	NES Live Web Site: https://www.gov.uk/export-declarations-and-the-national-export-system-exportprocedures