

SSN WEB SERVICES.DOC	REF.: SSN-WS
OVERVIEW	VER.: v1.50

SSN Web Services - Message Service –

1. Overview

The SSN Web Services – Message Service handles all SSN messages defined in the SSN XMLRG v4.02.

Two protocols are available over HTTPS connections, either XML or SOAP. The SOAP protocol extends the XML protocol by adding a SOAP header and a SOAP body to the XML message used in the XML protocol. The body of the SOAP message is the same as the XML message used in the XML protocol and as defined in XMLRG v4.02.

Each SSN Web Service uses the standard HTTP status code response to acknowledge each HTTP request and may also include in some cases an SSN_Receipt XML message in the acknowledgement (**synchronous** message response to the HTTP request). In the following sections it is detailed for each webservice when an SSN_Receipt is needed or not.

SSN Web services can be **asynchronous** or **synchronous**. For the asynchronous web services the following concepts are very important, to understand the message flows presented in SSN XMLRG v4.02:

- **Data Provider URL:** This is the endpoint used by SSN to request details that it does not have in its database about a notification sent by a data provider. SSN uses the id of the user that sent the notification to map it to a configured URL in SSN for that user.
- **Data Requestor URL:** This is the endpoint used by SSN to send the response message (**asynchronous message**) with the details requested by a user. SSN uses the id of the user that sent the request to map it to a configured URL in SSN for that user. This is also applicable to the delivery of the Incident distribution report sent back to the user sending the notification message for Incidents.
- **Data Recipient URL:** This is the endpoint used by SSN to send Incident Notifications when the notifier of the incident requests for its distribution to some member states. SSN uses the countries list for distribution defined in the Incident Notification message to map to configured URLs in SSN for each country within that list.

All of the above URLs are endpoints that the users of SSN will need to implement for system to system interfaces, depending on the type of usage of SSN. The following is the mapping of these URLs to the message types that require an endpoint on the user side:

- **Data Provider URL:** SSN2MS_<type>_Req; SSN2MS_IncidentDetail_Tx_Ack;
- **Data Requestor URL:** SSN2MS_<type>_Res;
- **Data Recipient URL:** SSN2MS_IncidentDetail_Tx;

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For the other types of messages, the users will use URLs of endpoints implemented at SSN side, and are only required to use them according to what is explained in section 3 and the SSN XMLRG v4.02.

Differences between XML and SOAP protocols

As explained previously, the main difference between XML and SOAP protocols is the inclusion of the SOAP header. The SOAP header includes several parameters that need to be defined according to the SOAP standard and that allow SOAP nodes to interpret the messages.

The header does not change the behavior of the web services with respect to the XML protocol, except for the **Data Requestor URL** endpoint which is used in the asynchronous webservices. While in the XML case SSN uses the id of the user (coming in the header of the XML) to know which endpoint to send the **asynchronous** response after processing the request, for the SOAP case SSN uses the *"ReplyTo"* parameter in the SOAP header to retrieve the URL to where the **asynchronous** response is to be sent. This difference exists for SSN to be in accordance to the WS-Addressing Request-Response Message Exchange Pattern (MEP) in SOAP standard. So, the mandatory reply endpoint – *"ReplyTo"* – property is used by SSN EIS for the asynchronous response to the data requestor.

The same is true for the processing of the requests for data in case of Member States that are data providers. In the XML Protocol, the responses with the details requested by SSN from the Member State are sent to a fixed SSN URL, while in the SOAP case, the response with the details is sent to the *"ReplyTo"* parameter in the SOAP header of the request for details sent by SSN.

This difference results that, in SOAP protocol there is more flexibility from the data requestor side to ask for data to be delivered to different endpoints using one unique user id. While in the XML case, there can be only one single endpoint to send the details requested (the configured URL in SSN for that unique user).

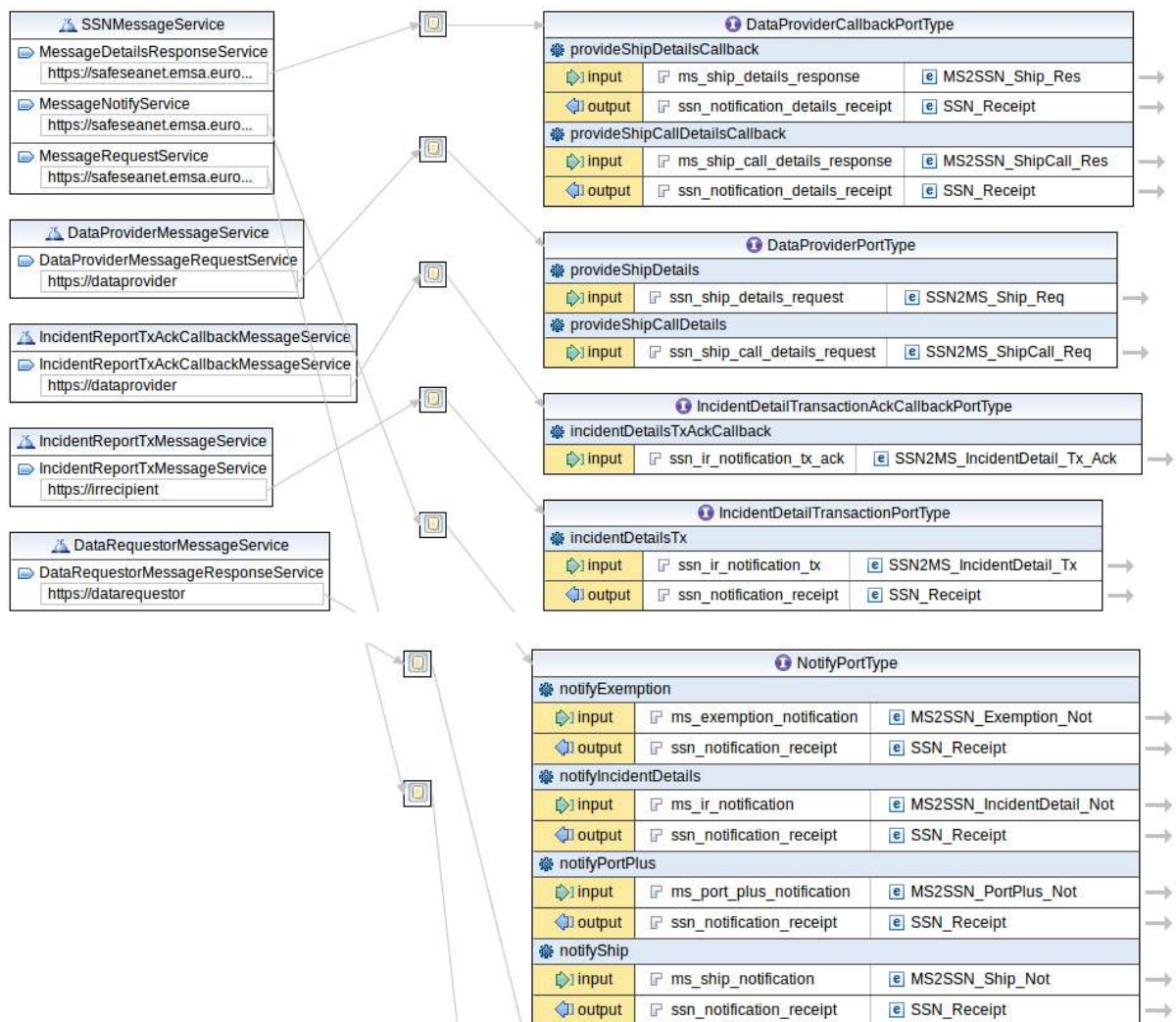
In both cases however, the URL(s) to be used need to be declared to EMSA, to the Maritime Support Services, so that SSN may be configured at the network side to use the new address(es) and the data requestor to include the required SSL certificate on their side. Without this configuration step, SSN will not be able to contact the URL set either in the Data Requestor field or in the *"ReplyTo"* parameter. This means that although SOAP provides more flexibility to use different endpoints, it does not mean that there is the freedom to use different URLs at discretion. If the URL is not part of the URLs agreed with EMSA, the system will not be able to make the connection and the replies will never reach the endpoint.

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2. messages.wSDL

The messages.wSDL (using WSDL version 1.1, SOAP version 1.1, WS-Addressing version 1.0) defines all the SSN message exchange between the SSN EIS and the data providers and requestors (MS, THETIS etc). This updated version also describes the IR Services provided by IR Data Provider and IR Recipient roles.

For demonstration purposes the WSDL depicted hereunder use the messages related to the *PortPlus* Notification, *ShipCall* request-response and *IR Tx* and *Acknowledgement* messages.



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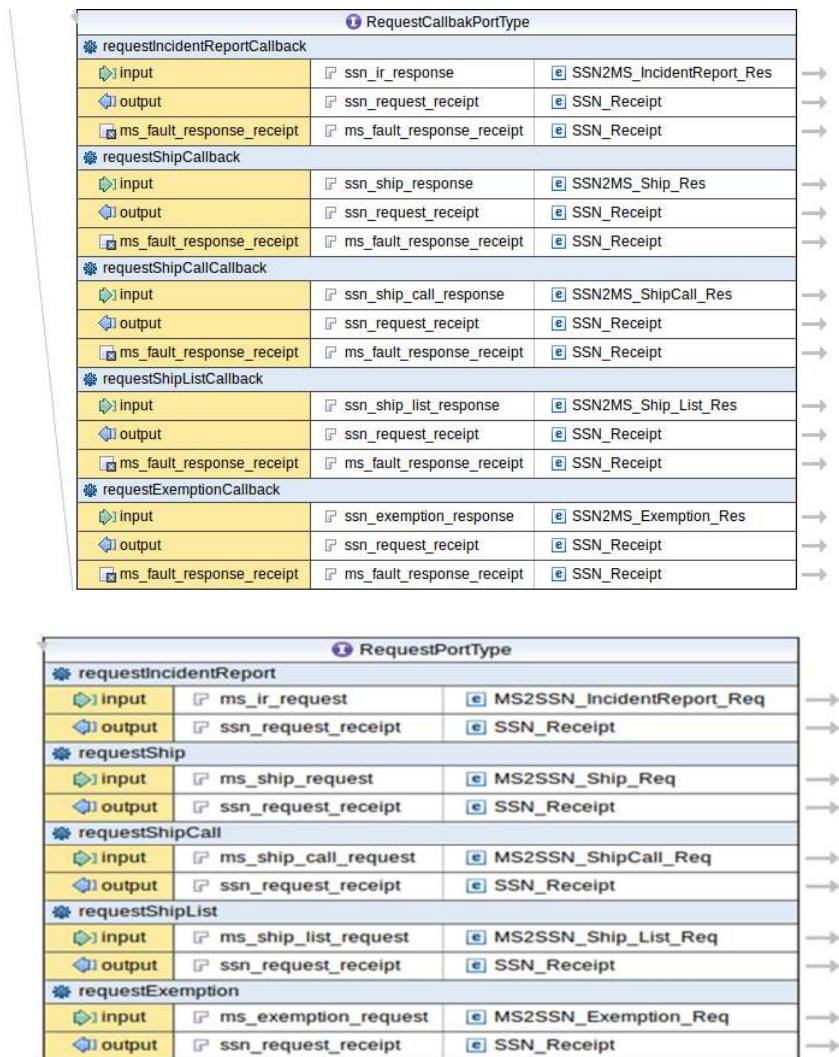


Figure 2—1: Message Service wsd

The following sections explain in detail the particularities of the SOAP implementation of the SSN webservices, which are the way that the SOAP header parameters need to be filled in to comply with the SOAP standard and to what SSN is expecting.

Some parameters of the SOAP header follow the same logic independently of the web service, and these are the following:

- The “source endpoint” – “From” – property of WS-Addressing of the SOAP Header is optional (ignored) in SSN v4, because the SSN System requests for Notification Details (e.g. SSN2MS_ShipCall_Req) to the SOAP interface URL configured in SSN for the user id contained in the “From” header of the XML body of the respective notification (Data Provider URL). The same is true for authorization of tasks, these are based on the user id contained in the “From” header of the XML body.

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3. EIS SSN system

The Services provided by EIS SSN system in bundle named SSNMessageService are listed below ¹

1. **MessageNotifyService (MS2SSN_<type>_Not)** – operation **notify** of NotifyPortType (**soapAction="https://safeseanet.emsa.europa.eu/messageservice/notify"**) serves the incoming Message Notifications (e.g. MS2SSN_PortPlus_Not) – input: ms_notification – and it always return SSN_Receipt as response **synchronously** – output:ssn_notification_receipt SSN_Receipt.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:To soapenv:mustUnderstand="1">
      <wsa:Address>https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-v3-
ws/ssnmessageservice
      </wsa:Address>
    </wsa:To>
    <wsa:Action
soapenv:mustUnderstand="1">https://safeseanet.emsa.europa.eu/messageservice/notify
    </wsa:Action>

    <wsa:MessageID soapenv:mustUnderstand="1">MSREFID
    </wsa:MessageID>
  </soapenv:Header>
  <soapenv:Body>
    <ssn:MS2SSN_PortPlus_Not xmlns:ssn="urn:eu.emsa.ssn"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <ssn:Header From="GRPIR01" MSRefId="MS2SSN_S1602-01ds"
SentAt="2017-07-21T12:00:00Z" To="SafeSeaNet" Version="4.0" />
      <ssn:Body>
        <ssn:NotificationStatus UpdateStatus="N">
          </ssn:NotificationStatus>

        <ssn:Notification>
          <ssn:VesselIdentification IMONumber="9332511" />
          <ssn:VoyageInformation PortOfCall="GRPIR"
ETAToPortOfCall="2017-07-28T12:00:00Z" ETDFFromPortOfCall="2017-07-
29T12:00:00Z"
PositionInPortOfCall="MARINE" ShipCallId="shipCallIdTESTas"
ETAToNextPort="2017-07-29T22:00:00Z" LastPort="PTLIS" NextPort="BEOST"
ETDFFromLastPort="2017-07-27T12:00:00Z" />

          <ssn:PreArrival3DaysNotificationDetails
CargoVolumeNature=" fuel" ConditionCargoBallastTanks="inerted"
PlannedWorks="Maintenance" PlannedOperations="unloading"
PossibleAnchorage="Y" ShipConfiguration="SHT" />
        </ssn:Notification>
      </ssn:Body>
    </ssn:MS2SSN_PortPlus_Not>
  </soapenv:Body>
</soapenv:Envelope>
```

¹ In implementation view, SSNMessageService is a web service (spring-ws) that delegates the incoming SOAP messages to three (3) endpoints – SsnMessageNotificationEndpoint, SsnMessageRequestEndpoint SsnMessageResponseEndpoint – based on the message SOAP Action that –the endpoints- handle the notifications, requests and response (notification details) messages accordingly. So, the SOAP Action described in this document per operation should be defined on the message soap header to be submitted.

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```
</soapenv:Body>
</soapenv:Envelope>
```

Figure 3—1: Example of SOAP MS2SSN Message Notification

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:MessageID>402607</wsa:MessageID>
  <wsa:To env:mustUnderstand="1">https://dataprovder/notify</wsa:To>
  <wsa:Action>https://safeseanet.emsa.europa.eu/messageservice/notifyResponse
  </wsa:Action>
  <wsa:RelatesTo>MSREFID</wsa:RelatesTo>
</env:Header>
<env:Body>
  <SSN_Receipt xmlns="urn:eu.emsa.ssn"><Header MSRefId="MS2SSN_S1602-01ds"
SSNRefId="1533824" StatusCode="OK" StatusMessage="The message processed
successfully." Version="4.0" SentAt="2017-08-25T07:19:45Z" From="SafeSeaNet"
To="GRPIR01"/></SSN_Receipt></env:Body>
</env:Envelope>
```

Figure 3—2 Example of (synchronous) SSN_Receipt on arrival of SOAP MS2SSN Message Notification

2. **MessageRequestService (MS2SSN_<type>_Req)** – operation **request** of RequestPortType (**soapAction="https://safeseanet.emsa.europa.eu/messageservice/request"**) serves the incoming Message Requests (e.g. MS2SSN_ShipCall_Req) – input: ms_request– and it always return SSN_Receipt as response **synchronously** – output: ssn_request_receipt SSN_Receipt.

The “reply endpoint” property should provide the URL for the operation **requestCallbak** of RequestCallbakPortType implemented by DataRequestorMessageService - refer to section 4 of this document.

Additionally, the mandatory “message id” – “MessageID” – property should have the same value as the value of MSRefId attribute of the XML Header element.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:To soapenv:mustUnderstand="1">
    <wsa:Address>https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-v3-
ws/ssnmessageservice
    </wsa:Address>
  </wsa:To>
  <wsa:MessageID soapenv:mustUnderstand="1">MSREFID_REQ
  </wsa:MessageID>
  <wsa:Action
soapenv:mustUnderstand="1">https://safeseanet.emsa.europa.eu/messageservice/request
  </wsa:Action>
  <wsa:ReplyTo soapenv:mustUnderstand="1">
    <wsa:Address>https://datarequestor/messageservice/response
    </wsa:Address>
  </wsa:ReplyTo>
</soapenv:Header>
<soapenv:Body>
<ssn:MS2SSN_ShipCall_Req xmlns:ssn="urn:eu.emsa.ssn">
  <ssn:Header Version="4.0" TestId="GRPIR01" SentAt="2017-08-24T09:05:00Z"
From="GRPIR01" To="SafeSeaNet" MSRefId="MS2SSN_ShipCall_Req_a21a" TimeoutValue="30"
/>
</ssn:MS2SSN_ShipCall_Req>
</soapenv:Body>
</soapenv:Envelope>
```

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```

<ssn:Body>
<ssn:RequiredResponseCriteria>
  <ssn:ShipCallResp                                GetDetails="ExpectedCallOfSelectedShip"
  GetHazmat="HazmatDetails" />
<ssn:SearchCriteria>
<ssn:TimePeriodCriteria StartDateTime="2017-07-30T10:05:00Z" EndDateTime="2017-08-
23T10:00:00Z"/>
  <ssn:ShipIdentificationCriteria                                IMONumber="9332511"/>
<ssn:ShipCallIdentificationCriteria ShipCallID="newid" />
</ssn:SearchCriteria>
</ssn:RequiredResponseCriteria>
</ssn:Body>
</ssn:MS2SSN_ShipCall_Req>
</soapenv:Body>
</soapenv:Envelope>

```

Figure 3—3: Example of SOAP MS2SSN Message Request

```

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:MessageID>N/A</wsa:MessageID>
  <wsa:To
env:mustUnderstand="1">https://datarequestor/messageservice/response</wsa:To>
  <wsa:Action>https://safeseanet.emsa.europa.eu/messageservice/requestResponse</w
sa:Action>
  <wsa:RelatesTo>MSREFID_REQ</wsa:RelatesTo>
</env:Header>
<env:Body>
  <SSN_Receipt xmlns="urn:eu.emsa.ssn"><Header MSRefId="MS2SSN_ShipCall_Req_a21a"
SSNRefId="1535334" StatusCode="OK" StatusMessage="The message processed successfully."
Version="4.0" TestId="GRPIR01" SentAt="2017-08-28T10:21:08Z" From="SafeSeaNet"
To="GRPIR01"/></SSN_Receipt>
</env:Body>
</env:Envelope>

```

Figure 3—4 Example of SSN_Receipt on arrival of SOAP MS2SSN Message Request

3. **MessageDetailsResponseService (MS2SSN_<type>_Res)** – operation **provideDetailsCallback** of **DataProviderCallbackPortType (soapAction="https://safeseanet.emsa.europa.eu/messageservice/detailsresponse")** serves the incoming **Message Notification Details** (e.g. **MS2SSN_ShipCall_Res**) – input: **ms_notification_details_response**– and it always returns **SSN_Receipt** as response **synchronously** – output: **ssn_notification_details_receipt SSN_Receipt**.

This operation is the callback interface of the **provideDetails** operation –refer to section 5 of this document. The mandatory “relationship” – “RelatesTo” – property includes the value of correlation Id (**SSNRefId**) of the XML Header element; i.e. the **SSNRefID** of the initial **SSN2MS_<type>_Req**.

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:To>https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-v3-
ws/ssnmessageservice</wsa:To>
  <wsa:MessageID>29d408ca</wsa:MessageID>
  <wsa:RelatesTo>402679</wsa:RelatesTo>
  <wsa:Action
soapenv:mustUnderstand="1">https://safeseanet.emsa.europa.eu/messageservice/detailsres
ponse
</wsa:Action>
  <wsa:From soapenv:mustUnderstand="1">
    <wsa:Address>https://dataprovder/detailsresponse</wsa:Address>
  </wsa:From>
  <wsa:ReplyTo soapenv:mustUnderstand="1">
    <wsa:Address>https://dataprovder/detailsresponse</wsa:Address>

```


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```

</wsa:ReplyTo>
</soapenv:Header>
<soapenv:Body>
<urn:MS2SSN_ShipCall_Res xmlns:urn="urn:eu.emsa.ssn">
  <urn:Header Version="4.0" SentAt="2017-08-05T10:00:00" From="GRPIR01"
  To="SafeSeaNet" MSRefId="MS2SSN_ShipCall_Regew" SSNRefId="1529116" StatusCode="OK"/>
  <urn:Body>
    <urn:ProvidedResponseCriteria>
      <urn:ShipCallResp GetWaste="WasteDetails"/>
      <urn:SearchCriteria>
        <urn:ShipIdentificationCriteria IMONumber="9332511"
        MMSINumber="237777131" CallSign="GR71313" ShipName="KAKO-SALESI"/>
      </urn:SearchCriteria>
    </urn:ProvidedResponseCriteria>
    <urn:QueryResults>
      <urn:VesselIdentification IMONumber="9332511" MMSINumber="237777131"
      CallSign="GR71313" ShipName="KAKO-SALESI" Flag="GR"/>
      <urn:VoyageInformation ShipCallId="newid" LastPort="GRITA"
      PortOfCall="GRPIR" PositionInPortOfCall="marine" PortFacility="test"
      ETDFromLastPort="2017-07-16T12:00:00" ETAToPortOfCall="2017-08-14T12:00:00"
      NextPort="GRSAL" ETAToNextPort="2017-07-19T12:00:00" ETDFromPortOfCall="2017-07-
      18T12:00:00" BriefCargoDescription="desc" PoBasinHazmatNotification="10">
        <urn:PurposeOfCall CallPurposeCode="10"/>
        <urn:PurposeOfCall CallPurposeCode="11"/>
      </urn:VoyageInformation>
      <urn:WasteInformation>
        <urn:WasteSummary LastPortDelivered="GRITA"
        LastPortDeliveredDate="2017-07-16T12:00:00" WasteDeliveryStatus="All"/>
        <urn:WasteDetails>
          <urn:Source ProviderOfLastUpdate="GRPIR01"
          LastUpdateReceivedAt="2017-08-05T10:00:00" ShipCallId="sc16062014ts2"/>
          <urn:WasteItem PortDeliveryRemainingWaste="GRPIR">
            <urn:WasteType>
              <urn:WasteCode>1100</urn:WasteCode>
            </urn:WasteType>
            <urn:ToBeDelivered UnitOfMeasurement="KGM" Quantity="123.12"/>
            <urn:MaxStorage UnitOfMeasurement="KGM" Quantity="123.12"/>
            <urn:RetainedOnBoard UnitOfMeasurement="TNE"
            Quantity="123.12"/>
            <urn:EstimateGenerated UnitOfMeasurement="TNE"
            Quantity="123.12"/>
          </urn:WasteItem>
        </urn:WasteDetails>
      </urn:WasteInformation>
    </urn:QueryResults>
  </urn:Body>
</urn:MS2SSN_ShipCall_Res></soapenv:Body>
</soapenv:Envelope>

```

Figure 3—5 Example of SOAP MS2SSN Notification Details Response

```

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:MessageID>SSNREFID_Receipt</wsa:MessageID>
    <wsa:To env:mustUnderstand="1">https://dataprovder/detailsresponse
    </wsa:To>
    <wsa:Action>https://safeseanet.emsa.europa.eu/messageservice/detailsresponseRes
    ponse
    </wsa:Action>
    <wsa:RelatesTo>29d408ca</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN_Receipt xmlns="urn:eu.emsa.ssn"><Header
    MSRefId="MS2SSN_ShipCall_Req_Regew" SSNRefId="785334" StatusCode="OK"
    StatusMessage="The message processed successfully." Version="4.0" TestId="GRPIR01"
    SentAt="2017-08-05T10:00:02" From="SafeSeaNet" To="GRPIR01"/></SSN_Receipt></env:Body>
  </env:Envelope>

```

Figure 3—6 Example of SSN_Receipt on arrival of SOAP MS2SSN Notification Details Response

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4. Data Requestor SSN system

This section describes the Service provided by Data Requestor SSN system and named DataRequestorMessageService.

1. **DataRequestorMessageResponseService (SSN2MS_<type>_Res)** – operation **requestCallback** of **RequestCallbakPortType** (**soapAction="https://datarequestor/messageservice/response"**²) serves the incoming Message Responses (e.g. SSN2MS_ShipCall_Res) – input: ssn_response.

This operation is the callback interface of the **request** operation – refer to section 3, item 2 of this document. The mandatory “relationship” – “RelatesTo” – property includes the value of correlation Id (MSRefId) of the XML Header element; i.e. the MSRefID of the initial MS2SSN_<type>_Req.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:To>https://datarequestor/messageservice/response
</wsa:To>
  <wsa:From>
    <wsa:Address> https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-v3-
ws/ssnmessageservice
    </wsa:Address>
  </wsa:From>
  <wsa:Action>https://datarequestor/messageservice/response</wsa:Action>
  <wsa:MessageID>402611</wsa:MessageID>
  <wsa:RelatesTo>MSREFID_REQ</wsa:RelatesTo>
</env:Header>
<env:Body>
<SSN2MS_ShipCall_Res xmlns="urn:eu.emsa.ssn"><Header
MSRefId="MS2SSN_ShipCall_Req_a21a" SSNRefId="MS2SSN_ShipCall_Req_a21a" StatusCode="OK"
Version="4.0" TestId="GRPIR01" SentAt="2017-08-28T10:21:08Z" From="SafeSeaNet"
To="GRPIR01"/><Body><ProvidedResponseCriteria><ShipCallResp
GetDetails="ExpectedCallOfSelectedShip"
GetHazmat="HazmatDetails"/><SearchCriteria><TimePeriodCriteria StartDateTime="2017-07-
30T10:05:00Z" EndDateTime="2017-08-23T10:00:00Z"/><ShipIdentificationCriteria
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="VesselIdentificationType"
IMONumber="9332511"/></SearchCriteria></ProvidedResponseCriteria><QueryResults><PortPl
usNotificationList><Source ProviderOfLastUpdate="SSNADMIN" LastUpdateReceivedAt="2017-
08-22T10:01:49Z"/><VesselIdentification Flag="GR" CallSign="GR71313" ShipName="KAKO-
SALESI" IMONumber="9332511" MMSINumber="237777131"/><VoyageInformation
ShipCallId="GREGT" PortOfCall="GRPIR" ETAToPortOfCall="2017-08-
11T09:48:00Z"/><VesselDetails GrossTonnage="0"><Company
ImoCompanyNr="0000000"/></VesselDetails><PreArrival24HoursNotificationDetails
POBVoyageTowardsPortOfCall="0"/><HazmatConfirmation
HazmatOnBoardYorN="N"/></PortPlusNotificationList><PortPlusNotificationDetails><Exempt
ions><ExemptionDetails ExemptionType="Pre-Arrival" CompanyName="ii" DateFrom="2017-07-
28Z" DateTo="2017-08-28Z"><Route Port="GRPIR"/><Route Port="GR888"/><Authority
Country="EU" AuthorityType="NCA" AuthorityName="SafeSeaNet"/><Contact247
FirstName="SafeSeaNet" LastName="EMSA" LoCode="EUCOM" Phone="+351211209415"
Fax="+351211209415" Email="aggelos.argyropoulos@intrasoft-
intl.com"/></ExemptionDetails><ExemptionDetails ExemptionType="Waste" CompanyName="ii"
DateFrom="2017-07-28Z" DateTo="2017-08-28Z"><Route Port="GRPIR"/><Route
Port="GR888"/><Authority Country="EU" AuthorityType="NCA"
AuthorityName="SafeSeaNet"/><Contact247
FirstName="SafeSeaNet" LastName="EMSA"
LoCode="EUCOM" Phone="+351211209415" Fax="+351211209415"
Email="aggelos.argyropoulos@intrasoft-
```

² The SSN EIS system uses the value of SSN_Response_SOAP_Action system parameter (current value <https://datarequestor/messageservice/response>) to set the SoapAction of the responses (SOAP messages) submitted to the data requestors.

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```
intl.com"/></ExemptionDetails></Exemptions><HazmatInformation><HazmatSummary/></Hazmat
Information></PortPlusNotificationDetails></QueryResults></Body></SSN2MS_ShipCall_Res>
</env:Body>
</env:Envelope>
```

Figure 4—1 Example of SOAP SSN2MS MessageResponse

5. Data Provider SSN system

This section describes the Service provided by Data Provider SSN system named DataProviderMessageService.

1. **DataProviderMessageResponseService (SSN2MS_<type>_Req)** – operation **provideDetails** of DataProviderPortType (**soapAction="https://dataprovider/messageservice/request"**³) serves the incoming Message Requests for Notification Details (e.g. SSN2MS_ShipCall_Req) – input: **ssn_notification_details_request**.

This operation is implemented according to the WS-Addressing Request-Response MEP. So, the mandatory “reply endpoint” – “ReplyTo” – property is used by MS Data Provider for the **asynchronous** response to the EIS SSN details request received by this web service.

The “reply endpoint” property provides the URL for the operation **provideDetailsCallback** of DataProviderCallbackPortType implemented by MessageDetailsResponseService of EIS SSN system - refer to section 3, item 3.

Additionally, the mandatory “message id” – “MessageID” – property has the same value of SSNRefId attribute of the XML Header element.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
<wsa:To> https://dataprovider/notify</wsa:To>
<wsa:From>
<wsa:Address xmlns:wsa="http://www.w3.org/2005/08/addressing">
https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-
ws/ssnmessageservice</wsa:Address>
</wsa:From>
<wsa:ReplyTo>
<wsa:Address xmlns:wsa="http://www.w3.org/2005/08/addressing">
https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-
ws/ssnmessageservice</wsa:Address>
</wsa:ReplyTo>
<wsa:Action>https://dataprovider/messageservice/request</wsa:Action>
<wsa:MessageID>402648</wsa:MessageID>
</env:Header>
<env:Body>
<SSN2MS_ShipCall_Req xmlns="urn:eu.emsa.ssn">
<Header TimeoutValue="30" SSNRefId="346350" Version="4.0" To="GRPIR01"
SentAt="2017-08-28T10:21:08Z" From="SafeSeaNet"/>
<Body>
<RequiredResponseCriteria>
<ShipCallResp_GetHazmat="HazmatDetails"/>
</Body>
</SSN2MS_ShipCall_Req>
</env:Body>
</env:Envelope>
```

³ The SSN EIS system uses the value of SSN_Request_SOAP_Action system parameter (current value https://dataprovider/messageservice/request) to set the SoapAction of the notification details requests (SOAP messages) submitted to the data providers.

SSN WEB SERVICES.DOC	REF.: SSN-WS
IR DATA PROVIDER SSN SYSTEM	VER.: v1.50

```

<SearchCriteria>
  <ShipIdentificationCriteria
    IMONumber="9332511"/>
  <AdditionalSearchCriteria      ShipCallId="GRET"
    GetHazmatType="HazmatTowardPortOfCall"/>
  </SearchCriteria>
</RequiredResponseCriteria>
</Body>
</SSN2MS_ShipCall_Req>
</env:Body>
</env:Envelope>

```

Figure 5—1 Example of SOAP SSN2MS Message Request for Notification Details.

6. IR Data Provider SSN system

This section describes the Service provided by IR Data Provider SSN system named IncidentReportTxAckCallbackMessageService.

1. **IncidentReportTxAckCallbackMessageService (SSN2MS_IncidentDetail_Tx_Ack)** – operation **incidentDetailsTxAckCallback** of IncidentDetailTransactionAckCallbackPortType (**soapAction="https://datapprovider/messageservice/incidenttxack"**⁴) serves the consolidated status report submitted to IR Data Provider upon the arrival of Incident Report detail notifications receipts (and/or Feedback information) – input: **ssn_ir_notification_tx_ack**.

The mandatory “message id” – “MessageID” – property has the same value of SSNRefId attribute of the XML Header element; it is the MsRefId of the related Incident Report details message submitted by the specific IR data provider.

```

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:To>http://localhost:7023/ssn-xmlprotocol-v3-
ws/ssnmessageservice</wsa:To>
    <wsa:From><wsa:Address
      xmlns:wsa="http://www.w3.org/2005/08/addressing">http://localhost:7023/ssn-
xmlprotocol-v3-ws/ssnmessageservice</wsa:Address>
    </wsa:From>
    <wsa:Action>https://datapprovider/messageservice/incidenttxack</wsa:Action>
    <wsa:MessageID>TEST_201410011</wsa:MessageID>
  </env:Header>
  <env:Body>
    <SSN2MS_IncidentDetail_Tx_Ack xmlns="urn:eu.emsa.ssn">
      <Header Version="4.0" SentAt="2017-06-23T09:42:23Z" From="SSN" To="NCADKAAR1"
        SSNRefId="MS2SSN_Inc_Not_1104CCEE"/>
      <Body><IncidentReportAcknowledged      IncidentID="DK001212345678901765"
        MsRefIDofIRupdate="MS2SSN_Inc_Not_1104CCEE"/>
      <IRorFeedbackRecipients_Ack_list><SSNparticipant_asIRorFeedbackRecipient
        RecipientCountry="EU">
      <SSN_AuthorityXML      SSN_ID_AuthorityXML="ytttest1"

```

⁴ The SSN EIS system uses the value <https://datapprovider/messageservice/incidenttxack> to set the SoapAction of the consolidated status report (SOAP messages) submitted to the IR data providers.

Note: The destination URL (optional wsa:To property) where the SOAP message submitted is defined on EIS database as the SOAP interface URL of the IR data provider.

SSN WEB SERVICES.DOC	REF.: SSN-WS
IR RECIPIENT SSN SYSTEM	VER.: v1.50

```

RecipientXML_Ack="KO"/></SSNparticipant_asIRorFeedbackRecipient>
<SSNparticipant_asIRorFeedbackRecipient RecipientCountry="EU">
<EmailUserslist_Recipient_list
RecipientUser_Email="Isidora.IOANNOU@intrasoft-intl.com"
RecipientEmail_Ack="KO"/>
</SSNparticipant_asIRorFeedbackRecipient>
</IRorFeedbackRecipients_Ack_list>
</Body>
</SSN2MS_IncidentDetail_Tx_Ack>
</env:Body>
</env:Envelope>

```

Figure 6—1 Example of SOAP SSN2MS_IncidentDetail_Tx_Ack status report message.

7. IR Recipient SSN system

This section describes the Service provided by IR Recipient SSN system named IncidentReportTxMessageService.

1. **IncidentReportTxMessageService (SSN2MS_IncidentDetail_Tx)** – operation **incidentDetailsTx** of IncidentDetailTransactionPortType (**soapAction="https://irrecipient/messageservice/incidentreporttx"**⁵) serves the incoming details regarding the Incident Report distributed to IR recipients – input: **ssn_ir_notification_tx** – and it always return **SSN_Receipt** as response **synchronously** – output: **ssn_notification_receipt SSN_Receipt..**

The mandatory “message id” – “MessageID” – is the SSN identifier of the IR Recipient.

```

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
<wsa:To>https://irrecipient</wsa:To>
<wsa:From><wsa:Address xmlns:wsa="http://www.w3.org/2005/08/addressing">
https://safeseanet.emsa.europa.eu/ssn-xmlprotocol-v3-
ws/ssnmessageservice</wsa:Address>
</wsa:From>
<wsa:Action>https://irrecipient/messageservice/incidentreporttx</wsa:Action>
<wsa:MessageID></wsa:MessageID>
</env:Header>
<env:Body>
<SSN2MS_IncidentDetail_Tx xmlns="urn:eu.emsa.ssn">
<Header Version="4.0" SentAt="2017-06-23T09:28:58Z" From="SafeSeaNet" To="ytttest1"
SSNRefId="MS2SSN_Inc_Not_1104BBEE"/>
<Body><DistributedDetails>
<Incident><IncidentIdentification Type="POLREP" IncidentID="DK001212345678901589">
<AssociatedIncidentReport AssociatedIncidentID="PT201012345678901103"/>
</IncidentIdentification><IncidentNotificationStatus UpdateStatus="N"/>
<IRDistributionDetails IRDistributionToFlagState="Y"><IRRecipient
RecipientCountry="EU"/>
</IRDistributionDetails><IRVesselIdentificationList><IRVesselIdentification>
<IRVessel_IdentityVerified IMONumber="7350002" MMSINumber="445889000" CallSign="HMD00"
ShipName="HAMMOUDI J" IRNumber_FishingVessel="ABC012345678"/>
<IRVoyageInformation PortOfDeparture="PTPOR" PortOfDestination="PTLIS"
TotalPersonsOnBoard="12"/>
<CargoManifest Details="Cargo manifest available upon request to central SSN

```

⁵ The SSN EIS system uses the **https://irrecipient/messageservice/incidentreporttx** to set the SoapAction of the incident reports details (SOAP messages) submitted to the IR recipients.

Note: The destination URL (optional wsa:To property) where the SOAP message submitted is defined on EIS database as the SOAP interface URL of each IR recipient.

SSN WEB SERVICES.DOC	REF.: SSN-WS
IR RECIPIENT SSN SYSTEM	VER.: v1.50

```

system"/><ShipPositionAtTimeOfIncident>
<Area                                GeographicalArea="North
Aegean"/></ShipPositionAtTimeOfIncident></IRVesselIdentification></IRVesselIdentificat
ionList>
<AuthorityReportingIncident><IdentificationOfAuthority                LoCode="PTPOR"
Phone="2101234567" Fax="2101234567" EMail="admin@emsa.eu" AuthorityName="authName"/>
</AuthorityReportingIncident><IncidentDetails><POLREPIncidentInformation><POLREPInform
ation><POLWARN                P1_DateTime="2013-09-14T12:00:00Z"                P3_Incident="P3Incident"
P4_Outflow="P40outflow" P5_Acknowledge="P5Acknowledge">
<P2_Position><BearingDistance                Bearing="Bearing"                Distance="Distance"
Mark="Mark"/></P2_Position></POLWARN>
<POLINF                                P40_DateTime="2013-08-31T12:00:01Z"
P41_PollutionPosition="P41PollutionPosition"
P42_PollutionChars="P42PollutionChars"                P43_PollutionSource="P43PollutionSource"
P48_PollutionEffectForecast="P48PollutionEffectForecast"
P50_ActionTaken="P50ActionTaken"                P51_Photos="P51Photographs"
P53_OtherInformation="P53OtherInformation" P60_Acknowledge="P60Acknowledge">
<P44_Wind Speed="Speed" Direction="Direction"/><P46_SeaState WaveHeight="WaveHeight"
Visibility="Visibility"/>
<P47_PollutionDrift                                DriftSpeed="DriftSpeed"
DriftCourse="DriftCourse"/><P49_ObserverIdentity                Name="Name"                HomePort="HomePort"
Flag="PT" CallSign="OWVF"/>
<P52_InformedStateOrg                Name="Name"/></POLINF><POLFAC                P80_DateTime="2013-08-
31T12:00:01Z" P81_RequestForAssistance="P81RequestForAssistance"
P86_ChangeOfCommand="P86ChangeOfCommand"
P87_ExchangeOfInformation="P87ExchangeOfInformation"
P88_OtherInformation="P88OtherInformation"
P99_Acknowledge="P99Acknowledge"><Assistance                                P82_Cost="P82Cost"
P83_PreArrangements="P83PreArrangements" P84_Delivery="P84Delivery"/>
<P85_InformedStateOrg Name="Name"/></POLFAC>
</POLREPInformation>
</POLREPIncidentInformation>
</IncidentDetails>
</Incident>
</DistributedDetails>
</Body>
</SSN2MS_IncidentDetail_Tx>
</env:Body>
</env:Envelope>

```

Figure 7—1 Example of SSN2MS_IncidentDetail_Tx of Incident Report Details distributed to IR recipients.