

Notice of Arrival/Departure (NOAD)



White Paper

March 15, 2022

1. PURPOSE

The *Notice of Arrival/Departure (NOAD) White Paper* is intended to provide software (SW) development guidelines. This document also discusses the electronic data submission requirements of NOADs.

NOADs are required in response to federal regulations promoting maritime safety for vessels, along with their crew and passengers arriving to and departing from the United States (U.S.). The following regulations direct the NOAD process.

1.1 The U.S. Coast Guard (USCG) and U.S. Customs and Border Protection (CBP) Regulations Involved

All vessels required by [*33 Code of Federal Regulations \(CFR\) Part 160*](#) and vessels operating where the local Captain of the Port (COTP) has established additional rules requiring increased reporting must submit a NOAD to the National Vessel Movement Center (NVMC) before arrival to and departure from any U.S. port.

33 CFR 160 (final rule effective 30 April 2015) expands the applicability of NOA and Automatic Identification System (AIS) requirements to include more commercial, as well as private, vessels. This final rule amends the applicability of NOA requirements to include additional vessels, sets forth a mandatory method for electronic submission of NOAs, and modifies related reporting content, timeframes, and procedures. The final rule also extends the applicability of AIS requirements beyond Vessel Traffic Service (VTS) areas to all U.S. navigable waters, and requires that additional commercial vessels install and use AIS, consistent with statutory requirements, and in limited cases, the Secretary's discretionary authority. Final rule 33 CFR 160, Subpart C, which contains requirements and procedures for submitting NOAs, as well as notices of hazardous condition, can be found by navigating to the USCG NVMC home page at <http://www.nvmc.uscg.gov/>, and then clicking the appropriate link(s) in the [Regulations](#) section.

33 CFR 104, 160, and 165 (dated 1 July 2003) provide security measures for certain vessels calling on U.S. ports. These CFR parts require the owners or operators of vessels to designate security officers for vessels, develop security plans based on security assessments, implement security measures specific to the vessel's operations, and comply with Maritime Security Levels. These regulation sections can be found at http://www.ecfr.gov/cgi-bin/text-idx?gp=&SID=85dbe340703e8bdb134fd2908d402228&mc=true&tpl=/ecfrbrowse/Title33/33ch_apter1.tpl.

33 CFR 164.35 (dated 1 July 2001) requires a vessel to indicate the operational condition of its equipment. This final rule can be found at http://www.access.gpo.gov/nara/cfr/waisidx_01/33cfr164_01.html.

33 CFR 146, Subpart E, addresses Safety and Security NOA filing for vessels arriving at a place on the Outer Continental Shelf (OCS). Final rule 33 CFR 146, Subpart E, can be found by navigating to the USCG NVMC home page at <http://www.nvmc.uscg.gov/>, and then clicking the appropriate link(s) in the [Regulations](#) section.

SOLAS 1974, Chapter IX, as amended, makes mandatory the International Safety Management (ISM) Code, requiring the ship owner or any person who has assumed responsibility for the ship (the Company) to establish a safety management system. Chapter IX was adopted in May 1994 and entered into force on 1 July 1998.

8 CFR Parts 217, 231, and 251, and 19 CFR Parts 4, 122, and 178 require each foreign or domestic vessel to provide an electronic transmission of passenger and crewmember manifest information to an immigration officer (immigration officers who perform inspection functions are now part of CBP) in advance of an aircraft or vessel arrival to or departure from the United States. This final rule can be found at <http://www.cbp.gov/bulletins/39genno17.pdf>.

WARNING: Use of the eNOAD Web application does not relieve submitters of the responsibility of knowing the regulatory requirements pertaining to their particular vessels and ensuring submission of a complete and accurate NOA/D as specified in the Code of Federal Regulations. Failure to timely and accurately comply with regulations may result in enforcement actions, including civil penalties. The USCG will not be held liable for any damages resulting from regulatory noncompliance of a vessel.

2. DEVELOPER REGISTRATION

Developer registration is free and allows access to all needed reference materials, as well as notifications of important information and planned changes/updates. The NVMC recommends developers and users sign up for the USCG NVMC List Server to receive notifications regarding information pertaining to the NVMC and the NOAD process/development. More information can be found at <https://www.nvmc.uscg.gov/>.

3. ACCESS AND AUTHENTICATION

An Access Token is provided via a check box on the Developer Resources homepage upon registering with the NVMC as an external developer. Registration is required to access the Developer Resources page of the NVMC Web site. The Token is GUID-generated and recorded at the time of registration by the NVMC. This Token must be transmitted in the SOAP headers for successful access to the development, test, and production WebServices. If the Token is not correct or not present, the Web Service methods return the string **Invalid or Missing Token**, and the submission will be discarded. If the token is not yet granted access to the environment you are attempting to use it in, the string **Access Denied** will be returned. A sample program that uses the SOAP Header Token Authentication method is available for download on the **Developer Resources->Resource File Downloads** page.

4. TOKEN ACTIVATION

Once you have registered your account and received your token, for either Testing or Production environments, you must activate the token prior to use. To have a token activated, please contact the NVMC via one of the methods located in the “Contact Us” page at:

<https://www.nvmc.uscg.gov>. Please note that no Production tokens will be activated until certain requirements are met (refer to [*Section 5, Testing and Production Environments*](#)).

5. TESTING AND PRODUCTION ENVIRONMENTS

Before having your access token activated to allow submissions to our Production environment, you must sign up for a Developer Resources account in our “Testing” environment at:

<https://testdeveloper.nvmc.uscg.gov> and utilize the token assigned to that account for submissions to our “Testing” NOAD web service located at:

<https://testnoad.nvmc.uscg.gov/noadwebservice/noadwebservice.asmx>.

When you have received your token for our “Testing” environment and NVMC has activated it, you may start making submissions to the NOAD web service address listed in the paragraph above. After our Engineering personnel have reviewed your submissions and determined your software is producing and sending NOAD data, which is of sufficient integrity, your Production token can be activated for use and the NVMC will be notified. At such time, you will then be able to start making live submissions to our “Production” NOAD web service located at:

<https://noad.nvmc.uscg.gov/noadwebservice/noadwebservice.asmx>

6. SUPPORTED DATA SUBMISSION METHODS

1. Direct Submission - The following data submission methods require a direct connection to the Internet:

- Electronic Notice of Arrival/Departure (eNOAD) Web site:
<https://enoad.nvmc.uscg.gov/>.
- WebService:
 - Web services are provided for direct data submission into both the Staging and Production systems. This is the preferred method for electronic data submission. The WebService interface consists of two methods:
 - **noadSubmit** takes as input one string parameter containing the input XML. The method returns a string containing the Globally Unique Identifier (GUID) assigned to the newly created record by the system. This GUID must be placed in the NOTICE_ID element of the XML for future updates to the record. An update submission should ignore the GUID that is returned.
 - **noadSubmitCompressed** takes as input one string parameter containing the input XML. The method returns a string containing the GUID assigned to the newly created record by the system. For update submissions, this GUID must be placed in the NOTICE_ID element of the XML, prior to compression. An update submission should ignore the GUID that is returned.

Compression is achieved through a custom attribute assembly (CompressionExtensionClientAttribute.dll), which must be placed on the sending computer in the application bin directory. This attribute must then be added manually to the attribute tag for the **noadSubmitCompressed** function in the **Reference.vb** file for the WebReference. The custom attribute utilizes a freeware third-party assembly (**SharpZipLib.dll**) for compression. This library must also be on the computer in the application bin directory. An example program developed with Visual Studio .NET 2003, which utilizes the compressed method, is available for download on the Developer Resources->Resource File Downloads page.

If for any reason the XML parse fails for either method the return string will be "Parse Failed".

The test NOADWebService is located at
<https://testnoad.nvmc.uscg.gov/noadwebservice/noadwebservice.asmx>.

You must contact the NVMC to ensure the token found in your Developer account is also valid in the test NOADWebService.

NOTE: *Having a valid, active account and token in the production environment does not equate to having one in the testing environment. If it is necessary for an account to be made active for submissions in testing, contact the NVMC.*

The production NOADWebService may be used ONLY after your files pass full testing using the test NOADWebService. The production NOADWebService is located at <https://noad.nvmc.uscg.gov/noadwebservice/noadwebservice.aspx>.

The NOADWebService is the preferred method for electronic data submission.

- Retirement of the USCG InfoPath template:

A USCG InfoPath template had previously been available for download on the NVMC Downloads page. The USCG InfoPath template was provided primarily as an offline version of the eNOAD Web site. Due to Microsoft (MS) retirement of support for the InfoPath product, the USCG will no longer maintain or distribute an InfoPath template for the purposes of creating NOAD submissions. As of 26 May 2015, this template is no longer available for download. Users who previously downloaded the USCG InfoPath template may continue to use this template for NOAD submissions until it is fully retired, which is anticipated in the Fall of 2015. The USCG InfoPath Template has a built-in **Submit** button that consumes the WebService and automatically submits the notice via that method. This functionality requires a direct connection to the Internet for the duration of the submission. If this submission method is used with InfoPath, it is not necessary to also e-mail the notice to the NVMC. The USCG InfoPath template has been fully tested by the USCG, and consumes only the production Web Service.

2. Indirect Submission - Indirect submission allows for the use of burst or manual e-mail.

- E-mail (Automated Processing):

E-mail addresses are available for electronic submission of data into both the test and production systems.

The test system e-mail address is oscsvc_nvmcparstage@uscg.mil.

The production system e-mail address is enoad@nvmc.uscg.gov.

Submissions should be sent to production ONLY after they have been fully tested. Submissions that do not meet the business rules may be rejected, causing the submitter to incur delays or other problems with his/her NOAD submission. The NOAD Business Rules are provided as a developer resource material. Refer to [Section 6, Reference Materials](#).

E-mail messages sent to the previous addresses must meet or work within the following requirements:

- E-mail messages that contain multiple attachments, and zip archives containing **XML** files, are permitted.
- Total size of the e-mail message, including all attachments, is limited to 15 MB.
- **XML** files, whether attached individually or included in a zip archive, must begin with the standard XML header line (beginning with <?xml version="1.0"). The e-mail parser checks for this line to determine whether the file contains XML content. Without this line, the file will be rejected as non-XML content.

- **XML** files, whether attached individually or included in a zip archive, must contain XML data that is validated against the NOAD business rules, as well as the published XML schema. Refer to [Section 6, Reference Materials](#). The XML parsing process validates the submitted XML against the NOAD_Schema.xsd file using the .NET XMLValidatingReader object. If it fails to validate, the attachment will be rejected.

***NOTE:** The InfoPath template XML validates.*

- If the XML data is properly formatted and does not contain a unique GUID in the NOTICE_ID element, one is auto-generated for the submission and provided back to the sender. This value is used to identify the record. The value must be maintained for use as the NOTICE_ID in future updates to the same record.
- The production system e-mail address is provided upon verification of successful test submissions.

7. DATA

1. XML Format:

- Standard XML 1.0 format
- Root Element = NOTICE

Sample **XML** files can be downloaded from the Developer Resources->Resource File Download page.

2. XML Restricted Characters:

The following is an excerpt from *Extensible Markup Language (XML) 1.0 (Third Edition)*:

W3C Recommendation 04 February 2004

2.4 Character Data and Markup

Text consists of intermingled character data and markup. [Definition: Markup takes the form of start-tags, end-tags, empty-element tags, entity references, character references, comments, CDATA section delimiters, document type declarations, processing instructions, XML declarations, text declarations, and any white space that is at the top level of the document entity (that is, outside the document element and not inside any other markup).]

[Definition: All text that is not markup constitutes the character data of the document.]

The ampersand character (&) and the left angle bracket (<) **MUST NOT** appear in their literal form, except when used as markup delimiters, or within a comment, a processing instruction, or a CDATA section. If they are needed elsewhere, they **MUST** be escaped using either numeric character references or the strings "&" and "<" respectively. The right angle bracket (>) **MAY** be represented using the string ">" and **MUST**, for compatibility, be escaped using either ">" or a character reference when it appears in the string "]]>" in content, when that string is not marking the end of a CDATA section.

In the content of elements, character data is any string of characters which does not contain the start-delimiter of any markup and does not include the CDATA-section-close delimiter, "]]>". In a CDATA section, character data is any string of characters not including the CDATA-section-close delimiter, "]]>".

To allow attribute values to contain both single and double quotes, the apostrophe or single-quote character (') **MAY** be represented as "'" and the double-quote character (") as """.

The above basically means the characters (&), or (<) cannot be used in data. (>), ('), or (") should not be used either. Use instead the escaped versions:

(&) = &

(<) = <

(>) = >

(') = '

(") = "

If these characters are used in data, the XML is not well-formed and cannot be reliably parsed - the submission will be rejected.

3. XML Schema:

Available for individual download on the Developer Resources->Resource File Downloads page

4. Business Rules:

Available for download on the Developer Resources->Resource File Downloads page

5. Validation Requirements:

Third-party developers are required to ensure their output XML has been fully validated (data and format) and is in full compliance with both the *NOAD Business Rules* document and the XML schema. A free XML validation tool is available within the Developer Resources section of the NVMC Web site. Additionally, the Import Notice feature of the NVMC eNOAD Web site contains an XML validator; the site also serves as an example of interface design for current schema. The eNOAD Web site is located at <https://enoad.nvmc.uscg.gov>; registration to this site is free.

6. Initial/Update Submissions:

The first **successful** submission of a notice is considered an Initial submission. If an Initial submission is rejected, the submission is not processed. Therefore, the subsequent submission attempt is also considered an Initial submission (as are any subsequent attempts until one is accepted successfully). Once a successful Initial submission has been accepted for a notice, subsequent changes to that successful Initial submission are considered Update submissions.

Changes made to Arrival Port name, Notice Type, Voyage Type, or change in Estimated Time of Arrival (ETA) by more than seven days from the last successfully submitted ETA requires a new Initial submission and a new NOTICE_ID.

8. REFERENCE MATERIALS

Reference materials for all third-party SW development can be obtained in the Developers Resources section of the NVMC Web site (<https://www.nvmc.uscg.gov/>). The **NOAD.ZIP** file contains the following files/projects:

1. **NOAD Business Rules.doc** – Describes the data format and business rules associated with each element in the XML schema (xsd).
2. **Agency_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
3. **Country_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
4. **Crew_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
5. **Gender_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
6. **Foreign_Port_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
7. **Fuel_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
8. **INA_Exemptions_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
9. **Interim_ISSC_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
10. **ISSC_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
11. **Measure_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
12. **Person_ID_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
13. **Port_State_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
14. **RSO.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
15. **Ship_ID_Type_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
16. **State_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the Business Rule *NOAD Business Rules*.
17. **UN_Number_List.xml** – Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.

18. **Vessel_Classification_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
19. **Vessel_Subtype_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
20. **Vessel_Type_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
21. **Visa_Status_List.xml** - Provides reference data values. The values in this file must be used in the XML as described in the *NOAD Business Rules*.
22. **USCG_ENOAD_Schema_3.8** - Current Schema.
23. **NOAD White Paper.pdf, White_Paper_Third_Party_Software_Development.doc** – This document.
24. **Authentication Example Project** – Example Visual Basic .NET project developed in Visual Studio .NET 2003 illustrating adding the authentication token to your Simple Object Access Protocol (SOAP) headers.
25. **Compressed Submission Method Example** – Example Visual Basic .NET project developed in Visual Studio .NET 2003 illustrating the use of the Web Service compressed submission method.

9. SUMMARY AND POINTS OF CONTACT

The *NOAD White Paper* is an attempt to provide technical information to ease integration of automated data submission to the USCG for third-party developers. Questions and concerns may be directed to the following:

- Questions/Inquiries: sans@nvmc.uscg.gov
- Technical support: techsupport@nvmc.uscg.gov
- Phone number: 1.800.708.9823 or 304.264.2684.