EUROPEAN COMMISSION

EUROPEAN MARITIME SAFETY AGENCY

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SafeSeaNet

XML Messaging Reference Guide

Version 1.65

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Document Approval

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0.02	05-Jun-03	F. Silvestre / M. Varga	Modifications according to Yves's document about SSN messages description
0.03	10-Jun-03	F. Silvestre / M. Varga	Additional message types (Alert, CargoManifest)
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Changes from version 1.64 to version 1.65

Introduction

Changes to the document from previous version 1.64 to this version 1.65 are outlined in the following table. Changes include the decisions made during the Data Quality Working Group (DQWG) meeting that took place on the 9th & 10th of April 2008.

Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes	Decision Date	Rational	Context
15	SafeSeaNet global Architecture	Ammend the SSN global architecture figure. Update the SSN Services and data flows.	19/02/2008	Revise and allign the global architecture to SSN v1.9.	Allign to SSN v1.9.
12	Legal Framework	Change the reference from the IDA to the IDABC infrastructure.	19/02/2008	Both IDABC program and commercial certification authorities are used.	Adoption of the IDABC program.
27	Services description	Include a short description of the SSN Services.	19/02/2008	Clarify the primary use of the services provided.	Allign to SSN v1.9.
-	Chapter 3	Modify erroneous XML message examples.	19/02/2008	Correct XML message examples based on the SSN v1.9 adjustments.	Apply corrections
22	New Data Quality Guidelines section. Chapter 3 under each individual XML message definition.	Include the Data Quality Guidelines.	19/02/2008	Introduce the general Data Quality guidelines and the rules to be enforced per XML message element/aatribute .	Introducing the Data Quality guidlines
54	Test vessels	Define the test vessels used in SSN v1.9.	19/02/2008	Allow two test vessels in SSN to be used also in the Production environment to enable testing the interface by the MS.	Allign to SSN v1.9.

Changes from version 1.63 to version 1.64

Introduction

Changes to the document from previous version 1.63 to this version 1.64 are outlined in the following table.

Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes	Decision Date	Rational	Context
[XMRG Version 1.64 – XSD 1.64]					
6, 8	Changes from version to version	Modify the XML Reference Guide traceability format.	03/08/2007	Clearly indicate the changes from one version to another.	Workshop #7
53	Vessel Identification	Define the vessel identification attributes format.	19/01/2007	The vessel identification validation rules are missing.	Contact Sheet-0148
57	SSN_Receipt XML message	Update the goal of the SSN_Receipt.xml message receipt	14/02/2007	Clarify the use of the SSN_Receipt message based on the SSN v1.9 developments .	Contact Sheet-0149
109	SSN2MS_Ship_Res.xml message	Define the use of the SentAt and From attributes.	03/08/2007	Add NotificationDetails items Sent_At and From.	ContactSheet-0132
-	XML messages related to NextPortofCall	Introduce the exception location codes ZZUKN and ZZCAN.	25/10/2005	Change UKNWN to ZZNUKN and CANCEL to ZZNCAN	Workshop #4
-	XML messages related to contact details	Phone and Fax number are restricted to only numbers and “+”	12/06/2007	Change the description of the Phone and Fax fields	SSN v1.9 Specifications
-	XML messages related to download information	Url has a maximum length of 256.	12/04/2005	Change the URL field length to 20..256	Contact Sheet-061
70, 117	Security messages	Note on Security messages	-	Add a note to the security messages.	Decision taken from the MARSEC Committee
159	Annex A	List the most significant and urgent inconsistencies	24/10/2007	Add the list of	Workshop #8

		between the XMLRG and the XSD.		inconsistencies in Annex A.	

Changes from version 1.62 to version 1.63

Introduction

Changes to the document from previous version 1.62 to this version 1.63 are outlined in the following table.

Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes	Decision Date	Rational	Context
[XMRG Version 1.63 – XSD 1.6]					
30	Description of the "Information Requests" process	Specify the use of SSN_Receipt message in case of invalid MS2SSN_<type>_Req.	01/06/2006	Clarify the XML schema validation and processing of messages transmitted in SSN.	Helpdesk service calls SSN-111 (Ireland) & SSN-145 (Norway).
40	Validation of the XML messages	Specify the contents of SSN_Receipt Invalid message.			
47	SSN_Receipt XML message	▪ Specify the use of SSN_Receipt message in case of invalid MS2SSN_<type>_Req. ▪ Update figure "When to send this message?"			
88	MS2SSN_Ship_Res.xml message	Set the occurance (Occ) of TotalPersonsOnBoard to 0-1.	01/06/2006	The TotalPersonsOnBoard is not transmitted by the AIS ship device.	Helpdesk service call SSN-84 (Poland).
91, 92	MS2SSN_Ship_Res.xml message	Examples were updated.	12/10/2005	False samples were corrected.	Helpdesk service call SSN-28 (Poland).
95	SSN2MS_Ship_Res.xml message	Add NextPortOfCall, ETA and TotalPersonsOnBoard in the VoyeageInformation part.	04/11/2005	Complete the missing attributes of the *VoyageInformation* element node.	Helpdesk service call SSN-24 (France).
112	SSN2MS_Hazmat_Res.xml message	▪ The occurance (Occ) of ETA and ETD is set to 0-1. ▪ Clarify the meaning of ETD.	25-26/10/2005	Correct the description of the "ETD" attribute.	Workshop #4. SSN 4/3/11

128, 129	MS2SSN_Alert_Req.xml message	The description of SentAt, From, IMONumber and MMSINumber in SearchCriteria part was updated to show that at least one of them should exist.	04/11/2005	Clarify the Occ of the Search Criteria to avoid false processing when no attriobute is defined.	Helpdesk service call SSN-23 (France).
152	SSN2MS_Alert_Res.xml message	Set the occurance (Occ) of the Body > SearchCriteria From and SentAt to 0-1.			
-	All XML messages	The length of From and To items is set to 3-15.	15/11/2005	Extend the maximum size of the user id from 8 to 15.	Helpdesk service call SSN-83 (Ireland).

Changes from version 1.60 to version 1.62

Introduction

Changes to the document from previous version 1.60 to this version 1.62 are outlined in the following table.

Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes
[XMRG Version 1.62 – XSD 1.6]		
-	Receipt XML message and Get Details XML messages	▪ SSNRefId attribute hasn't a fixed length
-	XML messages related to download information	▪ Url has a maximum length of 80 positions.
87	AISVoyageInformation structure	▪ Added TotalPersonsOnBoard (as already defined in XML Schema)
94	VoyageInformation structure	▪ Corrected VoyageInformation structure to correspond to XML Schema
122	SSN2MS_Security_Res XML message	▪ Rename NotificationDetails element to NotificationsDetails

Changes from version 1.40 to version 1.60

Introduction

Changes (insertions and deletions) to the document from previous version 1.40 to this version 1.51 are outlined in the following table. Changes are marked with a red outside border and are in red color.

Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes
[XMRG Version 1.50 – XSD 1.5]		
35	XML Structure and Schema Definition	The namespace of the SafeSeaNet XML schema is *urn:eu.emsa.ssn* and must be specified as *xmlns* attribute value of the root element of every XML message.
-	All XML messages	▪ Add *xmlns="urn:eu.emsa.ssn"* attribute to every root element of every XML instance (as *urn:eu.emsa.ssn* is the target namespace of SafeSeaNet). ▪ Version value is now '1.5', as the current version of the XML specifications.
[XMRG Version 1.60 – XSD 1.6]		
36		Clarification on From and To attribute in the xml header
43		Completed list of roles with ADM and EMSA
	All Receipt messages and xml header messages	Update status message description in that its contents are dynamic and could contain NCA contact information.
	All XML messages	Update doc types and supported extensions when providing the url details block.
	All Request and Response messages	Update on Vessel identification block where occurrence of attributes IMO number and MMSI number have changed.
80	MS2SSN_Ship_Res	Change structure of MRSNotifDetails block and AISNotifDetails block
89-91	SSN2MS_Ship_Res	Change structure ShipNotificationDetails block by adding a VoyageInformation block
	All XML messages	Version value is now 1.6, as the current version of the XML specification.
	All XML messages	New xml message examples have been provided.

Foreword:

Objectives of the SafeSeaNet project

The project will be built on the results already achieved in the framework of the TEN-Transport project for the setting-up of a telematic network between the maritime administrations of five Member States for the exchange of data concerning dangerous and polluting goods, in relation with the implementation of directive 93/75/EEC ("Hazmat network"). Compared to Hazmat network, the scope of SafeSEaNet is more ambitious:

- Its geographical scope will cover all EU Member States and could be extended to EFTA maritime counties (Norway and Iceland), as well as the maritime acceding countries, with a possible participation from other non-EU countries. It has to be emphasised that the existing national systems involve a number of different authorities, depending on the centralised or decentralised structure of the State concerned. The telematic network may therefore link authorities at local/regional level and central authorities.
- It shall take into account new IT technologies: SafeSeaNet shall be capable of functioning with means, such as Internet, and should be flexible enough to cope with possible future technological developments.
- It also aims at preparing and facilitation the setting-up of the future European Maritime Safety Agency.

Legal Framework

Established by Decision 2004/387/EC of the European Parliament and the Council on 21 April 2004, IDABC is a new programme that aims to identify, support and promote the development of interoperable pan-European e-Government services. IDABC will build on the achievements of the preceding IDA programmes, which focused on improving the effectiveness of telematic information exchanges between public administrations.

The TESTA-II action of IDABC programme is currently interconnecting a network between the National administrations of the Member States and the European Institutions. These network facilities can be used as a service for the SSN application. A second kind of network connection that could be used is the Internet.

The future application will be based on an interconnection/message process between the Member States. No central European database being the consolidation of the Member State data will exist. A central application will be hosted by the European Commission Data Center. Alternatively a central application could be hosted by complementary services available on TESTA-II network.

A certain number of already available commercial software products could probably perform the tasks requested with some limited adaptation. This kind of option should be evaluated in priority.

Most of the data transmitted contain personal information. Strong and reliable measures have to be taken at application level to ensure the confidentiality, security and integrity of the data transmitted independend of the type of network to be used TESTA II or Internet.

Document Overview

Introduction

This document will help you to understand the SafeSeaNet system implemented to enable the exchange of information between the Member States.

The first chapter makes a global presentation of the system while chapter 2 and chapter 3 describe the processes (flow) of the system and the messages conveying information between the Member States and SafeSeaNet.

Contents

The document contains the following chapters:

Chapter 1 - SafeSeaNet System Overview

Overview

Introduction

This chapter gives an overview of the elements SafeSeaNet system is based on.

Contents

This chapter contains the following topics:

SafeSeaNet global Architecture

Description

The heart of the SafeSeaNet architecture consists of the SafeSeaNet XML Messaging System acting as secure and reliable yellow pages index system and as a "hub & spoke" system (including authentication, validation, data transformation, logging, auditing,…), for sending requests to and receive notifications & responses from the right Member States (and corresponding NCAs).

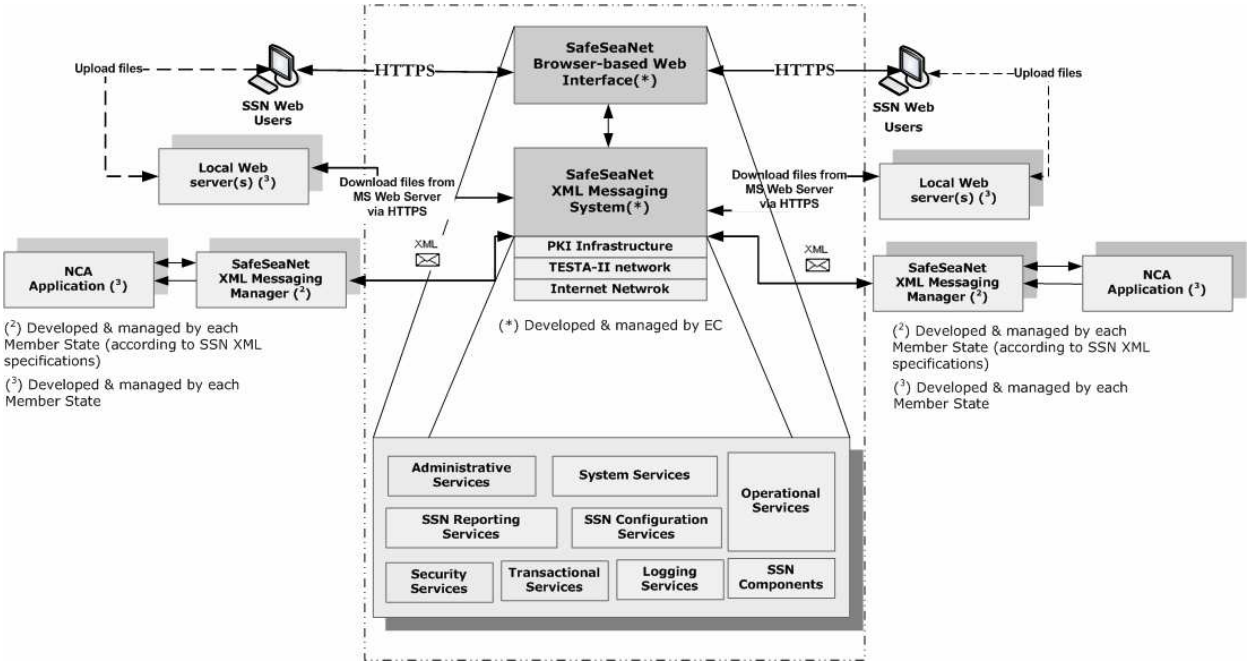
The system is using

- standard Internet protocols (XML, HTTPS,…),
- PKI infrastructure
- TESTA-II network
- Internet network.

This SafeSeaNet XML Messaging System is the expected result of the SafeSeaNet project and will be developed and managed by the European Community (in DI's Data Center premises or in the EMSA premises).

Illustration

The following illustration outlines the SafeSeaNet global architecture. Please refer to "Chapter 2 - SafeSeaNet Functional Services Overview" at page 26 for more details about the functional services provided by the different interfaces (browser-based and XML interfaces).



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SafeSeaNet global Architecture, Continued

Centralized architecture

The solution consists of centrally hosting the application offering the SafeSeaNet services (in DI's Data Center premises or in the EMSA premises). The central SafeSeaNet system will then act as yellow pages (European Index) and information broker, and sometimes also as *data provider* (some sent notifications are already fully detailed, like the port notification). The Member States will act as *data providers* (by sending notifications to SafeSeaNet and responding to data requests coming from SafeSeaNet on behalf of other *data requesters*) and *data requesters* (by asking SafeSeaNet for detailed information about previous notifications). SafeSeaNet will provide two different interfaces to help the Member States communicate with the central SafeSeaNet system:

- A default browser-based web interface
- An XML message-based interface

As such solution is based on standard protocols (XML, HTTPS, ...) and is centrally-deployed, there is no need for any special SafeSeaNet software/hardware deployment in each Member State except a Web server (for handling HTTPS request/response if they implement the SafeSeaNet XML interface and/or for storing documents corresponding to the details of sent notifications so that SafeSeaNet could download them on behalf of a *data requester*'s request).

XML Messaging Framework

SafeSeaNet will be built as an XML messaging framework providing services to Member States by means of XML messages/documents exchange in a reliable, secure and in a choreographed (workflow) way. The best answer (product, components, …) to the architecture should offer, among others:

- Set of services and tools for sending, receiving, parsing, and tracking interchanges and documents (via Messaging services) over standard protocols (HTTP, XML,...)
- Set of services and tools to create and manage robust, long-running, loosely coupled business processes that span organizations, platforms, applications (via Orchestration services)
- Set of services and tools to administer servers, databases, queues, transactional services, security services,... .
- High availability and scalability through clustering and load balancing
- Open and extensible environment (via custom components,...)

Scope of SafeSeaNet

Technical Background and context of work

Prevention of accidents at sea and marine pollution are essential components of the transport policy of the European Union. The EU maritime safety policy started with the publication in 1993 of the Communication of the Commission on "a common policy for safe sea". Since then, the Commission has initiated more than 15 proposed Directives or Regulations in the areas of safety of passenger vessels, prevention of pollution, port State control, social requirements for seafarers, etc.

The shipwreck of the oil tanker "ERIKA" on the 13 December 1999 caused the pollution of nearly 400-km of French coastline. The Further to this accident, the Commission adopted in March 2000 a first set of proposals, known as the ERIKA-I package, followed in December 2000 by a second set of measures, the so-called ERIKA-II package.

More recently shipwreck of the oil tanker "Prestige" on the 27 November 2002 caused the pollution along the Spain coastline and outside the country. This accident is one of the biggest disasters in the 21st century.

The implementation of several of these measures includes the collection and dissemination of the data related to maritime activities. A number of competent authorities have been designated by Members States are bound to collect data from ships' masters or operators and to exchange information. Until now, exchange of data is not harmonised, making use of several means of communication, from phone or fax to EDIFACT or XML. This hampers considerably an efficient implementation of the EU maritime safety legislation

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Implementation Constraints

The following rules must be strictly observed when implementing the central SafeSeaNet system and the NCA applications:

- For obvious scalability reasons, the exchange of XML messages between a NCA application and the central SafeSeaNet system must be implemented in an **asynchronous** way. Technically speaking, when a NCA application sends, via HTTP, an XML message (notification, request or response) to the central SafeSeaNet system, the latter one will merely answer with the HTTP '202 Accepted' status code. The same applies in the opposite way (from the central SafeSeaNet system to the NCA applications). The NCA application must take into account the asynchronous nature of the XML messages exchanged when implementing the NCA application user interface (e.g. using 'sync on async' technique,…).

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Continued

Implementation Constraints (continued)

- Every NCA application (as well as the central SafeSeaNet system) must be designed to cope with potential communication and server problems (e.g. 'HTTP 500' returned by the SafeSeaNet server, final response not received from SafeSeaNet within time, timeout,…). As a general rule, as long as an XML message (request or response) has not been acknowledged with the HTTP '202 Accepted' status code, it's up to the sender to retry sending it (with a maximum number of retries). For instance, the central SafeSeaNet system is designed to retry sending a message a max. of 5 times every 2 seconds. Consequently, an XML message might never be sent (max. number of unsuccessful retries reached) at all. In that case (network or server congestion), manual intervention procedure must be triggered (e.g. via monitoring) to solve the problem. In the meantime, every NCA application must be designed to cope with these rare situations (e.g. not receiving a response to a previously sent request). Please refer to the description of the XML messages for more details.
- For security reasons, HTTPS must be implemented when sending XML messages and upon receiving XML messages. Please refer to the "SafeSeaNet Security Approach" for more details.
- Every NCA application and the central SafeSeaNet system must provide a **single** address (url) for sending **and** receiving XML messages. The single SafeSeaNet address must be used by the NCA applications to send XML messages (requests and responses) to the central SafeSeaNet system. The single address provided by every NCA application will be used by the central SafeSeaNet system to send XML messages (requests and responses) to the NCA applications.

Member States' responsibilities

In an environment where various actors collect, process and exchange data, it is imperative that the **responsibilities** are **clearly defined**. In fact, the fulfillment of the obligations that are laid out for each actor is a **conditio sine qua non** for the system.

Although this may seem a strict approach, it is no more than normal in an environment where standardized communication is implemented.

The **responsibility** for a site that **collects** (owns) data is twofold:

1. It needs to **notify** the European Index whenever a change (add, change, delete) of the data element occurs. This notification happens through a **well-defined** message. Correct implementation of this notification message constitutes the first responsibility of the site. The notification mechanism must act when data capture is done (usually this mean 24 hours a day)

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Continued

Member States' responsibilities (continued)

2. The second responsibility for such a site is being able to **respond to a request** whenever anactor requests information, the owner of that information will receive a (well-defined) request from the European Index. In **response** to that request, it must prepare the correct data, and transmit that back to the European Index, again using a **well-defined message** format. Being able to respond to a request, both in content (returning the correct information) and format (using the correct message format), constitutes the second responsibility of the site.

A data-owning site (Data Provider) must be reachable by the European Index over the Internet/TESTA 24 hours a day.

The responsibility for a site that wants to **request data** consists of being able to send a correct **request message**, and to be able to interpret the contents of the reply to such a message. To be able to contact the **European Index**, access to the **Internet and TESTA** is needed.

This kind of application would typically need to be available whenever there is a possible need to use *SafeSeaNet*. In practice this will mean that the possibility to request data must exist 24 hours a day.

Technically speaking, the data providers of each Member State must have an URL (Internet address) that the European Index can contact either through TESTA or INTERNET.

SafeSeaNet messages specifications

The SafeSeaNet project consists in providing a reliable and secure system and infrastructure for exchanging messages between the Member States.

But, it also provides sets of specifications helping them to develop the necessary interfaces for exchanging messages between their local NCA Application and the central SafeSeaNet XML Messaging System.

For specifications about	See
▪ The flow of messages (requests and responses), ▪ The structures of each of these XML messages	This guide
▪ The Networking aspects	SafeSeaNet – Testa Approach (available on the Circa web site in the SafeSeaNet Interest Group)
▪ The Security aspects	SafeSeaNet – Security Approach (available on the Circa web site in the SafeSeaNet Interest Group)

Stakeholders

Introduction

SafeSeaNet considers 4 types of stakeholders:

- Coastal Stations
- Port Authorities
- Local Competent Authorities
- National Competent Authorities

Coastal Station (CS)

Coastal Station means any of the following, designated by Member States pursuant to a directive:

- A vessel traffic service
- A shore-based installation responsible for a mandatory reporting system approved by the IMO
- A body responsible for coordinating search and rescue operations or operations to tackle pollution at sea

Port Authority (PA)

Port Authority means the competent authority or body designated by Member States for each port to receive and pass on information reported pursuant to a directive.

Local Competent Authority (LCA)

Local Competent Authority means the authorities and organizations designated by Member States to receive and pass on information pursuant to a directive.

National Competent Authority (NCA)

Physical entity designated by Member States in charge of handling and exchanging the SafeSeaNet messages related to the maritime safety and the traffic monitoring directive. The single point of contact within the Member State is designated as NCA in the framework of SafeSeaNet.

Single Point of Contact (SPOC)

Based on the outcome of the SafeSeaNet questionnaire, most of the Member States agreed to have only a single point of contact (SPOC) represented by the National Competent Authority (NCA) even though the Member State is organized through multiple maritime authorities managing their maritime data in a common central data store.

Netherlands is the exception having decided to work with multiple points of contacts

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Stakeholders, Continued

Single Point of Contact (SPOC) (continued)

In other words, this means that it is up to the Member State to manage and guarantee that the data requested by SafeSeaNet is always available through this single technical point of contact. It is up to the Member State to manage the one-to-many relationship.

Each country must provide a single address (url) for sending and receiving XML messages. This single address provided by every NCA application provided will be used by the central SafeSeaNet system to send XML messages (requests and responses) to the point of contact.

Data Quality Guidelines

Data Quality Guidelines

The SSN Group at SSN 7 (Lisbon 31 May and 1 June 2007) agreed to set up an Ad Hoc Working Group on Data Quality with the objective to develop a "Data Quality Guideline covering the scope of the quality validations to be implemented into SSN". The specific objectives of the DQ WG were the establishment of automatic data quality checks and procedures to:

- Prevent mistaken data to enter into SSN. Before sending the SSN data to the SSN core, the Member State's SSN national applications will perform a complete set of checks based on specific predefined rules ensuring the data cohesion.
- During the checking process, the national SSN application will verify that the message corresponds to the expectations. If no conflict detected the message will be send to the SSN Core, otherwise it will be rejected by giving a relevant warning to the message originator about the nature of the mistake.
- Additional checks at EU level by the Maritime Support Service will ensure the harmonized implementation.

The DQ group recognizes that the actors involved in the DQ chain are:

- SSN data originators (agents, masters or operators and Authorities)
- NCA
- LCAs
- EMSA

MS SSN national applications will comply with the agreed technical set of rules adopted by the SSN group ensuring the content of the notifications is correct.

The agreed Guidelines are defined in the different XML messages ("Description" field).

EMSA pays full respect to the notifications of MS and in no case EMSA will modify any notification of the MS concerned. EMSA has the right to doubt and as soon as it detects an incorrect value it will draw the attention of the MS concerned.

Data encoding

Data Encoding

Every XML message exchanged between SafeSeaNet and the different Member States (and their corresponding NCA applications) must be **UTF-8** encoded.

The chosen language is English.

Network requirements

Introduction

Please refer to the document “SafeSeaNet – Testa Approach” (available on the Circa web site in the SafeSeaNet Interest Group).

Security requirements

Introduction

Please refer to the document “SafeSeaNet – Security Approach” (available on the Circa web site in the SafeSeaNet Interest Group).

Chapter 2 - SafeSeaNet Functional Services Overview

Overview

Introduction

SafeSeaNet provides services enabling Member States to send notifications about ships and incidents, and to request detailed information about these notifications.

The central SafeSeaNet system will then act as yellow pages (European Index) and information broker, and sometimes also as *data provider* (some sent notifications are already fully detailed, like the port notification).

The Member States will act as *data providers* (by sending notifications to SafeSeaNet and responding to data requests coming from SafeSeaNet on behalf of other *data requesters*) and *data requesters* (by asking SafeSeaNet for detailed information about previous notifications).

SafeSeaNet will provide two different interfaces to help the Member States communicate with the central SafeSeaNet system:

- A default browser-based web interface
- An XML message-based interface

This document aims only at describing the SafeSeaNet XML message-based interface that will enable the NCA applications of the Member States to communicate programmatically with the SafeSeaNet system.

This chapter aims at describing, at a higher level, the functional services offered by SafeSeaNet, and how they should be implemented in terms of activities and exchange of XML messages between the SafeSeaNet system and the NCA applications.

SafeSeaNet Browser-Based Web Interface

SafeSeaNet will provide a default browser-based web interface to help the Member States (acting as *data requester* or *data provider*) communicate manually and visually with the central SafeSeaNet system. This browser-based web interface will enable the Member States to:

- Manually send notifications to SafeSeaNet (by filling in web forms) – the Member State acting as *Data Provider*.
- Manually request detailed information about previously sent notifications (by filling in web forms and viewing results) – the Member State acting as *Data Requester*

This web application will be hosted on the central SafeSeaNet system and accessible via Testa and Internet.

The description of this default browser-based web interface is out of the scope of this document. It will be described in a separate document.

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Overview, Continued

SafeSeaNet XML Message-Based Interface

SafeSeaNet will also provide an XML message-based interface to enable the NCA applications of the Member States to communicate programmatically with the SafeSeaNet system. The XML message-based interface consists of a set of XML messages fulfilling the needs of both *data requester* and *data provider*.

This chapter aims at identifying all these XML messages and describing how and when they should be used in the process flow of the different SafeSeaNet functional services.

Note about the services description

These processes have been defined for the sole purpose of illustrating, at a higher and more comprehensive business level, the functional services provided by SafeSeaNet (consisting of exchanging, in an orderly fashion, XML messages dealing with maritime information about vessels and alerts). Therefore, these processes do not dictate how the Member States should handle or process the information they own.

Note about the NCA responsibilities

The Member States are responsible for developing their NCA application in a way that it provides implementation for the sending, receiving and processing of the messages as described in the processes flow diagrams (see current chapter) and in the detailed description of the XML messages (See Chapter 3 - SafeSeaNet XML Messages on page 39).

Services description

- Administrative services: provide the administrative utilities necessary for administering system resources including databases and queues.
- System services: provide low-level technical services, utilities and frameworks.
- Operational services facilitate the execution of the SafeSeaNet business activities. A set of processes concerned with maintaining the operational service of the underlying infrastructure is predefined.
- Reporting services: provide operational and system usage reports to system users and administrators in one single transaction.
- SSN Configuration services: provide the utilities to configure the oprocesses and threads involved in the system.
- Security services: include all the security features provided by the software architecture and frameworks.
- Transactional services: perform database and JMS message queue transactions.
- Logging services: provides the facilities to create, configure, and customize the logs. Enables logging of messages and message processing details.
- SSN Components provide the functional services of SafeSeaNet and are considered below. While from a high level logical perspective the functional services are divided in Notification related services and Information Request related services, technically speaking the SSN components are dicomposed in two application namely: ssn-core-app and ssn-xmlprotocol-app. While the first is

primarily concerned with the business logic the later handles all the functionality concerned with the transmission of XML messages.

SafeSeaNet Functional Services

The SafeSeaNet functional services can be divided into 2 groups:

- Notifications
- Information Requests

These 2 groups of functional services are described in the following pages.

Contents

This chapter contains the following sections describing the processes:

Definition of a *Data Provider*

Introduction

In SafeSeaNet, a *Data Provider* is a Member State owning some information about vessels and incidents, and making it available to *Data Requesters* by sending notifications to SafeSeaNet and responding to requests for detailed information.

This map explains the responsibilities of a *Data Provider* and how it may interact with the SafeSeaNet system.

Responsibilities

The responsibility of a *Data Provider* is twofold. It must:

- Send notifications to SafeSeaNet about vessels and incidents, indicating it owns some detailed information about these notifications which is made available on request.
- Respond to SafeSeaNet's requests (on behalf of *Data Requesters*) for detailed information about notifications.

SafeSeaNet Supplied Interfaces for *Data Provider*

SafeSeaNet provides two different interfaces to enable *data providers* to send notifications to the central SafeSeaNet system:

- the default browser-based web interface,
- the XML message-based interface.

However, to respond to SafeSeaNet's requests for detailed information about notifications, SafeSeaNet only provides the XML message-based interface (see below for more details).

Types of *Data Provider*

Two types of *data providers* could be encountered in this system:

- Data Providers (LCAs) already having their own databases to store vessel movements and manifest details in XML format. The exchange of information between LCAs and NCAs happens in electronic format.
- Data Providers (small maritime entities) still having their own detailed information being stored in paper format. Some NCAs are still receiving report data from the LCA's or the ship operators as paper documents or as fax documents.

For *data providers* already equipped with central stores, they will more likely implement the SafeSeaNet XML message-based interface for sending notifications and responding to safeSeaNet's requests.

Continued on next page

Definition of a Data Provider, Continued

Types of Data Provider (continued)

For the small entities still receiving the maritime data in paper format, the Commission had suggested that they scan those paper documents in electronic format and upload them on a web server that will be managed by the Member State (recommended at NCA level) so that, these documents could be retrieved by the SafeSeaNet system on demand. This type of *data providers* will more likely use the default browser-based web interface for sending the notifications (along with the url of the document to be fetched by SafeSeaNet upon a *data requester*'s request). They do not have to implement the XML-message based interface for getting detailed information since the detailed information is made available as a document on a web server accessible by the central SafeSeaNet server.

Data Provider capabilities

The *Data Provider* is the one who has sent a notification to SafeSeaNet telling it owns some kind of information, and is ready to share it. But sharing the information can be done in 3 different ways depending on the capabilities of the *data provider*:

- If the *data provider* does not have any application server nor web server to serve detailed information, then SafeSeaNet will merely send back the *data provider* contact details (contact person name, phone, fax and email as defined in the central SafeSeaNet configuration database or supplied in the notification message) in the response to the *data requester*.
- If the *data provider* does not have an application server (talking XML) but has a local (national) web server where it may store documents (pdf, doc,… format) corresponding to the detailed information it owns (note that the url of the document must have been given in the notification message), then SafeSeaNet will fetch the document from the web server and send it back, Base64-encoded, in the response to the *data requester*.
- If the *data provider* has implemented the SafeSeaNet XML messages specifications (as described in this document), then SafeSeaNet will ask the *data provider* to send back the detailed information in XML format. SafeSeaNet will then send back the XML response to the *data requester*.

Browser-based Web Interface for *Data Provider*

In terms of *data provider*'s responsibilities, the default browser-based web interface enables *data providers* to send notifications to safeSeaNet right out-of-the-box, i.e. without implementing anything. Obviously, such browser-based web interface implies user interaction in terms of keying in information and reading displayed information, and, therefore, cannot be used to communicate automatically and programmatically with the SafeSeaNet system.

For small entities putting their detailed information as documents on a national web server, the default browser-based web interface allows them, when sending a notification, to give the url where they have previously stored the document containing the detailed information of the notification.

Continued on next page

Definition of a Data Provider, Continued

XML Message-based Interface for *Data Provider*

The XML message-based interface supplied by SafeSeaNet enables automated communication between a NCA application and the SafeSeaNet system. The XML message-based interface consists of a set of XML messages fulfilling the needs of both *data requester* and *data provider*.

In terms of *data provider*'s responsibilities, the XML message-based interface provides XML messages enabling a NCA application (acting as *Data Provider*) to:

- Send notifications to the central SafeSeaNet system
- Respond to SafeSeaNet's requests (on behalf of *Data Requesters*) for detailed information about notifications

Obviously, such interface requires some development effort in terms of implementing the set of XML messages described in this document. Nevertheless, for *data providers* already equipped with central stores, automating the *data provider* services using this XML message-based interface can quickly provide benefits like sending notifications faster, reducing the risk of typo error (no need for manual typing).

The XML messages related to the *data provider*'s responsibilities are easily identified through the following naming convention:

- The *data provider* sends ***MS2SSN_<SSN_Not_Type>_Not*** XML notification message to SafeSeaNet and receives ***SSN_Receipt*** XML message back as confirmation.
- The *data provider* receives ***SSN2MS_<SSN_Tx_Type>_Req*** XML request message from SafeSeaNet (on behalf of a *data requester*'s request) and sends back ***MS2SSN_<SSN_Tx_Type>_Res*** XML response message to SafeSeaNet. The *data provider* receives ***SSN_Receipt*** XML message back as confirmation.

Please refer to "SafeSeaNet XML Messages" at page 39 for more details.

Definition of a *Data Requester*

Introduction

In SafeSeaNet, a *data requester* is a Member State asking SafeSeaNet to get information about a port, a vessel or incidents in an area. Essentially, these information are based on previous notifications sent by the *data providers*. When detailed information about a notification is requested y a *data requester*, SafeSeaNet will ask the corresponding *data provider* to get the detailed information and send it back to the *data requester*.

This map explains how a *data provider* may interact with the SafeSeaNet system.

SafeSeaNet Supplied Interfaces for *Data Requester*

SafeSeaNet provides two different interfaces to enable *data requesters* to ask information to the central SafeSeaNet system:

- the default browser-based web interface,
- the XML message-based interface.

Browser-based Web Interface for *Data Requester*

In terms of *data requester* needs, the default browser-based web interface provides *data requesters* with a rich interface for getting detailed information about any of the sent notifications (provided they have been granted access to) right out-of-the-box, i.e. without implementing anything. Obviously, such browser-based web interface implies user interaction in terms of keying in information and reading displayed information, and, therefore, cannot be used to communicate automatically and programmatically with the SafeSeaNet system.

XML Message-based Interface for *Data Requester*

The XML message-based interface supplied by SafeSeaNet enables automated communication between a NCA application and the SafeSeaNet system. The XML message-based interface consists of a set of XML messages fulfilling the needs of both *data requester* and *data provider*.

Although the default browser-based web interface offers out-of-the-box a richer interface, some Member States might be tempted to implement the XML message-based interface to build their own *data requester* application. Obviously, such interface requires some development effort in terms of implementing the set of XML messages described in this document.

The XML messages related to the *data requester* needs are easily identified through the following naming convention:

- The *data requester* sends ***MS2SSN_<SSN_Tx_Type>_Req*** XML message to SafeSeaNet and receives ***SSN_Receipt*** XML message back as confirmation
- The *data requester* receives back ***SSN2MS_<SSN_Tx_Type>_Res*** XML message from SafeSeaNet

Please refer to “SafeSeaNet XML Messages” at page 39 for more details.

Description of the “Send Notifications” process

Purpose

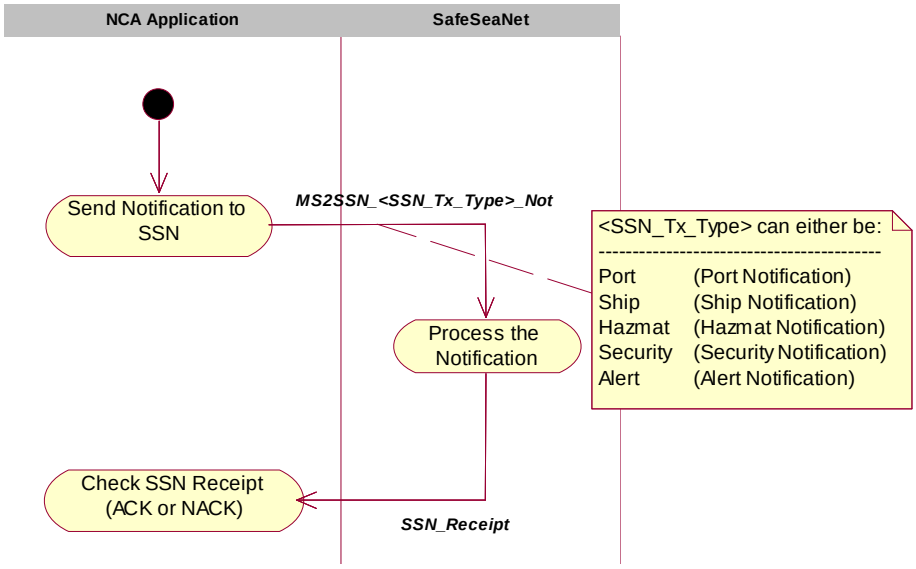
This process outlines the flow of activities performed when a Member State (acting as *Data Provider*) sends a notification to SafeSeaNet. Notifications aim at telling SafeSeaNet that a Member State owns some kind of information about a vessel or about an incident.

Notification Types

Notifications can be of 5 different types:

Type	Description
Port	Used to notify SafeSeaNet that a given vessel is bound for a particular port with an estimated time of arrival and with a number of persons aboard. Note that the destination port can be ‘unknown’ (then cancelling a previous port notification).
Ship	Used to notify SafeSeaNet about a ship’s voyage and cargo information. A ship notification is essentially based on MRS or AIS message.
Hazmat	Used to notify SafeSeaNet that a given vessel carries dangerous goods and that the sender owns some detailed information about these dangerous goods.
Security	Used to notify SafeSeaNet that the sender holds some security information about a given vessel.
Alert	Used to notify SafeSeaNet that the sender holds some information about specific incidents like SITREP, POLREP, Waste, lost/found containers. An alert can be linked or not to a particular vessel.

Flow



As mentioned earlier, the default browser-based web application that SafeSeaNet will provide could act as the NCA application in the figure above.

Continued on next page

Description of the "Send Notifications" process, Continued

Description of the flow

Step	Action
1	The NCA application prepares the ***MS2SSN_<SSN_Tx_Type>_Not*** XML message corresponding to the type of the notification and sends it to SafeSeaNet.
2	SafeSeaNet logs and validates the notification message. ▪ If valid, it stores the notification information in its index database, and sends back the ***SSN_Receipt*** XML message with a positive status code as response (synchronous connection). ▪ If invalid or any problem during the processing of the notification, it sends back the ***SSN_Receipt*** XML message with a negative status code as response (synchronous connection).
3	The NCA application analyzes the received XML response and processes it accordingly.

XML messages For more details about the XML messages used by this process, see "Send Notifications" at page 60.

Description of the “Information Requests” process

Purpose

This process outlines the flow of activities performed when a Member State requests to SafeSeaNet some detailed information about a notification. Requesting information implies a *data requester* (the Member State requesting the information), the *SafeSeaNet* system (acting as yellow pages and information broker) and a *data provider* (the Member State owning the information and having told this to SafeSeaNet through a previous notification).

Information Request Types

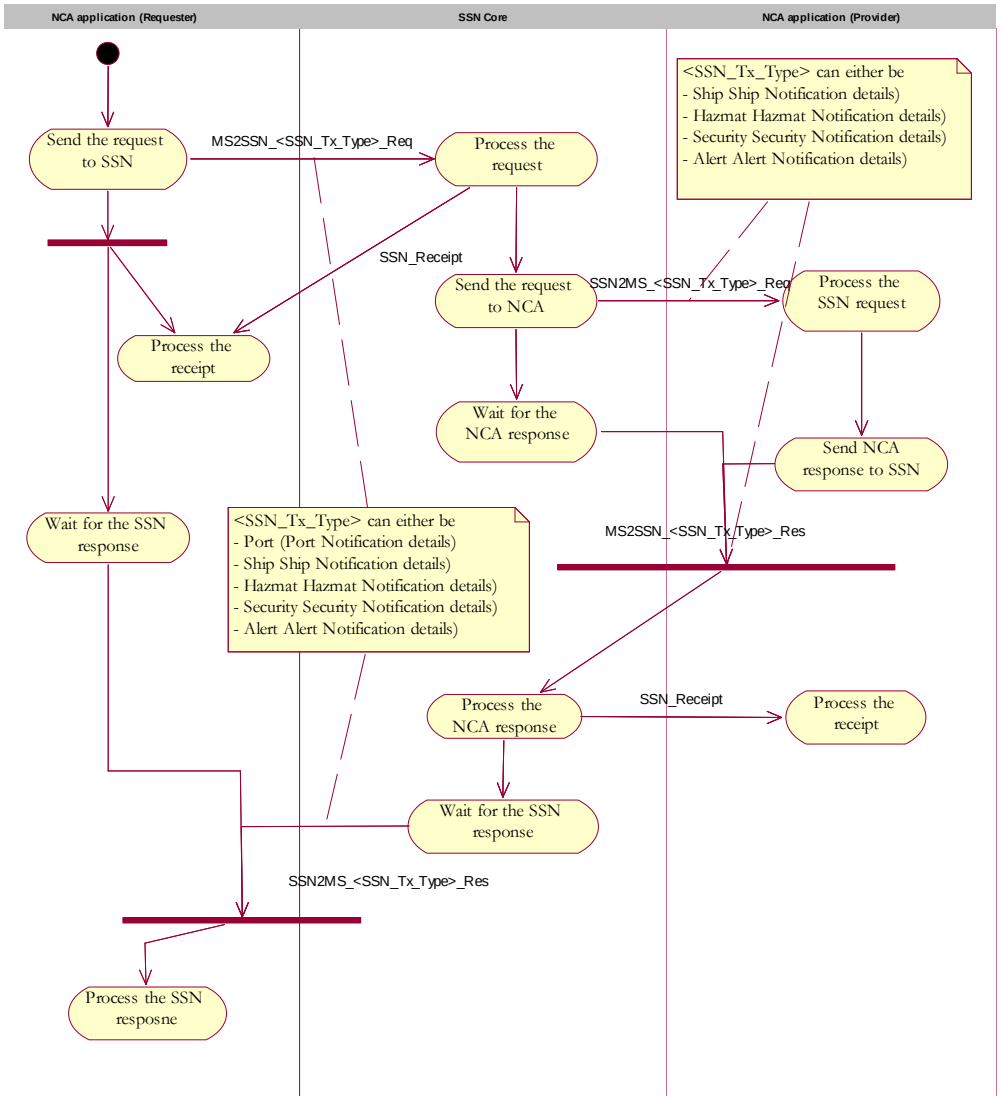
Information requests can be of 6 different types:

Type	Description
Port	Used to get detailed information about a given port notification. As SafeSeaNet holds the complete information of a port notification, there’s no need to ask more information to the Member State (*data provider*) having originally sent the port notification. Therefore, SafeSeaNet will also act as *data provider* for the port notification information request.
Ship	Used to get detailed information about a given ship notification. Upon receiving such request, SafeSeaNet will ask the actual *data provider* to send him the detailed information. SafeSeaNet will then send it back to the *data requester*.
Hazmat	Used to get detailed information about a given Hazmat notification. Upon receiving such request, SafeSeaNet will ask the actual *data provider* to send him the detailed information. SafeSeaNet will then send it back to the *data requester*.
Security	Used to get detailed information about a given Security notification. Upon receiving such request, SafeSeaNet will ask the actual *data provider* to send him the detailed information. SafeSeaNet will then send it back to the *data requester*.
Alert	Used to get detailed information about a given Alert notification. Upon receiving such request, SafeSeaNet will ask the actual *data provider* to send him the detailed information. SafeSeaNet will then send it back to the *data requester*.

Continued on next page

Description of the “Information Requests” process, Continued

Flow



The process flow illustrates the case where the *data provider* can talk XML with SafeSeaNet.

As mentioned earlier, the default browser-based web application that SafeSeaNet will provide could act as the NCA application (*Data Requester* part only) in the figure above.

Description of the flow

Step	Action

1	The NCA application (*data requester*) prepares the ***MS2SSN_<SSN_Tx_Type>_Req*** XML message corresponding to the type of the information request and sends it to SafeSeaNet. • Contrary to the notification principle, the communication is now asynchronous. Therefore, upon receiving the transport acknowledgement (HTTP return code 202 and SSN_Receipt message with StatusCode='OK', meaning request accepted), the NCA application should wait for receiving asynchronously the ***SSN2MS_<SSN_Tx_Type>_Res*** XML response from SafeSeaNet.

Description of the "Information Requests" process, Continued

Description of the flow (continued)

Step	Action
2	SafeSeaNet logs and validates the received ***MS2SSN_<SSN_Tx_Type>_Req*** XML message. ▪ If well-formatted (XML compliant) or valid (compliant to corresponding XSD), an SSN_Receipt message with StatusCode='OK' is sent synchronously. It then looks in its index database to find out who's the owner of the requested information. Assuming the *data provider* is able to talk XML with SafeSeaNet (see above for more details about *data provider* capabilities), SafeSeaNet will send a ***SSN2MS_<SSN_Tx_Type>_Req*** XML message asking the data provider to send the requested detailed information and wait for receiving asynchronously the ***MS2SSN_<SSN_Tx_Type>_Res*** XML response from the *data provider*. ▪ If any problem during the processing of the *data requester* request, it sends back to the *data requester* the ***SSN2MS_<SSN_Tx_Type>_Res*** XML message with a negative status code as response. ▪ If the ***MS2SSN_<SSN_Tx_Type>_Req*** XML message is not well-formatted (not XML compliant) or not valid (not compliant to corresponding XSD), an SSN_Receipt message is sent synchronously containing the error message generated by the parser.
3	The NCA application (*data provider*) should log and validate the received ***SSN2MS_<SSN_Tx_Type>_Req*** XML message. ▪ If valid, it searches for the requested detailed information and sends it back to SafeSeaNet in the ***MS2SSN_<SSN_Tx_Type>_Res*** XML message. ▪ If invalid or any problem during the processing of the request, it sends back to SafeSeaNet the ***MS2SSN_<SSN_Tx_Type>_Res*** XML message with a negative status code as response.

4	SafeSeaNet logs and validates the received ***MS2SSN_<SSN_Tx_Type>_Res*** XML message and sends ***SSN_Receipt*** XML message back as confirmation (synchronous connection). It then prepares and sends back to the *data requester* the ***SSN2MS_<SSN_Tx_Type>_Res*** XML message with the requested detailed information asynchronously.
5	The NCA application (*data requester*) should log and validate the received ***SSN2MS_<SSN_Tx_Type>_Res*** XML message and process it

XML messages

For more details about the XML messages used by this process, see “SafeSeaNet XML Messages” at page 39.

Chapter 3 - SafeSeaNet XML Messages

Overview

Introduction

SafeSeaNet aims at exchanging, between Member States, maritime data related to vessels and alerts. Such exchange of information will be ensured through the use of XML messages.

The exchange of data required by the different processes will be performed using XML messages (see the services described in chapter "SafeSeaNet Functional Services Overview" on page 26). These different XML messages are gathered into the following so-called SafeSeaNet XML transactions:

- Notifications (used by *data providers* and the central SafeSeaNet system)
  - Send Port Notification
  - Send Ship Notification
  - Send Hazmat Notification
  - Send Security Notification
  - Send Alert Notification

- Information Requests (used by *data requesters*, the central SafeSeaNet system and *data providers*)
  - Get Port Notification Details
  - Get Ship Notification Details
  - Get Hazmat Notification Details
  - Get Security Notification Details
  - Get Alert Notification Details

This chapter describes the XML messages exchanged between SafeSeaNet and the Member States to support the SafeSeaNet functional services.

Contents

This chapter contains the following sections:

Section 3.1 - Conventions

Overview

Introduction

The section presents the conventions used for improving the understanding the description of the XML messages.

Contents

This section contains the following topics:

Conventions used in this chapter

Introduction

The tables used to describe the XML messages provide the following information:

- Item
- Occ (Occurrence)
- Type
- Len
- Description

This information is described in the next information blocks of this topic.

Item

It indicates the item name.

- An ***XML element*** is indicated in bold & italic.
- An attribute is indicated by a normal appearance.

Occ

The column Indicates the occurrence of the element or attribute

The value	indicates
1	a mandatory item
0-1	an optional item but if present, the item must be unique
0-n	an optional item. When present, it may appear more than once
1-n	a mandatory item. The item may also appear more than once

Type

This column indicates the data type of the attribute.

The type	indicates
Text	A sequence of characters (string).
DT	Date and Time in UTC format (Coordinated Universal Time) as '*YYYY-MM-DD*T*hh:mm:ss*'
Date	Date as '*YYYY-MM-DD*'
Enum	Enumeration giving the list of possible values. The possible values will be listed in **bold**.
Int	Integer value between -2147483648 and 2147483647.
Uri	Uniform Resource Identifier reference.
Base64	Indicates the attribute contains base64-encoded value.
Choice	Allows one and only one of the elements contained in the selected group to be present within the containing element (exclusive choice).

Continued on next page

Conventions used in this chapter, Continued

Len	This column indicates the length of the attribute. ▪ ‘n’ indicates a fixed length where ‘n’ the number of characters ▪ ‘m-n’ indicates a variable length where “m” is the minimum and “n” is the maximum
Description	This column describes the items and the possible values of the attribute.

Conventions for naming the XML messages

Root element

The root element of each XML message gives the name of the message and must then be used to identify whether the message is a notification, an information request or a response to an information request, and the type of the notification or information request (port, ship,…).

Naming convention

The name of the message is always built as follows (except for the special *SSN_Receipt* XML message):

<Direction>_<SSN_Tx_Type>_<MsgType>

Name part	Possible values	Description
<Direction>	MS2SSN	Message sent by a NCA application to the central SafeSeaNet system.
	SSN2MS	Message sent by the central SafeSeaNet system to a NCA application.
<SSN_Tx_Type>	Port	Port Notification
	Ship	Ship Notification
	Hazmat	Hazmat Notification
	Security	Security Notification
	Alert	Alert Notification
<MsgType>	Not	The message consists of a notification
	Req	The message consists of a request for notification details
	Res	The message consists of a response to a request for notification details

Member States acting as *Data requesters* should send or receive (process) the following XML messages (only if they do not want to use the SSN default browser-based web interface but implement their own interface):

- MS2SSN_<SSN_Tx_Type>_Req (send request to SSN)
- SSN2MS_<SSN_Tx_Type>_Res (receive response from SSN)

Member States acting as *Data providers* should receive (process) or send the following XML messages:

- MS2SSN_<SSN_Tx_Type>_Not (send notification to SSN)
- SSN2MS_<SSN_Tx_Type>_Req (receive request from SSN)
- MS2SSN_<SSN_Tx_Type>_Res (send response to SSN)

XML Structure and Schema Definition (XSD)

General structure of the XML Messages

The structure of every XML message is the following:

```
<root element xmlns="urn:eu.emsa.ssn">
  <Header .../>
  <Body>...</Body>
</root element>
```

Element or node	Description
Root element	Gives the name of the XML message (see Naming convention above for more details)
Header	There is always a *Header* node giving "non business" information about the current SafeSeaNet transaction (such as reference id for correlation, sending and expiration DateTimeUTC, global status code and status message…).
Body	There is always a *Body* node (except when a XML response must be sent corresponding to a request which format was invalid) giving the "business" information of the current SafeSeaNet transaction. Such "business" information consists of one or more node element(s) containing different attributes.

XSD of the XML messages

The XML Schema Definition (XSD) of all the XML messages will be supplied separately in an electronic format. The official namespace of the SafeSeaNet XSD specifications is "*urn:eu.emsa.ssn*" and must be specified as *xmlns* attribute value of the root element of every XML message.

XSD (XML Schema Definition), a Recommendation of the World Wide Web Consortium (W3C), specifies how to formally describe the elements in an Extensible Markup Language (XML) document.

***From* and *To* attributes**

The *From* and *To* attributes of the *Header* element node of every XML message is used to identify the sender and the recipient of the message. SafeSeaNet will use the following convention as internal identification of the SafeSeaNet stakeholders:

- The central SafeSeaNet system will be identified under the name '**SSN'**.
- Every SafeSeaNet entity (Coastal station, port, PSC, NCA) using the XML message-based interface will be assigned one ore more user identifications. The role played by the entity along with its access rights in SafeSeaNet will be centrally managed by the SSN Administrator or the NCA Administrator. The user identifications do not have to reflect the location code and are definitely not the location code of the entity itself to which the user reports. The user id could however reflect the location code but that depends entirely on the entity creating and assigning the user ids.
- Each SSN user has an account which is mainly described by the userid and the password. Each SSN user has a role, one that could be shared by others. Each SSN user is known by its location (and location code), one that could be shared by others. **So once again, do not use the location code in your From attribute but use the userid instead.**

Error! Objects cannot be created from editing field codes.

The *From* attribute of an XML request is used to determine the recipient of the corresponding XML response. If the From attribute contains the userid we can easily map it to the corresponding DataRequester url.

Continued on next page

XML Structure and Schema Definition (XSD), Continued

***TestId* attribute**	The *TestId* attribute of the *Header* element is only useful for testing purposes in order to identify a particular test case (see Test Plan for more details). It must be ignored otherwise.
Versioning	The official version of the XML specifications will be specified through the *Version* attribute of the *Header* element of any XML message. The version number ('n.m') will be defined as fixed value in every release of the XML Schema Definition file (.xsd). The current version number is '1.6'. SafeSeaNet (and the Member States) will only support the latest version of the XML specifications. That means that, prior to using a new version of the XML specifications, all Member States must agree upon a date when everyone will switch from the previous version to the new version of the XML specifications.
***TimeoutValue* attribute**	The *TimeoutValue* attribute of the *Header* element node of every XML request message should be used to specify a timeout value (in seconds) indicating when the request should be considered as expired and no longer be processed (*Timeout* status code) if its corresponding XML response has not yet been sent back. The recommended timeout value is between 45 and 60 seconds. Anyway, these timeout value recommendations will be determined more accurately during the SafeSeaNet testing and pilot phase.
SafeSeaNet speaks English	All the information (vessel, alert, DG,…) transmitted as attributes values of the XML messages must be in English.

Validation of the XML messages

Validation principle

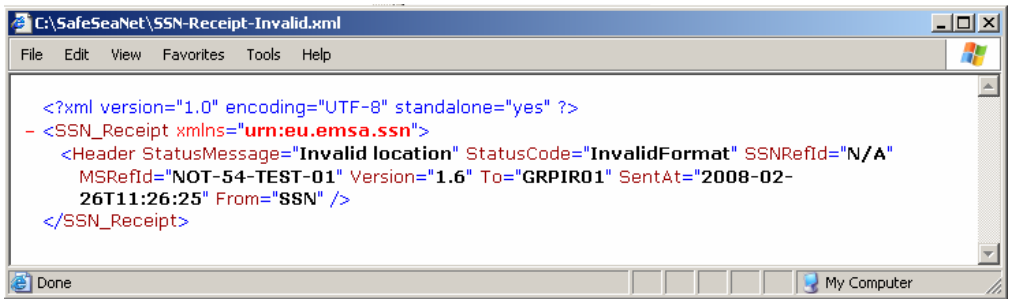
When receiving an XML message, the SafeSeaNet central system and the NCA applications must check whether it is a "Well Formed" XML document (i.e. a document that conforms to the XML syntax rules) and must validate it against its XML Schema definition (XSD).

If an error is detected, an '*InvalidFormat*' status code (in the *StatusCode* attribute of the *Header* element node) must be returned within the XML message that should normally follow in the flow of the transaction.

The *StatusMessage* attribute of the *Header* element node can also be used to communicate more information about the error (see example below).

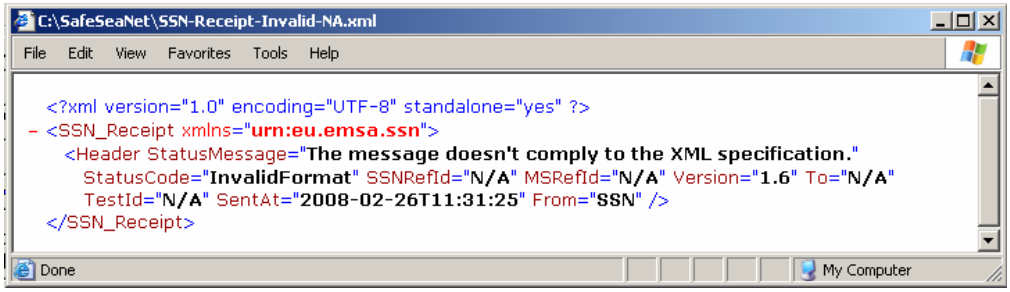
Invalid Notification, Request or Response

Whenever an XML Notification (MS2SSN_<SSN_Tx_Type>__Not) or XML request (<Direction>_<SSN_Tx_Type>_Req) or XML response (<Direction>_<SSN_Tx_Type>_Res) validation failed, a *SSN_Receipt* XML message must be sent back to the caller:



Invalid XML message

Sometimes an *SSN_Receipt* XML message doesn't fully respect the XML schema. This could occur in case of messages that cannot be parsed against the ssn.xsd schema:



ID Correlation between the XML messages in a transaction

Header Attributes

Knowing that the exchange of the XML messages between the NCA applications and SafeSeaNet is asynchronous, two special attributes has been defined in the *Header* element node of the XML messages to allow the correlation between Request and Response.

- *SSNRefId* given by the SafeSeaNet central system
- *MSRefId* given by the Member States NCA Applications

Both attributes are not always present in every message

SSNRefId

It consists of a Universal Unique Identifier (uuid) generated by the central SafeSeaNet system for identifying a transaction initiated by an incoming *MS2SSN_<SSN_Tx_Type>_Req* XML message).

It is internally used by the central SafeSeaNet system for correlating to the transaction when XML responses are received later on from the NCA applications.

This uuid is specified by SafeSeaNet in the *SSNRefId* attribute of every XML message dealing with the current transaction it sent to the NCA applications.

The NCA applications must sent back this uuid in the *SSNRefId* attribute of every XML message dealing with the current transaction they sent to the central SafeSeaNet system

MSRefId

It consists of a unique identifier (which format is free to choose provided it's XML compliant) generated by a NCA application for identifying a transaction.

It is inserted in the *MSRefId* attribute of the *Header* element node of the initial *MS2SSN_<SSN_Tx_Type>_Req* XML message.

It is used internally by the NCA application for correlating to the transaction when the final XML response is received later on from the central SafeSeaNet system.

This transaction identifier is specified by a NCA application in the *MSRefId* attribute of every XML message dealing with the current transaction it sent to the central SafeSeaNet application.

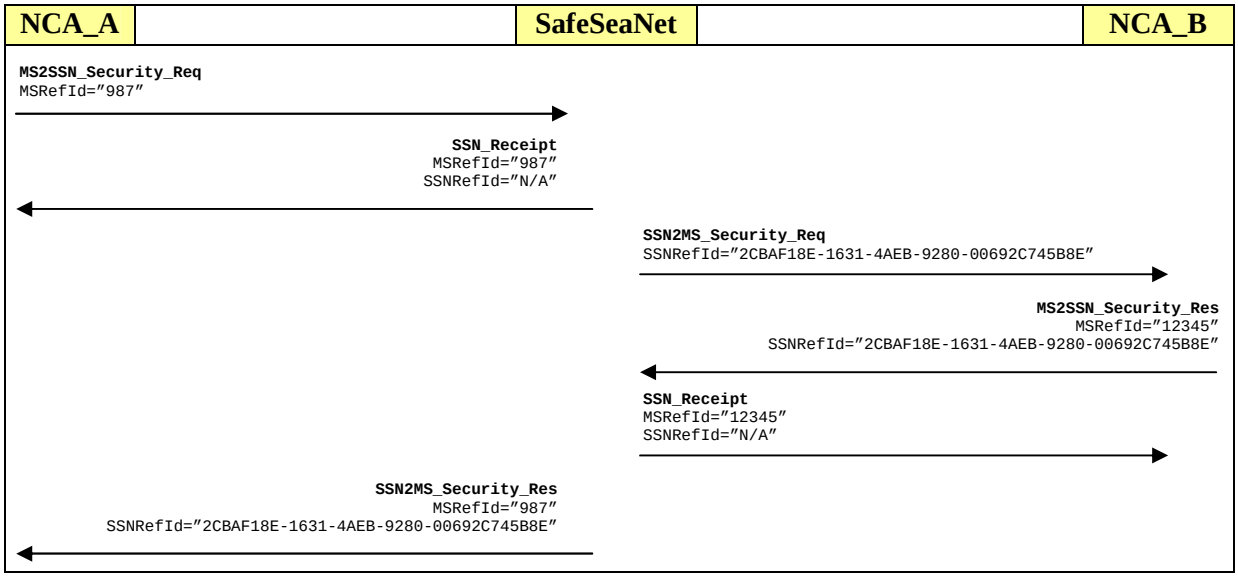
The central SafeSeaNet system must sent back this NCA application's transaction identifier in the *MSRefId* attribute of every XML message dealing with the current transaction they sent to the NCA applications.

Continued on next page

ID Correlation between the XML messages in a transaction,
Continued

Example

The following example aims at explaining how the *SSNRefId* and *MSRefId* attributes should be used within a SafeSeaNet transaction (e.g. Security Notification Details request):



Status Codes and Status Messages

Introduction

Every SafeSeaNet XML response/receipt message (*MS2SSN_<SSN_Tx_Type>_Res*, *SSN2MS_<SSN_Tx_Type>_Res*, and *SSN_Receipt* XML messages) includes attributes for setting the status code and the status message. These status code and status message are used to give the result of the processing of a SafeSeaNet XML request/notification message (*MS2SSN_<SSN_Not_Type>_Not*, *MS2SSN_<SSN_Tx_Type>_Req* and *SSN2MS_<SSN_Tx_Type>_Req* XML messages). These are outlined below.

Status Code

A status code is defined in every SafeSeaNet XML response/receipt message. It is defined as the *StatusCode* attribute of the *Header* element with the following enumerated set of values:

Attribute value	Description
InvalidFormat	The corresponding XML request/notification/response message was not valid (see p.47 for more details)
Timeout	The corresponding XML request/notification message has not been processed within time (according to the *TimeoutValue* attribute).
ServerError	The corresponding XML request/notification message has not been successfully processed due to a server problem (e.g. connection problem, database problem, application problem,…).
OK	The notification has been successfully processed or the request message has been successfully received or the notification details requested in the corresponding XML request message has been found (response messages). When a port notification has been sent and there is no definition of any authority in SSN associated to the *NextPortOfCall* a warning is appended in the *StatusMessage: "Warning: Port identification not compliant. Please complete the Port Authority identification in SSN*". When a notification has been sent for a banned vessel a warning is appended in the *StatusMessage:"*Warning: The reported vessel is banned". When a notification has been sent for a single hull tanker a warning is appended in the *StatusMessage:"*Warning: The reported vessel is A Single Hull Tanker".
NotFound	The notification details requested in the corresponding XML request message does not exist. This value may only be used in an XML response message.

NotAvailable	The data provider system is temporarily unavailable (e.g. due to planned and announced maintenance).
AccessDenied	The user (identified via the *From* attribute of the *Header* element) is not allowed to send the corresponding XML request/notification or doesn't exist.

Status Message

Next to the *StatusCode* attribute, there's always a corresponding *StatusMessage* attribute that might be used to specify an optional message giving more detailed information about the status code value.

As that status message (free text) could be useful for debugging purpose, it is recommended to insert message in English.

Please refer to the description of the XML messages for more details.

Location codes

Introduction

Port of departure and port of destination in some notification messages are also defined using location codes.

This map gives some explanations about the format of a location code.

Format of a location code

A location code is a standard way for representing locations in transportation sectors (rail, maritime,…). The list of location codes is managed by the UNECE (http://www.unece.org/cefact/locode/service/main.htm). It consists of a 2 letter country code (according to ISO 3166) followed by a three characters city code that may include digits from 2 to 9.

Exhaustive list of European maritime location codes

The Member States should provide their list of maritime authorities that will deal with SafeSeaNet and associated roles (see p.55 for more details). as well as their list of location codes (and geographical coordinates in terms of latitude and longitude). The list of all gathered location codes will be the official list supported by SafeSeaNet.

In addition, theres is a list of “way points” for ships leaving port where the next port of call is defined only in regional terms (Interface Control Document, Table 5, page 41)

Example of location codes

The following table gives some examples of location codes involved in SafeSeaNet:

Location Code	Description
BEANR	Antwerpen (Belgium)
BEZEE	Zeebrugge (Belgium)
FRDKK	Dunkerque (France)
FRLEH	Le Havre (France)
LVRIX	Riga (Latvia)
NLAMS	Amsterdam (Netherlands)
NLRTM	Rotterdam (Netherlands)
PTLIS	Lisboa (Portugal)

Vessel Identification

Introduction

The vessel identification element node contains four attributes:

- IMONumber
- MMSINumber
- CallSign
- ShipName

This section gives some explanations about the format of the vessel identification attributes.

IMO Number format

A 7-digit unique code. The IMO ship identification number is a permanent number assigned to each qualifying ship for identification purposes (referenece www.imo.org).

MMSI Number format

A Maritime Mobile Service Identity (MMSI) is a series of nine digits:

- Pos 1->3: Maritime identification digits (MID) always starting with a digit from 2 to 7. One or more MID have been allocated to each country and can be used to determine the flagstate when displaying. Reference: www.itu.int, MARS database.
- Pos 4->9: Maritime mobile number, is a free numeric field.

Call Sign format

A unique designation for a transmitting station up to 7 characters long. The structure is defined by the International Telecommunication Union (ITU).

Ship Name format

No specific structure. Up to 35 characters long.

Example of vessels

The following table gives some examples of vessels involved in SafeSeaNet:

IMO Number	MMSI Number	Call Sign	Ship Name
7203637	249678000	9HAM5	IONIS
7400833	636005943	ELPV	STOLT INTEGRITY
9000247	257769000	LANC4	TRANS SCANDIC
9200330	477675000	VRVY8	FEDERAL OSHIMA

Test vessels

The following table gives the details of the two (2) vessels defined in SSN for testing purposes only. The vessel with IMO Number = “9999999” is for use by the Member States while the vessel with IMO Number = “0000000” is for use by EMSA.

It is important to note that the two test vessels do not undergo the vessel definition validity checks and their details can not be updated.

IMO Number	MMSI Number	Call Sign	Ship Name
0000000	000000000	TEST	TEST SHIP SAFESEANET
9999999	999999999	SSNTEST	TEST SHIP SAFESEANET for MS

SafeSeaNet Roles

Introduction

Every SafeSeaNet user identification is assigned a role in SafeSeaNet. This map aims at describing the roles supported in SafeSeaNet.

List of supported roles

Roles in SafeSeaNet will be defined using a 3 letter code. Roles will be centrally managed by SSN in order to assign the corresponding access rights. The following table lists the roles supported by SafeSeaNet:

Role Code	Description
POR	Used to identify a Port Authority
CST	Used to identify a Coastal Station
PSC	Used to identify a Port State Control
NCA	Used to identify a National Competent Authority
OTH	Used to identify a maritime entity that’s not yet covered by the above roles
SSN	Used to identify a SSN Administrator

Base64 Encoding and Decoding

Introduction

As explained earlier (see “Data Provider capabilities” at page 30), detailed information about a notification could be provided by the *data provider* as a document (pdf, doc,… format) on a local (national) web server. In such a case, when a *data requester* asks SafeSeaNet for getting the notification details, SafeSeaNet will download the document from the web server and send it back, Base64-encoded, along with the document type in the corresponding XML response to the *data requester*. The *data requester* has just to decode the Base64 string of characters to be able to view it in its original format.

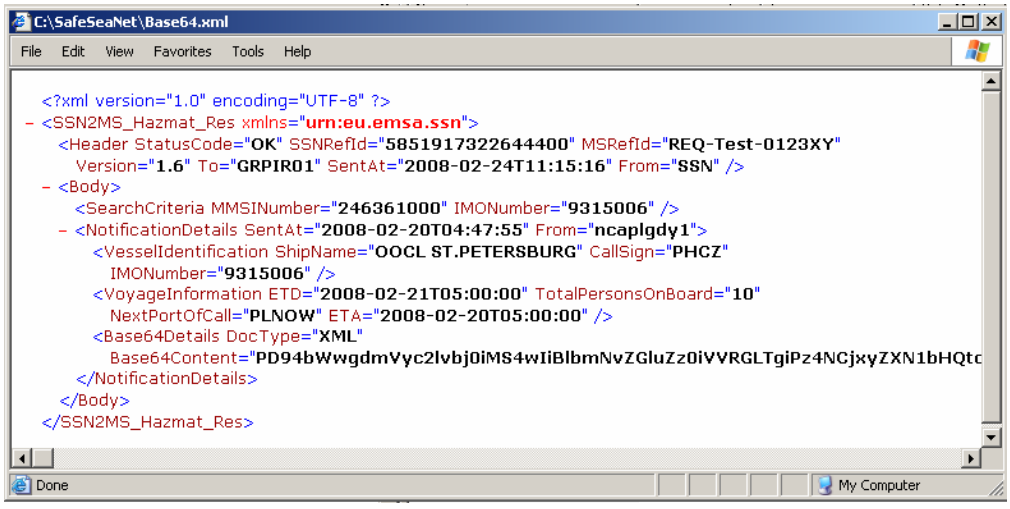
What is Base64?

The Base64 encoding, specified in RFC 2045 - MIME (Multipurpose Internet Mail Extensions), is designed to represent arbitrary sequences of octets in a form that need not be humanly readable. A 65-character subset ([A-Za-z0-9+/=]) of US-ASCII is used, enabling 6 bits to be represented per printable character.

The encoding and decoding algorithms are simple (and already supplied as method calls in Java and .NET environments). The encoded data are consistently only about 33 percent larger than the unencoded data.

Example of a Base64 value

The following lines gives an example of an Hazmat details base64-encoded in the XML response (*Base64Content* attribute) sent back by SafeSeaNet to the *data requester*:



Section 3.2 - SSN_Receipt XML message

Overview

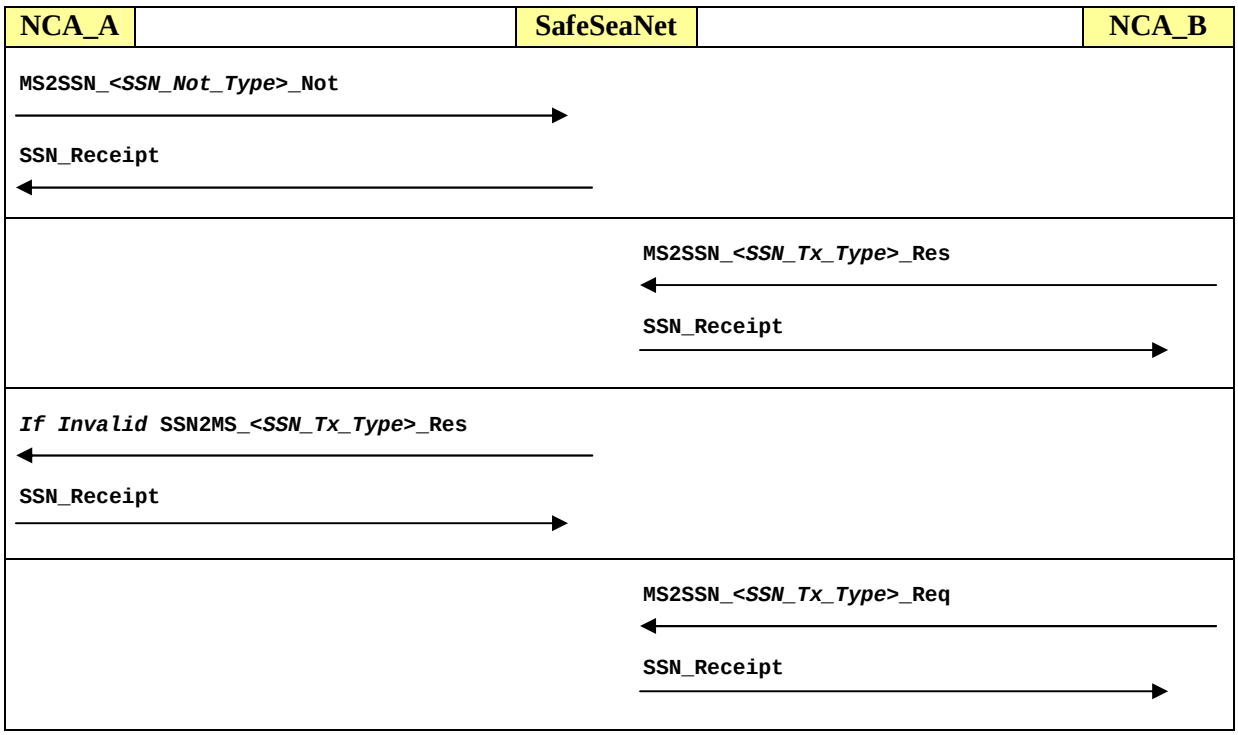
Introduction

The goal of the **SSN_Receipt.xml** message receipt is twofold:

- It must be sent by SafeSeaNet as the confirmation message (indicating whether the notification message is compliant to the corresponding XSD and has been successfully validated and processed, or not) to every notification message (MS2SSN_*<SSN_Not_Type>*_Not) received from the Member States.
- It must be sent as the confirmation message (indicating whether the request message is compliant to the corresponding XSD, or not) to every request message (MS2SSN_<SSN_Tx_Type>_Req) received from the Member States.
- It must be sent as the confirmation message (indicating whether the response message is compliant to the corresponding XSD, or not) to every response message (MS2SSN_<SSN_Tx_Type>_Res or SSN2MS_<SSN_Tx_Type>_Res).
- In the case that any of the aforementioned messages is compliant to the corresponding XSD or the notification message has been successfully validated and processed the SSN_Receipt message Status Code will be set to 'OK'.
- In the case that any of the aforementioned messages is not compliant to the corresponding XSD or the notification is invalid the SSN_Receipt message Status Code will be set to 'InvalidFormat'.

When to send this message?

The following figure illustrates the three cases when this message must be sent:



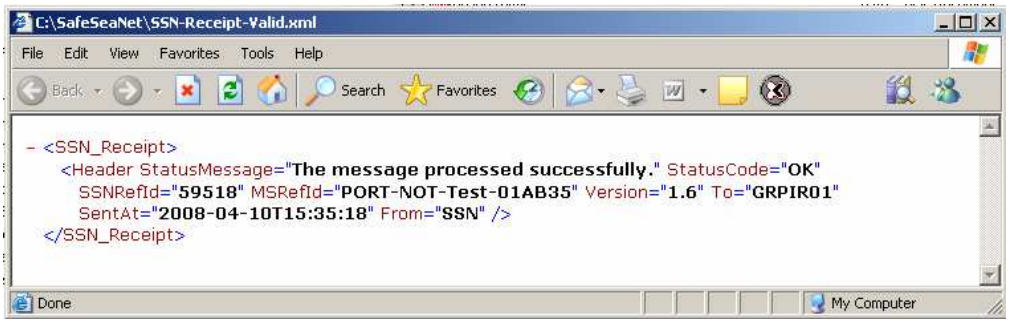
Overview, Continued

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the *MS2TCN_xxx_Res.xml* response.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet in the *TCN2MS_xxx_Res.xml* response..
SentAt	1	DT	19	Message creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message (as defined in SafeSeaNet).
To	1	Text	3-15	The name of the recipient of the message (as defined in SafeSeaNet)
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string. This is a dynamic message and can as such contain NCA contact details retrieved from the SSN Database.

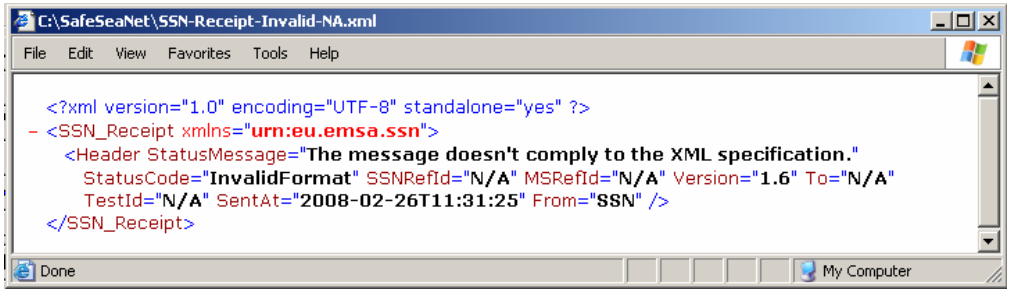
Example of receipt confirming a successful Port notification



Example of receipt with *InvalidFormat* error

Invalid notification or response

Sometimes an *SSN_Receipt* XML message doesn't fully respect the XML schema. This could occur in case of unsuccessful data validation such as access rights, userid, location code, etc..:



Section 3.3 - Send Notifications

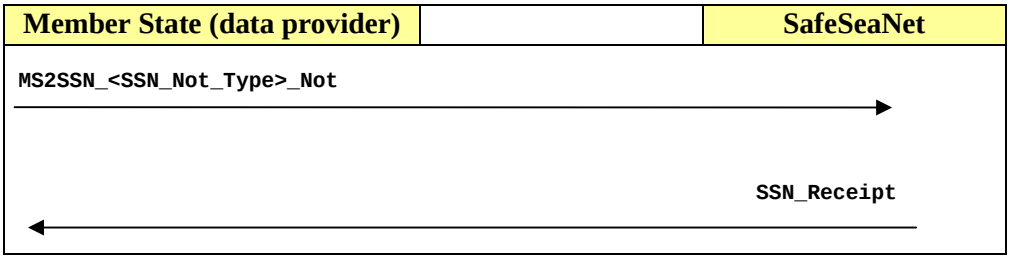
Overview

Introduction

This section describes the different XML messages that must be used by a Member State (acting as *Data Provider*) to notify SafeSeaNet that the Member State owns some kind of information.

General flow of the XML messages

The following figure outlines the expected **synchronous** flow of XML messages related to every SafeSeaNet XML notification. A ***SSN_Receipt*** XML message (see p.57) will always be returned as response to a notification.



The different types of notifications (<*SSN_Not_Type*>) are:

- Port
- Ship
- Hazmat
- Security
- Alert

Contents

This section contains the following topics:

MS2SSN_Port_Not.xml message

Introduction

The **MS2SSN_Port_Not.xml** message is sent by a Member State to SafeSeaNet in order to notify SafeSeaNet that a given vessel is bound to a particular port with an estimated time of arrival and a number of persons aboard.

Notification details

This notification already contains all its detailed information. Therefore, SafeseaNet will store the details of the notification in its central database and will then act as the *Data Provider* when a request for getting detailed information about this notification comes in.

Please refer to “Get Port Notification Details” at page 90 for more details about how to request / provide the detailed information about this notification

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version (‘1.6’)
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Notification creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time to UTC. SentAt< ETA < ETD in UTC
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message (‘SSN’).
Body	**1**			**Body Node**
Notification	**1**			***Notification* element node**
VesselIdentification	**1**			***VesselIdentification* element node** The vessel identification attributes (IMO number, MMSI, Call Sign, ship name) have to be checked against a reference ship database
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given. IMO number – IMO Res A.600 (15)- has to be checked if not existing in the reference DATABASE.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given. MID according to the ITU regulation.

CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel Upon SOLAS, chapter I, part B, regulation 15 "Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (FROM “A” TO ”Z” AND FROM 0 TO 9)
VoyageInformation	**1**			***VoyageInformation* element node**

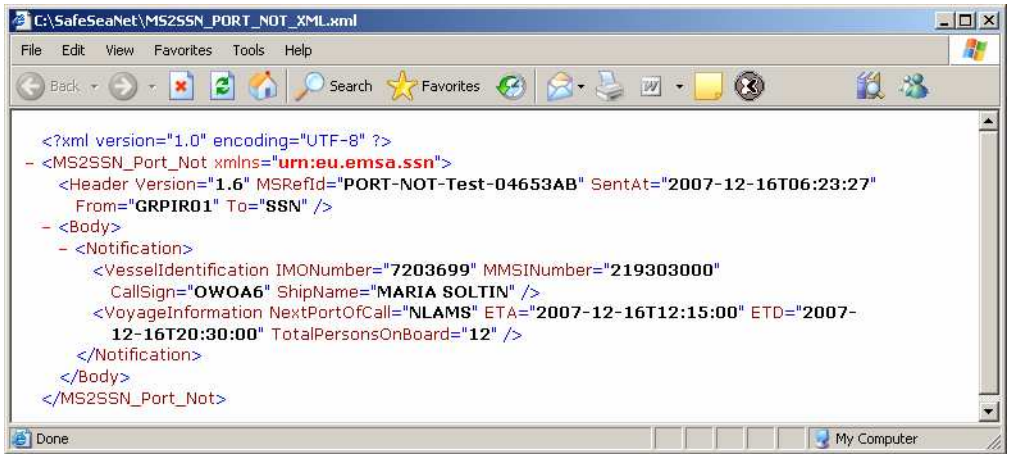
Continued on next page

MS2SSN_Port_Not.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
NextPortOfCall	1	Text	5	~~Location code of next port of call. May be 'ZZCAN if unknown (cancelling a previous port notification). Please note that~~ . This attribute indicates the **actual** next port of call, e.g. if the port of Oostende is sending this notification, then this *NextPortOfCall* attribute must be the location code of Oostende (BEOST) and not the next port of call after Oostende. The cancellation of a previous port notification is merely a new port notification for which the NextPortOfCall attribute value is "ZZCAN". E.g. during the voyage, the master of the ship receives new orders from his head office. The new destination is now port of Stockholm instead of Amsterdam. Upon receiving this information, the Master of the ship has the obligation to inform Amsterdam about these changes but he has not obligation to indicate his new port of destination. In this case, Amsterdam must transmit a new port notification message to SSN, cancelling the one sent previously, by indicating that the next port of call is "ZZCAN" and then ETA and ETD attributes are not given. The "next port of call" attribute cannot be unknown ("ZZUKN"). The "next port of call" attribute must only be the LOCODE of the specific port of call or its dependent port's LOCODEs.
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is ~~unknown~~ ZZCAN (this may only occur due to a cancellation of a port notification message). ETA<ETD in UTC
ETD	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of departure from next port of call (ETD > ETA). May only be optional if *NextPortOfCall* attribute value is ~~unknown~~ ZZCAN (this may only occur due to a cancellation of a port notification message).
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown. Dots and commas are not allowed.

Example of a normal port notification



A possible scenario for the above port notification could be the following:

- A vessel has left port of Lisbon and is bound for port of Amsterdam. The master of the ship must transmit to the port of Amsterdam the following information:
  - ETA: 16-Dec-07 at 12h15 (UTC)
  - ETD: 16-Dec-07 at 20h30 (UTC)
  - Total persones on board: 12

Continued on next page

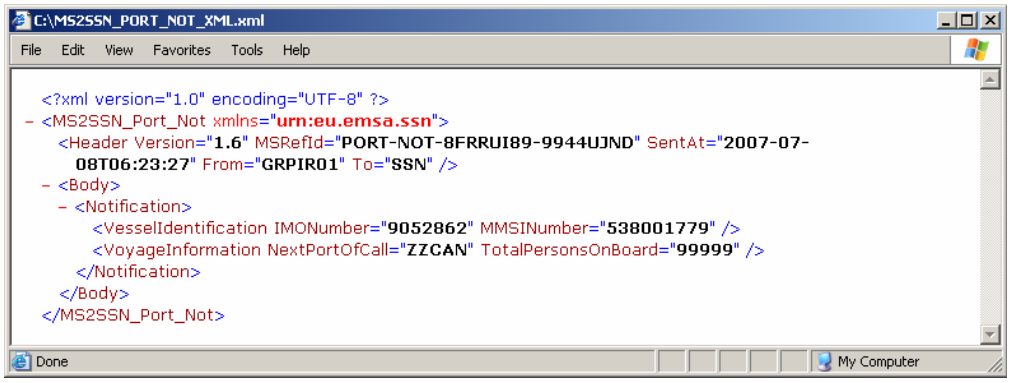
MS2SSN_Port_Not.xml message, Continued

Example of a normal port notification (continued)

- Upon receiving this information, the port of Amsterdam sends the notification to SSN using the XML message shown above.

Cancellation of a previous Port Notification

The cancellation of a previous port notification is merely a new port notification for which the *NextPortOfCall* attribute value could be unknown (“ZZCAN”).



A possible scenario for the above « cancellation » of a port notification could be the following:

- A vessel has left port of Lisbon and is bound for port of Amsterdam. The master of the ship has informed the port of Amsterdam which in turn has notified SSN (previous example).
- During his voyage, the master of the ship receives new orders from his head office. The new destination is now port of Stockholm. Upon receiving this information, the master of the ship has the obligation to inform Amsterdam about these changes but he has not obligation to indicate his new port of destination. In this case, Amsterdam must transmit a new port notification message (as shown above) to SSN, cancelling the one sent previously, by indicating that the next port of call is unknown (the *NextPortOfCall* attribute is “ZZCAN” and then, the *ETA* and *ETD* attributes are not given).

MS2SSN_Ship_Not.xml message

Introduction

The **MS2SSN_Ship_Not.xml** message is sent by a Member State to SafeSeaNet in order to notify SafeSeaNet about a vessel's voyage and cargo information. The ship notification can be originally captured via a MRS or AIS signal.

Notification details

Please refer to "Get Ship Notification Details" at page 95 for more details about how to request / provide the detailed information about this notification

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Notification creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
AISNotification	**0-1**	**Choice**		***AISNotification* element node. Not allowed if *MRSNotification* specified**
…				▪
MRSNotification	**0-1**	**Choice**		***MRSNotification* element node. Not allowed if *AISNotification* specified**
…				▪

Continued on next page

MS2SSN_Ship_Not.xml message, Continued

***AISNotification* element**

The following table describes the *AISNotification* element that must be used when the notification is of type AIS. Beside some minor differences with the MRS notification (e.g. Total number of persons on board missing), the major difference resides in the fact that the details of the AIS notification can only be provided as an XML message (see "MS2SSN_Ship_Res.xml message" at page 100) and not as a document on a web server.

Item	Occ	Type	Len	Description
AISNotification	**0-1**	**Choice**		***AISNotification* element node. Not allowed if *MRSNotification* specified**
VesselIdentification	**1**			***VesselIdentification* element node** No checking rules to be applied in the AIS notification to keep the original information and no reject messages.
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**1**			***AISVoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown. Considering the actual situation with the vast majority of the AIS messages include the actual name and not the Locode described in many different ways, the SSN Group decided not to reject notifications containing more than 5 characters in this attribute. Member States requesting through the web will receive the original content of the attribute. Member States when requesting through the XML these messages will receive ZZUKN.

ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is unknown. The NCA application should convert the AIS date format (MMDDHHMM) into the ISO format. As an example it could be done the following way: – SS should be 00 – YYYY should be the year the message was sent provided the day/month are greater than the day/month of the timestamp. Otherwise it will be YYYY+1. – Default values are month MM = 0 day DD = 0, hour HH = 24, minutes MM = 60 are not compatible with ISO standards Proposal: – If MM or DD has default value, ETA shouldn't be provided If HH or MM has default value, for the ETA the following dummy has to be employed: 23:59:59.
ShipPosition	**1**			***ShipPosition* element node**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000
Timestamp	1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the ship position reporting.

Continued on next page

MS2SSN_Ship_Not.xml message, Continued

***MRSNotification* element**

The following table describes the *MRSNotification* element that must be used when the notification is of type MRS. Beside some minor differences with the AIS notification (e.g. Total number of persons on board mandatory), the major difference resides in the fact that the details of the MRS notification could be provided as a document on a web server.

Item	Occ	Type	Len	Description
MRSNotification	**0-1**	**Choice**		***MRSNotification* element node. Not allowed if *AISNotification* specified**
VesselIdentification	**1**			***VesselIdentification* element node** The message identifier attributes (IMO number, MMSI, Call Sign, ship name) have to be checked against a reference ship database
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given. IMO number – IMO Res A.600 (15)- has to be checked if not existing in the reference database.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given. MID according to the ITU regulation.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel Upon SOLAS, chapter I, part B, regulation 15 "Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (from “A” to ”Z” and from 0 to 9)
VoyageInformation	**1**			***MRSVoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call~~. May be “ZZUKN” if unknown.~~ The MRS message has to comply with the UN Locode list or with the agreed list of waypoints (described in the ICD, chapter 8.3).
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. ~~May only be optional if *NextPortOfCall* attribute value is unknown.~~ Only optional if vessel's destination (NextPortOfCall) is a waypoint, but mandatory for destinations inside EU waters.
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.
ShipPosition	**1**			***ShipPosition* element node**

Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000

Continued on next page

MS2SSN_Ship_Not.xml message, Continued

MRSNotification element (continued)

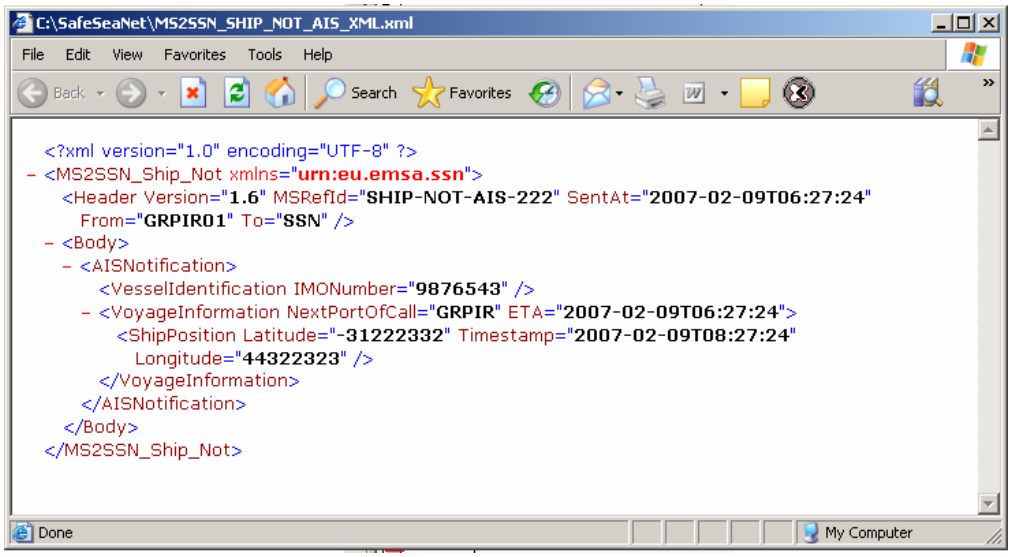
Item	Occ	Type	Len	Description
NotificationDetails	**0-1**			***NotificationDetails* element node.** ▪ If not specified, that means the MRS notification details can be obtained from the data provider in XML (see "MS2SSN_Ship_Res.xml message" at page 100) ▪ If specified, that means the MRS notification details is available as a document on a web server (*UrlDetails* must then be specified) or via a phone/fax (*ContactDetails* must then be specified).
UrlDetails	0-1	Choice		**Element indicating the type and the url of the document containing the MRS notification details (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the **MRS** notification details. If SafeSeaNet receives a request for getting detailed information about this notification, it will use this url to download the document. The Uri must start with https://.
DocType	1	Enum		Type of document format among the following possible values: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the notification details (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person.
FirstName	0-1	Text	0-50	First name of the contact person.
LoCode	1	Text	5	Location code of the contact person.
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters

EMail	0-1	Text	0-50	Email address of the contact person.

Continued on next page

MS2SSN_Ship_Not.xml message, Continued

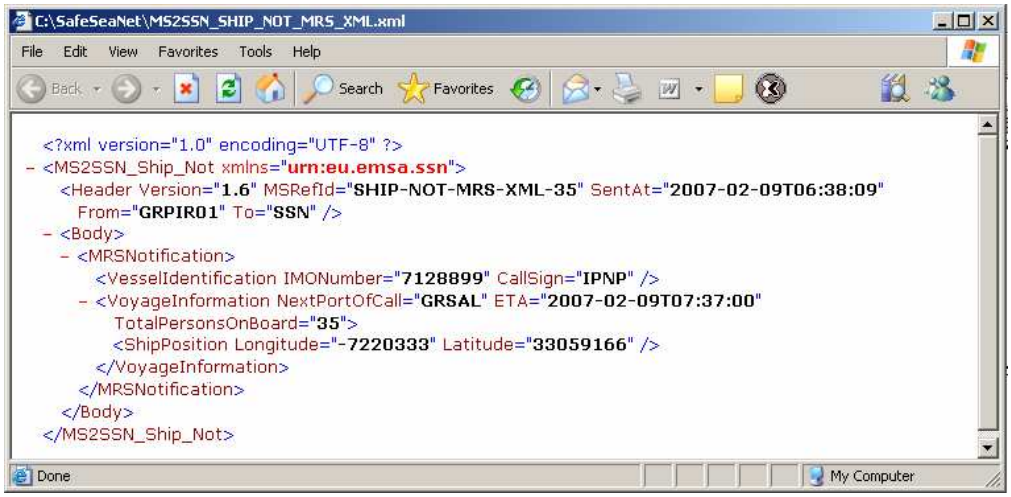
Example of an AIS ship notification



Note that the AIS notification details can be requested by SSN to the data provider only via the *SSN2MS_Ship_Req.xml* message.

Examples of an MRS ship notification

The following example illustrates a MRS notification which details can be requested by SSN to the data provider via the *SSN2MS_Ship_Req.xml* message:

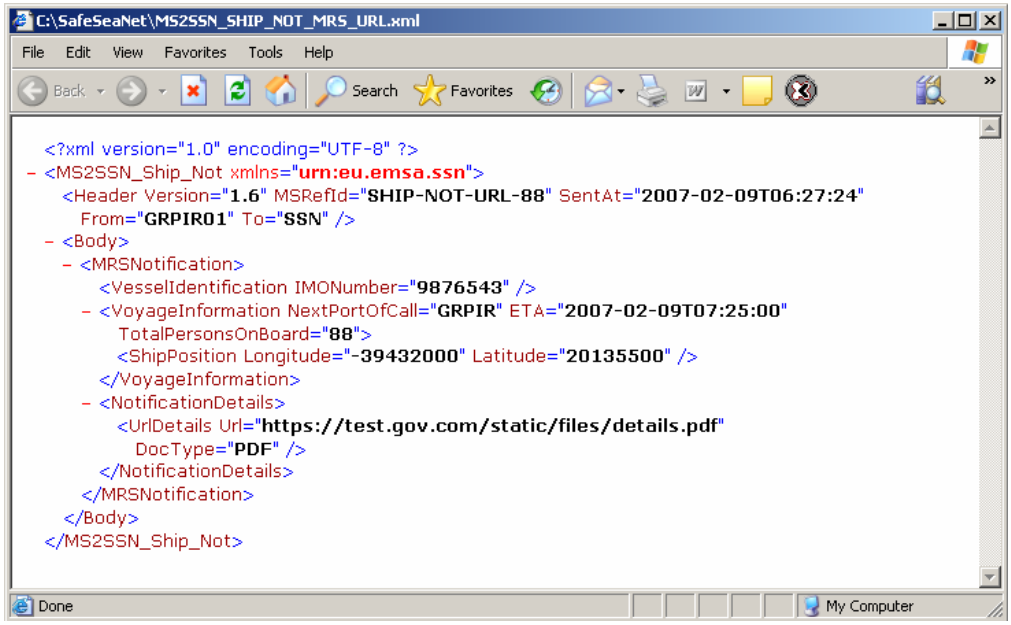


Continued on next page

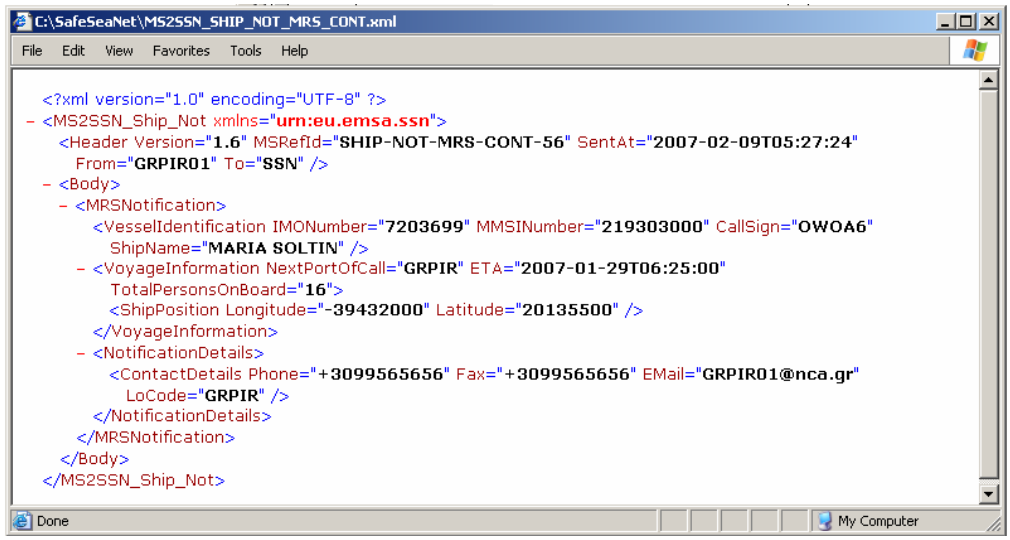
MS2SSN_Ship_Not.xml message, Continued

Examples of an MRS ship notification (continued)

The following example illustrates a MRS notification which details is available as a Word document and can be downloaded by SSN from the specified url:



The following example illustrates a MRS notification which details can only be requested by phone or fax:



MS2SSN_Hazmat_Not.xml message

Introduction

The **MS2SSN_Hazmat_Not.xml** message is sent by a Member State to SafeSeaNet in order to notify SafeSeaNet that a given vessel carries dangerous goods and that the Member State owns some detailed information about these dangerous goods.

This notification must ensure that the vessel and the cargo, if dangerous and/or polluting (PDG), are identified when transiting through EU waters. So, it must be sent by the MS of the port of destination if the vessel is coming from a non EU port (or unknown) and by the MS of the Port of departure if the vessel is leaving an EU port, regardless of her destination.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version (‘1.6’)
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Notification creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC. For all hazmat notifications SentAt < ETA Also, for all hazmat notifications the ETD < ETA A status message warning will be sent if SentAt > ETD
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message (‘SSN’).
Body	**1**			**Body Node**
Notification	**1**			***Notification*** **element node(s). Only 1 element node might be given**
VesselIdentification	**1**			***VesselIdentification*** **element node** The message identifier attributes (IMO number, MMSI, Call Sign, ship name) have to be checked against a reference ship database

IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given. IMO number – IMO Res A.600 (15)- has to be checked if not existing in the reference database.
MMSINumber	0-1	Text	9	MMSI number of the vessel. . Mandatory if *IMONumber* not given. MID according to the ITU regulation
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel Upon SOLAS, chapter I, part B, regulation 15 "Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (from "A" to "Z" and from 0 to 9)
VoyageInformation	**1**			***VoyageInformation* element node**
NextPortOfCall	1	Text	5	~~Location code of next port of call. May be "ZZUKN" if unknown.~~ *Location code of next port of call (even if vessel goes outside EU) or the location code of the defined "waypoints" . Can be "ZZUKN" if the next port of call is unknown.* *For vessel coming to an EU port from outside EU, the "next port of call" attribute cannot be "ZZUKN". The "next port of call" attribute must be the LOCODE of this port of call (next port of call) or its dependent port's LOCODE.* *For vessels leaving a port of a MS the "next port of call" attribute has to be checked against the reference LOCODEs database (waypoints LOCODEs included).*
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call~~. May only be optional if *NextPortOfCall* attribute value is unknown.~~ *If the vessel is leaving an EU port both ETD (from this port) and the ETA (to the next port, regardless if it is EU or non EU) are compulsory.* *ETA should not be filled in if NextPortOfCall attribute value is unknown or the defined "waypoints".* *For vessel arriving at an EU port coming for outside EU, the ETA at the port of destination (EU port) cannot be unknown.*
ETD	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of departure from the **loading** port. ~~May only be optional if *NextPortOfCall* attribute value is unknown.~~ *Can only be optional if the vessel is arriving from a non EU port.* *ETD<ETA*~~.~~

TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown. Dots and commas are not allowed.

Continued on next page

MS2SSN_Hazmat_Not.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
NotificationDetails	**0-1**			***NotificationDetails* element node.** ▪ If not specified, that means the Hazmat notification details can be obtained from the data provider in XML (see "MS2SSN_Hazmat_Res.xml message" at page 121) ▪ If specified, that means the Hazmat notification details is available as a document on a web server (*UrlDetails* must then be specified) or via a phone/fax (*ContactDetails* must then be specified).
UrlDetails	0-1	Choice		**Element indicating the type and the url of the document containing the notification details (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the notification details. If SafeSeaNet receives a request for getting detailed information about this notification, it will use this url to download the document. The Uri must start with https://.
DocType	1	Enum		Type of document format among the following possible values: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the notification details (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person.

MS2SSN_Hazmat_Not.xml message, Continued

Message description (continued)

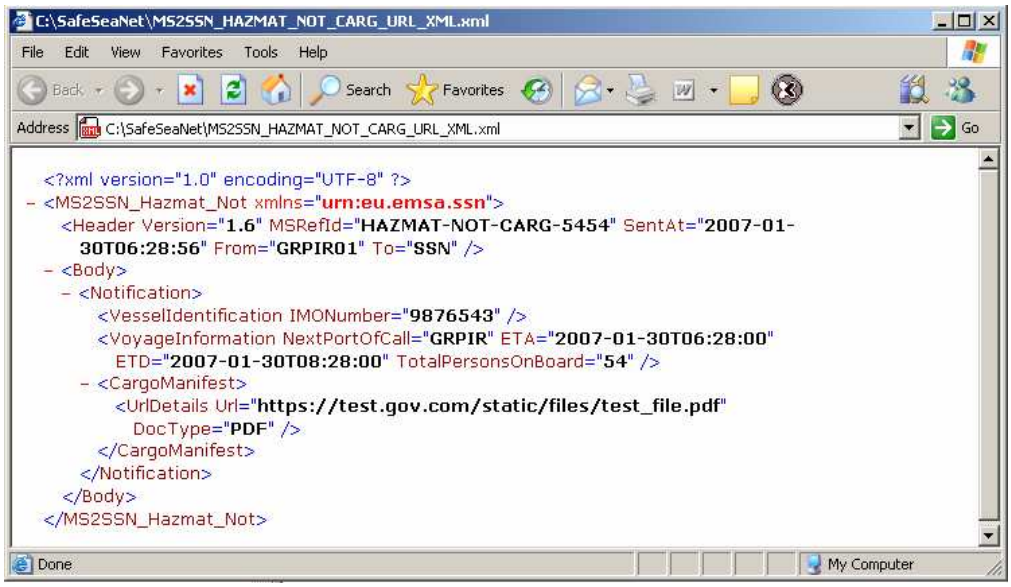
Item	Occ	Type	Len	Description
CargoManifest	**1**			***CargoManifest* element node. The cargo manifest should be available as a document on a web server (*UrlDetails* must then be specified) or via a phone/fax (*ContactDetails* must then be specified).**
UrlDetails	0-1	Choice		**Element indicating the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest, it will use this url to download the document. The Uri must start with https://.
DocType	1	Enum		Type of document format among the following possible values: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the cargo manifest (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person.

Continued on next page

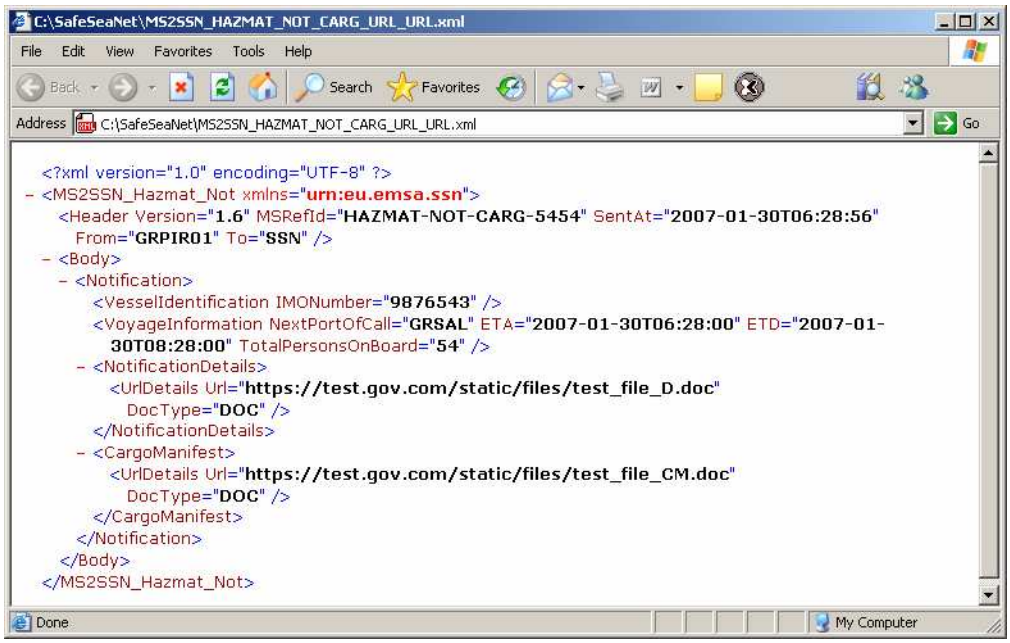
MS2SSN_Hazmat_Not.xml message, Continued

Examples

The following example illustrates a Hazmat notification which details can be requested by SSN to the data provider via the *SSN2MS_Hazmat_Req.xml* message. The *CargoManifest* element indicates that the cargo manifest is available as a PDF document and can be downloaded by SSN from the specified url.



The following example illustrates a Hazmat notification which details is available as a Word document and can be downloaded by SSN from the specified url:

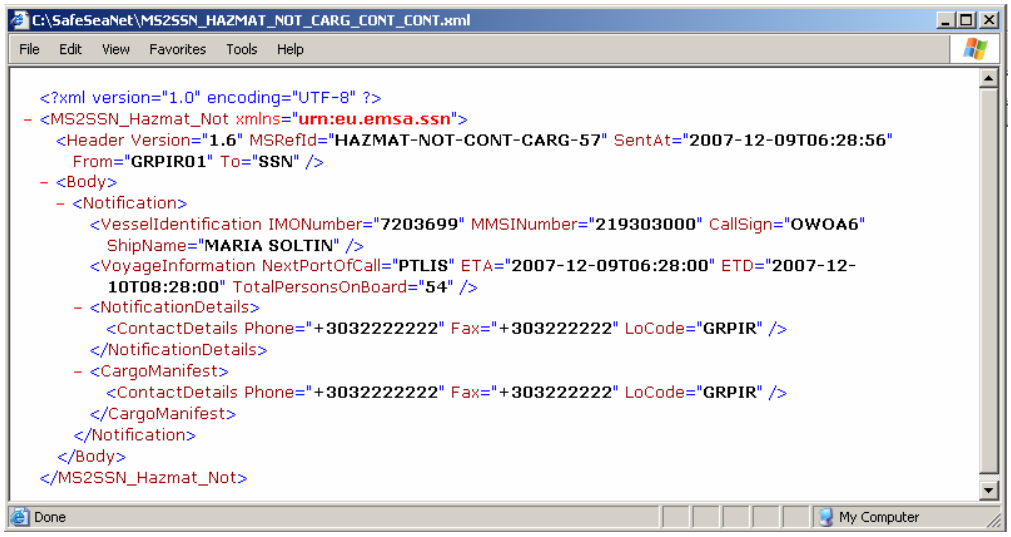


Continued on next page

MS2SSN_Hazmat_Not.xml message, Continued

Examples (continued)

The following example illustrates a Hazmat notification which details can only be requested by phone or fax:



MS2SSN_Security_Not.xml message

Introduction

The **MS2SSN_Security_Not.xml** message is sent by a Member State to SafeSeaNet in order to notify SafeSeaNet that the Member State owns some detailed security information about a given vessel.

Note

The security message was initially in the list of SSN messages but after launching the discussion on reviewing the content of the security message in order to harmonise it with the relevant decisions of the MARSEC Committee, some Member States expressed concerns about the inclusion of the security message into SSN. The COSS Committee discussed on the issue but till present no final decision has been taken and therefore the inclusion of the security message into SSN is still pending.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version (‘1.6’)
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response.
SentAt	1	DT	19	Notification creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message (‘SSN’).
Body	**1**			**Body Node**
Notification	**1**			***Notification* element node(s). Only 1 element node might be given**
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel

Continued on next page

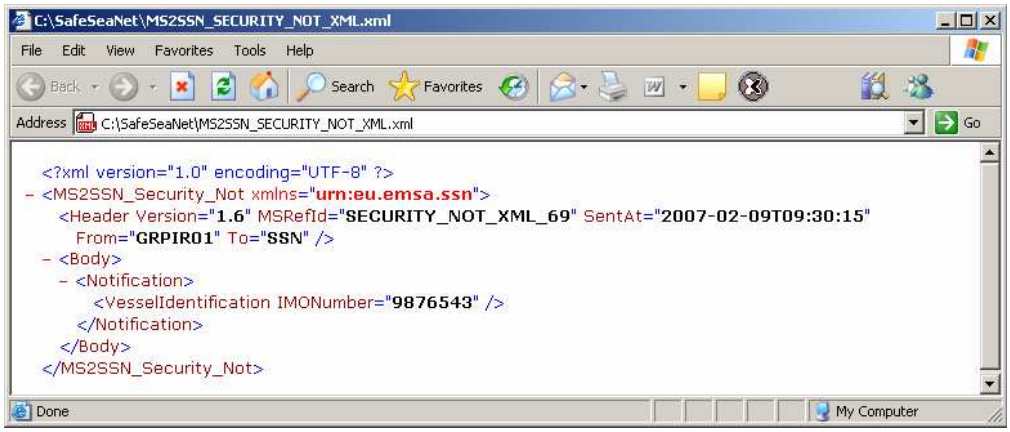
MS2SSN_Security_Not.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
NotificationDetails	**0-1**			***NotificationDetails* element node.** ▪ If not specified, that means the Security notification details can be obtained from the data provider in XML (see "MS2SSN_Security_Res.xml message" at page 139) ▪ If specified, that means the Security notification details is available as a document on a web server (*UrlDetails* must then be specified) or via a phone/fax (*ContactDetails* must then be specified).
UrlDetails	0-1	Choice		**Element indicating the type and the url of the document containing the notification details (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the notification details. If SafeSeaNet receives a request for getting detailed information about this notification, it will use this url to download the document. The Uri must start with https://.
DocType	1	Enum		Type of document format among the following possible values: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the notification details (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person.

MS2SSN_Security_Not.xml message, Continued

Example



The *NotificationDetails* element indicates that the notification details is available as a Word document and can be downloaded by SSN from the specified url.

MS2SSN_Alert_Not.xml message

Introduction

The **MS2SSN_Alert_Not.xml** message is sent by a Member State to SafeSeaNet in order to notify SafeSeaNet that the Member State holds some information about a specific incident type.

Types of Incident

The following types of incidents are supported by SafeSeaNet:

Incident Type	Description
SITREP	Situation report
POLREP	Pollution report
Waste	Waste reporting alert
Lost/found Containers	
Others	Any other one not in the above list

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Notification creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
Incident	**1**			***Incident* element node(s). Only 1 element node might be given**
Type	1	Enum		Type of the incident notification among the following possible values: ▪ **SITREP** ▪ **POLREP** ▪ **Waste** ▪ **LostFoundContainers** ▪ **Others**

Continued on next page

MS2SSN_Alert_Not.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
VesselIdentification	**0-1**	Choice		***VesselIdentification* element node. Mandatory if vessel identified. Not allowed if *ContactIdentification* given.** The message identifier attributes (IMO number, MMSI, Call Sign, ship name) have to be checked against a reference ship database
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given IMO number – IMO Res A.600 (15)- has to be checked if not existing in the reference database.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given. MID according to the ITU regulation
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel Upon SOLAS, chapter I, part B, regulation 15 "Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (from “A” to ”Z” and from 0 to 9)
ContactIdentification	**0-1**	Choice		***ContactIdentification* element node. Mandatory if vessel not identified. Not allowed if *VesselIdentification* given.**
MaritimeAuthority	1	Text	1-50	Name of the Maritime Authority
LoCode	1	Text	5	Location code of the Maritime Authority
Phone	1	Text	0-20	Phone number (country code included) of the Maritime Authority. Only numbers and the symbol “+” are allowed. No spaces allowed between characters
Fax	1	Text	0-20	Fax number (country code included) of the Maritime Authority. Only numbers and the symbol “+” are allowed. No spaces allowed between characters
Email	0-1	Text	0-50	Email address of the Maritime Authority
IncidentDetails	**0-1**			***IncidentDetails* element node.** ▪ If not specified, that means the incident details can be obtained from the data provider in XML (see “MS2SSN_Alert_Res.xml message” at page 153) ▪ If specified, that means the incident details is available as a document on a web server (*UrlDetails* must then be specified) or via a phone/fax (*ContactDetails* must then be specified).

UrlDetails	0-1	Choice		**Element indicating the type and the url of the document containing the notification details (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the incident details. If SafeSeaNet receives a request for getting detailed information about this incident, it will use this url to download the document. The Uri must start with https://.

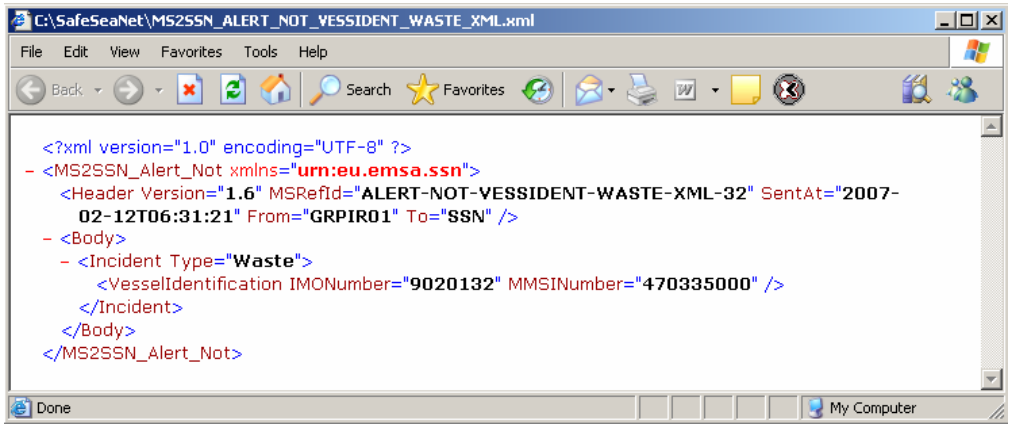
Continued on next page

MS2SSN_Alert_Not.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
DocType	1	Enum		Type of document format among the following possible values: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the incident details (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person.

Example of an alert for an identified ship

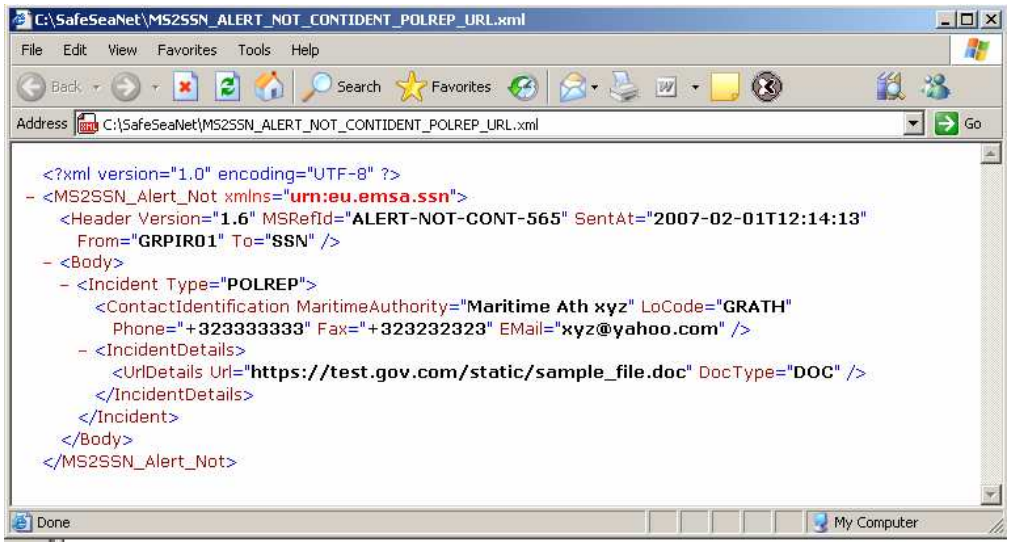


As the *IncidentDetails* element is not specified, that means that the incident details can be requested by SSN to the *data provider* using the *SSN2MS_Alert_Req.xml* message.

Continued on next page

MS2SSN_Alert_Not.xml message, Continued

Example of an alert for an unknown ship



The *ContactIdentification* element gives the coordinates of the maritime authority holding the alert details.

The *IncidentDetails* element indicates that the incident details is available as a Word document and can be downloaded by SSN from the specified url.

Section 3.4 - Get Port Notification Details

Overview

Introduction

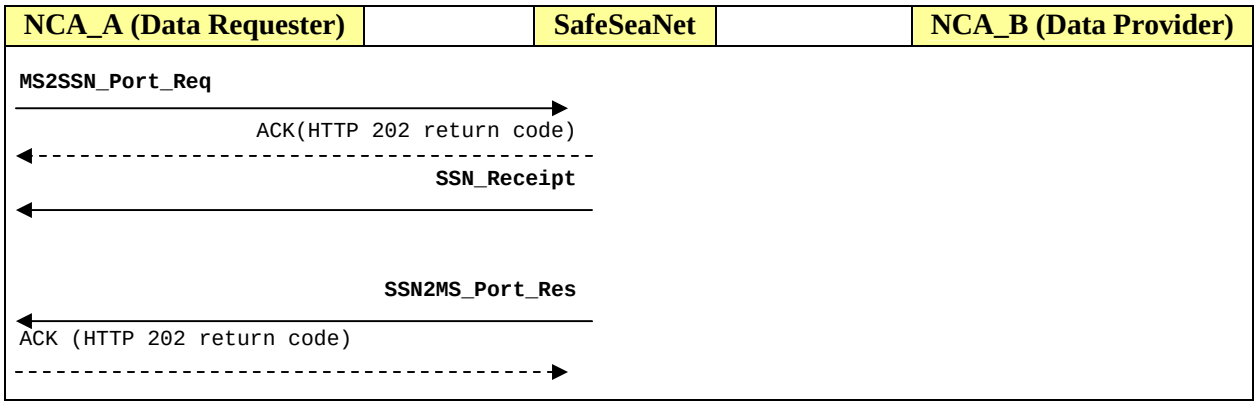
A Member State may ask SafeSeaNet to get the latest port notification details for a given vessel. Such service is implemented by exchanging different XML messages between the *data requester* and the SafeSeaNet system.

The messages are used by the "Information Requests" process (see page 35)

This section describes the different XML messages provided for this transaction.

General flow of the XML messages

The following figure outlines the expected aynchronous flow of XML messages related to this SafeSeaNet XML transaction. You may notice that, as SafeSeaNet has all the port notification details in its database (stored when receiving the *MS2SSN_Port_Not.xml* notification message from the *data provider*), there is no need to ask the *data provider* for the details.



Contents

This section contains the following topics:

MS2SSN_Port_Req.xml message

Introduction

The **MS2SSN_Port_Req.xml** message is sent by a Member State (*data requester*) to SafeSeaNet in order to request the latest port notification details about a given vessel.

Please note that such kind of XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

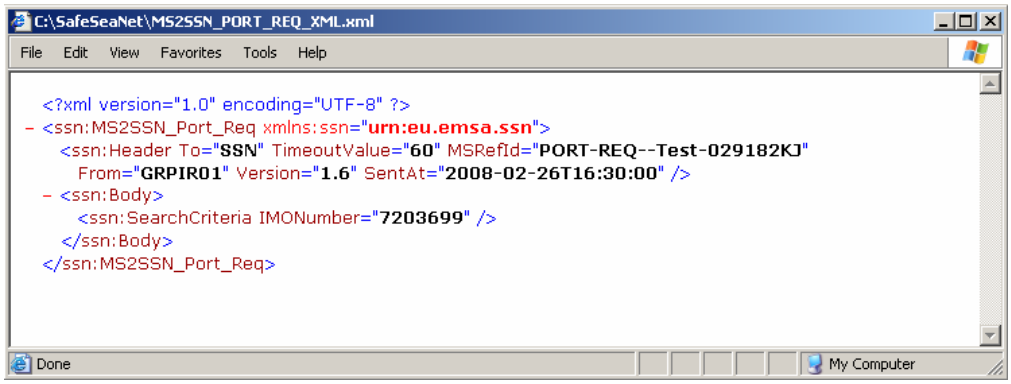
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN2MS_Port_Res.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node(s). Only 1 element node might be given**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

MS2SSN_Port_Req.xml message, Continued

Example



This request means that the data requester asks SSN for the detailed information of the latest port notification received for the vessel which IMO# is 7325526. The *TimeoutValue* attribute indicates that the data requester expects to receive the *SSN2MS_Port_Res.xml* response message within 60 seconds.

SSN2MS_Port_Res.xml message

Introduction

The **SSN2MS_Port_Res.xml** message is the response sent by SafeSeaNet to a Member State (*data requester*) requesting the latest port notification details for a given vessel.

Please note that such kind of XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Port_Req.xml* request.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			***SearchCriteria* element node(s).**
IMONumber	0-1	Text	7	From original *MS2SSN_Port_Req.xml* request
MMSINumber	0-1	Text	9	From original *MS2SSN_Port_Req.xml* request
PortNotificationDetails	**0-1**			***PortNotificationDetails* element node. Optional if StatusCode <> Found**
SentAt	1	DT	19	Date and time (ISO 8601 UTC format) indicating when the notification has been notified to safeSeaNet.
From	1	Text	3-15	The name of the sender (data provider) of the notification (see p.45).

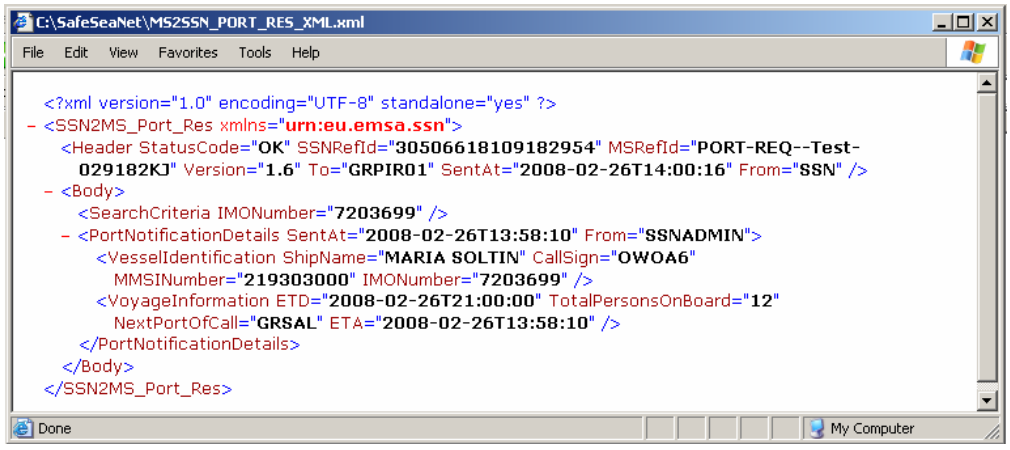
Continued on next page

SSN2MS_Port_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**1**			***VoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be “ZZCAN” if unknown.
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is unknown.
ETD	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of departure from the next port of call. May only be optional if *NextPortOfCall* attribute value is unknown.
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.

Example



Section 3.5 - Get Ship Notification Details

Overview

Introduction

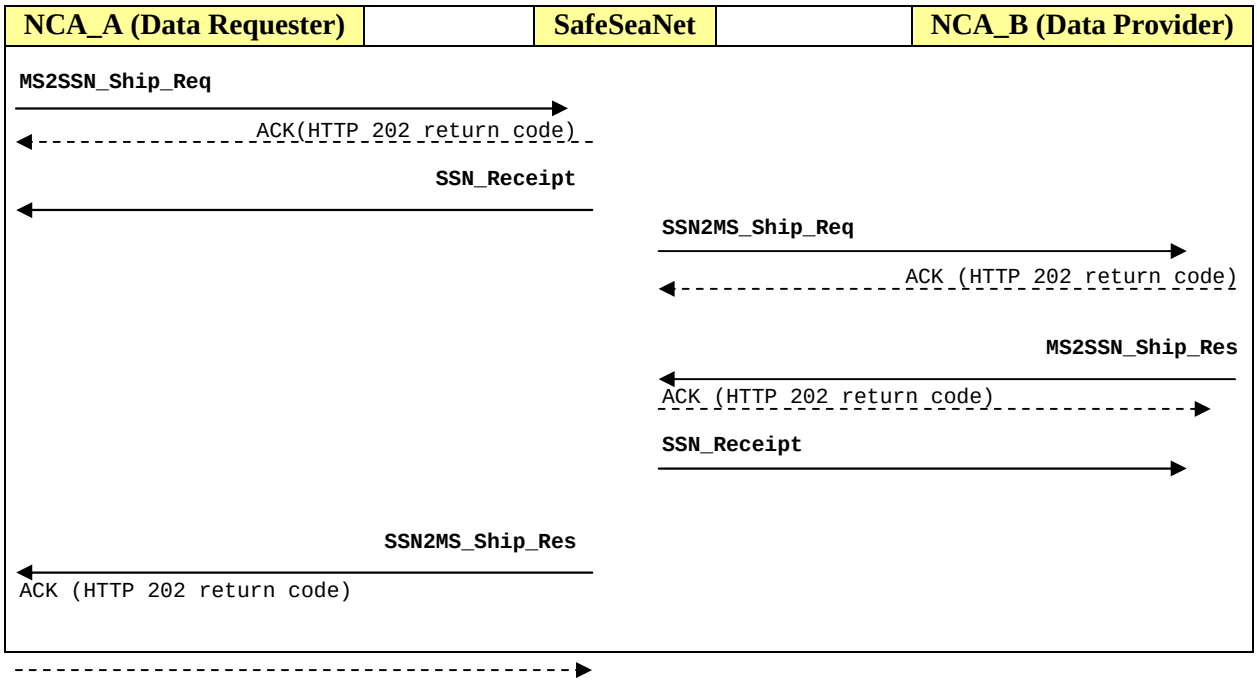
A Member State may ask SafeSeaNet to get the latest ship notification details for a given vessel. Such service is implemented by exchanging different XML messages between the *data requester*, the SafeSeaNet system and the *data provider*.

The messages are used by the "Information Requests" process (see page 35)

This section describes the different XML messages provided for this transaction.

General flow of the XML messages

The following figure outlines the expected aynchronous flow of XML messages related to this SafeSeaNet XML transaction (assuming the data provider is able to talk XML with SafeSeaNet - please refer to "Data Provider capabilities" at page 30 for more details):



Contents

This section contains the following topics:

MS2SSN_Ship_Req.xml message

Introduction

The **MS2SSN_Ship_Req.xml** message is sent by a Member State (*data requester*) to SafeSeaNet in order to request the latest ship notification details about a given vessel.

Please note that such kind of XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

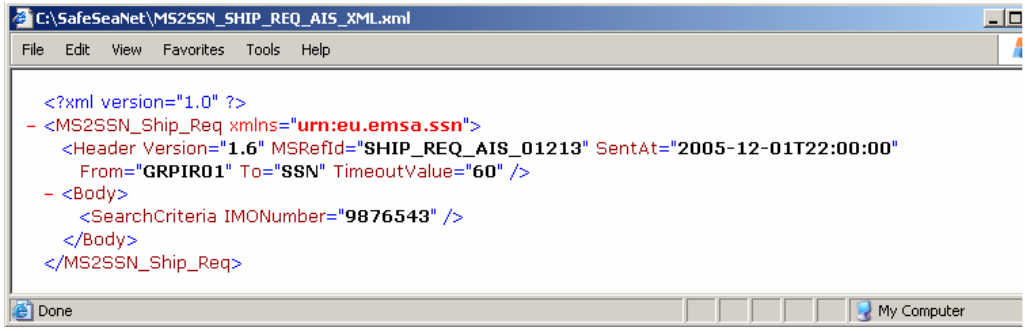
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN2MS_Ship_Res.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node(s). Only 1 element node might be given**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

MS2SSN_Ship_Req.xml message, Continued

Example



SSN2MS_Ship_Req.xml message

Introduction

The **SSN2MS_Ship_Req.xml** message is sent by SafeSeaNet to the Member State owning the Ship notification details (*data provider*) in order to request the latest Ship notification details about a given vessel.

This message is used by SafeSeaNet when receiving a **MS2SSN_Ship_Req.xml** message coming from a *data requester* and when SafeSeaNet has identified that the *data provider* (i.e. the owner of the notification details) is able to talk XML with SafeSeaNet (please refer to "Data Provider capabilities" at page 30 for more details).

Please note that such kind of XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

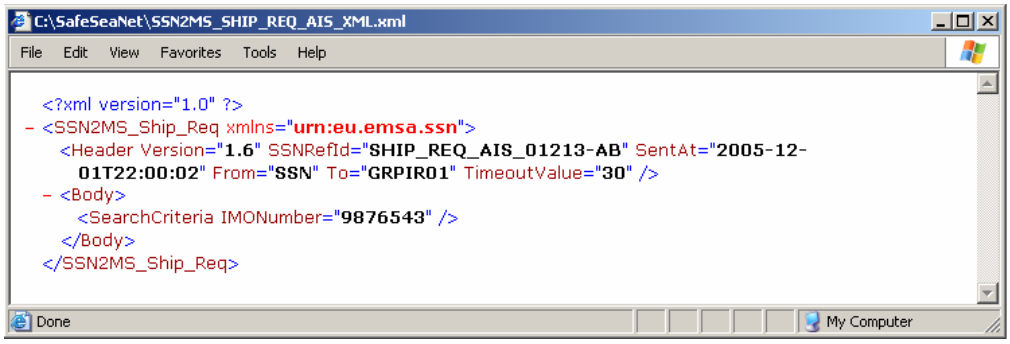
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
SSNRefld	1	Uuid	1-36	Reference number given by the SafeSeaNet. It must inserted later by the NCA application in the *SSNRefId* attribute of the *MS2SSN_Ship_Res.xml* response and will be used for correlation when SafeSeaNet will receive the response from the NCA application.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node.**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

SSN2MS_Ship_Req.xml message, Continued

Example



MS2SSN_Ship_Res.xml message

Introduction

The **MS2SSN_Ship_Res.xml** message is sent by the Member State owning the notifications details (*data provider)* to SafeSeaNet in answer to its request for getting the latest ship notification details about a given vessel. The *data provider* should return the details of the latest ship notification it owns.

Please note that such kind of XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

The following table describes the XML message used for the transaction. Either the *MRSNotificationDetails* or the *AISNotificationDetails* element will be returned depending on the type of the ship notification (MRS or AIS).

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Ship_Req.xml* request.
SSNRefld	1	Uuid	1-36	Reference number given by the SafeSeaNet. It will be inserted back by the NCA application in the *SSNRefId* attribute of the *SSN_Receipt.xml* response if the message is not well-formed.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			***SearchCriteria* element node(s). Only 1 element node might be given**
IMONumber	0-1	Text	7	From initial *MS2SSN_Ship_Req.xml* request
MMSINumber	0-1	Text	9	From initial *MS2SSN_Ship_Req.xml* request
VesselIdentification	**1**			***VesselIdentification* element node** No chercking rules to be applied if already applied in the notification.
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.

MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel

MS2SSN_Ship_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
MRSNotificationDetails	**0-1**	**Choice**		***MRSNotificationDetails* element node. Not allowed if *StatusCode* <> OK or if *AISNotificationDetails* specified**
…				
AISNotificationDetails	**0-1**	**Choice**		***AISNotificationDetails* element node. Not allowed if *StatusCode* <> OK or if *MRSNotificationDetails* specified**
…				

***MRSNotificationDetails* element**

The following table describes the *MRSNotificationDetails* element (returned if ship notification type = MRS):

Item	Occ	Type	Len	Description
MRSNotificationDetails	**0-1**	**Choice**		***MRSNotificationDetails* element node. Not allowed if *StatusCode* <> OK or if *AISNotificationDetails* specified**
MRSVoyageInformation	**1**			***MRSVoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown.
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. ~~May only be optional if *NextPortOfCall* attribute value is unknown.~~
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000
MRSDynamicInformation	**1**			***MRSDynamicInformation* element node**
ReportingDateAndTime	1	DT	19	Date and Time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of reporting. This time stamp corresponds also to the given position.

COG	1	Int		Course over ground in 1/10° (0-3599; 3600 = not available = default; 3601-4095 = should not be used) Lower value: 0; Upper value: 3600
SOG	1	Int		Speed over ground in 1/10 knot steps (0-102.2 knots). 102.3 = not available; 102.2 = 102.2 knots or higher. Example: A value of 893 means 89.3 knots. Lower value: 0; Upper value: 1023
NavigationalStatus	1	Enum		One of the following possible values: ▪ **0** (under way using engine) ▪ **1** (at anchor) ▪ **2** (not under command) ▪ **3** (restricted manoeuvrability) ▪ **4** (constrained by her draught) ▪ **5** (moored) ▪ **6** (aground) ▪ **7** (engaged in fishing) ▪ **8** (under way sailing) ▪ **9** till **14** (reserved → should not be used) ▪ **15** (not defined)
Bunker	0-1			***Bunker*** **element node. Mandatory if total quantity of bunker is more than 5000 tons.**
Chars	1	Text		Bunker characteristics
Quantity	1	Text		Bunker estimated quantity
MRSCargoInformation	1			***MRSCargoInformation*** **element node**
CargoType	1	Text	0-255	Type of cargo.
DG	1			***DG*** **(dangerous goods) element node**
AnyDG	1	Enum		Either **Y** or **N**
DGDetails	***0-99***			***DGDetails*** **element node describing the dangerous goods (up to 99)**
IMOClass	1	Text	1-7	IMO class of DG
Quantity	1	Text	1-18	Quantity of DG
CargoManifest	0-1			***CargoManifest*** **element node Mandatory if *AnyDG* = Y**
UrlDetails	0-1	Choice		***UrlDetails*** **element node. Used only to specify the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server). Not allowed if *ContactDetails* specified.**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest about this vessel, it will use this url to download the document.
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive

MS2SSN_Ship_Res.xml message, Continued

MRSNotificationDetails element (continued)

Item	Occ	Type	Len	Description
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the notification details (if the *data provider* can only provide the information via phone or fax). Not allowed if *UrlDetails* specified.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person.

Continued on next page

MS2SSN_Ship_Res.xml message, Continued

***AISNotification Details* element**

The following table describes the *AISNotificationDetails* element (returned if ship notification type = AIS):

Item	Occ	Type	Len	Description
AISNotificationDetails	**0-1**	**Choice**		***AISNotificationDetails* element node. Not allowed if *StatusCode* <> OK or if *MRSNotificationDetails* specified** No checking rules applied in the AIS response
VesselInformation	**0-1**			***VesselInformation* element node**
LengthAndBeam	0-1	Text	1-36	Length and beam
ShipDraught	0-1	Int		In 1/10 m; 255 means 25.5 m or greater; 0 means not available; in accordance with IMO resolution A.851
ShipType	0-1	Enum		One of the following possible values: ▪ **0** (not available or no ship) ▪ **1-99** ▪ **100-199** (preserved for regional use) ▪ **200-255** (preserved for future use)
AntennaLocation	0-1	Text	1-36	Location of position-fixing antenna
AISVoyageInformation	**1**			***AISVoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown. Considering the actual situation with the vast majority of the AIS messages include the actual name and not the Locode described in many different ways, the SSN Group decided not to reject notifications containing more than 5 characters in this attribute. Member States requesting through the web will receive the original content of the attribute. Member States when requesting through the XML these messages will receive ZZUKN
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is unknown.
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000

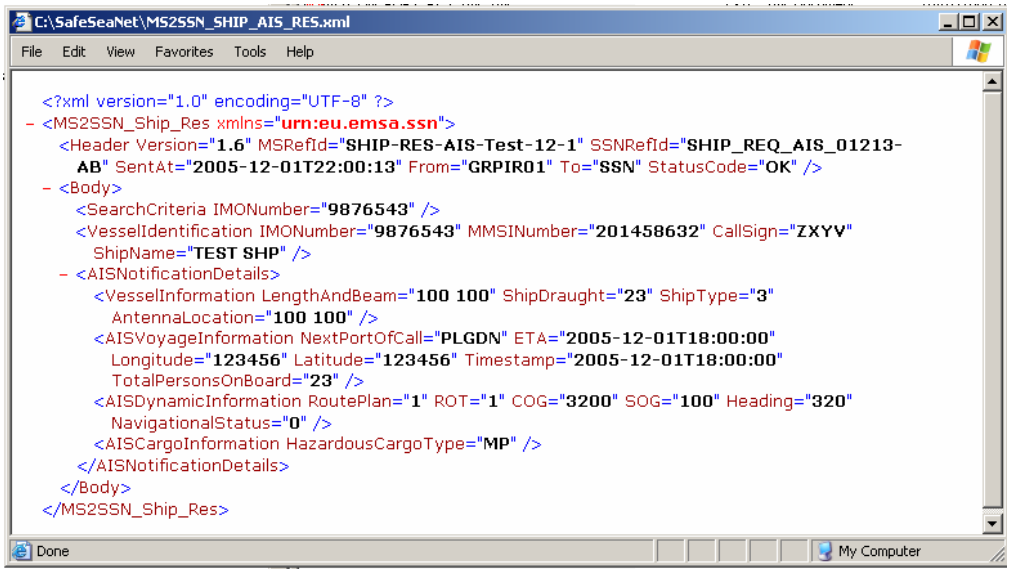
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000
Timestamp	1	DT		Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the ship position.
TotalPersonsOnBoard	0-1	Int		Total number of persons aboard. **99999** if actually unknown.
AISDynamicInformation	1			***AISDynamicInformation*** element node
RoutePlan	1	Text		Route plan
ROT	0-1	Int		Rate of Turn. Possible values are: ▪ from **0** to **+126** (turning right at up to 708° per min. or higher) ▪ from **-126** to **0** (turning left at up to 708° per min. or higher) ▪ **+127** (turning right at > 5°/30s) ▪ **-127** (turning left at > 5°/30s) ▪ **-128** (no turn info available)
COG	0-1	Int		Course over ground in 1/10° (0-3599; 3600 = not available = default; 3601-4095 = should not be used)
SOG	0-1	Int		Speed over ground in 1/10 knot steps (0-102.2 knots). 102.3 = not available; 102.2 = 102.2 knots or higher. Example: A value of 893 means 89.3 knots.
NavigationalStatus	0-1	Enum		One of the following possible values: ▪ **0** (under way using engine) ▪ **1** (at anchor) ▪ **2** (not under command) ▪ **3** (restricted manoeuvrability) ▪ **4** (constrained by her draught) ▪ **5** (moored) ▪ **6** (aground) ▪ **7** (engaged in fishing) ▪ **8** (under way sailing) ▪ **9** till **14** (reserved → should not be used) ▪ **15** (not defined)
Heading	0-1	Int		Degrees from 0 to 359; 511 means not available
AISCargoInformation	**0-1**			***AISCargoInformation*** **element node**
HazardousCargoType	0-1	Enum		Type of hazardous cargo (if any) among the following possible values: ▪ **DG** ▪ **HS** ▪ **MP**

Continued on next page

MS2SSN_Ship_Res.xml message, Continued

Example of an AIS notification details

The details of an AIS notification can only be supplied in the XML format. An example of the details of a lastest AIS notification could be the following:

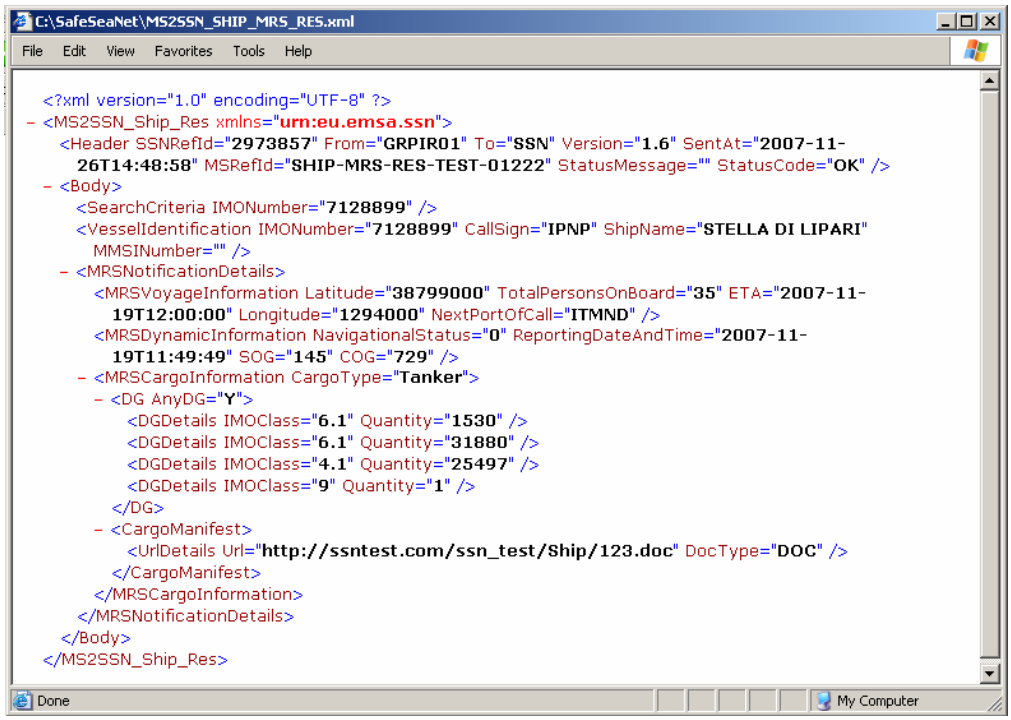


Continued on next page

MS2SSN_Ship_Res.xml message, Continued

Example of an MRS notification details

The following example illustrates the details of a MRS notification. The cargo information specifies that dangerous goods are on board and that the cargo manifest can be downloaded by SSN from the specified url.



SSN2MS_Ship_Res.xml message

Introduction

The **SSN2MS_Ship_Res.xml** message is the response sent by SafeSeaNet to a Member State (*data requester*) requesting the latest ship notification details about a given vessel.

Please note that such kind of XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Structure of the Notification details

Depending on the *data provider* capabilities (see p. 30), the following element nodes of the XML message will be returned:

If the *data provider*…	Then the XML message contains the following nodes…
is able to talk XML with SafeSeaNet (allowed for both AIS and MRS)	… <NotificationDetails…> <VesselIdentification …/> **<MRSNotificationDetails…/> or** **<AISNotificationDetails…/>** </NotificationDetails> …
can only provide notification details as downloadable files (only allowed for MRS since AIS may only be supplied as XML format)	… <NotificationDetails…> <VesselIdentification …/> <VoyageInformation …/> **<Base64Details…/>** </NotificationDetails> …
is only accessible via phone/fax/email (only allowed for MRS since AIS may only be supplied as XML format)	… <NotificationDetails…> <VesselIdentification …/> <VoyageInformation …/> **<ContactDetails…/>** </NotificationDetails> …

Message description

The following table describes the XML message used for the transaction. Either the *MRSNotificationDetails* or the *AISNotificationDetails* element will be returned depending on the type of the ship notification (MRS or AIS).

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version (‘1.6’)
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.

Continued on next page

SSN2MS_Ship_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Ship_Req.xml* request.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It will be inserted back by the NCA application in the *SSNRefId* attribute of the *SSN_Receipt.xml* response if the message is not well-formed.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			***SearchCriteria* element node(s). Only 1 element node might be given**
IMONumber	0-1	Text	7	From initial *MS2SSN_Ship_Req.xml* request
MMSINumber	0-1	Text	9	From initial *MS2SSN_Ship_Req.xml* request
NotificationDetails	**0-1**			***NotificationDetails* element node. Not allowed if StatusCode <> Found**
SentAt	**1**	DT	19	Date and time (ISO 8601 UTC format) indicating when the notification has been notified to safeSeaNet.
From	1	Text	3-15	The name of the sender (data provider) of the notification (see p.45).
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel

Continued on next page

SSN2MS_Ship_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
VoyageInformation	**0-1**			***VoyageInformation*** **element node. Used to the positioning of the vessel when notification details are not available in xml format at dataprovider. If specified, the other elements (MRSNotificationDetails, AISNotificationDetails) are not allowed.**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown.
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is unknown.
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.
AISNotificationDetails	**0-1**	**Choice**		***AISNotificationDetails*** **element node. Mandatory if the ship notification is of type AIS. If specified, the other elements (*MRSNotificationDetails, Base64Details, ContactDetails*) are not allowed.**
…				From corresponding *MS2SSN_Ship_Res.xml* response (if any). See p.105.
MRSNotificationDetails	**0-1**	**Choice**		***MRSNotificationDetails*** **element node. Used to specify that the MRS notification details are available in XML format (see p.102). If specified, the other elements (*AISNotificationDetails, Base64Details, ContactDetails*) are not allowed.**
…				From corresponding *MS2SSN_Ship_Res.xml* response (if any). See p.102.
Base64Details	**0-1**	**Choice**		***Base64Details*** **element. Used to specify that the MRS notification details are available in another document format (downloaded by SSN from a web server). If specified, the other elements (*AISNotificationDetails, MRSNotificationDetails, ContactDetails*) are not allowed.**

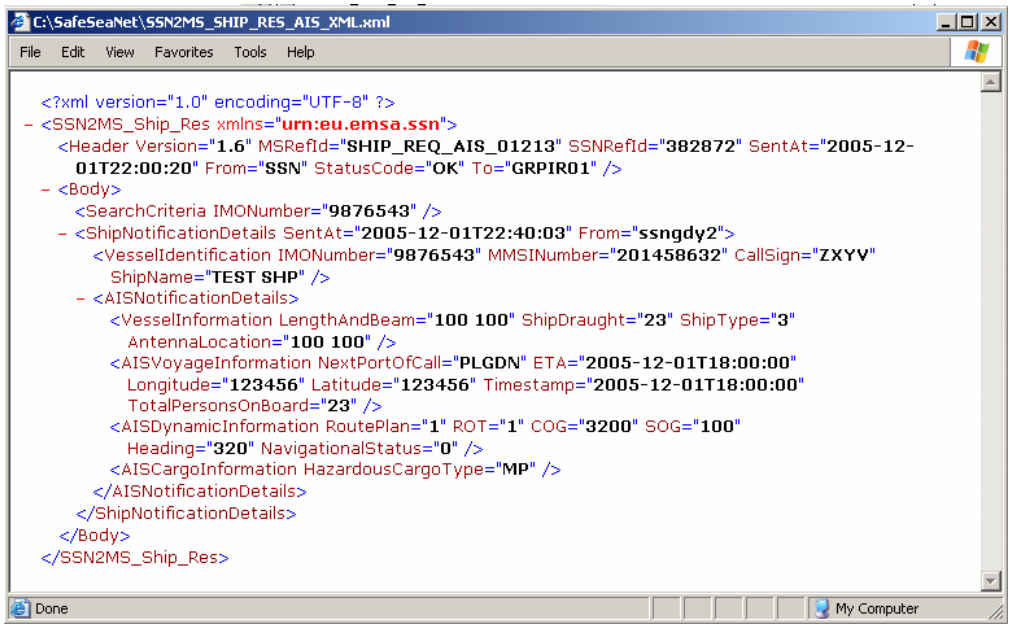
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
Base64Content	1	base64		Base64-encoded characters of the notification details downloaded by SafeSeaNet.
ContactDetails	**0-1**	**Choice**		***ContactDetails* element. Used to specify that the MRS notification details are available by phone/fax/email. If specified, the other elements (*AISNotificationDetails, MRSNotificationDetails, Base64Details*) are not allowed.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person

Continued on next page

SSN2MS_Ship_Res.xml message, Continued

Example of an AIS notification in XML

The AIS notification details can only be provided in XML format as shown below:

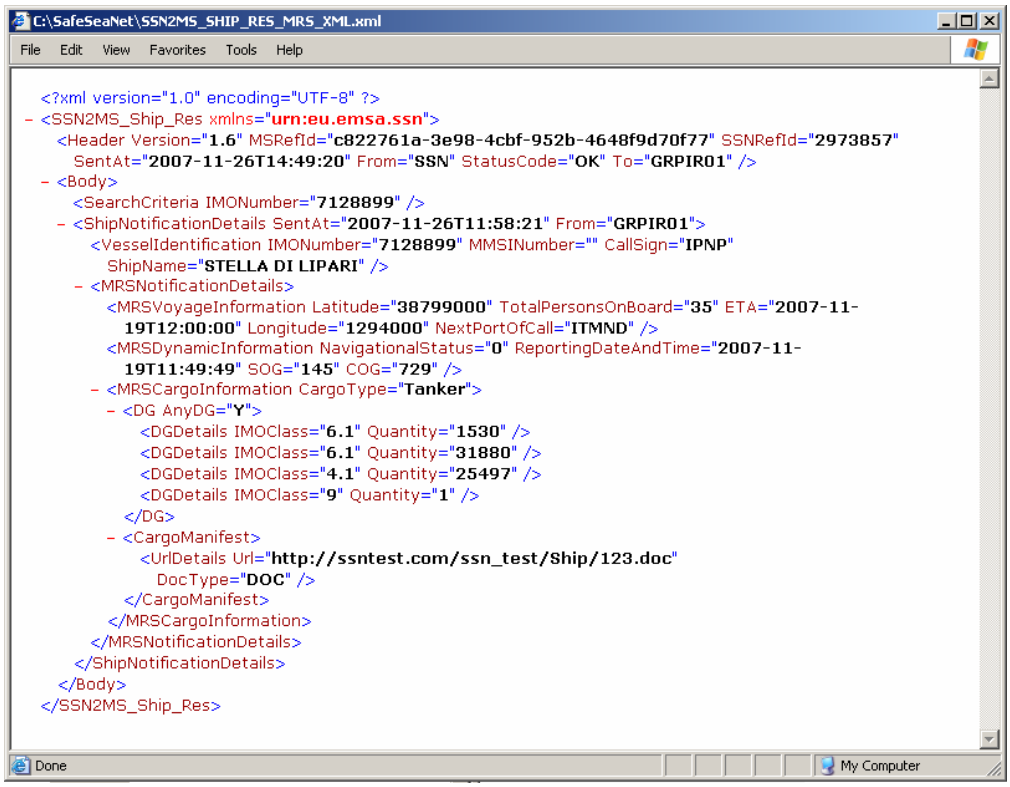


Continued on next page

SSN2MS_Ship_Res.xml message, Continued

Examples of a MRS notification details

The following example illustrates the details of a MRS notification available in XML format. The cargo information specifies that dangerous goods are on board and that the cargo manifest can be downloaded by SSN from the specified url.

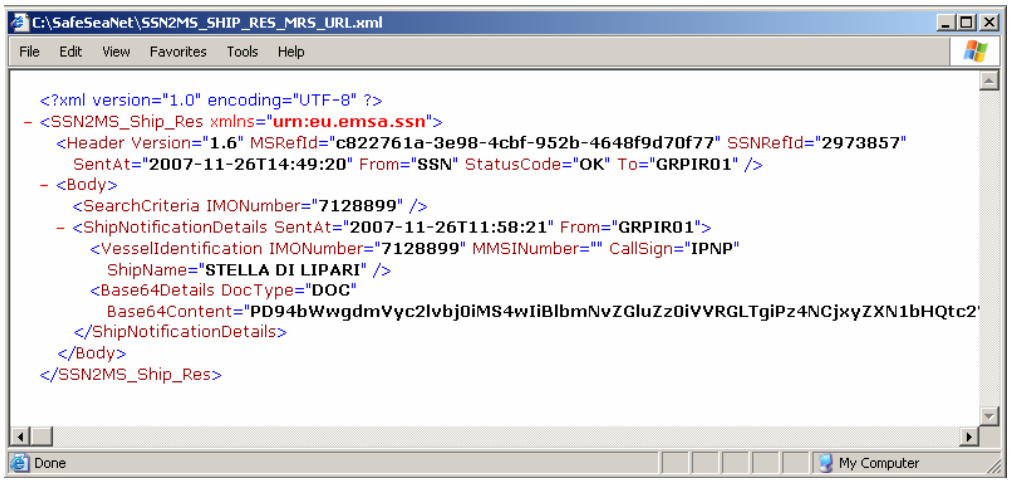


Continued on next page

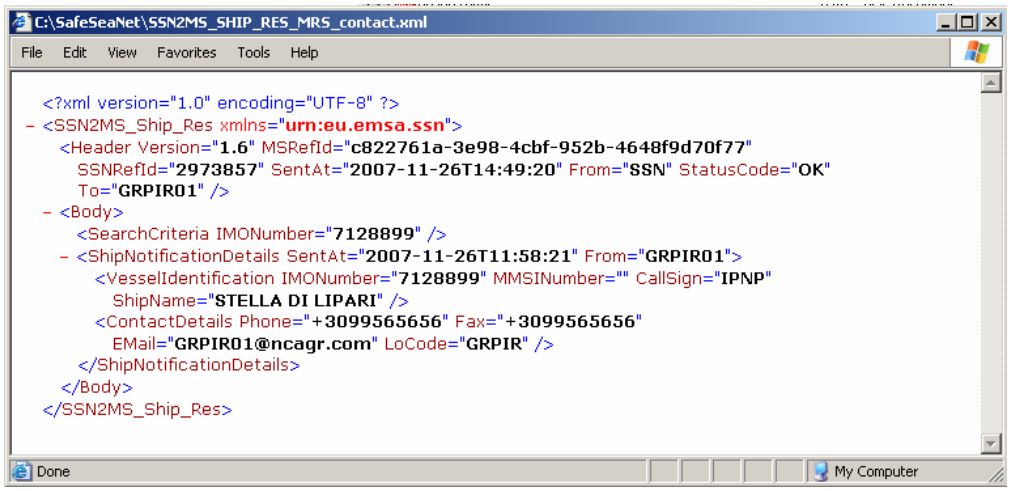
SSN2MS_Ship_Res.xml message, Continued

Examples of a MRS notification details (continued)

The following example illustrates a MRS notification which details details are available as a Word document. To recover the original Word document, the *data requester* must base64-decode (see p.56 for more details) the stream of characters provided in the *Base64Content* attribute:



The following example illustrates a MRS notification which details can only be requested by phone or fax:



Section 3.6 - Get Hazmat Notification Details

Overview

Introduction

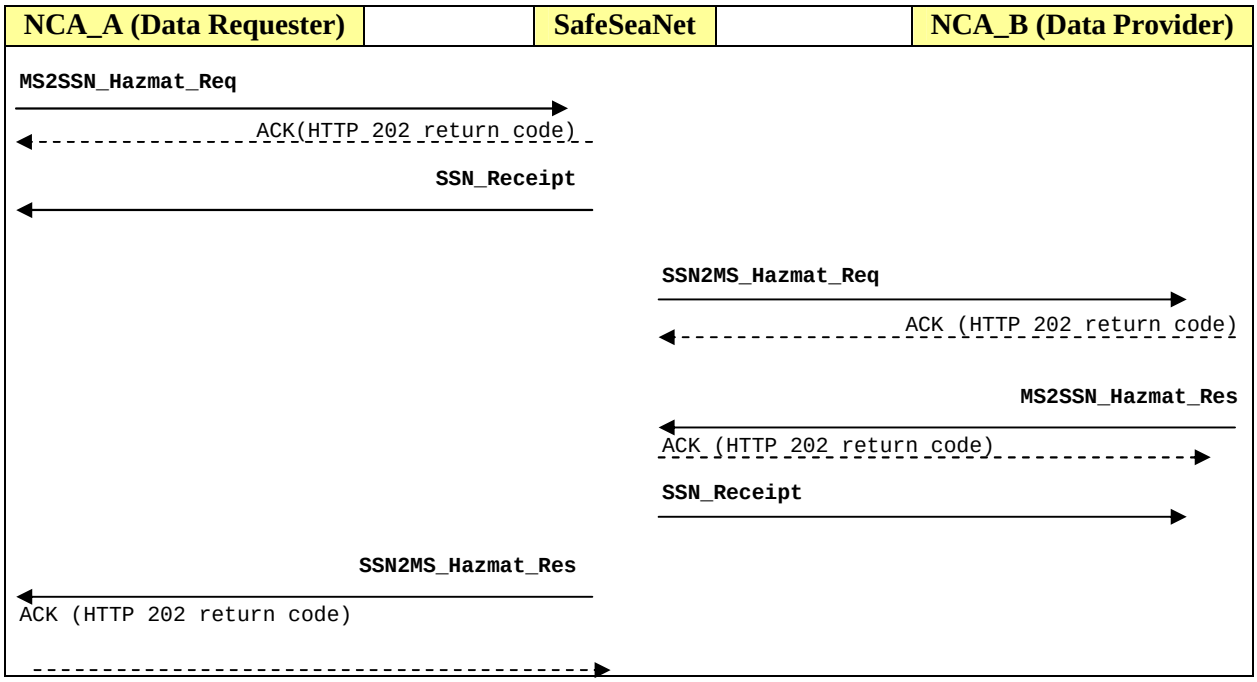
A Member State may ask SafeSeaNet to get the latest hazmat notification details for a given vessel. Such service is implemented by exchanging different XML messages between the *data requester*, the SafeSeaNet system and the *data provider*.

The messages are used by the "Information Requests" process (see page 35)

This section describes the different XML messages provided for this transaction.

General flow of the XML messages

The following figure outlines the expected aynchronous flow of XML messages related to this SafeSeaNet XML transaction (assuming the data provider is able to talk XML with SafeSeaNet - please refer to "Data Provider capabilities" at page 30 for more details):



Contents

This section contains the following topics:

MS2SSN_Hazmat_Req.xml message

Introduction

The **MS2SSN_Hazmat_Req.xml** message is sent by a Member State (*data requester*) to SafeSeaNet in order to request the latest Hazmat notification details about a given vessel.

Please note that such kind of XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

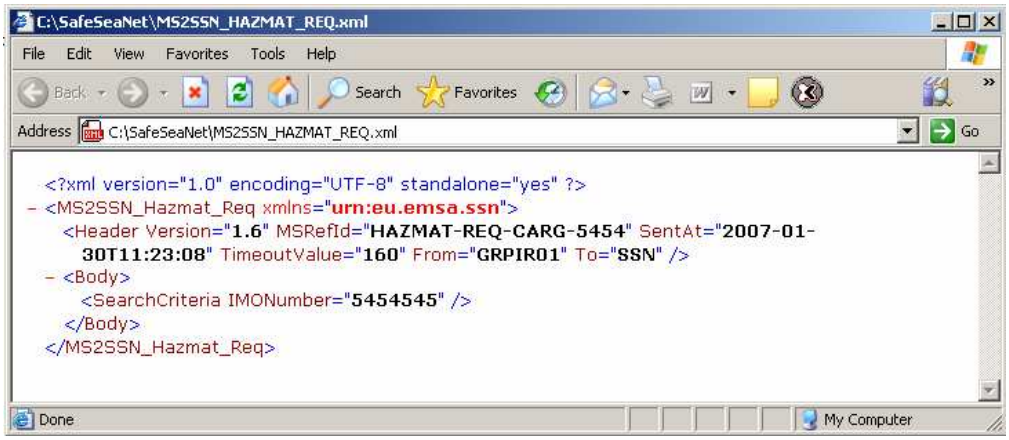
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN2MS_Hazmat_Res.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

MS2SSN_Hazmat_Req.xml message, Continued

Example



SSN2MS_Hazmat_Req.xml message

Introduction

The **SSN2MS_Hazmat_Req.xml** message is sent by SafeSeaNet to the Member State owning the Hazmat notification details (*data provider*) in order to request the latest Hazmat notification details about a given vessel.

This message is used by SafeSeaNet when receiving a **MS2SSN_Hazmat_Req.xml** message coming from a *data requester* and when SafeSeaNet has identified that the *data provider* (i.e. the owner of the notification details) is able to talk XML with SafeSeaNet (please refer to "Data Provider capabilities" at page 30 for more details). The *data provider* must have implemented this XML message and its XML response accordingly.

Please note that such kind of XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

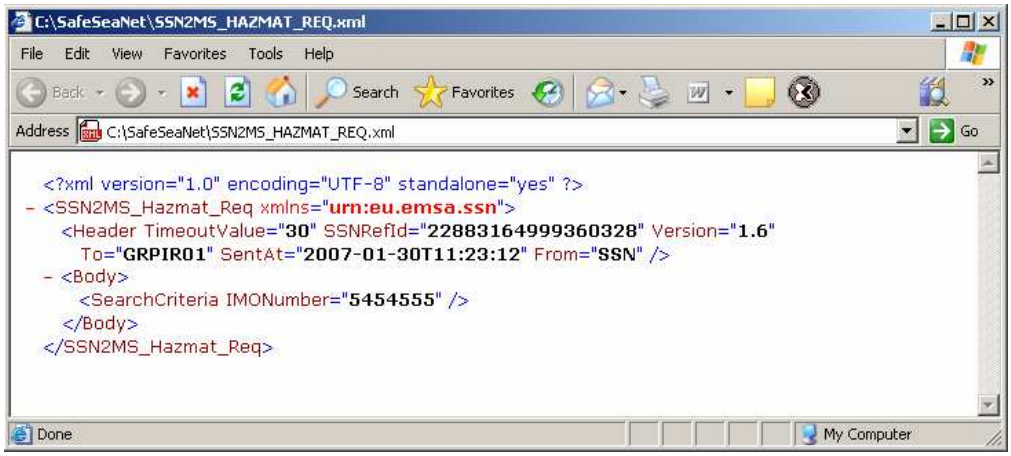
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It must inserted later by the NCA application in the *SSNRefId* attribute of the *MS2SSN_Hazmat_Res.xml* response and will be used for correlation when SafeSeaNet will receive the response from the NCA application.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node.**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

SSN2MS_Hazmat_Req.xml message, Continued

Example



MS2SSN_Hazmat_Res.xml message

Introduction

The **MS2SSN_Hazmat_Res.xml** message is sent by the Member State owning the notifications details (*data provider)* to SafeSeaNet in answer to its request for getting the latest hazmat notification details about a given vessel.

Please note that such kind of XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

The following table describes the XML message used for the transaction. Note that the location of the cargo manifest has been given at notification time (see "MS2SSN_Hazmat_Not.xml message" at p.75).

Item	Occ	Type	Len	Description
Header	**1**			**Header node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the response. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response if this message is not well-formed. The MSRefId must be unique
SSNRefId	1	Uuid	1-36	Reference number given by SafeSeaNet in the *SSN2MS_Hazmat_Req.xml* request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body node (optional if the request format was invalid)**
SearchCriteria	**1**			From corresponding *SSN2MS_Hazmat_Req.xml* request
IMONumber	0-1	Text	7	From corresponding *SSN2MS_Hazmat_Req.xml* request
MMSINumber	0-1	Text	9	From corresponding *SSN2MS_Hazmat_Req.xml* request
NotificationDetails	**0-1**			***NotificationDetails* element node. Not allowed if StatusCode <> Found**
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.

MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel

Continued on next page

MS2SSN_Hazmat_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
VoyageInformation	**1**			***VoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown.
ETA	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. May only be optional if *NextPortOfCall* attribute value is unknown.
ETD	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of departure from the **loading** port. May only be optional if the ship is coming from a port located outside the Community.
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.
INFShipClass	0-1	Enum		Code for the license of the vessel according to the INF Code (Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on board Ships). Possible values are: ▪ **INF1 (Class INF 1)** ▪ **INF2 (Class INF 2)** ▪ **INF3 (Class INF3)**
CargoInformation	**1**			***CargoInformation* element node**
DPG	**1-9999**			***DPG* element node describing each type of dangerous goods on board.**
TechnicalName	1	Text	1-350	Technical name of DPG. *Note: this term may mean the "proper shipping name" or the "product name" or the "technical name" depending on the code used (IMDG, IBC or IGC)*
UNNumber	1	Text	4	UN number of DPG. Please use 'NONE' if UN number not existing.
IMOHazardClass	1	Text	1-7	IMO Hazard class (IMDG-IBC-IGC codes) of DPG
WeightGross	***0-1***	***Choice***		***WeightGross* element specifying the gross weight of the dangerous good. Mandatory if *WeightNet* not present.**
UnitOfMeasurementGross	1	Enum		Indication of the unit of measurement in which the weight (mas) is expressed. Possible values are: ▪ **KGM** (kilogram) ▪ **TNE** (Metric tonne)
GrossQuantity	1	Text	1-18	Gross weight of the dangerous goods including respectively their packing, but without the equipment used by the carrier for their transport.

Continued on next page

MS2SSN_Hazmat_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
WeightNet	***0-1***	***Choice***		***WeightNet* element specifying the net weight of the dangerous good. Mandatory if *WeightGross* not present.**
UnitOfMeasurementNet	1	Enum		Indication of the unit of measurement in which the weight (mas) is expressed. Possible values are: ▪ **KGM** (kilogram) ▪ **TNE** (Metric tonne)
NetQuantity	1	Text	1-18	Net weight of the dangerous goods excluding respectively their packing, and without the equipment used by the carrier for their transport.
PlacementOfGoods	***0-99***			***PlacementOfGoods* element describing the location of goods which are not in containers.**

LocationOnBoardGoods	1	Text	1-25	The following formats for Stowage cells are recommended:
				▪ If container vessels as per ISO standard: Bay/Row/Tier in format: *BBBRRTT*. If Bay number is less than 3 characters it must be filled with leading zeros, e.g. "0340210".
				▪ If feeder vessels as per ISO standard: Hatch/Tier/Row in format: *HHHTTRR*. If hatch number is less than 3 characters it must be filled with leading zeroes.
				▪ If ro-ro vessels: Deck/Bay/Row/Tier in format: *DDBBBRRTT*
				▪ If general cargo vessels: 3 to 9 characters, format:
				  ▪ firstly 3 characters (mandatory) for the cell number (01, 02, etc. with a further indication: S (starboard), P (Portside) of C (Centre));
				  ▪ secondly 3 characters (optional) for the indication of the deck level:
				  o WED = weather deck
				  o TD9 = tween deck 9
				  o …
				  o TD1 = tween deck 1
				  o LOH = lower hold
				  ▪ thirdly 3 characters (optional) for a further indication within a hold, e.g. hatchcovers.
				▪ If tanker vessel: tank number.

Continued on next page

MS2SSN_Hazmat_Res.xml message, Continued

Message description (continued)

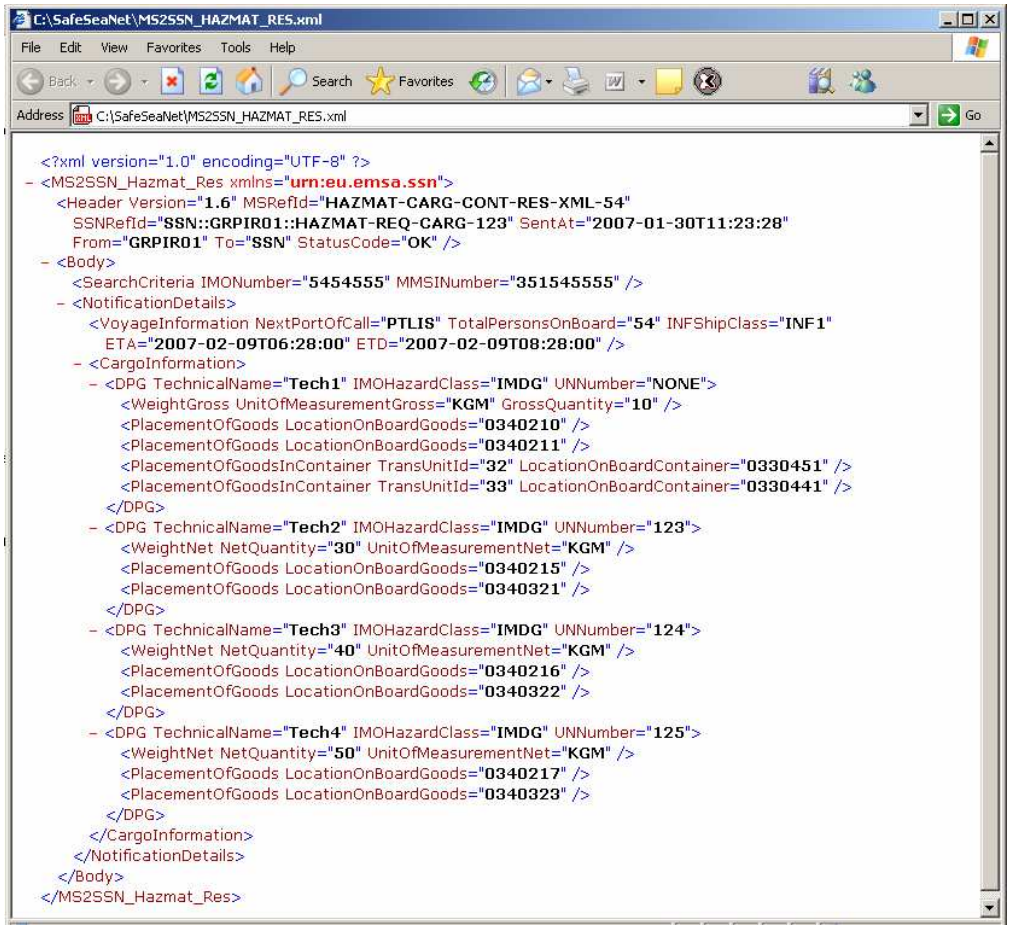
Item	Occ	Type	Len	Description
PlacementOfGoodsInContainer	***0-99***			***PlacementOfGoodsInContainer* element specifying the placement of the container which contains the dangerous good.**
TransUnitId	1	Text	1-17	Identification number of cargo transport unit (if no tanks)

LocationOnBoardContainer	1	Text		Location of container which contains the dangerous good on board of ship. The following formats for Stowage cells are recommended:
				▪ If container vessels as per ISO standard: Bay/Row/Tier in format: *BBBRRTT*. If Bay number is less than 3 characters it must be filled with leading zeros, e.g. "0340210".
				▪ If feeder vessels as per ISO standard: Hatch/Tier/Row in format: *HHHTTRR*. If hatch number is less than 3 characters it must be filled with leading zeroes.
				▪ If ro-ro vessels: Deck/Bay/Row/Tier in format: *DDBBBRRTT*
				▪ If general cargo vessels: 3 to 9 characters, format:
				  ▪ firstly 3 characters (mandatory) for the cell number (01, 02, etc. with a further indication: S (starboard), P (Portside) of C (Centre));
				  ▪ secondly 3 characters (optional) for the indication of the deck level:
				  o WED = weather deck
				  o TD9 = tween deck 9
				  o …
				  o TD1 = tween deck 1
				  o LOH = lower hold
				  ▪ thirdly 3 characters (optional) for a further indication within a hold, e.g. hatchcovers.

Continued on next page

MS2SSN_Hazmat_Res.xml message, Continued

Example



SSN2MS_Hazmat_Res.xml message

Introduction

The **SSN2MS_Hazmat_Res.xml** message is the final response sent by SafeSeaNet to a Member State requesting the latest Hazmat notification details about a given vessel (*data requester*).

Please note that such kind of XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Structure of the Notification details

Depending on the *data provider* capabilities (see p. 30), the following element nodes of the XML message will be returned:

If the *data provider*…	Then the XML message contains the following nodes…
is able to talk XML with SafeSeaNet	… <NotificationDetails…> <VesselIdentification…/> <VoyageInformation…/> **<CargoInformation…/>** </NotificationDetails…> …
can only provide notification details as downloadable files	… <NotificationDetails…> <VesselIdentification…/> <VoyageInformation…/> **<Base64Details…/>** </NotificationDetails…> …
is only accessible via phone/fax/email	… <NotificationDetails…> <VesselIdentification…/> <VoyageInformation…/> **<ContactDetails…/>** </NotificationDetails…> …

Continued on next page

SSN2MS_Hazmat_Res.xml message, Continued

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Hazmat_Req.xml* request.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It will be inserted back by the NCA application in the *SSNRefId* attribute of the *SSN_Receipt.xml* response if the message is not well-formed.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			From initial *MS2SSN_Hazmat_Req.xml* request
IMONumber	0-1	Text	7	From initial *MS2SSN_Hazmat_Req.xml* request
MMSINumber	0-1	Text	9	From initial *MS2SSN_Hazmat_Req.xml* request
NotificationDetails	**0-1**			***NotificationDetails* element node. Not allowed if StatusCode <> Found**
SentAt	1	DT	19	Date and time (ISO 8601 UTC format) indicating when the notification has been notified to safeSeaNet.
From	1	Text	3-15	The name of the sender (data provider) of the notification (see p.45).
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**1**			***VoyageInformation* element node**
NextPortOfCall	1	Text	5	Location code of next port of call. May be "ZZUKN" if unknown.

SSN2MS_Hazmat_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
ETA	0-1	DT	0 or 19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of arrival at next port of call. Optional if *NextPortOfCall* attribute value is empty
ETD	0-1	DT	0 or 19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time of departure from the **loading** port. *May only be optional if the ship is coming from a port located outside the Community*.
TotalPersonsOnBoard	1	Int		Total number of persons aboard. **99999** if actually unknown.
INFShipClass	0-1	Enum		Code for the license of the vessel according to the INF Code (Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on board Ships). Possible values are: ▪ **INF1 (Class INF 1)** ▪ **INF2 (Class INF 2)** **INF3 (Class INF3)**
CargoInformation	**0-1**	**Choice**		***CargoInformation* element node (from corresponding *MS2SSN_Hazmat_Res.xml* response).** **Used to specify that the Hazmat notification details are available in XML format. If specified, the other elements (*Base64Details, ContactDetails*) are not allowed.**
DPG	**1-9999**			From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
…				From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
ContactDetails	**0-1**	**Choice**		***ContactDetails* element. Used to specify that the Hazmat notification details are available by phone/fax/email. If specified, the other elements (*CargoInformation, Base64Details*) are not allowed.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters

Continued on next page

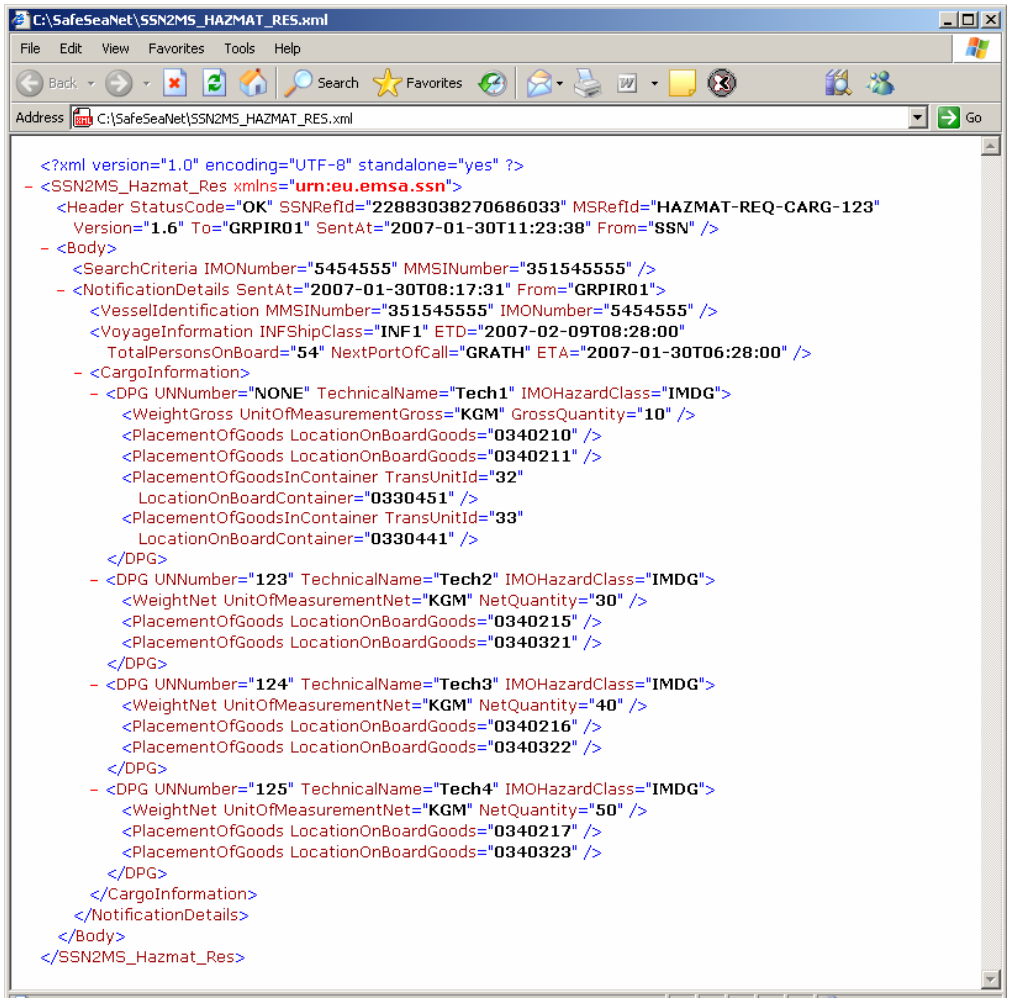
SSN2MS_Hazmat_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
EMail	0-1	Text	0-50	Email address of the contact person
Base64Details	**0-1**	**Choice**		***Base64Details*** **element. Used to specify that the Hazmat notification details are available in another document format (downloaded by SSN from a web server). If specified, the other elements (*CargoInformation, ContactDetails*) are not allowed.**
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
Base64Content	1	Base64		Base64-encoded characters of the notification details downloaded by SafeSeaNet.

Examples of an XML Hazmat details

The following example illustrates the details of a Hazmat notification available in XML format:



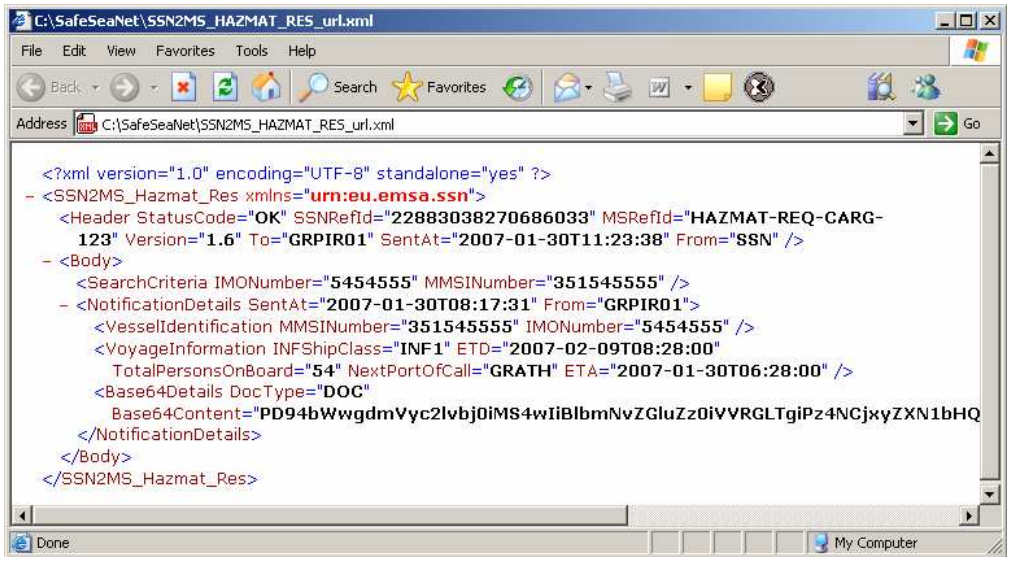

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <SSN2MS_Hazmat_Res xmlns="urn:eu.emsa.ssn">
    <Header StatusCode="OK" SSNRefId="22883038270686033" MSRefId="HAZMAT-REQ-CARG-123"
      Version="1.6" To="GRPIR01" SentAt="2007-01-30T11:23:38" From="SSN" />
  - <Body>
      <SearchCriteria IMONumber="5454555" MMSINumber="351545555" />
    - <NotificationDetails SentAt="2007-01-30T08:17:31" From="GRPIR01">
        <VesselIdentification MMSINumber="351545555" IMONumber="5454555" />
        <VoyageInformation INFShipClass="INF1" ETD="2007-02-09T08:28:00"
          TotalPersonsOnBoard="54" NextPortOfCall="GRATH" ETA="2007-01-30T06:28:00" />
      - <CargoInformation>
        - <DPG UNNumber="NONE" TechnicalName="Tech1" IMOHazardClass="IMDG">
            <WeightGross UnitOfMeasurementGross="KGM" GrossQuantity="10" />
            <PlacementOfGoods LocationOnBoardGoods="0340210" />
            <PlacementOfGoods LocationOnBoardGoods="0340211" />
            <PlacementOfGoodsInContainer TransUnitId="32"
              LocationOnBoardContainer="0330451" />
            <PlacementOfGoodsInContainer TransUnitId="33"
              LocationOnBoardContainer="0330441" />
          </DPG>
        - <DPG UNNumber="123" TechnicalName="Tech2" IMOHazardClass="IMDG">
            <WeightNet UnitOfMeasurementNet="KGM" NetQuantity="30" />
            <PlacementOfGoods LocationOnBoardGoods="0340215" />
            <PlacementOfGoods LocationOnBoardGoods="0340321" />
          </DPG>
        - <DPG UNNumber="124" TechnicalName="Tech3" IMOHazardClass="IMDG">
            <WeightNet UnitOfMeasurementNet="KGM" NetQuantity="40" />
            <PlacementOfGoods LocationOnBoardGoods="0340216" />
            <PlacementOfGoods LocationOnBoardGoods="0340322" />
          </DPG>
        - <DPG UNNumber="125" TechnicalName="Tech4" IMOHazardClass="IMDG">
            <WeightNet UnitOfMeasurementNet="KGM" NetQuantity="50" />
            <PlacementOfGoods LocationOnBoardGoods="0340217" />
            <PlacementOfGoods LocationOnBoardGoods="0340323" />
          </DPG>
        </CargoInformation>
      </NotificationDetails>
    </Body>
  </SSN2MS_Hazmat_Res>
```

Continued on next page

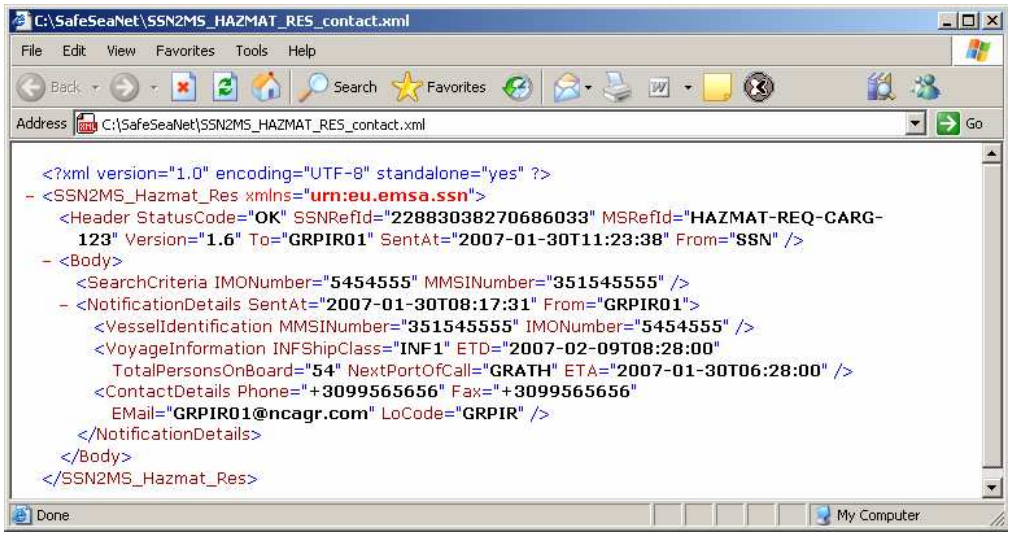
SSN2MS_Hazmat_Res.xml message, Continued

Examples of an XML Hazmat details (continued)

The following example illustrates a Hazmat notification which details are available as a Word document. To recover the original Word document, the *data requester* must base64-decode (see p.56 for more details) the stream of characters provided in the *Base64Content* attribute:



The following example illustrates a Hazmat notification which details can only be requested by phone or fax:



Section 3.7 - Get Security Notification Details

Overview

Introduction

A Member State may ask SafeSeaNet to get the latest security notification details for a given vessel. Such service is implemented by exchanging different XML messages between the *data requester*, the SafeSeaNet system and the *data provider*.

The messages are used by the "Information Requests" process (see page 35)

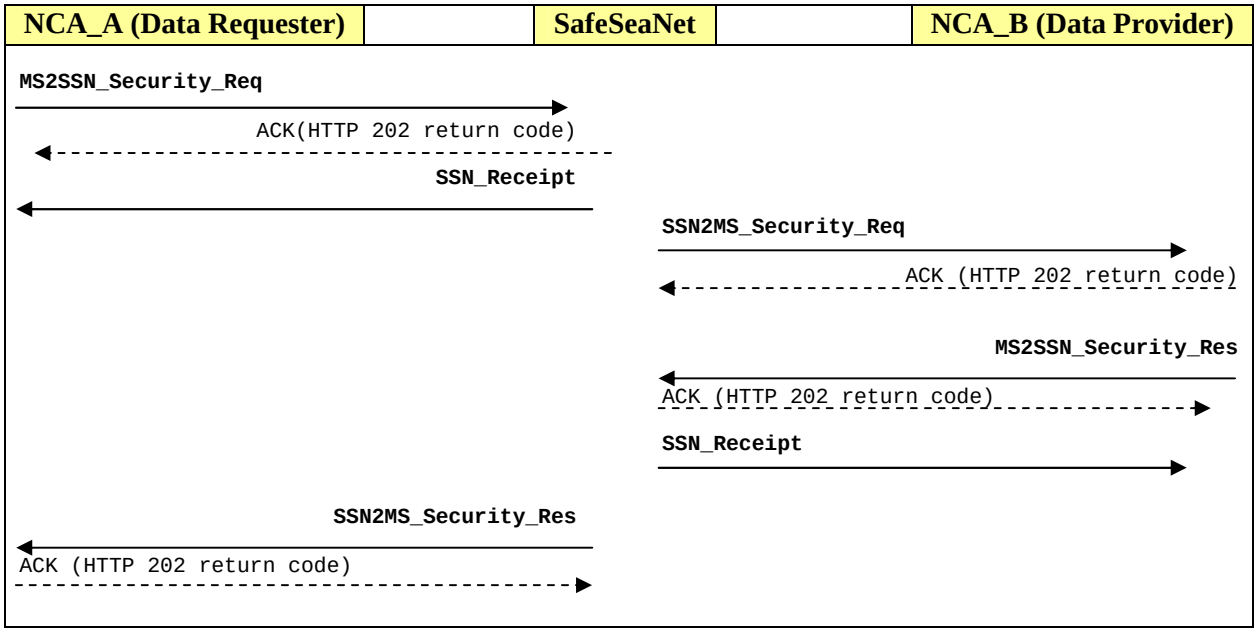
This section describes the different XML messages provided for this transaction.

Note

The security message was initially in the list of SSN messages but after launching the discussion on reviewing the content of the security message in order to harmonise it with the relevant decisions of the MARSEC Committee, some Member States expressed concerns about the inclusion of the security message into SSN. The COSS Committee discussed on the issue but till present no final decision has been taken and therefore the inclusion of the security message into SSN is still pending.

General flow of the XML messages

The following figure outlines the expected aynchronous flow of XML messages related to this SafeSeaNet XML transaction (assuming the data provider is able to talk XML with SafeSeaNet - please refer to "Data Provider capabilities" at page 30 for more details):



Contents

This section contains the following topics:

MS2SSN_Security_Req.xml message

Introduction

The **MS2SSN_Security_Req.xml** message is sent by a Member State (*data requester*) to SafeSeaNet in order to request the latest Security notification details about a given vessel.

Please note that such kind of XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN2MS_Security_Res.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

MS2SSN_Security_Req.xml message, Continued

Example

SSN2MS_Security_Req.xml message

Introduction

The **SSN2MS_Security_Req.xml** message is sent by SafeSeaNet to the Member State owning the Security notification details (*data provider*) in order to request the latest Security notification details about a given vessel.

This message is used by SafeSeaNet when receiving a **MS2SSN_Security_Req.xml** message coming from a *data requester* and when SafeSeaNet has identified that the *data provider* (i.e. the owner of the notification details) is able to talk XML with SafeSeaNet (please refer to "Data Provider capabilities" at page 30 for more details). The *data provider* must have implemented this XML message and its XML response accordingly.

Please note that such kind of XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

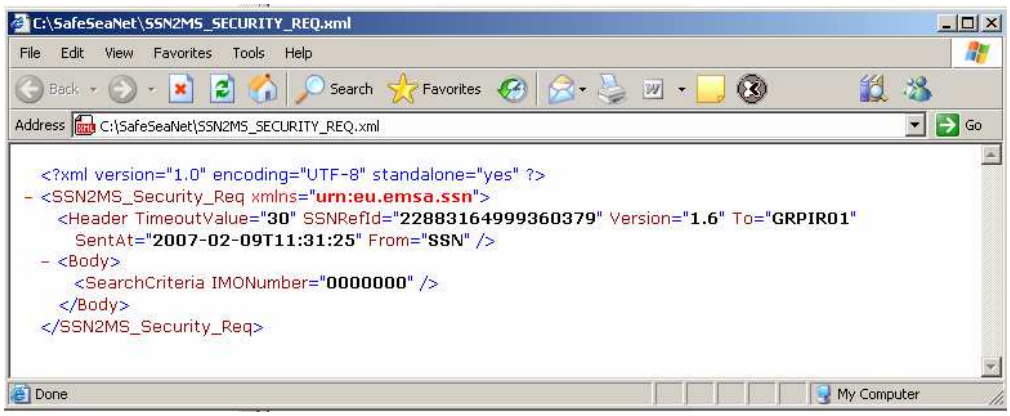
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It must inserted later by the NCA application in the *SSNRefId* attribute of the *MS2SSN_Security_Res.xml* response and will be used for correlation when SafeSeaNet will receive the response from the NCA application.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node.**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.

Continued on next page

SSN2MS_Security_Req.xml message, Continued

Example



MS2SSN_Security_Res.xml message

Introduction

The **MS2SSN_Security_Res.xml** message is sent by the Member State owning the notifications details (*data provider)* to SafeSeaNet in answer to its request for getting the latest security notification details about a given vessel.

Please note that such kind of XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the response. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response if this message is not well-formed. The MSRefId must be unique
SSNRefId	1	Uuid	1-36	Reference number given by SafeSeaNet in the *SSN2MS_Hazmat_Req.xml* request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body node (optional if the request format was invalid)**
SearchCriteria	**1**			From corresponding *SSN2MS_Security_Req.xml* request
IMONumber	0-1	Text	7	From corresponding *SSN2MS_Security_Req.xml* request
MMSINumber	0-1	Text	9	From corresponding *SSN2MS_Security_Req.xml* request
NotificationsDetails	**0-1**			***NotificationDetails* element node. Not allowed if *StatusCode* <> OK**
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.

CallSign	0-1	Text	1-7	Call sign of the vessel

Continued on next page

MS2SSN_Security_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
ShipName	0-1	Text	1-35	Name of the vessel
SecurityInformation	**1**			***VoyageInformation* element node**
ValidCertificate	1	Enum		Y or N
IssuingAuthority	1	Text		Name of issuing authority
CurrentSecLevel	1	Text		Current security level
PreviousPortSecLevel	1	Text		Security level in previous port
SecurityMeasures	1	Text		Special/Additional security measures
Maintenance	1	Text		Confirmation maintenance ship security procedures
Others	1	Text		Other practical security related information

Example

Open issues

- Description of *SecurityInformation* element attributes???

SSN2MS_Security_Res.xml message

Introduction

The **SSN2MS_Security_Res.xml** message is the final response sent by SafeSeaNet to a Member State requesting the latest security notification details about a given vessel (*data requester*).

Please note that such kind of XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Structure of the Notification details

Depending on the *data provider* capabilities (see p. 30), the following element nodes of the XML message will be returned:

If the *data provider*…	Then the XML message contains the following nodes…
is able to talk XML with SafeSeaNet	… <NotificationDetails…> <VesselIdentification…/> **<SecurityInformation…/>** </NotificationDetails…> …
can only provide notification details as downloadable files	… <NotificationDetails…> <VesselIdentification…/> **<Base64Details…/>** </NotificationDetails…> …
is only accessible via phone/fax/email	… <NotificationDetails…> <VesselIdentification…/> **<ContactDetails…/>** </NotificationDetails…> …

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version (‘1.6’)
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Security_Req.xml* request.

Continued on next page

SSN2MS_Security_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It will be inserted back by the NCA application in the *SSNRefId* attribute of the *SSN_Receipt.xml* response if the message is not well-formed.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			From initial *MS2SSN_Security_Req.xml* request
IMONumber	0-1	Text	7	From initial *MS2SSN_Security_Req.xml* request
MMSINumber	0-1	Text	9	From initial *MS2SSN_Security_Req.xml* request
NotificationsDetails	**0-1**			***NotificationsDetails* element node. Not allowed if StatusCode <> Found**
SentAt	1	DT	19	Date and time (ISO 8601 UTC format) indicating when the notification has been notified to SafeSeaNet.
From	1	Text	3-15	The name of the sender (data provider) of the notification (see p.45).
VesselIdentification	**1**			***VesselIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
SecurityInformation	**0-1**	**Choice**		***SecurityInformation* element node (from corresponding *MS2SSN_Security_Res.xml* response). Used to specify that the Security notification details are available in XML format. If specified, the other elements (*Base64Details, ContactDetails*) are not allowed.**
ValidCertificate	1	Enum		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
IssuingAuthority	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)

SSN2MS_Security_Res.xml message, Continued

Message description (continued)

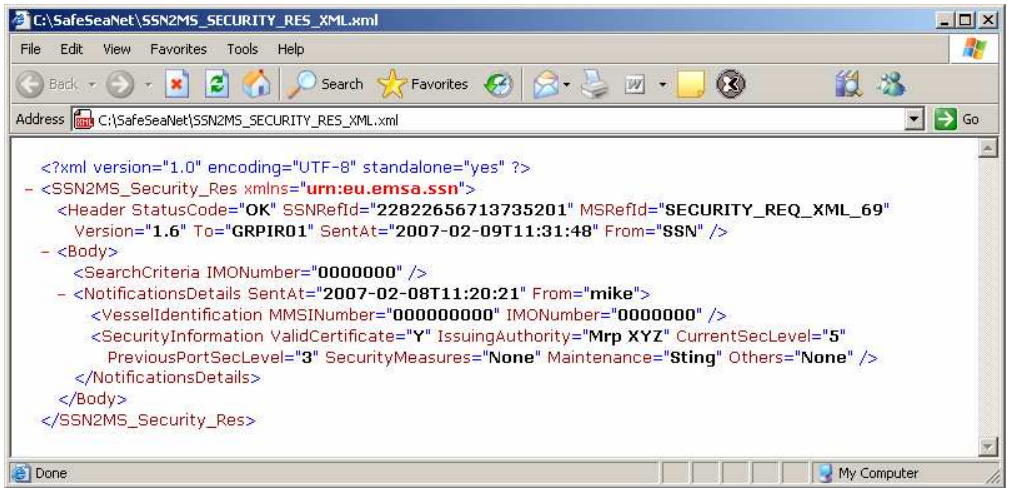
Item	Occ	Type	Len	Description
CurrentSecLevel	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
PreviousPortSecLevel	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
SecurityMeasures	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
Maintenance	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
Others	1	Text		From corresponding *MS2SSN_Hazmat_Res.xml* response (if any)
ContactDetails	**0-1**	**Choice**		***ContactDetails* element. Used to specify that the Security notification details are available by phone/fax/email. If specified, the other elements (*SecurityInformation, Base64Details*) are not allowed.**
LastName	0-1	Text	0-50	Last name of the contact person
FirstName	0-1	Text	0-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	1-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	1-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person
Base64Details	**0-1**	**Choice**		***Base64Details* element. Used to specify that the Security notification details are available in another document format (downloaded by SSN from a web server). If specified, the other elements (*SecurityInformation, ContactDetails*) are not allowed.**
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
Base64Content	1	base64		Base64-encoded characters of the notification details downloaded by SafeSeaNet.

Continued on next page

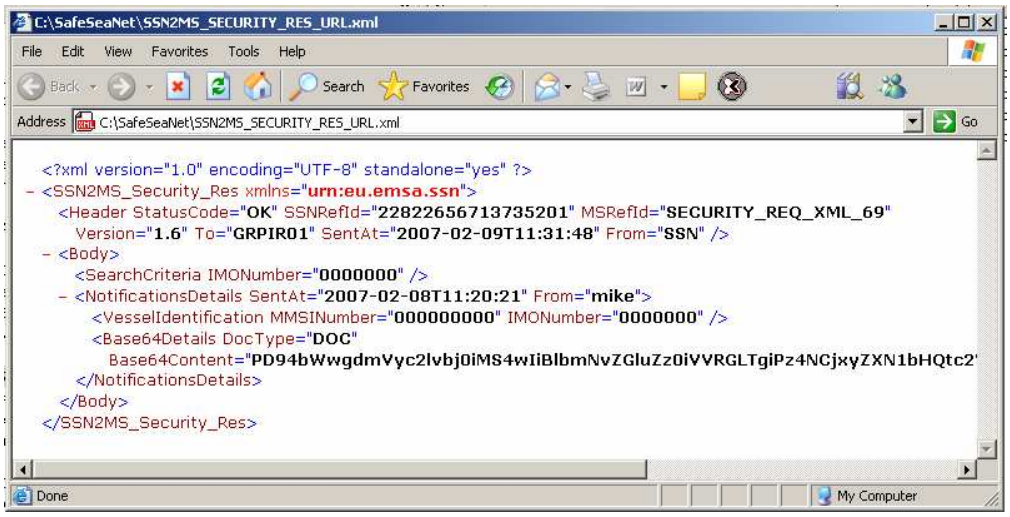
SSN2MS_Security_Res.xml message, Continued

Examples

The following example illustrates the details of a Security notification available in XML format:



The following example illustrates a Security notification which details details are available as a Word document. To recover the original Word document, the *data requester* must base64-decode (see p.56 for more details) the stream of characters provided in the *Base64Content* attribute:

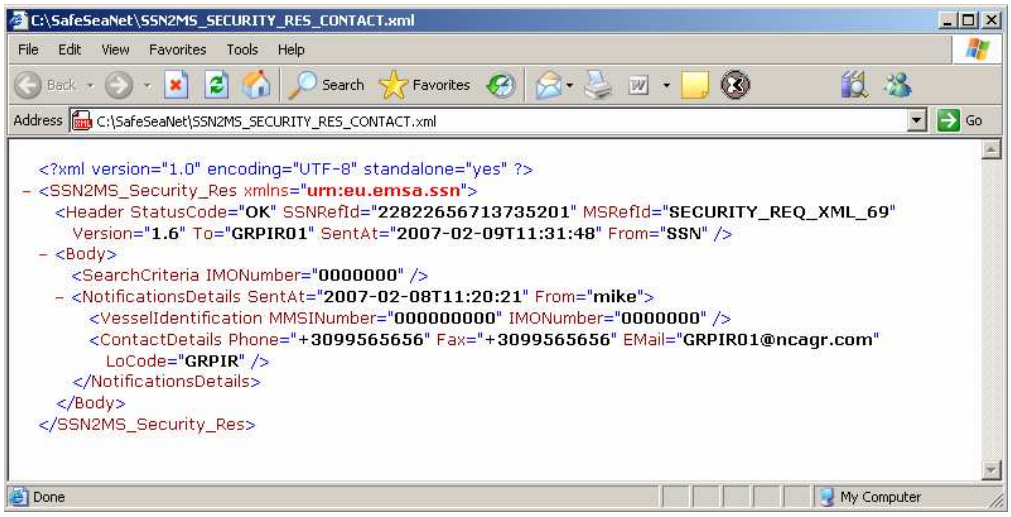


Continued on next page

SSN2MS_Security_Res.xml message, Continued

Examples (continued)

The following example illustrates a Security notification which details can only be requested by phone or fax:



Section 3.8 - Get Alert Notification Details

Overview

Introduction

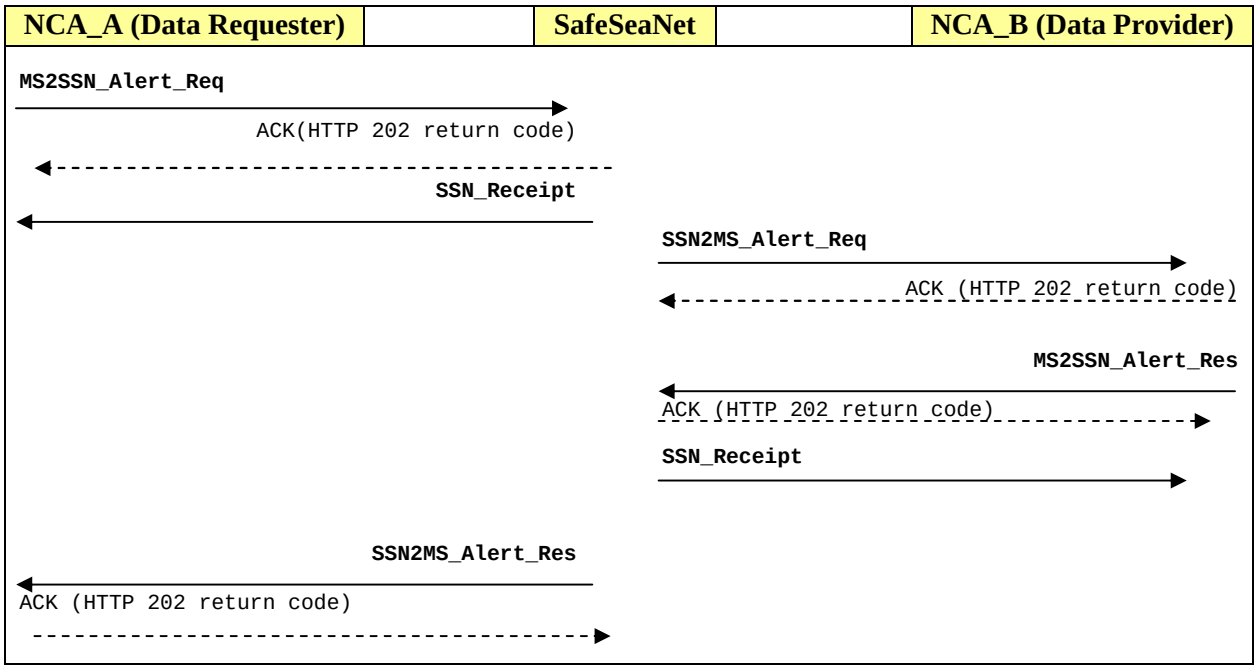
A Member State may ask SafeSeaNet to get the Alert notification details for a given incident (identified via a locode, incident type and notification date & time). Such service is implemented by exchanging different XML messages between the *data requester*, the SafeSeaNet system and the *data provider*.

The messages are used by the "Information Requests" process (see page 35)

This section describes the different XML messages provided for this transaction.

General flow of the XML messages

The following figure outlines the expected aynchronous flow of XML messages related to this SafeSeaNet XML transaction (assuming the data provider is able to talk XML with SafeSeaNet - please refer to "Data Provider capabilities" at page 30 for more details):



Contents

This section contains the following topics:

MS2SSN_Alert_Req.xml message

Introduction

The **MS2SSN_Alert_Req.xml** message is sent by a Member State (*data requester*) to SafeSeaNet in order to request the incident notification details about a given incident type.

Please note that such kind of XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN2MS_Security_Res.xml* response. The MSRefId must be unique
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node**
IncidentType	1	Enum		Type of the incident among the following possible values: ▪ **SITREP** ▪ **POLREP** ▪ **Waste** ▪ **LostFoundContainers** ▪ **Others**
SentAt	0-1	DT	19	Date and time (ISO 8601 UTC format) indicating when the alert has been notified to SafeSeaNet. (At least one of SentAt, From, IMONumber, MMSINumber should exist)

From	0-1	Text	3-15	The name of the sender (data provider) of the alert notification (see p.45). (At least one of SentAt, From, IMONumber, MMSINumber should exist)
IMONumber	0-1	Text	7	IMO number of the vessel (optional - at least one of SentAt, From, IMONumber, MMSINumber should exist)
MMSINumber	0-1	Text	9	MMSI number of the vessel (optional - at least one of SentAt, From, IMONumber, MMSINumber should exist)

Continued on next page

MS2SSN_Alert_Req.xml message, Continued

Example

SSN2MS_Alert_Req.xml message

Introduction

The **SSN2MS_Alert_Req.xml** message is sent by SafeSeaNet to the Member State owning the incident notification details (*data provider*) in order to request the incident notification details about a given incident type.

This message is used by SafeSeaNet when receiving a **MS2SSN_Alert_Req.xml** message coming from a *data requester* and when SafeSeaNet has identified that the *data provider* (i.e. the owner of the notification details) is able to talk XML with SafeSeaNet (please refer to "Data Provider capabilities" at page 30 for more details). The *data provider* must have implemented this XML message and its XML response accordingly.

Please note that such kind of XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) and its corresponding XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
SSNRefId	1	Uuid	1-36	Reference number given by the SafeSeaNet. It must inserted later by the NCA application in the *SSNRefId* attribute of the *MS2SSN_Security_Res.xml* response and will be used for correlation when SafeSeaNet will receive the response from the NCA application.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired and must not be processed.
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
Body	**1**			**Body Node**
SearchCriteria	**1**			***SearchCriteria* element node.**
IncidentType	1	Enum		Type of the incident among the following possible values: ▪ **SITREP** ▪ **POLREP** ▪ **Waste** ▪ **LostFoundContainers** ▪ **Others**

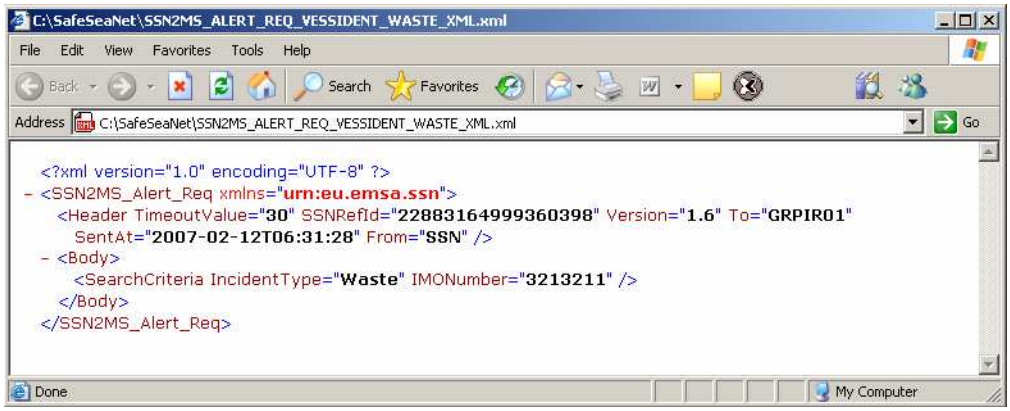
Continued on next page

SSN2MS_Alert_Req.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
SentAt	1	DT	19	Date and time (ISO 8601 UTC format) indicating when the alert has been notified to SafeSeaNet.
IMONumber	0-1	Text	7	IMO number of the vessel (optional)
MMSINumber	0-1	Text	9	MMSI number of the vessel (optional)

Example



MS2SSN_Alert_Res.xml message

Introduction

The **MS2SSN_Alert_Res.xml** message is sent by the Member State owning the notifications details (*data provider)* to SafeSeaNet in answer to its request for getting the incident notification details about a given incident type.

A prerequisite to this message is that the different incident details can be modelled as XML (XML schema) and that all Member States agree upon a common version.

Please note that such kind of XML response (*MS2SSN_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*SSN2MS_<SSN_Tx_Type>_Req.xml*) must be implemented by a Member State (*data provider*) in order to supply the notification details in XML format.

Important notes:

Taking into account the size of the XML information (and the effort it would take for the Member States to develop them), the European Commission recommends in a first step that the Member States (data provider) should make their alert messages available as Word documents (.doc) on a web server and not in XML (using the *MS2SSN_Alert_Res.xml* message). The templates "Word" for these alert messages will be made centrally available for download on the SafeSeaNet web server. Nevertheless, SafeSeaNet will be ready to process the alert messages in XML format.

Incidents Details

The description of this XML message includes a first try to model in XML the details of the different incident types. The following table gives a mapping between an incident type and its corresponding element node in the XML message:

Incident Type	Corresponding element node in XML message
SITREP	SITREPAlertInformation
POLREP	POLREPAlertInformation
Waste	WasteAlertInformation
Lost/found Containers	LostFoundContainersAlertInformation
Others	OtherAlertInformation

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
MSRefId	1	Text	1-36	Reference number given by the caller in the response. It will be inserted back by SafeSeaNet in the *MSRefId* attribute of the *SSN_Receipt.xml* response if this message is not well-formed. The MSRefId must be unique
SSNRefId	1	Uuid	1-36	Reference number given by SafeSeaNet in the *SSN2MS_Hazmat_Req.xml* request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format) All the time/date related attributes are in UTC. If local time is used MS application has to adjust the time in UTC.
From	1	Text	3-15	The name of the originator of the message (see p.45).
To	1	Text	3-15	The name of the recipient of the message ('SSN').
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body node (optional if the request format was invalid)**
SearchCriteria	**1**			From incoming *SSN2MS_Alert_Req.xml* request
IncidentType	1	Enum		From incoming *SSN2MS_Alert_Req.xml* request
SentAt	1	DT	19	From incoming *SSN2MS_Alert_Req.xml* request
IMONumber	0-1	Text	7	From incoming *SSN2MS_Alert_Req.xml* request
MMSINumber	0-1	Text	9	From incoming *SSN2MS_Alert_Req.xml* request
IncidentDetails	**0-1**			***IncidentDetails* element node. Not allowed if *StatusCode* <> OK**
WasteAlertInformation	**0-1**	**Choice**		***WasteAlertInformation* element node (if incident type = Waste)**
…				
SITREPAlertInformation	**0-1**	**Choice**		***SITREPAlertInformation* element node (if incident type = SITREP)**
…				
POLREPAlertInformation	**0-1**	**Choice**		***POLREPAlertInformation* element node (if incident type = POLREP)**
…				
LostFoundContainersAlertInformation	**0-1**	**Choice**		***LostFoundContainersAlertInformation* element node (if incident type = LostFoundContainers)**
…				

OtherAlertInformation	**0-1**	**Choice**		***OtherAlertInformation*** **element node (if incident type = Others)**
…				

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

***WasteAlertInformation* element**

The following table describes the *WasteAlertInformation* element (returned if incident type = Waste):

Item	Occ	Type	Len	Description
WasteAlertInformation	**0-1**	**Choice**		***WasteAlertInformation* element node (if incident type = Waste)**
VesselIdentification	**1**			***VesselIdentification* element node (if ship identified)**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if *MMSINumber* not given.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if *IMONumber* not given.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
Flag	0-1	Text	3	3 letter country code (according to ISO 3166) of the flag of the ship
NonComplianceInformation	**1**			***NonComplianceInformation* element node. Used to describer the non-compliance with waste delivery requirements**
WasteDeliveryDuePort	1	Text	5	Location code of the port where waste-delivery was due.
ETD	1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the estimated time when the ship left port.
InspectionReason	1	Text		Reasons why the ship should be inspected in next port and any other relevant information.
InspectionInformation	**0-1**			***InspectionInformation* element node**
Deficiencies	1	Text		Deficiencies found during inspection.
ActionTaken	1	Text		Description of the action(s) taken
InspectionAuthority	**1**			***InspectionAuthority* element node**
Name	1	Text		Name of the inspection authority
Coordinates	1	Text		Co-ordinates of the inspection authority (phone, fax and/or email)
AuthoritiesNotified	**0-1**			***AuthoritiesNotified* element node**
NextPortOfCall	0-1	Text	5	Location code of next port of call
OtherAuthorities	0-1	Text		Other Authorities notified

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MS2SSN_Alert_Res.xml message, Continued

***SITREPAlertInformation* element**

The following table describes the *SITREPAlertInformation* element (returned if incident type = SITREP):

Item	Occ	Type	Len	Description
SITREPAlertInformation	**0-1**	**Choice**		***SITREPAlertInformation* element node (if incident type = SITREP)**
VesselIdentification	**0-1**			***VesselIdentification* element node (if ship identified)**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**1**			***VoyageInformation* element node (if ship identified)**
PortofDeparture	1	Text	5	Location code of port of departure.
PortOfDestination	1	Text	5	Location code of port of destination.
TotalPersonsOnBoard	1	Int		Total number of persons on board. **99999** if actually unknown.
ShipPosition	**1**			***ShipPosition* element node**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0’1” (east) → 167 4°20’ (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0’1” (north) → 167 50°50’ (north) → 30500000
CargoManifest	**0-1**			***CargoManifest* element node. Used only to specify the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server).**
UrlDetails	**1**			***UrlDetails* element node.**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest, it will use this url to download the document.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

SITREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
SITREPInformation	**1**			***SITREPInformation* element node**
SITREPId	1	Text		To indicate the nature of message and completeness of sequence of SITREPs concerning the casualty
A_CasualtyIdentification	**1**			***CasualtyIdentification* element node**
Name	1	Text		Name of the ship
CallSign	1	Text	1-7	Call sign of the ship
Flag	1	Text		2 letter country code (ISO 3166) of the flag of the ship
B_Position	**1**			***Position* element node**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0’1” (east) → 167 4°20’ (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0’1” (north) → 167 50°50’ (north) → 30500000
C_Situation	**1**			***Situation* element node**
MessageType	1	Enum		Supported message type. Possible values are: ▪ **Distress** ▪ **Urgency**
NotifiedAt	1	DT		Date and time (ISO 8601 UTC format) when the alert has been notified.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

SITREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
Nature	1	Enum		Nature of distress/urgency. Possible values are: ▪ **Fire** ▪ **Collision** ▪ **Medico**
D_NumberOfPersons	1	Int		Number of persons
E_AssistanceRequired	1	Text		Type of assistance required
F_CoordinatingRCC	1	Text		Name of coordinating RCC
G_CasualtyDescription	1	Text		Physical description, owner/character, cargo carried, passage from/to, life-saving equipment carried
H_WeatherOnScene	1	Text		Weather on scene. Wind, sea/swell state, air/sea temperature, visibility, cloud cover/.ceiling, barometric pressure
J_InitialActionsTaken	1	Text		Initial actions taken by casualty and RCC
K_SearchArea	1	Text		Search area as planned by RCC
L_CoordinatingInstructions	1	Text		OSC designated, units participating, communications
M_FuturePlans	1	Text		
N_AdditionalInformation	1	Text		Include time SAR operation terminated

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

***POLREPAlertInformation* element**

The following table describes the *POLREPAlertInformation* element (returned if incident type = POLREP):

Item	Occ	Type	Len	Description
POLREPAlertInformation	**0-1**	**Choice**		***POLREPAlertInformation* element node (if incident type = POLREP)**
VesselIdentification	**0-1**			***VesselIdentification* element node (if ship identified)**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**0-1**			***VoyageInformation* element node (if ship identified)**
PortOfDeparture	1	Text	5	Location code of port of departure.
PortOfDestination	1	Text	5	Location code of port of destination.
TotalPersonsOnBoard	1	Int		Total number of persons on board. **99999** if actually unknown.
ShipPosition	**1**			***ShipPosition* element node**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0’1” (east) → 167 4°20’ (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0’1” (north) → 167 50°50’ (north) → 30500000
CargoManifest	**0-1**			***CargoManifest* element node. Used only to specify the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server).**
UrlDetails	**1**			***UrlDetails* element node.**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest, it will use this url to download the document.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

POLREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
POLREPInformation	**1**			***POLREPInformation* element node**
POLWARN	**1**			***POLWARN* element node.** Initial notice (a first information or a warning of a casualty or the presence of oil slicks or harmful substances
P1_DateTime	1	Text		The day of the month as well as the time of the day when the incident took place or, if the cause of the pollution is not known, the time of the observation should be stated with 6 numbers. Time should be stated as GMT, for example 091900z (i.e. the 9th of the relevant month at 1900 GMT).
P3_Incident	1	Text		Incident summary
P4_Outflow	1	Text		The polluting substance, such as CRUDE OIL, CHLORINE, DINITROL, PHENOL as well as the total quantity in tonnes of the outflow and/or the flow rate, and the risk of further outflow should be mentioned. If there is no pollution, but a threat of pollution, the words NOT YET followed by the substance (for example NOT YET FUEL OIL) should be stated.
P5_Acknowledge	1	Text		When this number is used, the message (telefax) should be acknowledged as soon as possible by the competent national authority
P2_Position	**1**			***Position* element node.** Indicates the main position of the incident and longitude in degrees and minutes, and may in addition give the bearing of and the distance from a location known by the receiver.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

POLREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0'1" (east) → 167 4°20' (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0'1" (north) → 167 50°50' (north) → 30500000
POLINF	**1**			***POLINF* element node.** Detailed supplementary report
P40_DateTime	0-1	Text		If it varies from POLWARN
P41_PollutionPosition	1	Text		Indicates the main position of the pollution in degrees and minutes of latitude and longitude, and may in addition give the distance and bearing of some prominent landmark known to the receiver if other than indicated in POLWARN (Position). Estimated amount of pollution (eg size of polluted areas, number of tonnes of oil spilled if other than indicated in POLWARN (Outflow), or number of containers, drums lost). Indicates length and width of slick given in nautical miles if not indicated in POLWARN (Position).
P42_PollutionChars	1	Text		Gives type of pollution, eg type of oil with viscosity and pour point, packaged or bulk chemical, sewage. For chemicals proper name or United Nations number if known should be given. Appearance, eg liquid, floating solid, liquid oil, semi-liquid sludge, tarry lumps, weathered oil, Discolouration of sea, visible vapour should also be given as well as any markings on drums, containers

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

POLREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
P43_PollutionSource	1	Text		Indicates the source of pollution eg from vessel or other undertaking. If from vessel, it should be notified whether the pollution is a result of a deliberate discharge or casualty. If the latter, a brief description should be given. Where possible name, type, size, call sign, nationality and port of registration of polluting vessel should be mentioned. If vessel is proceeding on its way, course, speed and destination should be indicated.
P44_Wind	**1**			***Wind*** **element node.**
Speed	1	Text		Indicates wind speed in m/sec.
Direction	1	Text		Indicates wind direction in degrees. The direction always indicates from where the wind is blowing.
P45_Tide	**1**			***Tide*** **element node.**
Speed	1	Text		Indicates current speed of the tide in knots and tenths of knots.
Direction	1	Text		Indicates current direction in degrees. The direction always indicates the direction in which the current tide is flowing
P46_SeaState	**1**			***SeaState*** **element node.**
WaveHeight	1	Text		Indicates the wave height in metres.
Visibility	1	Text		Indicates visibility in nautical miles
P47_PollutionDrift	**1**			***PollutionDrift*** **element node**
DriftCourse	1	Text		Indicates the drift course of pollution in degrees
DriftSpeed	1	Text		Indicates the drift speed of pollution in knots and tenths of knots. In cases of air pollution (gas cloud), drift speed should be indicated in m/sec
P48_PollutionEffect Forecast	1	Text		Results of mathematical models could indicate eg. arrival on beach with estimated timing
P49_ObserverIdentity	**1-99**			***ObserverIdentity*** **element node.** Identifies who has reported the incident. If it is a ship, name, home port, flag and call sign must be given. Ships on-scene could also be indicated under this item by name, home port, flag and call sign, especially if the polluter cannot be identified and the spill is considered to be of recent origin.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

POLREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
Name	1	Text		
HomePort	1	Text		
Flag	1	Text		
CallSign	1	Text		
P50_ActionTaken	1	Text		Mentions action taken for the disposal of the pollution
P51_Photographs	1	Text		Indicates if photographs or samples from the pollution have been taken. Contact numbers (including telephone, telefax and telex numbers as appropriate) of the sampling authority should be given.
P52_InformedStateOrg	**0-99**			***InformedStateOrg* element node**
Name	1	Text		Name of other states and organisations informed
P53_OtherInformation	0-1	Text		Spare for additional relevant information. eg results of sample or photographic analysis, results of inspections or surveyors, statements of ship's personnel
P60_Acknowledge	1	Text		When this number is used, the message (telefax) should be acknowledged as soon as possible by the competent national authority
POLFAC	**1**			***POLFAC* element node.** For requests for assistance from other Contracting Parties, as well as for operational matters in the assistance situation
P80_DateTime	0-1	Text		If it varies from POLWARN and POLINF
P81_RequestForAssistance	1	Text		Type and amount of assistance required in form of: - specified equipment - specified equipment with trained personnel - complete strike teams - personnel with special expertise with indication of country requested
Assistance	**1**			***Assistance* element node**
P82_Cost	1	Text		Information on cost of delivered assistance to be notified to requesting country.

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

POLREPAlertInformation element (continued)

Item	Occ	Type	Len	Description
P83_PreArrangements	1	Text		Information concerning customs clearance, access to territorial waters in the requesting country.
P84_Delivery	1	Text		Information concerning the delivery of the assistance, eg rendez-vous at sea with information on frequencies to be used, call sign and name of Supreme On-Scene Commander of the requesting country or land-based authorities with contact numbers (including telephone, telefax and telex numbers as appropriate) and contact persons.
P85_InformedStateOrg	**0-99**			***InformedStateOrg* element node.** Only if different from POLINF
Name	1	Text		Name of other states and organisations informed
P86_ChangeOfCommand	1	Text		When a substantial part of an oil pollution or serious threat of oil pollution moves or has moved into the zone of another Contracting Party, the country which has exercised the supreme command or the operation may request the other party to take over the supreme command
P87_ExchangeOfInformation	1	Text		When a mutual agreement has been reached between two parties on a change of supreme command, the country transferring the supreme command should give a report on all relevant information pertaining to the operation to the country taking over the command
P88_OtherInformation	0-1	Text		Spare for any other relevant requirements or instructions.
P99_Acknowledge	1	Text		When this number is used, the message (telefax) should be acknowledged as soon as possible by the competent national authority

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

***LostFoundContainersAlertInformation* element**

The following table describes the *LostFoundContainersAlertInformation* element (returned if incident type = LostFoundContainers):

Item	Occ	Type	Len	Description
LostFoundContainersAlertInformation	**0-1**	**Choice**		***LostFoundContainersAlertInformation* element node (if incident type = LostFoundContainers)**
VesselIdentification	**0-1**			***VesselIdentification* element node (if ship identified)**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
VoyageInformation	**0-1**			***VoyageInformation* element node (if ship identified)**
PortOfDeparture	1	Text	5	Location code of port of departure.
PortOfDestination	1	Text	5	Location code of port of destination.
TotalPersonsOnBoard	1	Int		Total number of persons on board. **99999** if actually unknown.
ShipPosition	**1**			***ShipPosition* element node**
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0’1” (east) → 167 4°20’ (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0’1” (north) → 167 50°50’ (north) → 30500000
CargoManifest	**0-1**			***CargoManifest* element node. Used only to specify the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server).**
UrlDetails	**1**			***UrlDetails* element node.**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest, it will use this url to download the document.

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MS2SSN_Alert_Res.xml message, Continued

LostFoundContainersAlertInformation element (continued)

Item	Occ	Type	Len	Description
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
LostFoundContainersInformation	**1**			***LostFoundContainersInformation* element node**
P1_ReportType	1	Enum		Supported report type. Possible values are: ▪ **Loss** ▪ **Observation** A. Loss (ship having lost a or several containers/packaged goods) B. Observation (ship noting the presence of containers/packages goods drifting at sea)
P2_ShipIdentification	**1**			***CasualtyIdentification* element node**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
ContainerInformation	**1**			***ContainerInformation* element node.**
P3_ContainerPosition	**1**			***ContainerPosition* element node.** Last seen position of container at sea, or last position of ship when the container has presumably been lost
Longitude	1	Int		Longitude in 1/10000 min. (+/- 180 degrees; East = positive; West = negative; 181 = not available). Examples: 181° (east) → 108600000 -180° (west) → -108000000 0°0’1” (east) → 167 4°20’ (east) → 2600000
Latitude	1	Int		Latitude in 1/10000 min. (+/- 90 degrees; North = positive; South = negative; 91 = not available) 91° (north) → 54600000 -90° (south) → -54000000 0°0’1” (north) → 167 50°50’ (north) → 30500000
P4_NumberOfContainers	1	Int		Number of containers

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MS2SSN_Alert_Res.xml message, Continued

LostFoundContainersAlertInformation element (continued)

Item	Occ	Type	Len	Description
P5_TypeOfGoods	1	Enum		DG/PG : Y/N IMO/UN/IMDG Code Number
Containers	**1-99**			***Containers*** **element node.**
Description	1	Text		Description of a container: dimension, color, marks, numbers, condition
CargoLeaking	1	Text		Yes/No/Not visible Description of Pollution
Wind	**1**			***Wind*** **element node.**
Speed	1	Text		Indicates wind speed in m/sec.
Direction	1	Text		Indicates wind direction in degrees. The direction always indicates from where the wind is blowing.
Tide	**1**			***Tide*** **element node.**
Speed	1	Text		Indicates current speed of the tide in knots and tenths of knots.
Direction	1	Text		Indicates current direction in degrees. The direction always indicates the direction in which the current tide is flowing.
SeaState	**1**			***SeaState*** **element node.**
WaveHeight	1	Text		Indicates the wave height in metres.
Visibility	1	Text		Indicates visibility in nautical miles
ContainersDrift	**1**			***ContainersDrift*** **element node**
DriftCourse	1	Text		Indicates the drift course of containers in degrees
DriftSpeed	1	Text		Indicates the drift speed of containers in knots and tenths of knots. In cases of air pollution (gas cloud), drift speed should be indicated in m/sec

Continued on next page

MS2SSN_Alert_Res.xml message, Continued

***OtherAlertInformation* element**

The following table describes the *OtherAlertInformation* element (returned if incident type = LostFoundContainers):

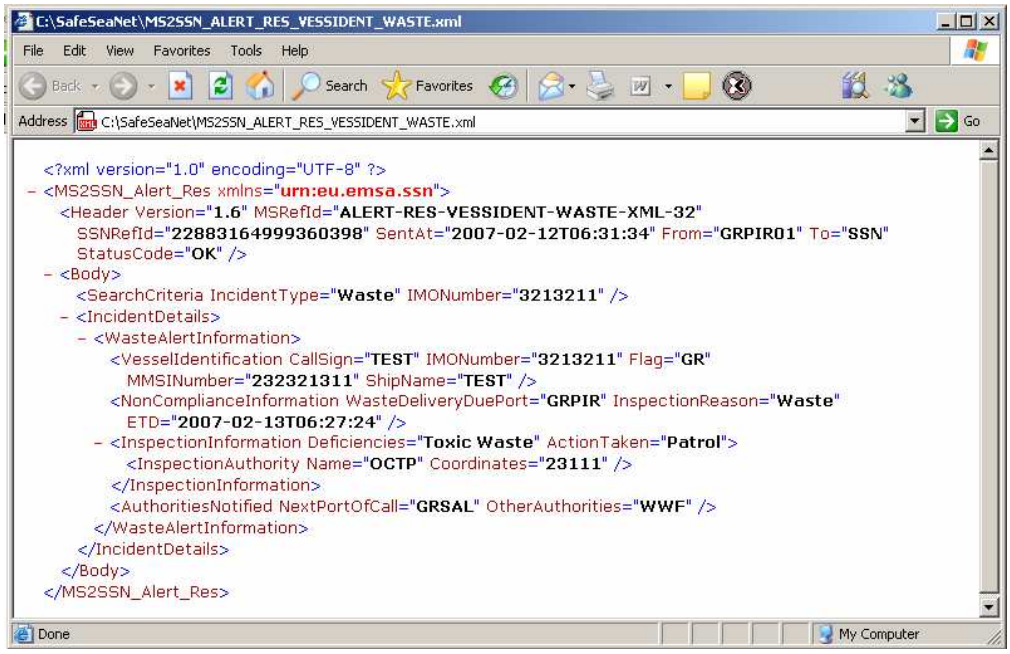
Item	Occ	Type	Len	Description
OtherAlertInformation	**0-1**	**Choice**		***OtherAlertInformation* element node (if incident type = Others)**
VesselIdentification	**0-1**			***VesselIdentification* element node (if ship identified)**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatoy if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatoy if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
CargoManifest	**0-1**			***CargoManifest* element node. Used only to specify that the cargo manifest cannot be requested via the corresponding XML message but either via a web server (*UrlDetails*) or a phone/fax (*ContactDetails*).**
UrlDetails	0-1	Choice		***UrlDetails* element node. Used only to specify the type and the url of the document containing the cargo manifest (if the *data provider* will store the document on a local web server).**
Url	1	Uri	20-256	Url of the document containing the cargo manifest. If SafeSeaNet receives a request for getting the cargo manifest about this vessel, it will use this url to download the document.
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
ContactDetails	0-1	Choice		**Element indicating the contact details to obtain the notification details (if the *data provider* can only provide the information via phone or fax)**
LastName	1	Text	1-50	Last name of the contact person
FirstName	1	Text	1-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	0-1	Text	0-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. Mandatory if neither *Fax* nor *EMail* given. No spaces allowed between characters

MS2SSN_Alert_Res.xml message, Continued

OtherAlertInformation element (continued)

Item	Occ	Type	Len	Description
Fax	0-1	Text	0-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. Mandatory if neither *Phone* nor *EMail* given. No spaces allowed between characters
EMail	0-1	Text	0-50	Email address of the contact person. Mandatory if neither *Fax* nor *Phone* given.
OtherInformation	**1**			***OtherInformation* element node**
Details	1	Text		Description of the incident (free text)

Example of a Waste incident type



Open issues

- Description of *WastAlerteInformation* node element attributes (format, size)?
- Description of *SITREPAlertInformation* node element attributes (format, size)?
- Description of *POLREPAlertInformation* node element attributes (format, size)?
- Description of *LostFoundContainersAlertInformation* node element attributes (format, size)?
- Description of *OtherAlertInformation* node element attributes (format, size)?

SSN2MS_Alert_Res.xml message

Introduction

The **SSN2MS_Alert_Res.xml** message is the final response sent by SafeSeaNet to a Member State requesting the incident notification details about a given incident type (*data requester*).

Please note that such kind of XML response (*SSN2MS_<SSN_Tx_Type>_Res.xml*) and its corresponding XML request (*MS2SSN_<SSN_Tx_Type>_Req.xml*) should only be implemented by a Member State if it wants to develop its own *data requester* interface instead of using the default browser-based web interface supplied by SSN.

Structure of the Notification details

Depending on the *data provider* capabilities (see p.30), the following element nodes of the XML message will be returned:

If the *data provider*…	Then the XML message contains the following nodes…
is able to talk XML with SafeSeaNet	… <IncidentDetails…> **<*SITREPAlertInformation* …/> or** **<*POLREPAlertInformation* …/> or** **<*WasteAlertInformation* …/> or** **<*LostFoundContainersAlertInformation* …/> or** **<*OtherAlertInformation* …/> or** </IncidentDetails…> …
can only provide notification details as downloadable files	… <IncidentDetails…> **<Base64Details…/>** </IncidentDetails…> …
is only accessible via phone/fax/email	… <IncidentDetails…> **<ContactDetails…/>** </IncidentDetails…> …

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SSN2MS_Alert_Res.xml message, Continued

Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
Header	**1**			**Header Node**
Version	1	Text	3	SafeSeaNet request current version ('1.6')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller (data requester) in the original *MS2SSN_Security_Req.xml* request.
SSNRefld	1	Uuid	1-36	Reference number given by the SafeSeaNet. It will be inserted back by the NCA application in the *SSNRefId* attribute of the *SSN_Receipt.xml* response if the message is not well-formed.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
From	1	Text	3-15	The name of the originator of the message ('SSN').
To	1	Text	3-15	The name of the recipient of the message (see p.45).
StatusCode	1	Enum		Global status code. See p.50 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
Body	**0-1**			**Body Node (only optional when *StatusCode*="InvalidFormat")**
SearchCriteria	**1**			From original *MS2SSN_Alert_Req.xml* request
IncidentType	1	Enum		From original *MS2SSN_Alert_Req.xml* request
SentAt	0-1	DT	19	From original *MS2SSN_Alert_Req.xml* request
From	0-1	Text	3-15	From original *MS2SSN_Alert_Req.xml* request
IMONumber	0-1	Text	7	From original *MS2SSN_Alert_Req.xml* request
MMSINumber	0-1	Text	9	From original *MS2SSN_Alert_Req.xml* request
VesselIdentification	**0-1**	**Choice**		***VesselIdentification* element node. Mandatory if vessel identified at Incident notification. Not allowed if *StatusCode* <> OK**
IMONumber	0-1	Text	7	IMO number of the vessel. Mandatory if MMSI number is lacking.
MMSINumber	0-1	Text	9	MMSI number of the vessel. Mandatory if IMO number is lacking.
CallSign	0-1	Text	1-7	Call sign of the vessel
ShipName	0-1	Text	1-35	Name of the vessel
Flag	0-1	Text	3	3 letter country code (according to ISO 3166) of the flag of the ship

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SSN2MS_Alert_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
ContactIdentification	**0-1**	**Choice**		***ContactDetails* element node. Mandatory if vessel not identified at Incident notification. Not allowed if *StatusCode* <> OK**
LastName	0-1	Text	1-50	Last name of the contact person
FirstName	0-1	Text	1-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	0-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	0-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Email	0-1	Text	0-50	Email address of the contact person
IncidentDetails	**0-1**			***IncidentDetails* element node. Not allowed if *StatusCode* <> OK**
SentAt	1	DT	19	Date and time (ISO 8601 UTC format) indicating when the incident has been notified to SafeSeaNet.
From	1	Text	3-15	The name of the sender (data provider) of the incident notification (see p.45).
WasteAlertInformation	**0-1**	**Choice**		***WasteAlertInformation* element node (if incident type = Waste).** From incoming *MS2SSN_Alert_Res.xml* response (if any)
…				From corresponding *MS2SSN_Alert_Res.xml* response (if any)
SITREPAlertInformation	**0-1**	**Choice**		***SITREPAlertInformation* element node (if incident type = SITREP).** From incoming *MS2SSN_Alert_Res.xml* response (if any)
…				From corresponding *MS2SSN_Alert_Res.xml* response (if any)
POLREPAlertInformation	**0-1**	**Choice**		***POLREPAlertInformation* element node (if incident type = POLREP).** From incoming *MS2SSN_Alert_Res.xml* response (if any)
…				From corresponding *MS2SSN_Alert_Res.xml* response (if any)
LostFoundContainersAlertInformation	**0-1**	**Choice**		***LostFoundContainersAlertInformation* element node (if incident type = LostFoundContainers).** From incoming *MS2SSN_Alert_Res.xml* response (if any)
…				From corresponding *MS2SSN_Alert_Res.xml* response (if any)
OtherAlertInformation	**0-1**	**Choice**		***OtherAlertInformation* element node (if incident type = Others).** From incoming *MS2SSN_Alert_Res.xml* response (if any)
…				From corresponding *MS2SSN_Alert_Res.xml* response (if any)

SSN2MS_Alert_Res.xml message, Continued

Message description (continued)

Item	Occ	Type	Len	Description
ContactDetails	**0-1**	**Choice**		**ContactDetails element. Mandatory when the data provider can only be reached by phone/fax/email (see p. 30)**
LastName	0-1	Text	1-50	Last name of the contact person
FirstName	0-1	Text	1-50	First name of the contact person
LoCode	1	Text	5	Location code of the contact person
Phone	1	Text	0-20	Phone number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Fax	1	Text	0-20	Fax number (country code included) of the contact person. Only numbers and the symbol "+" are allowed. No spaces allowed between characters
Email	0-1	Text	0-50	Email address of the contact person
Base64Details	**0-1**	**Choice**		***Base64Details* element. Mandatory when the *data provider* can only provide incident details as downloadable files (see p. 30)**
DocType	1	Enum		Supported document formats. Possible values are: DocType: DOC -> Extensions allowed: DOC, DOT, RTF DocType: HTML -> Extensions allowed: HTM, HTML DocType: PDF -> Extensions allowed: PDF DocType: TXT -> Extensions allowed: TXT DocType: XML -> Extensions allowed: XML Extensions are case insensitive
Base64Content	1	base64		Base64-encoded characters of the notification details downloaded by SafeSeaNet.

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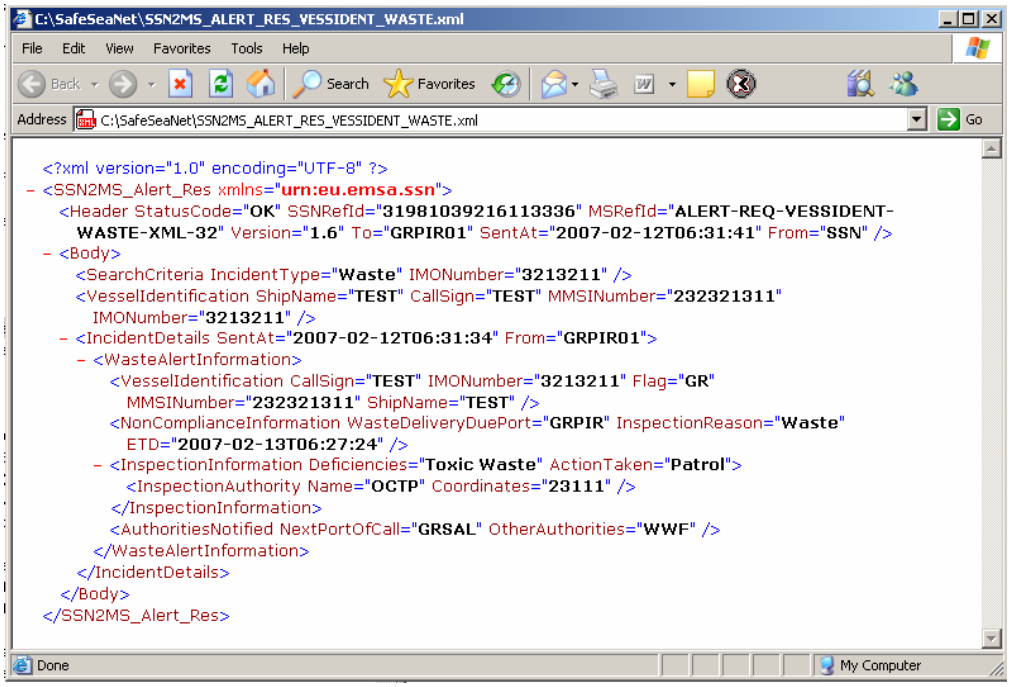
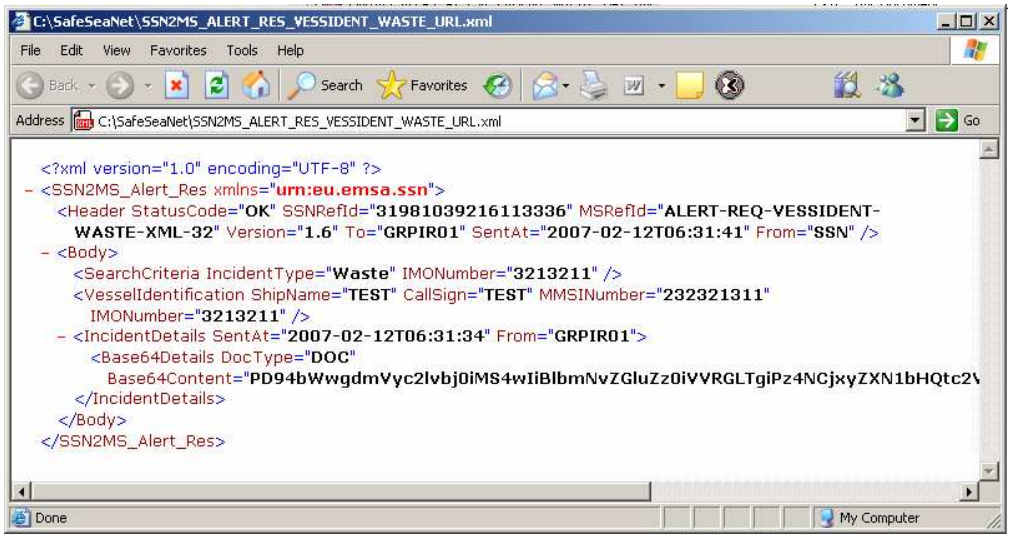
SSN2MS_Alert_Res.xml message, Continued

Examples

The following example illustrates the details of a Waste alert in XML format:



The following example illustrates a Waste alert which details are available as a Word document. To recover the original Word document, the *data requester* must base64-decode (see p.56 for more details) the stream of characters provided in the *Base64Content* attribute:



Annex A

Description List of most significant inconsistencies between the XSD schema and SSN XML messaging reference guide v1.64.

XML Message	Description
1. ***MS2SSN_Ship_Not.xml > MRSNotification > VoyageInformation > Bunker***	Defined as optional in ssn.xsd. Attributes Chars and Quantity. Not defined in the XML Ref. Guide.
2. ***MS2SSN_Ship_Res.xml > MRSNotificationDetails > MRSCargoInformation > DG > DGDetails***	In XMLRG Occ = 0 - 99 In ssn.xsd cc = 0 - infinity
3. ***MS2SSN_Ship_Res.xml > AISNotificationDetails > AISCargoInformation***	The element is mandatory but it contains only one attribute "HazardousCargoType" that is optional. What is the purpose of the mandatory element when the attribute "HazardousCargoType" is missing? Remaining open issues: • What's the unit of the quantity of DG? • What's the bunker characteristics and the unit of the bunker estimated quantity? • Is there any description of the ship type (value from 1 to 99 in AIS message)? • What's the format and unit of the antenna location (AIS message) • What's the format and description of the route plan (AIS message) • Is there any description of the hazardous cargo type (AIS message)?
4. ***SSN2MS_Ship_Res.xml > Body > ShipNotificationDetails***	The element has attributes: SentAt and From are defined in the ssn.xsd but not in the XMLRG.
5. ***MS2SSN_Hazmat_Res.xml > Body > NotificationDetails > VesselIdentification***	The element is defined as mandatory in the XMLRG Occ = 1 but in the ssn.xsd it is optional.
6. ***MS2SSN_Hazmat_Res.xml > Body > CargoInformation > DPG***	In the XMLRG the Occ = 1-9999 but in the ssn.xsd the occurence is 1 - infonity. Also the occurence of the elements "PlacementOfGoods" and "PlacementOfGoodsInContainer" is 1-99 in the XMLRG but 0 - infonity in the ssn.xsd.
7. ***MS2SSN_Alert_Not.xml and MS2SSN_Alert_Req.xml > Waste and ContactIdentification***	What is the meaning of an Waste Notification for a non-identified vessel?
8. ***MS2SSN_Alert_Req.xml > Body > SearchCriteria***	Questions: • SentAt: how is it possible for a data requester to know the exact date and time of the notification. • From: how is it possible for a data requester to know the SSN user id of the data provider?

XML Message	Description
9. MS2SSN_Alert_Res.xml > Body > IncidentDetails > WasteAlertInformation > VesselIdentification	In the XMLRF it is defined as mandatory when it should option as defined in the ssn.xsd
10. MS2SSN_Alert_Res.xml > Body > IncidentDetails > WasteAlertInformation > InspectionInformation	Define the length of the attributes. What is the unit of measurement for "Coordinates"?
11. MS2SSN_Alert_Res.xml > Body > IncidentDetails > SITREPAlertInformation > SITREPInformation	Define the length of the attributes. Also the CargoManifest > UrlDetails > Url: a) size must be extended to 256. b) CargoManifest must be optional in the ssn.xsd: Occ = 0..1 (optional) c) The SSN2MS_Alert_Res message by definition contains the exact elements of the MS2SSN_Alert_Res per incident type. This means that the UrlDetails will be provided and not the Base64Contents. Also SITREPInformation > A_CasualtyIdentification is mandatory, with the information Name, Callsign and Flag required. It seems difficult to have A_CasualtyIdentification when the vessel identification information is not there. If the ship is identified, are the A_CasualtyIdentification details CallSign and ShipName identical to those under VesselIdentification? If yes what is the purpose of the A_CasualtyIdentification element?
12. MS2SSN_Alert_Res.xml > Body > IncidentDetails > POLREPAlertInformation > POLREPInformation	Define the length of the attributes. Also CargoManifest > UrlDetails > Url size must be extended to 256.The SSN2MS_Alert_Res message by definition contains the exact elements of the MS2SSN_Alert_Res per incident type. This means that the UrlDetails will be provided and not the Base64Contents. Also POLREPInformation > POLWARN > P1_DateTime the Type in the XMLRG must be dateTime as in ssn.xsd. Also POLREPInformation > POLINF > P40_DateTime the Type in the XMLRG and ssn.xsd must be dateTime. Also POLREPInformation > POLINF > P49_ObserverIdentity the occasion in the XMLRG is 1-99 but in the ssn.xsd is 1-infinity. Also POLREPInformation > POLINF > P52_InformedStateOrg the occasion in the XMLRG is 0-99 but in the ssn.xsd is 0-infinity. Also POLREPInformation > POLFAC > P80_DateTime the Type in the XMLRG and ssn.xsd must be dateTime. Also POLREPInformation > POLFAC > P85_InformedStateOrg the occasion in the XMLRG is 0-99 but in the ssn.xsd is 0-infinity.

XML Message	Description
13. MS2SSN_Alert_Res.xml > Body > IncidentDetails > LostFoundContainersAlertInformation > LostFoundContainersInformation	Define the length of the attributes. Also CargoManifest > UrlDetails > Url size must be extended to 256. The SSN2MS_Alert_Res message by definition contains the exact elements of the MS2SSN_Alert_Res per incident type. This means that the UrlDetails will be provided and not the Base64Contents. Also in the ssn.xsd the CargoLeaking appears twise: a) under ContainerInformation (correct) and b) under LostFoundContainersInformation (false must be removed). Also ContainerInformation > P5_TypeOfGoods is of Enum type and must be defined as such in the ssm.xsd. Also ContainerInformation > Containers the occasion in the XMLRG is 1-99 but in the ssn.xsd is 1-infinity. Also ContainerInformation > Containers > Description in the XMLRG the Occ = 1 but in the ssn.xsd Occ = 0..1
14. MS2SSN_Alert_Res.xml > Body > IncidentDetails > OtherAlertInformation > OtherInformation	Define the length of the attribute "Details". Also CargoManifest > UrlDetails > Url the size must be extended to 256. The SSN2MS_Alert_Res message by definition contains the exact elements of the MS2SSN_Alert_Res per incident type. This means that the UrlDetails will be provided and not the Base64Contents.
15. SSN2MS_Alert_Res.xml > Body > ContactIdentification	include: Last name, First name but in the MS2SSN_Alert_Not the ContactIdentification include: Maritime Authority name
16. MS2SSN_Alert_Res.xml > SITREPAlertInformation	VoyageInformation is mandatory Occ=1 In the XSD the VoyageInformation is also mandatory. However, VoyageInformation must be optional Occ=0..1.
17. MS2SSN_Alert_Res.xml > POLREPAlertInformation	VoyageInformation is optional with Occ=0..1 But in the XSD the VoyageInformation is mandatory. VoyageInformation must be optional Occ=0..1.