

Interface Design Description

SAFESEANET 2-10685

RDSSN Web Service Interfaces

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Interface Design Description

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1 Introduction

1.1 Background

The Royal Danish Navy SafeSeaNet (RDNSSN) system is the Danish part of the European SafeSeaNet (EUSSN) system governing ship reporting according to EU Directives 2002/59/EC and 2009/17/EC, and 2009/16/EU of the European Parliament and the Council on establishing a Community vessel traffic monitoring and information system.

The RDNSSN system is the data consumer for ports and agents and a data provider for EUSSN. Furthermore the RDNSSN exposes an interface for search in RDNSSN national data and EUSSN data.

1.2 Revision History

| Revision | Date | Status |
|----------|------------|---------------------|
| 1.25 | 02-12-2010 | Release version 1.6 |

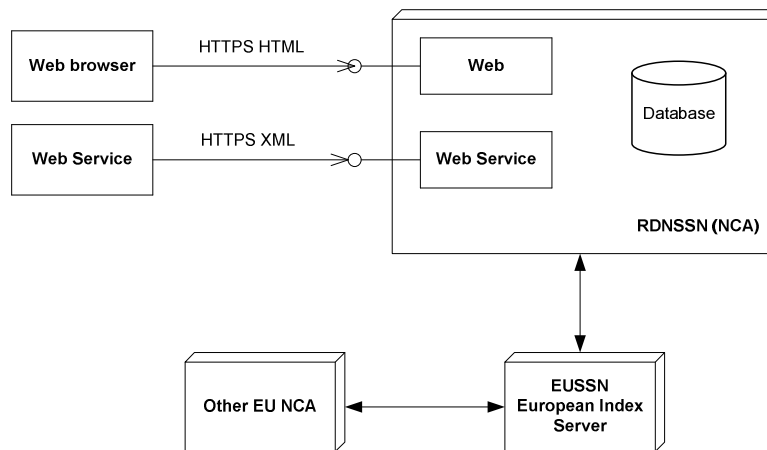
2 RDNSSN Overview

EUSSN is a distributed network linking maritime administrations of the EU Member States together and hereby providing the means for exchanging maritime information. EUSSN is linked up to the Member States through one focal point, the National Competent Authority (NCA), in each Member State. Admiral Danish Fleet (Søværnets Operative Kommando - SOK) is appointed the NCA of Denmark.

The general principle of EUSSN is that all factual information is stored at a national level at each NCA. A central European index server (EUSSN) keeps track of the location of all information existing in the network. Every time information is changed at the NCA, a notification is sent to the EUSSN to keep it updated. A NCA can issue a request for information not stored in its local databases by sending a query through the EUSSN.

The RDNSSN system provides information exchange facilities both via a web application interface and a set of web service interfaces. The web application interface is accessible through a web browser intended for manual interaction. The web service interfaces are accessible through exchange of XML messages and are intended for system-to-system integration with the RDNSSN.

The following diagram visualizes the RDNSSN and EUSSN.



2.1 Users of the RDNSSN web service interface

There are three types of users:

- **Ports**
 - Can search EUSSN for vessels carrying hazmat with the port as next port of call
 - Must submit reports for all vessels bound to the port
- **Agents**
 - Must submit reports for vessels carrying hazmat coming from a non-EU port and all vessels carrying hazmat departing from a EU port
- **Authorities**
 - Can search RDNSSN national data

3 Web service interface

This section describes the technical details that a data provider needs to know about RDNSSN.

3.1 Introduction

The web service interfaces of the RDNSSN are established using standard WSDL Web Services designed to support interoperable machine-to-machine interaction over the Internet via the exchange of XML messages.

The public interface of each Web Service is described by a WSDL document which is an XML-based service description of how to communicate using the service; namely, the protocol bindings and message formats required to interact with the web services. The supported operations and messages are described abstractly, and then bound to a concrete network protocol and message format.

The SOAP protocol over HTTP is used when exchanging messages, which implies that information, is exchanged using extensible XML-based messages.

3.2 Authentication and authorization

A user must be created in order to use the RDNSSN. Please contact SOK for further information.

All access to web service operations require the user to log on. HTTP Basic authentication is used to authenticate the user.

The network communication is secured by utilizing HTTPS, that is, the network traffic is encrypted and the server is identified by a SSL certificate. Each web service operation requires the authenticated user to be authorized, that is, be assigned a specific role, to gain access.

3.3 Faults

In case of one or more validation errors occurring when submitting a report, a FaultException containing the validation error(s) will be thrown.

3.4 Submitting reports

This section describes the overall process taking place when a data provider submits reports into the RDNSSN system. This is a common process regardless of submitting either Port or Hazmat reports. The submit process also deals with the update and cancellation of previously submitted reports.

The process of submitting a report into the RDNSSN system takes place in a number of stages:

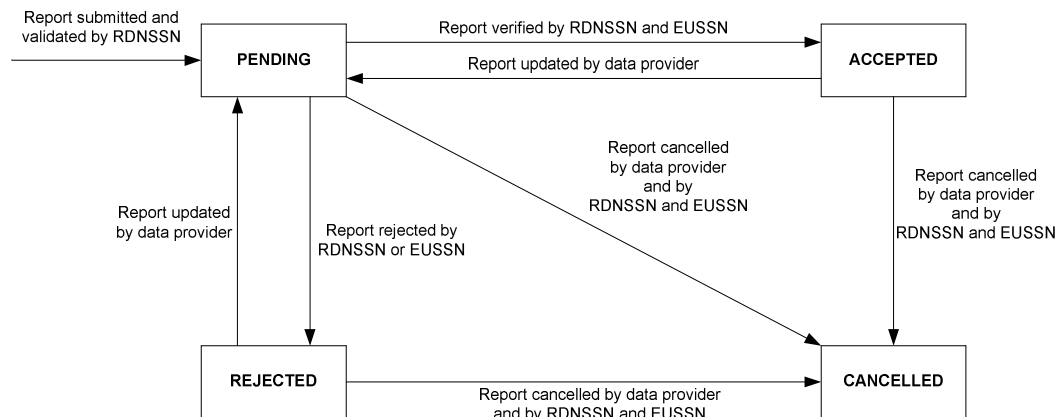
1. The data provider submits a report into the RDNSSN system
2. The submitted report is initially validated according to the XML schema and business validation rules. Failing validation will result in a rejected report which the data provider is responsible for correcting. When a report is created in the RDNSSN system a messageId is assigned to the report. The messageId of the report is returned to the data provider for future reference, e.g. when updating the report or querying the status of the report
3. When a report is valid according to RDNSSN validation rules then the content of the report is further verified by the EUSSN system. The report is either rejected or accepted as a result of this verification.
4. The data provider examines the status of the submitted report (received either via an email or by querying the web service interface for the status). If the report is accepted, the submit process is completed. If the report is rejected, the data provider must update the report according to the description of the rejection. It is the obligation of the data provider to ensure that the report is eventually accepted.

A report entered into the RDNSSN will always be in exactly one of the following unique life cycle states:

| State | description |
|-----------------|---|
| PENDING | A newly submitted or updated report is in this state |
| ACCEPTED | A report is in this state when RDNSSN and EUSSN has verified and accepted the |

| report | |
|------------------|---|
| REJECTED | The report is in this state when the RDNSSN or EUSSN has rejected it |
| CANCELLED | The report is in this state when the data provider has cancelled the report and the report has been cancelled by RDNSSN and EUSSN. Until RDNSSN and EUSSN has cancelled the report, the state will be PENDING |

The following diagram illustrates the legal state changes that RDNSSN supports:



It is the obligation of the data provider to ensure that all submitted reports eventually end in the ACCEPTED (or CANCELLED) state which concludes the report submission process. The data provider must explicitly handle the case when a report is in the REJECTED state by correcting and updating the report until it becomes ACCEPTED. The data provider may choose to cancel (if it is not already CANCELLED) a previously submitted report which will place it in the CANCELLED state.

The status of a submitted report can be determined by the data provider using the appropriate GetStatus operation on the service interface. In order to avoid polling the status continuously via the web service interface the client **must** insert a delay of minimum 20 seconds between each invocation. The delay exists because the communication with EUSSN is asynchronously.

As an alternate mean of determining the final status of the report, an email will be sent to the organisation of the user who submitted the report when the report changes state to either ACCEPTED or REJECTED (An email will always be sent to the dedicated email address registered by the RDNSSN as part of the organisation of the user). The email will contain a description of the status along with a message id.

4 Web Service Operations

Each operation takes one or more input parameters and gives one or more output results. The tables describing the operation attributes show input parameters as “[In]” and output values as “[Out]”.

The data types used as input or output are described in detail in section 5.

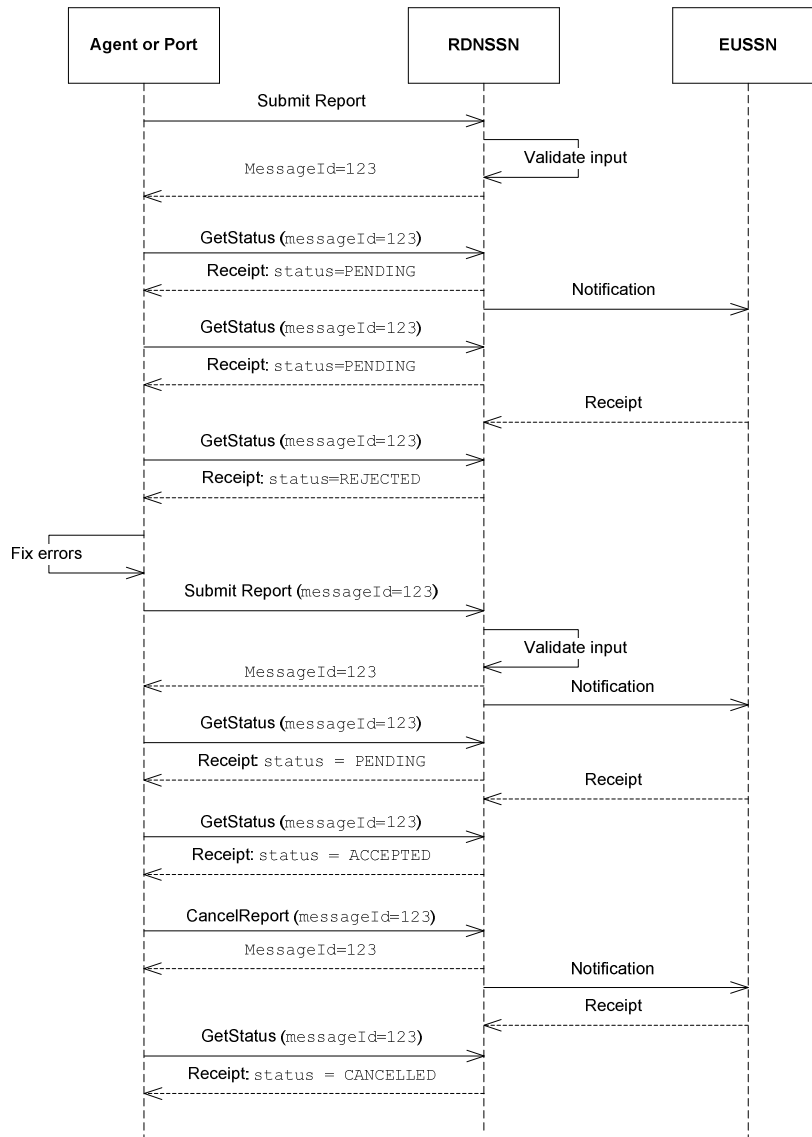
4.1 Overview of operations

The table show the operations available and the intended user.

| Operation | User |
|-------------------------|-----------|
| SubmitPreArrival72Hours | Port |
| SubmitPreArrival24Hours | Port |
| SubmitArrival | Port |
| SubmitDeparture | Port |
| GetPortStatus | Port |
| CancelPort | Port |
| SubmitHazmat | Agent |
| GetHazmatStatus | Agent |
| CancelHazmat | Agent |
| SearchNationalPortData | Authority |
| SubmitEUHazmatSearch | Port |
| GetEUHazmatSearchResult | Port |

4.2 Submit operations

The general data flow for an operation is visualized in the following sequence diagram:

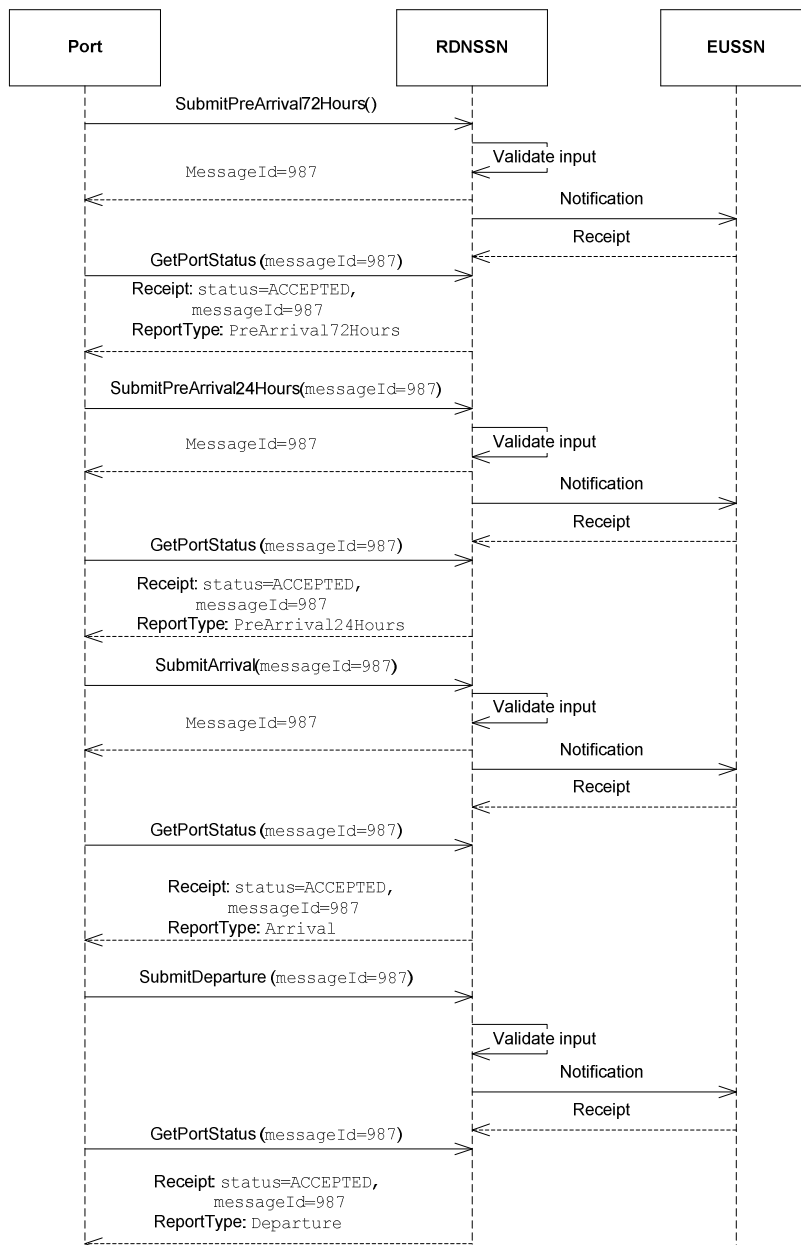


The vertical lines in the sequence diagram do not reflect linear time.

The important point to note is that the communication with EUSSN is asynchronous. This is the reason why the data provider has to use the GetStatus operation to obtain the report status. This is also the reason why the data provider must insert a delay between each GetStatus operation invocation.

4.3 Submit Port

The following sequence diagram illustrates the intended flow of port related data:



The vertical lines in the sequence diagram do not reflect linear time. An important point to note is that the messageId is reused for all messages for the specific vessel for the specific port of call. The messageId **must not** be reused the next time the vessel is expected to call the port.

4.3.1 SubmitPreArrival72Hours

To be provided at least 72 hours from the expected arrival to the port of call. Mandatory for vessels bound for an expanded inspection according to the Port State Control directive.

This operation submits a new PreArrival72Hours report or updates (replaces) an existing.

| In/Out | Name | Type | Description |
|--------|-----------|--------|---------------------------------------|
| [In] | MessageId | String | The id associated with the ship call. |

| | | | |
|-------|----------------------------|--------|--|
| | | | <p>If empty, a new report is created and messageId is generated by RDNSSN and is available as the return value.</p> <p>If non empty, the operation will update (replace) the previously submitted report. Reports in cancelled state cannot be updated</p> |
| [In] | Vessel | Vessel | The vessel that is expected to arrive at the port, mandatory |
| [In] | Operator | String | The operator of the vessel, max length = 35, mandatory |
| [In] | PortOfCall | String | Locode of the port of call, see data type description, mandatory |
| [In] | LastPort | String | Locode of the last port of call, see data type description, mandatory |
| [In] | NextPort | String | Locode of the next port of call, see data type description |
| [In] | PositionInPort | String | Sublocode, see data type description |
| [In] | EtaPortOfCall | Date | The estimated time of arrival for the vessel to the port, mandatory |
| [In] | EtdPortOfCall | Date | The estimated time of departure for the vessel from the port |
| [In] | PlannedOperations | String | See PlannedOperations data type description, mandatory |
| [In] | PlannedWorks | String | Max length = 256, mandatory |
| [In] | ShipConfiguration | String | See ShipConfiguration data type description, mandatory for tankers |
| [In] | CargoVolumeNature | String | Max length = 256, mandatory for tankers |
| [In] | ConditionCargoBallastTanks | String | Max length = 256, mandatory for tankers |
| [Out] | MessageId | String | The id associated with the ship call is returned for this operation |

4.3.2 SubmitPreArrival24Hours

To be provided at least 24 hours before the vessel is expected to arrive to the port of call.

This operation submits a new PreArrival24Hours report or updates (replaces) an existing.

| In/Out | Name | Type | Description |
|--------|-----------|--------|---|
| [In] | MessageId | String | <p>The id associated with the ship call.</p> <p>If empty, a new report is created and messageId is generated by RDNSSN and is available as the return value.</p> <p>If non empty, the operation will update (replace) the previously submitted report. Reports in cancelled state cannot be updated</p> |
| [In] | Vessel | Vessel | The vessel that is expected to arrive at the port, mandatory |
| [In] | Operator | String | The operator of the vessel, max length = 35, mandatory |

| | | | |
|-------|-------------------|---------|--|
| [In] | PortOfCall | String | Locode of the port of call, see data type description, mandatory |
| [In] | LastPort | String | Locode of the last port of call, see data type description, mandatory |
| [In] | NextPort | String | Locode of the next port of call, see data type description |
| [In] | PositionInPort | String | Sublocode, see data type description |
| [In] | EtaPortOfCall | Date | The estimated time of arrival for the vessel to the port, mandatory |
| [In] | EtdPortOfCall | Date | The estimated time of departure for the vessel from the port, mandatory |
| [In] | PlannedOperations | String | See PlannedOperations data type description |
| [In] | PersonsOnBoard | Integer | See PersonsOnBoard data type description. |
| [Out] | MessageId | String | The id associated with the ship call is returned for this operation |

4.3.3 SubmitArrival

To be provided when the vessel has arrived to the port of call.

This operation submits a new Arrival report or updates (replaces) an existing.

| In/Out | Name | Type | Description |
|--------|----------------|--------|---|
| [In] | MessageId | String | The id associated with the ship call. The operation will update (replace) the previously submitted report. Reports in cancelled state cannot be updated, mandatory |
| [In] | Vessel | Vessel | The vessel that has arrived at the port, mandatory |
| [In] | Operator | String | The operator of the vessel, max length = 35, mandatory |
| [In] | PortOfCall | String | Locode of the port of call, see data type description, mandatory |
| [In] | LastPort | String | Locode of the last port of call, see data type description, mandatory |
| [In] | NextPort | String | Locode of the next port of call, see data type description |
| [In] | PositionInPort | String | Sublocode, see data type description, mandatory |
| [In] | AtaPortOfCall | Date | The actual time of arrival for the vessel to the port, mandatory |
| [In] | EtdPortOfCall | Date | The estimated time of departure for the vessel from the port, mandatory |
| [Out] | MessageId | String | The id associated with the ship call is returned for this operation |

4.3.4 SubmitDeparture

To be provided when the vessel departs the port.

This operation submits a new Departure report or updates (replaces) an existing.

| In/Out | Name | Type | Description |
|--------|---------------|--------|---|
| [In] | MessageId | String | The id associated with the ship call. If non empty, the operation will update (replace) the previously submitted report. Reports in cancelled state cannot be updated, mandatory |
| [In] | Vessel | Vessel | The vessel that has departed from the port, mandatory |
| [In] | Operator | String | The operator of the vessel, max length = 35, mandatory |
| [In] | PortOfCall | String | Locode of the port of call, see data type description, mandatory |
| [In] | LastPort | String | Locode of the last port of call, see data type description, mandatory |
| [In] | NextPort | String | Locode of the next port of call, see data type description |
| [In] | AtdPortOfCall | Date | The actual time of departure for the vessel in the port, mandatory |
| [Out] | MessageId | String | The id associated with the ship call is returned for this operation |

4.3.5 GetPortStatus

This operation gets the current status of a port report of any type.

| In/Out | Name | Type | Description |
|--------|------------|---------|--|
| [In] | MessageId | String | The messageId returned in the submit operation, mandatory |
| [Out] | Receipt | Receipt | The receipt returned for this operation |
| [Out] | ReportType | String | {PreArrival72Hours, PreArrival24Hours, Arrival, Departure} |

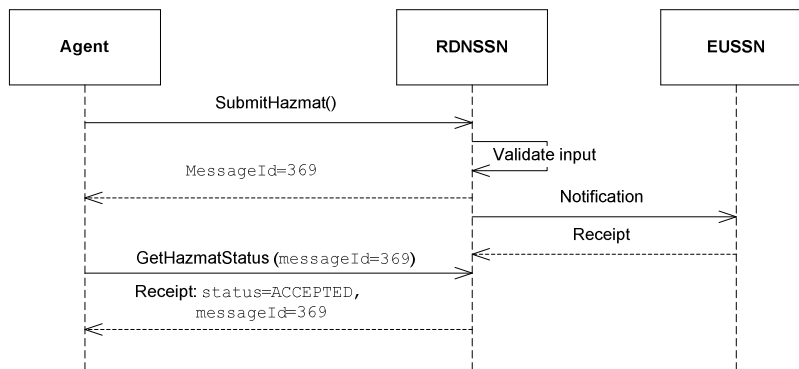
4.3.6 CancelPort

This operation cancels the PreArrival72Hours, PreArrival24Hours, Arrival, and Departure messages associated with the messageId.

| In/Out | Name | Type | Description |
|--------|-----------|--------|--|
| [In] | MessageId | String | The messageId returned in the submit operation, mandatory |

4.4 Submit Hazmat

The following sequence diagram illustrates the intended flow of hazmat related data:



The vertical lines in the sequence diagram do not reflect linear time. The messageId must only be reused for one specific port of call. The next time the vessel calls the port a different SubmitHazard messages must be sent (which will be assigned another messageId).

4.4.1 SubmitHazard

This operation submits a new Hazard report or updates (replaces) an existing.

| In/Out | Name | Type | Description |
|--------|-----------------|---------|--|
| [In] | MessageId | String | The id associated with the ship call. If empty, a new report is created and messageId is generated by RDNSSN and is available as the return value. If non empty, the operation will update (replace) the previously submitted report. Reports in cancelled state cannot be updated |
| [In] | Vessel | Vessel | The vessel that is carrying hazmat, mandatory |
| [In] | PortOfCall | String | Locode of the PortOfCall, see data type description, mandatory |
| [In] | EtaPortOfCall | Date | The estimated time of arrival for the vessel to the port, mandatory |
| [In] | EtdPortOfCall | Date | The estimated time of departure for the vessel from the port, mandatory if departed from EU port |
| [In] | InfShipClass | String | See InfShipClass data type description |
| [In] | PersonsOnBoard | Integer | See PersonsOnBoard data type description. Mandatory if departed from EU port. |
| [In] | LastPort | String | Locode of the last port, see data type description |
| [In] | EtdFromLastPort | Date | The estimated time of departure for the vessel from the last port |
| [In] | NextPort | String | Locode of the next port, see data type description, mandatory if departed from EU port |
| [In] | EtaNextPort | Date | The estimated time of arrival for the vessel to the port, |

| | | | |
|-------|---------------------|------------------------|--|
| | | | mandatory if departed from EU port |
| [In] | DepartureFromEUPort | Boolean | True if voyage initiates from an EU port. This field cannot be edited after the report has been created. |
| [In] | LocationFormat | String | See LocationFormat data type description, mandatory |
| [In] | DGElements | List<DGClassification> | |
| [In] | CargoElements | List<CargoElement> | There must exist a minimum of one element in the list |
| [Out] | MessageId | String | The id associated with the ship call is returned for this operation |

4.4.2 GetHazmatStatus

This operation gets the status of a specific Hazmat report.

| In/Out | Name | Type | Description |
|--------|-----------|---------|--|
| [In] | MessageId | String | The messageId returned in the submit operation, mandatory |
| [Out] | Receipt | Receipt | The receipt returned for this operation |

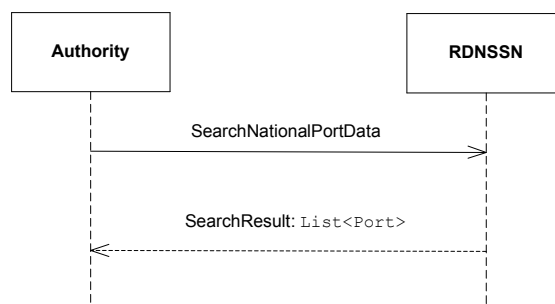
4.4.3 CancelHazmat

This operation cancels the Hazmat message associated with the messageId.

| In/Out | Name | Type | Description |
|--------|-----------|--------|--|
| [In] | MessageId | String | The messageId returned in the submit operation, mandatory |

4.5 Search national data

The following sequence diagram illustrates the flow:



4.5.1 SearchNationalPortData

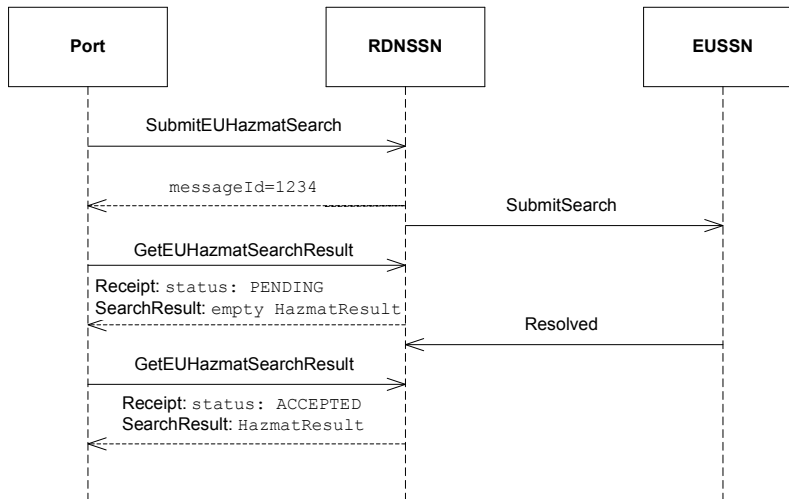
This operation returns the list of reports that are created or updated within StartDate and EndDate. Only reports in state ACCEPTED or CANCELLED will be returned.

| In/Out | Name | Type | Description |
|--------|-----------|------|-----------------------------|
| [In] | StartDate | Date | Max time span allowed is 30 |
| [In] | EndDate | Date | days, mandatory |

| | | |
|-------|--------------|------------|
| [Out] | SearchResult | List<Port> |
|-------|--------------|------------|

4.6 Search EU data

The following sequence diagram illustrates the flow:



The vertical lines in the sequence diagram do not reflect linear time.

4.6.1 SubmitEUHazmatSearch

This operation returns the Hazmat details for the selected ship with an EtaPortOfCall after the given search date. If several relevant Hazmat reports exist, the report closest to the search date will be returned.

According to the role of the user, the search will either be on the assigned locode of the user's organisation (if the organisation does not have one assigned, the user will not be able to search) or on any locode.

| In/Out | Name | Type | Description |
|--------|------------|--------|--|
| [In] | ImoNumber | String | Length = 7, mandatory if mmsi is empty |
| [In] | MmsiNumber | String | Length = 9, mandatory if imo is empty |
| [In] | SearchDate | Date | Must be no earlier than the time of the request and no later than 30 days from the time of the request, mandatory |
| [Out] | MessageId | String | The id associated with the search is returned for this operation |

4.6.2 GetEUHazmatSearchResult

| In/Out | Name | Type | Description |
|--------|-----------|---------|---|
| [In] | MessageId | String | The messageId returned in the SubmitEUHazmatSearch operation, mandatory |
| [Out] | Receipt | Receipt | The receipt returned for this operation. PENDING if search has not been resolved. ACCEPTED if search has been |

| | | | |
|-------|--------------|--------------|---|
| | | | resolved |
| [Out] | HazmatResult | HazmatResult | The search result, always empty if the search has not been resolved |

5 Web Service Data types

5.1 Date

All date time values must be specified in UTC (Coordinated Universal Time) in the format:

YYYY-MM-DDThh:mm:ss

Where:

- YYYY is the year in the Gregorian calendar
- MM is the month of the year between 01 (January) and 12 (December)
- DD is the day of the month between 01 and 31
- The capital letter T is used to separate the date and time components.
- hh is the number of complete hours that have passed since midnight (00-23)
- mm is the number of complete minutes since the start of the hour (00-59)
- ss is the number of complete seconds since the start of the minute (00-59)

Example: 2010-01-24T00:51:35

5.2 Locode

All locations are specified using the UN/LOCODE scheme; a 5 character string designating seaports (among many other locations used in trade and transport) developed and maintained by United Nations Economic Commission.

Example: Aarhus is DKAAR, Grenaa is DKGRE

5.3 Sublocode

The sublocode is the IMO port facility number in the port where the ship is docked. The sublocode is described by 4 digits.

Example: "Aarhus Havn - Multi-Bulk" is 0005

5.4 LocationFormat

The placement format is used to designate the location of cargo or containers on board a vessel.

The format depends on the type of vessel. The following formats should be used if possible (custom formats may be used if these do not suffice):

- If container vessel (ISO standard): Bay/Row/Tier in format:
BBBRRTT

If the Bay number is less than 3 digits it must be padded with leading zeros (similar for Row and Tier), e.g. "0340217"
- If feeder vessel: Hatch/Tier/Row in format:
HHHTTRR (20" container)
HHHTTRRRR (40" container)

If the Hatch number is less than 3 digits it must be padded with leading zeros (similar for the Tier and Row).
- If ro-ro vessel: Deck/Bay/Row/Tier in format:
DDBBBRRTT
- If tanker vessel: Tank number
- If general cargo vessel: Use the variable format (3-9 characters):
CCDDDDHHH

Where:

- **CCC** is 3 mandatory characters specifying the cell number (01, 02, etc. with a further indication: S (starboard), P (Portside) or C (Centre)).
- **DDD** is 3 optional characters specifying the deck level (WED = weather deck, TD9 = tween deck 9, ... TD1 = tween deck 1, LOH = lower hold).
- **HHH** is 3 optional characters specifying further indication within a hold (e.g. hatch covers).

5.5 InfShipClass

The international code for the safe carriage of packaged Irradiated Nuclear Fuel, plutonium and high-level radioactive wastes on board ships (INF cargo).

Ships carrying INF cargo are assigned to one of four classes, depending on the total radioactivity of INF cargo which is carried on board:

- **INF1** - Ships which are certified to carry INF cargo with an aggregate activity less than 4,000 TBq.
- **INF2** - Ships which are certified to carry irradiated nuclear fuel or high-level radioactive wastes with an aggregate activity less than 2×10^6 TBq and ships which are certified to carry plutonium with an aggregate activity less than 2×10^5 TBq.
- **INF3** - Ships which are certified to carry irradiated nuclear fuel or high-level radioactive wastes and ships which are certified to carry plutonium with no restriction of the maximum aggregate activity of the materials.

- **NONE**

5.6 UnNumber

The 4 digit UN-number is used to identify dangerous goods and hazardous substances and articles. Padded with zeroes if less than 4 digits.

Example:

- **0093** (Flares, aerial)
- **1202** (Gas oil or diesel fuel or heating oil, light)
- **NONE** (if unknown or not applicable)

5.7 IMO Hazard Class

The IMO Hazard Class classifies dangerous cargo item using either:

- **IMDG** Code: International Maritime Dangerous Goods Code
- **IBC** Code : International Bulk Chemical Code
- **IGC** Code : International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk
- **MARPOL ANNEX 1** Code: Marine pollution
- **BC** Code: Bulk Cargo Code
- **INF**

Example:

- **3** (Kerosene)
- **6.1** (Chemical sample, toxic)

5.8 PlannedOperations

A 2 character string used to describe the planned operations at the port, can be one of the following:

- **00** - Unknown operation
- **01** - Loading only
- **02** - Discharging only
- **03** - Discharging and Loading
- **04** - Cruise call
- **05** - Bunkering only
- **06** - Repair only
- **07** - Provisions only
- **08** - Waiting Berth

- **09** - Towage
- **10** - Port Contractor
- **11** - Vessels below 100 GT
- **12** - Governmental vessels

- **20** - Neither Loading nor Discharging - Arriving and departing in EU-traffic
- **21** - Loading only - Arriving and departing in EU-traffic
- **22** - Discharging only - Arriving and departing in EU-traffic
- **23** - Discharging and Loading - Arriving and departing in EU-traffic
- **30** - Neither Loading nor Discharging - Arriving in EU-traffic and departing in non-EU-traffic
- **31** - Loading only - Arriving in EU-traffic and departing in non-EU-traffic
- **32** - Discharging only - Arriving in EU-traffic and departing in non-EU-traffic
- **33** - Discharging and Loading - Arriving in EU-traffic and departing in non-EU-traffic
- **40** - Neither Loading nor Discharging - Arriving in non-EU-traffic and departing in EU-traffic
- **41** - Loading only - Arriving in non-EU-traffic and departing in EU-traffic
- **42** - Discharging only - Arriving in non-EU-traffic and departing in EU-traffic
- **43** - Discharging and Loading - Arriving in non-EU-traffic and departing in EU-traffic

EU traffic means ships arriving from EU without load or only carrying T2 products between EU ports without calling at any port outside the EU and ships bound for EU without load or only with T2-products not intended for export from EU.

5.9 PersonsOnBoard

The "persons onboard" field is an integer between 1 and 99999.

5.10 ShipConfiguration

One of the following:

- **SHT** – Single Hull Tanker
- **SHT-SBT** – Single Hull Tanker - Segregated Ballast Tanker

- **DHT** – Double Hull Tanker

5.11 Vessel

| Name | Type | Description |
|-------------------|--------|---|
| ImoNumber | String | Length = 7, mandatory if mmsi is empty |
| MmsiNumber | String | Length = 9, mandatory if imo is empty |
| Callsign | String | Max length = 7, mandatory |
| Shipname | String | Max length = 35, mandatory |
| Flag | String | ISO 3166-1-alpha-2 code Length = 2 |

It is not possible to update ImoNumber, MmsiNumber and Callsign after a report has been created.

5.12 DGClassification

| Name | Type | Description |
|-------------------------|--------|--|
| DGClassification | String | {IMDG, IGC, IBC, MARPOL_ANNEX1, BC, INF} |

5.13 CargoElement

| Name | Type | Description |
|------------------------|---------|--|
| TechnicalName | String | Max length = 350, mandatory |
| UNNumber | String | Length = 4, see data type description, mandatory |
| ImoHazardClass | String | See data type description, mandatory |
| WeightType | String | {Gross, Net}, mandatory |
| WeightQuantity | Decimal | The weight quantity measured in kilogram . Max value = 99,999,999 mandatory |
| LocationOnBoard | String | Actual location on board, see LocationFormat data type description, mandatory |
| TransportUnitId | String | The identification number of the cargo unit. (e.g. container id) |

5.14 CargoInformation

| Name | Type | Description |
|------------------------|--------|---|
| TechnicalName | String | Max length = 350 |
| UNNumber | String | Length = 4, see data type description |
| ImoHazardClass | String | See data type description |
| WeightType | String | {Gross, Net} |
| WeightUnit | String | {KGM, TNE} |
| WeightQuantity | String | The weight quantity measured in WeightUnit . |
| LocationOnBoard | String | Actual location on board, see LocationFormat data type description |
| TransportUnitId | String | The identification number of the cargo unit. (e.g. container id) |

5.15 Receipt

| Name | Type | Description |
|--------------------|--------|---|
| MessageId | String | The id provided by RDNSSN. |
| Status | String | {PENDING, REJECTED, ACCEPTED, CANCELLED} |
| Description | String | In case of errors they will be described in |

| |
|------------|
| this field |
|------------|

5.16 Port

The content of this data type is created from the current state of RDNSSN or EUSSN. The consequence is that the consumer of this data type cannot expect all attributes to contain data.

| Name | Type | Description |
|-----------------------------------|---------|---|
| MessageId | String | The unique id describing this port report |
| LastUpdated | Date | The time when the report was last updated |
| ReportStatus | String | {ACCEPTED, CANCELLED} |
| Vessel | Vessel | |
| Operator | String | The operator of the vessel |
| EtdFromLastPort | Date | Estimated time of departure from last port |
| LastPort | String | The locode of the last port of call |
| PortOfCall | String | The locode of port of call |
| NextPort | String | The locode of the next port of call |
| EtaPortOfCall | Date | Estimated time of arrival to the port of call |
| EtdPortOfCall | Date | Estimated time of departure from the port of call |
| AtaPortOfCall | Date | Actual time of arrival to the port of call |
| AtdPortOfCall | Date | Actual time of departure from the port of call |
| PositionInPortOfCall | String | The sublocode where the vessel is docked |
| ShipConfiguration | String | See data type description |
| PersonsOnBoard | Integer | See PersonsOnBoard data type description |
| PlannedOperations | String | See data type description |
| PlannedWorks | String | |
| CargoVolumeNature | String | |
| ConditionCargoBallastTanks | String | |

5.17 ContactDetails

| Name | Type | Description |
|-------------------|--------|---|
| LastName | String | The contact details of the authority with detailed hazmat information |
| FirstName | String | |
| Locode | String | |
| Phone | String | |
| Fax | String | |
| Email | String | |
| DetailsUrl | String | An url where the details can be downloaded (e.g. a PDF document) |

5.18 Hazmat

| Name | Type | Description |
|---------------------|--------|------------------------------|
| InfShipClass | String | See InfShipClass description |

| | |
|--------------------------|------------------------|
| | above |
| DgClassifications | List<DgClassification> |
| CargoInformation | List<CargoInformation> |

5.19 HazmatResult

The Hazmat details from EUSSN are contained in exactly one of: DetailsUrl, ContactDetails, or Hazmat. The other two will be null.

| Name | Type | Description |
|----------------------|----------------|---|
| Port | Port | The port attributes of this result item |
| PhoneFaxOrUrl | ContactDetails | The contact details of the authority with detailed hazmat information |
| CargoManifest | ContactDetails | |
| Hazmat | Hazmat | See data type description |

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