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Interface Control Document [ICD]

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1 INTRODUCTION

This is the ICD of the IMDatE services. This document is expected to grow with additional details of the services currently specified and with the addition of other services as they are included in the system.

Currently there are 3 types of services:

- SOAP web services (e.g. the Track Service)
- REST Web Services (e.g. the OVR service)
- Dissemination service (a complex service for disseminating data, e.g. ship positions)

The various services are described in detail in the following sections.

Note about the description approach:

- Most of the information is reported in tables
- For each element of the table a description was added where necessary, if the element is pointing to another table (typically below), where the element is explained, the description is omitted
- All referenced to the CDF details (CDF 0.5.3 is assumed in this release) are not explicitly explained here, as it is assumed that the reader has already knowledge of the CDF and of its values

2 OVERVIEWOF SOAP WEB SERVICES

Description

This document contains Web Service descriptions for the following services.

Web Services

Name	Description
TrackService	This service is used to get the ship positions tracks from the IMDatE internal database. Ship tracks can be composed by any combination of the various data sources managed by the IMDatE (e.g. T-AIS, S-AIS, LRIT, etc.). The tracks can be returned with the original positions points and/or interpolated and smoothed and/or extrapolated. The service is used internally by the IMDatE applications, e.g. by the WUP and by all business processes that need to retrieve ship position. data, but it is also exposed externally to other applications. The service returns ship positions in CDF format. All complex types and simple types of the CDF are not described here, as they refer to the CDF documentation.
PositionService	This service is used to get the vessels positions from the position cache. The position cache holds the last received position for each ship. It is used for the real time display of ship data. Currently it is only used internally to the IMDatE, but the service can technically be exposed externally and exploited by other applications.
FusionService	

2.1 TRACKSERVICE WEB SERVICE

Description

This service is used to get the ship positions tracks from the IMDatE internal database. Ship tracks can be composed by any combination of the various data sources managed by the IMDatE (e.g. T-AIS, S-AIS, LRIT, etc.).

The tracks can be returned with the original positions points and/or interpolated and smoothed and/or extrapolated.

The service is used internally by the IMDatE applications, e.g. by the WUP and by all business processes that need to retrieve ship position. data, but it is also exposed externally to other applications.

The service returns ship positions in CDF format. All complex types and simple types of the CDF are not described here, as they refer to the CDF documentation.

Type

SOAP 1.2

Style

Document

See Also

- Methods
- Complex Types
- Simple Types
- Elements

2.1.1 Methods: TrackService

Description

Methods

Name	Description
getTracksByBoundingBox	This method gets the ship positions tracks defined by a bounding box area and by a time window.
getTracksByVesselId	This method gets the ship positions tracks defined by a ship ID and by a time window.
getTracksByWkt	This method gets the ship positions tracks defined by a polygon and by a time window.

Method: getTracksByBoundingBox

Description

This method gets the ship positions tracks defined by a bounding box area and by a time window.

Action

Style

Document

Input (Literal)

The input of this method is the argument getTracksByBoundingBox having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:trackBBoxParameters	0..1	No	

Output (Literal)

Track positions are returned into a unique CDF root element, which in turn may contain information for 1 or many ships and for each ship, 1 or many track points.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns3:EMSA	tns3:PositionRootType	0..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

Example

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:trac="http://tracks.ws.imdate.acsys.it/">


   <soap:Header/>
   <soap:Body>
      <trac:getTracksByBoundingBox>
          <!--Optional:-->
          <parameters>
            <!--Optional:-->
             <beginTimestamp>2012-05-01T00:00:00Z</beginTimestamp>
             <!--Optional:-->
             <endTimestamp>2012-05-01T06:00:00Z</endTimestamp>
             <!--Optional:-->
             <maxRecords>30</maxRecords>
             <maxX>11</maxX>
             <maxY>41</maxY>
             <minX>10</minX>
             <minY>40</minY>
            <!--Zero or more repetitions:-->
             <source>T-AIS</source>
```

```
            </parameters>
         </trac:getTracksByBoundingBox>
      </soap:Body>
   /soap:Envelope>
```

Method: getTracksByVesselId

Description

This method gets the ship positions tracks defined by a ship ID and by a time window.

Action

Style

Document

Input (Literal)

The input of this method is the argument getTracksByVesselId having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:trackVesselIdParameters	0..1	No	

Output (Literal)

Track positions are returned into a unique CDF root element, which in turn may contain information for 1 or many ships and for each ship, 1 or many track points.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns3:EMSA	tns3:PositionRootType	0..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

Example

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:trac="http://tracks.ws.imdate.acsys.it/">


   <soap:Header/>
   <soap:Body>
      <trac:getTracksByVersselId>
          <parameters>
            <beginTimestamp>2012-05-01T00:00:00Z</beginTimestamp>
             <endTimestamp>2012-05-01T06:00:00Z</endTimestamp>
             <extrapolated>?</extrapolated>
             <fusedAndSmoothed>?</fusedAndSmoothed>

             <maxRecords>10</maxRecords>

             <maxTimeDifferenceInSeconds>?</maxTimeDifferenceInSeconds>
             <!--Zero or more repetitions:-->
             <source>T-AIS</source>
             <!--Optional:-->
             <stepInSeconds>?</stepInSeconds>
```

```
                <!--Optional:-->
                <maxRecords>30</maxRecords>
               <vesselId criteria="mmsi">247216100</vesselId>

            </parameters>
         </trac:getTracksByVersselId>
      </soap:Body>
   /soap:Envelope>
```

Method: getTracksByWkt

Description

This method gets the ship positions tracks defined by a polygon and by a time window.

Action

Style

Document

Input (Literal)

The input of this method is the argument getTracksByWkt having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:trackWktParameters	0..1	No	

Output (Literal)

The output of this method is the argument getTracksByWktResponse having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns3:EMSA	tns3:PositionRootType	0..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

2.1.2 Complex Types: TrackService

Complex Types

Name	Description
tns:trackBBoxParameters	
tns:trackVesselIdParameters	
tns:trackWktParameters	
tns:vesselId	The vessel ID used for retrieving the track. It can be any of the IDs managed by the system.
tns:WSException	A string returing the description of a possible error. It can be: - incorrect number of input parameters - errors returned by the database - connection problems

Complex Type: tns:trackBBoxParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:beginTimestamp	xsd:dateTime	0..1	No	Begin time stamp of the request.
tns:endTimestamp	xsd:dateTime	0..1	No	End time stamp of the request.
tns:maxRecords	xsd:int	0..1	No	Max records returned by the method.
tns:maxX	xsd:float	1..1	No	Max Longitude of the bounding box in EPSG 4326
tns:maxY	xsd:float	1..1	No	Max Latitude of the bounding box in EPSG 4326
tns:minX	xsd:float	1..1	No	Min Longitude of the bounding box in EPSG 4326
tns:minY	xsd:float	1..1	No	Min Latitude of the bounding box in EPSG 4326
tns:project	xsd:string	0..1	No	Project in the scope of which the request is made.
tns:source	xsd:string	0..*	Yes	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.

Complex Type: tns:trackVesselIdParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:beginTimestamp	xsd:dateTime	0..1	No	Begin time stamp of the request.
tns:endTimestamp	xsd:dateTime	0..1	No	End time stamp of the request.
tns:extrapolated	xsd:boolean	0..1	No	Flag indicating if the track positions must be extrapolated.
tns:fusedAndSmoothed	xsd:boolean	0..1	No	Flag indicating if the track positions must be interpolated and smoothed.
tns:maxRecords	xsd:int	0..1	No	Max records returned by the method.
tns:maxTimeDifferenceInSeconds	xsd:int	0..1	No	Max extrapolation time.
tns:project	xsd:string	0..1	No	Project in the scope of which the request is made.
tns:source	xsd:string	0..*	Yes	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.
tns:stepInSeconds	xsd:int	0..1	No	Interpolation step.
tns:vesselId	tns:vesselId	1..1	No	

Complex Type: tns:trackWktParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:beginTimestamp	xsd:dateTime	0..1	No	Begin time stamp of the request.
tns:endTimestamp	xsd:dateTime	0..1	No	End time stamp of the request.
tns:maxRecords	xsd:int	0..1	No	Max records returned by the method.

Component	Type	Occurs	Nillable?	Description
tns:project	xsd:string	0..1	No	Project in the scope of which the request is made.
tns:source	xsd:string	0..*	Yes	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.
tns:wkt	xsd:string	1..1	No	Polygon to be used for the track data request, in WKT format.

Complex Type: tns:vesselId

Description

The vessel ID used for retrieving the track. It can be any of the IDs managed by the system.

Derived By

Extending xsd:long

Attributes

Name	Type	Required?	Default	Description

Referenced By

- Element tns:vesselId [type trackVesselIdParameters]

Complex Type: tns:WSException

Description

A string returing the description of a possible error. It can be:
- incorrect number of input parameters
- errors returned by the database
- connection problems

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

Referenced By

- Element tns:WSException

2.1.3 Simple Types: TrackService

Simple Types

Name	Description
tns:vesselIdCriteria	

Simple Type: tns:vesselIdCriteria

Derived By

Restricting xsd:string

Enumeration

Value	Description
emsaId	
mmsi	
imo	
irNumber	

2.1.4 Elements: TrackService

Elements

Name	Description
tns:beginTimestamp [type trackBBoxParameters]	Begin time stamp of the request.
tns:beginTimestamp [type trackVesselIdParameters]	Begin time stamp of the request.
tns:beginTimestamp [type trackWktParameters]	Begin time stamp of the request.
tns:endTimestamp [type trackBBoxParameters]	End time stamp of the request.
tns:endTimestamp [type trackVesselIdParameters]	End time stamp of the request.
tns:endTimestamp [type trackWktParameters]	End time stamp of the request.
tns:extrapolated [type trackVesselIdParameters]	Flag indicating if the track positions must be extrapolated.
tns:fusedAndSmoothed [type trackVesselIdParameters]	Flag indicating if the track positions must be interpolated and smoothed.
tns:maxRecords [type trackBBoxParameters]	Max records returned by the method.
tns:maxRecords [type trackVesselIdParameters]	Max records returned by the method.
tns:maxRecords [type trackWktParameters]	Max records returned by the method.
tns:maxTimeDifferenceInSeconds [type trackVesselIdParameters]	Max extrapolation time.
tns:maxX [type trackBBoxParameters]	Max Longitude of the bounding box in EPSG 4326
tns:maxY [type trackBBoxParameters]	Max Latitude of the bounding box in EPSG 4326
tns:minX [type trackBBoxParameters]	Min Longitude of the bounding box in EPSG 4326
tns:minY [type trackBBoxParameters]	Min Latitude of the bounding box in EPSG 4326
tns:project [type trackBBoxParameters]	Project in the scope of which the request is made.

Name	Description
tns:project [type trackVesselIdParameters]	Project in the scope of which the request is made.
tns:project [type trackWktParameters]	Project in the scope of which the request is made.
tns:source [type trackBBoxParameters]	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.
tns:source [type trackVesselIdParameters]	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.
tns:source [type trackWktParameters]	One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.
tns:stepInSeconds [type trackVesselIdParameters]	Interpolation step.
tns:vesselId [type trackVesselIdParameters]	
tns:wkt [type trackWktParameters]	Polygon to be used for the track data request, in WKT format.
tns:WSException	A string returing the description of a possible error. It can be: - incorrect number of input parameters - errors returned by the database - connection problems

Element: tns:beginTimestamp [type trackBBoxParameters]

Description

Begin time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:beginTimestamp [type trackVesselIdParameters]

Description

Begin time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:beginTimestamp [type trackWktParameters]

Description

Begin time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:endTimestamp [type trackBBoxParameters]

Description

End time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:endTimestamp [type trackVesselIdParameters]

Description

End time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:endTimestamp [type trackWktParameters]

Description

End time stamp of the request.

Derived By

Type xsd:dateTime

Element: tns:extrapolated [type trackVesselIdParameters]

Description

Flag indicating if the track positions must be extrapolated.

Derived By

Type xsd:boolean

Element: tns:fusedAndSmoothed [type trackVesselIdParameters]

Description

Flag indicating if the track positions must be interpolated and smoothed.

Derived By

Type xsd:boolean

Element: tns:maxRecords [type trackBBoxParameters]

Description

Max records returned by the method.

Derived By

Type xsd:int

Element: tns:maxRecords [type trackVesselIdParameters]

Description

Max records returned by the method.

Derived By

Type xsd:int

Element: tns:maxRecords [type trackWktParameters]

Description

Max records returned by the method.

Derived By

Type xsd:int

Element: tns:maxTimeDifferenceInSeconds [type trackVesselIdParameters]

Description

Max extrapolation time.

Derived By

Type xsd:int

Element: tns:maxX [type trackBBoxParameters]

Description

Max Longitude of the bounding box in EPSG 4326

Derived By

Type xsd:float

Element: tns:maxY [type trackBBoxParameters]

Description

Max Latitude of the bounding box in EPSG 4326

Derived By

Type xsd:float

Element: tns:minX [type trackBBoxParameters]

Description

Min Longitude of the bounding box in EPSG 4326

Derived By

Type xsd:float

Element: tns:minY [type trackBBoxParameters]

Description

Min Latitude of the bounding box in EPSG 4326

Derived By

Type xsd:float

Element: tns:project [type trackBBoxParameters]

Description

Project in the scope of which the request is made.

Derived By

Type xsd:string

Element: tns:project [type trackVesselIdParameters]

Description

Project in the scope of which the request is made.

Derived By

Type xsd:string

Element: tns:project [type trackWktParameters]

Description

Project in the scope of which the request is made.

Derived By

Type xsd:string

Element: tns:source [type trackBBoxParameters]

Description

One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.

Derived By

Type xsd:string

Element: tns:source [type trackVesselIdParameters]

Description

One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.

Derived By

Type xsd:string

Element: tns:source [type trackWktParameters]

Description

One or many sources as defined by the CDF. If more than one source is set, they are put in logical OR.

Derived By

Type xsd:string

Element: tns:stepInSeconds [type trackVesselIdParameters]

Description

Interpolation step.

Derived By

Type xsd:int

Element: tns:vesselId [type trackVesselIdParameters]

Derived By

Type tns:vesselId

Attributes

Name	Type	Required?	Default	Description

Content Model

Contains text only.

Element: tns:wkt [type trackWktParameters]

Description

Polygon to be used for the track data request, in WKT format.

Derived By

Type xsd:string

Element: tns:WSException

Description

A string returing the description of a possible error. It can be:
- incorrect number of input parameters
- errors returned by the database
- connection problems

Derived By

Type tns:WSException

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

2.2 POSITIONSERVICE WEB SERVICE

Description

This service is used to get the vessel positions from the position cache. The position cache holds the last received position for each ship. It is used for the real time display of ship data.

Currently it is only used internally to the IMDatE, but the service can technically be exposed externally and exploited by other applications.

Type

SOAP 1.2

Style

Document

See Also

- Methods
- Complex Types
- Elements

2.2.1 Methods: PositionService

Methods

Name	Description
getCurrentVesselPosition	This method returns the current ship position for a given vessels ID.
getPositions	This method returns the current ship positions for a given bounding box and time window.
getPositionsCount	This method returns the count of vessel current positions for a given bounding box and time window.

Method: getCurrentVesselPosition

Description

This method returns the current ship position for a given vessels ID.

Action

Style

Document

Input (Literal)

The input of this method is the document element tns:getCurrentVesselPosition of type tns:getCurrentVesselPosition having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:vesselId	xsd:int	1..1	No	ID of the vessel to be searched for.
tns:project	xsd:string	0..1	No	Project in the scope of which the search is performed.

Output (Literal)

The output of this method is the document element tns:getCurrentVesselPositionResponse of type tns:getCurrentVesselPositionResponse having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	tns:positionResponse	0..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

Method: getPositions

Description

This method returns the current ship positions for a given bounding box and time window.

Action

Style

Document

Input (Literal)

The input of this method is the document element tns:getPositions of type tns:getPositions having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionParameters	0..1	No	

Output (Literal)

The output of this method is the document element tns:getPositionsResponse of type tns:getPositionsResponse having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	tns:positionResponse	0..1	No	This element includes the data returned by the call. It is a string where the format is specified by the contantTYype attribute (e.g. a JSON).

Faults

Name	Content	Description
WSException	tns:WSException	

Method: getPositionsCount

Description

This method returns the count of vessel current positions for a given bounding box and time window.

Action

Style

Document

Input (Literal)

The input of this method is the document element tns:getPositionsCount of type tns:getPositionsCount having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionCountParameters	0..1	No	

Output (Literal)

The output of this method is the document element tns:getPositionsCountResponse of type tns:getPositionsCountResponse having the structure defined by the following table.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	xsd:int	1..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

2.2.2 Complex Types: PositionService

Complex Types

Name	Description
tns:getCurrentVesselPosition	
tns:getCurrentVesselPositionResponse	
tns:getPositions	
tns:getPositionsCount	
tns:getPositionsCountResponse	
tns:getPositionsResponse	
tns:positionCountParameters	
tns:positionParameters	
tns:positionResponse	A string encoding the values returned by the call. The format is defined by the attribute contentype (e.g. JSON).
tns:WSException	

Complex Type: tns:getCurrentVesselPosition

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:vesselId	xsd:int	1..1	No	ID of the vessel to be searched for.
tns:project	xsd:string	0..1	No	Project in the scope of which the search is performed.

Referenced By

- Element tns:getCurrentVesselPosition

Complex Type: tns:getCurrentVesselPositionResponse

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		

Component	Type	Occurs	Nillable?	Description
tns:positions	tns:positionResponse	0..1	No	

Referenced By

- Element tns:getCurrentVesselPositionResponse

Complex Type: tns:getPositions

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionParameters	0..1	No	

Referenced By

- Element tns:getPositions

Complex Type: tns:getPositionsCount

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionCountParameters	0..1	No	

Referenced By

- Element tns:getPositionsCount

Complex Type: tns:getPositionsCountResponse

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	xsd:int	1..1	No	

Referenced By

- Element tns:getPositionsCountResponse

Complex Type: tns:getPositionsResponse

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	tns:positionResponse	0..1	No	This element includes the data returned by the call. It is a string where the format is specified by the contantTYype attribute (e.g. a JSON).

Referenced By

- Element tns:getPositionsResponse

Complex Type: tns:positionCountParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:maxX	xsd:float	1..1	No	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxY	xsd:float	1..1	No	Max latitude (EPSG:4326) used in the request bounding box.
tns:minX	xsd:float	1..1	No	Min longitude (EPSG:4326) used in the request bounding box.
tns:minY	xsd:float	1..1	No	Min latitude (EPSG:4326) used in the request bounding box.
tns:user	xsd:string	0..1	No	User who performed the request.

Referenced By

- Element tns:parameters [type getPositionsCount]

Complex Type: tns:positionParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:beginTimestamp	xsd:dateTime	0..1	No	Begin timestamp (UTC) of the request.
tns:endTimestamp	xsd:dateTime	0..1	No	End timestamp (UTC) of the request.
tns:maxRecords	xsd:int	0..1	No	Max number of records returned by the request.
tns:maxX	xsd:float	1..1	No	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxY	xsd:float	1..1	No	Max latitude EPSG:4326) used in the request bounding box.
tns:minX	xsd:float	1..1	No	Min longitude (EPSG:4326) used in the request bounding box.
tns:minY	xsd:float	1..1	No	Min latitude (EPSG:4326) used in the request bounding box.
tns:project	xsd:string	0..1	No	Project in the scope of which the search is performed.
tns:user	xsd:string	0..1	No	User who performed the request.

Referenced By

- Element tns:parameters [type getPositions]

Complex Type: tns:positionResponse

Description

A string encoding the values returned by the call. The format is defined by the attribute contentype (e.g. JSON).

Derived By

Extending xsd:string

Attributes

Name	Type	Required?	Default	Description
tns:contentType	xsd:string	Yes		
tns:results	xsd:int	Yes		

Referenced By

- Element tns:positions [type getCurrentVesselPositionResponse]
- Element tns:positions [type getPositionsResponse]

Complex Type: tns:WSException

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

Referenced By

- Element tns:WSException

2.2.3 Elements: PositionService

Elements

Name	Description
tns:beginTimestamp [type positionParameters]	Begin timestamp (UTC) of the request.
tns:endTimestamp [type positionParameters]	End timestamp (UTC) of the request.
tns:getCurrentVesselPosition	
tns:getCurrentVesselPositionResponse	
tns:getPositions	
tns:getPositionsCount	
tns:getPositionsCountResponse	
tns:getPositionsResponse	
tns:maxRecords [type positionParameters]	Max number of records returned by the request.
tns:maxX [type positionCountParameters]	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxX [type positionParameters]	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxY [type positionCountParameters]	Max latitude (EPSG:4326) used in the request bounding box.
tns:maxY [type positionParameters]	Max latitude EPSG:4326) used in the request bounding box.
tns:message [type WSException]	
tns:minX [type positionCountParameters]	Min longitude (EPSG:4326) used in the request bounding box.
tns:minX [type positionParameters]	Min longitude (EPSG:4326) used in the request bounding box.
tns:minY [type positionCountParameters]	Min latitude (EPSG:4326) used in the request bounding box.
tns:minY [type positionParameters]	Min latitude (EPSG:4326) used in the request bounding box.
tns:parameters [type getPositions]	
tns:parameters [type getPositionsCount]	
tns:positions [type getCurrentVesselPositionResponse]	
tns:positions [type getPositionsCountResponse]	

Name	Description
tns:positions [type getPositionsResponse]	This element includes the data returned by the call. It is a string where the format is specified by the contantTYype attribute (e.g. a JSON).
tns:project [type getCurrentVesselPosition]	Project in the scope of which the search is performed.
tns:project [type positionParameters]	Project in the scope of which the search is performed.
tns:user [type positionCountParameters]	User who performed the request.
tns:user [type positionParameters]	User who performed the request.
tns:vesselId [type getCurrentVesselPosition]	ID of the vessel to be searched for.
tns:WSException	

Element: tns:beginTimestamp [type positionParameters]

Description

Begin timestamp (UTC) of the request.

Derived By

Type xsd:dateTime

Element: tns:endTimestamp [type positionParameters]

Description

End timestamp (UTC) of the request.

Derived By

Type xsd:dateTime

Element: tns:getCurrentVesselPosition

Derived By

Type tns:getCurrentVesselPosition

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:vesselId	xsd:int	1..1	No	ID of the vessel to be searched for.
tns:project	xsd:string	0..1	No	Project in the scope of which the search is performed.

Element: tns:getCurrentVesselPositionResponse

Derived By

Type tns:getCurrentVesselPositionResponse

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	tns:positionResponse	0..1	No	

Element: tns:getPositions

Derived By

Type tns:getPositions

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionParameters	0..1	No	

Element: tns:getPositionsCount

Derived By

Type tns:getPositionsCount

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:positionCountParameters	0..1	No	

Element: tns:getPositionsCountResponse

Derived By

Type tns:getPositionsCountResponse

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	xsd:int	1..1	No	

Element: tns:getPositionsResponse

Derived By

Type tns:getPositionsResponse

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:positions	tns:positionResponse	0..1	No	This element includes the data returned by the call. It is a string where the format is specified by the contantTYype attribute (e.g. a JSON).

Element: tns:maxRecords [type positionParameters]

Description

Max number of records returned by the request.

Derived By

Type xsd:int

Element: tns:maxX [type positionCountParameters]

Description

Max longitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:maxX [type positionParameters]

Description

Max longitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:maxY [type positionCountParameters]

Description

Max latitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:maxY [type positionParameters]

Description

Max latitude EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:message [type WSException]

Derived By

Type xsd:string

Element: tns:minX [type positionCountParameters]

Description

Min longitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:minX [type positionParameters]

Description

Min longitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:minY [type positionCountParameters]

Description

Min latitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:minY [type positionParameters]

Description

Min latitude (EPSG:4326) used in the request bounding box.

Derived By

Type xsd:float

Element: tns:parameters [type getPositions]

Derived By

Type tns:positionParameters

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:beginTimestamp	xsd:dateTime	0..1	No	Begin timestamp (UTC) of the request.
tns:endTimestamp	xsd:dateTime	0..1	No	End timestamp (UTC) of the request.

Component	Type	Occurs	Nillable?	Description
tns:maxRecords	xsd:int	0..1	No	Max number of records returned by the request.
tns:maxX	xsd:float	1..1	No	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxY	xsd:float	1..1	No	Max latitude EPSG:4326) used in the request bounding box.
tns:minX	xsd:float	1..1	No	Min longitude (EPSG:4326) used in the request bounding box.
tns:minY	xsd:float	1..1	No	Min latitude (EPSG:4326) used in the request bounding box.
tns:project	xsd:string	0..1	No	Project in the scope of which the search is performed.
tns:user	xsd:string	0..1	No	User who performed the request.

Element: tns:parameters [type getPositionsCount]

Derived By

Type tns:positionCountParameters

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:maxX	xsd:float	1..1	No	Max longitude (EPSG:4326) used in the request bounding box.
tns:maxY	xsd:float	1..1	No	Max latitude (EPSG:4326) used in the request bounding box.
tns:minX	xsd:float	1..1	No	Min longitude (EPSG:4326) used in the request bounding box.
tns:minY	xsd:float	1..1	No	Min latitude (EPSG:4326) used in the request bounding box.
tns:user	xsd:string	0..1	No	User who performed the request.

Element: tns:positions [type getCurrentVesselPositionResponse]

Derived By

Type tns:positionResponse

Attributes

Name	Type	Required?	Default	Description
tns:contentType	xsd:string	Yes		

Name	Type	Required?	Default	Description
tns:results	xsd:int	Yes		

Content Model

Contains text only.

Element: tns:positions [type getPositionsCountResponse]

Derived By

Type xsd:int

Element: tns:positions [type getPositionsResponse]

Description

This element includes the data returned by the call. It is a string where the format is specified by the contantTYype attribute (e.g. a JSON).

Derived By

Type tns:positionResponse

Attributes

Name	Type	Required?	Default	Description
tns:contentType	xsd:string	Yes		
tns:results	xsd:int	Yes		

Content Model

Contains text only.

Element: tns:project [type getCurrentVesselPosition]

Description

Project in the scope of which the search is performed.

Derived By

Type xsd:string

Element: tns:project [type positionParameters]

Description

Project in the scope of which the search is performed.

Derived By

Type xsd:string

Element: tns:user [type positionCountParameters]

Description

User who performed the request.

Derived By

Type xsd:string

Element: tns:user [type positionParameters]

Description

User who performed the request.

Derived By

Type xsd:string

Element: tns:vesselId [type getCurrentVesselPosition]

Description

ID of the vessel to be searched for.

Derived By

Type xsd:int

Element: tns:WSException

Derived By

Type tns:WSException

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

2.3 FUSIONSERVICE WEB SERVICE

Type

SOAP 1.2

Style

Document

See Also

- Methods
- Complex Types
- Elements

2.3.1 Methods: FusionService

Methods

Name	Description
fuseAndSmooth	This service can be used for fusing eting ship positions. A CDF shall be provided in input, containing a certain number of positions. The output contains a CDF with the fused positions, according to the parameters defined by the user.

Method: fuseAndSmooth

Description

This service can be used for fusing eting ship positions. A CDF shall be provided in input, containing a certain number of positions. The output contains a CDF with the fused positions, according to the parameters defined by the user.

Action

Style

Document

Input (Literal)

The iput parameters.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:fusionParameters	0..1	No	

Output (Literal)

The output fused data.

Element	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns4:EMSA	tns4:PositionRootType	0..1	No	

Faults

Name	Content	Description
WSException	tns:WSException	

2.3.2 Complex Types: FusionService

Complex Types

Name	Description
tns:fuseAndSmooth	
tns:fuseAndSmoothResponse	
tns:fusionParameters	
tns:WSException	

Complex Type: tns:fuseAndSmooth

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:fusionParameters	0..1	No	

Referenced By

- Element tns:fuseAndSmooth

Complex Type: tns:fuseAndSmoothResponse

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns4:EMSA	tns4:PositionRootType	0..1	No	

Referenced By

- Element tns:fuseAndSmoothResponse

Complex Type: tns:fusionParameters

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns4:EMSA	tns4:PositionRootType	0..1	No	
tns:stepInSeconds	xsd:int	0..1	No	The interpolation step in seconds.

Referenced By

- Element tns:parameters [type fuseAndSmooth]

Complex Type: tns:WSException

Derived By

Restricting xsd:anyType

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

Referenced By

- Element tns:WSException

2.3.3 Elements: FusionService

Elements

Name	Description
tns:fuseAndSmooth	
tns:fuseAndSmoothResponse	
tns:message [type WSException]	
tns:parameters [type fuseAndSmooth]	
tns:stepInSeconds [type fusionParameters]	The interpolation step in seconds.
tns:WSException	

Element: tns:fuseAndSmooth

Derived By

Type tns:fuseAndSmooth

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:parameters	tns:fusionParameters	0..1	No	

Element: tns:fuseAndSmoothResponse

Derived By

Type tns:fuseAndSmoothResponse

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns4:EMSA	tns4:PositionRootType	0..1	No	

Element: tns:message [type WSException]

Derived By

Type xsd:string

Element: tns:parameters [type fuseAndSmooth]

Derived By

Type tns:fusionParameters

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns4:EMSA	tns4:PositionRootType	0..1	No	
tns:stepInSeconds	xsd:int	0..1	No	The interpolation step in seconds.

Element: tns:stepInSeconds [type fusionParameters]

Description

The interpolation step in seconds.

Derived By

Type xsd:int

Element: tns:WSException

Derived By

Type tns:WSException

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Nillable?	Description
SEQUENCE		1..1		
tns:message	xsd:string	0..1	No	

3 OVERVIEW OF REST WEB SERVICVES

Description

This document contains Web Service descriptions for the following services.

Web Services

Name	Description
Get OVR Info	Get Ship Particulars for a given vessel.
Get Voyages	Get ship voyages for specified interval
Get IMDatE ID	Retrieve the Imdate ID from other ship particulars .
Get Active Incidents	This method returns the currently active incidents. It refers to the incidents as modelled into the CDF 0.5.3.
Get Incident Details	This method can be used for getting additional information for the incidents of type SHIP_INCIDENT, e.g. data about the ship position, etc.
Get Incidents in Area by Bounding Box	This method can be used for getting the incidents for an area defined by the bounding box and a time window.

3.1 GET OVR INFO WEB SERVICE

Description

Get Ship Particulars for a given vessel.

Type

REST

See Also

- Methods
- Elements

3.1.1 Methods: Get OVR Info

Methods

Name	Description
ovrInfo	Retrieve Ship particulars from Imdate OVR

Method: ovrInfo

Description

Retrieve Ship particulars from Imdate OVR

Action

http://172.31.0.141:7010/ovrws/ovrInfo?id={integer}&project={string}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
id	integer	1..1	Imdate ID
project	string	1..1	if specified, additional info for specific projects are retrieved

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
aisTypeCode	integer	1..1	Ship Type, from Ais Type 5
aisTypeName	string	1..1	AIS ship type Description
callSign	string	1..1	Ship Call Sign
country	string	1..1	Name of the ship country
countryCode	string	1..1	ISO Code for the country
dimension	integer	1..1	Vessel lenght
id	integer	1..1	imdate ID
identitySource	string	1..1	source of the Identity
imo	integer	1..1	IMO Number
ir	string	1..1	IR number, for fishing vessels
mmsi	integer	1..1	MMSI
shipName	string	1..1	Ship Name

Argument	Type	Occurs	Description
status	string	1..1	Identity Status (V=valid N=Not Valid, T=Temporary)

Remarks

Only not empty fields are returned by the service.

Example

http://172.31.0.141:7010/ovrws/ovrInfo?id=147483

3.1.2 Elements: Get OVR Info

Elements

Name	Description
aisTypeCode	From AIS type 5, Vessel Type
aisTypeName	Description of AIS ship type
callSign	Radio Call Sign
country	Ship Flag (extended)
countryCode	Country code, 2 digits
dimension	Vessel length
id	Imdate Vessel identifier
identitySource	Source if the vessel identity information (AIS, SSN, EFCA, ...)
imo	IMO Number
ir	IR Number, for fishing vessels
mmsi	Maritime Mobile Service Identity
shipName	Name of the ship
status	Identity record status

Element: aisTypeCode

Description

From AIS type 5, Vessel Type

Defined As

Type integer

Referenced By

- Method ovrInfo

Example

```
"aisTypeCode":30
```

Element: aisTypeName

Description

Description of AIS ship type

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"aisTypeName":"Fishing"
```

Element: callSign

Description

Radio Call Sign

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"callSign":"SY8648"
```

Element: country

Description

Ship Flag (extended)

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"country":"GREECE "
```

Element: countryCode

Description

Country code, 2 digits

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"countryCode":"GR"
```

Element: dimension

Description

Vessel length

Defined As

Type integer

Referenced By

- Method ovrInfo

Example

```
"dimension":35
```

Element: id

Description

Imdate Vessel identifier

Defined As

Type integer

Referenced By

- Method ovrInfo

Example

```
"id":147483
```

Element: identitySource

Description

Source if the vessel identity information (AIS, SSN, EFCA, ...)

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"identitySource":"EFCA"
```

Element: imo

Description

IMO Number

Defined As

Type integer

Referenced By

- Method ovrInfo

Example

```
"imo":9095943
```

Element: ir

Description

IR Number, for fishing vessels

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"ir":"GRC000003200"
```

Element: mmsi

Description

Maritime Mobile Service Identity

Defined As

Type integer

Referenced By

- Method ovrInfo

Example

```
"mmsi":240751000
```

Element: shipName

Description

Name of the ship

Defined As

Type string

Referenced By

- Method ovrInfo

Example

```
"shipName":"AIGAION"
```

Element: status

Description

Identity record status

Defined As

Type string

Referenced By

- Method ovrInfo

Remarks

V= Valid, N=Not Valid, T=Temporary

Example

```
"status":"V"
```

3.2 GET VOYAGES WEB SERVICE

Description

Get ship voyages for specified interval

Type

REST

See Also

- Methods
- Elements

3.2.1 Methods: Get Voyages

Methods

Name	Description
voyages	Returns all the voyage info for the vessel specified by the id in the time window specified

Method: voyages

Description

Returns all the voyage info for the vessel specified by the id in the time window specified

Action

http://172.31.0.141:7010/ovrws/voyages?id={number}&begin={date}&end={date}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
id	number	1..1	Imdate ID
begin	date	1..1	Begin time window
end	date	1..1	End time window

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
array	object	1..1	Array of voyage elements

Example

http://iwls55:7010/ovrws/voyages?id=41835&begin=2012-06-11T10:28:42Z&end=2012-06-12T10:33:22Z

3.2.2 Elements: Get Voyages

Elements

Name	Description
array	
destination [element array]	Destination of the voyage.
eta [element array]	Estimated time of arrival.
id [element array]	Id of the voyage.
origin [element array]	Origin of the voyage.
ts [element array]	Timestamp of the voyage information.

Element: array

Defined As

Type object

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Description
SEQUENCE		1..1	
id	integer	1..1	Id of the voyage.
ts	dateTime	1..1	Timestamp of the voyage information.
origin	string	1..1	Origin of the voyage.
destination	string	1..1	Destination of the voyage.
eta	integer	1..1	Estimated time of arrival.

Referenced By

- Method voyages

Element: destination [element array]

Description

Destination of the voyage.

Defined As

Type string

Example

```
"destination":"AJACCIO"
```

Element: eta [element array]

Description

Estimated time of arrival.

Defined As

Type integer

Remarks

Format: MMddhhmm

Example

```
"eta":"06111845"
```

Element: id [element array]

Description

Id of the voyage.

Defined As

Type integer

Example

"id": 41835

Element: origin [element array]

Description

Origin of the voyage.

Defined As

Type string

Example

"origin": "ILE ROUSSE"

Element: ts [element array]

Description

Timestamp of the voyage information.

Defined As

Type dateTime

Example

"ts": "2012-06-11T12:26:06Z"

3.3 GET IMDATE ID WEB SERVICE

Description

Retrieve the Imdate ID from other ship particulars .

Type

REST

Remarks

Many IMDatE internal services need the IMDatE ID in input. This service is used tor etrieve the IMDatE ID from the other ship particulars.

Moreover this service can be used for creating any custom filtering on the vessels.

See Also

- Methods
- Elements

3.3.1 Methods: Get IMDatE ID

Methods

Name	Description
imdateId	

Method: imdateId

Action

http://172.31.0.141:7010/ovrws/imdateId?mmsi={number}&imo={}number&callsign={string}&shipName={string}&ir={string}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
mmsi	number	1..1	MMSI of the ship.
imo		1..1	IMO number of the ship.
callsign	string	1..1	Call Sign of the ship.
shipName	string	1..1	Ship Name.
ir	string	1..1	IR (used or fishing vessels).

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
array	object	1..1	

Example

http://172.31.0.141:7010/ovrws/imdateId?mmsi=240751000

3.3.2 Elements: Get IMDatE ID

Elements

Name	Description
array	
callSign [element array]	Call sign of the ship.
id [element array]	IMDatE ID of the ship.
imo [element array]	IMO number of the ship.
mmsi [element array]	MMSI of the ship.
shipName [element array]	Ship Name.
status [element array]	Validity flag. It can be "V" valid, "T" temporary.

Element: array

Defined As

Type object

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Description
SEQUENCE		1..1	
imo	integer	1..1	IMO number of the ship.
mmsi	integer	1..1	MMSI of the ship.
shipName	string	1..1	Ship Name.
callSign	string	1..1	Call sign of the ship.
status	string	1..1	Validity flag. It can be "V" valid, "T" temporary.
id	integer	1..1	IMDatE ID of the ship.

Referenced By

- Method imdateId

Element: callSign [element array]

Description

Call sign of the ship.

Defined As

Type string

Element: id [element array]

Description

IMDatE ID of the ship.

Defined As

Type integer

Element: imo [element array]

Description

IMO number of the ship.

Defined As

Type integer

Element: mmsi [element array]

Description

MMSI of the ship.

Defined As

Type integer

Element: shipName [element array]

Description

Ship Name.

Defined As

Type string

Element: status [element array]

Description

Validity flag. It can be "V" valid, "T" temporary.

Defined As

Type string

3.4 GET ACTIVE INCIDENTS WEB SERVICE

Description

This method returns the currently active incidents. It refers to the incidents as modelled into the CDF 0.5.3.

Type

REST

See Also

- Methods
- Elements

3.4.1 Methods: Get Active Incidents

Methods

Name	Description
getActiveIncidents	

Method: getActiveIncidents

Action

http://iwls55:7010/imdate-incident-services-war/servlet/getActiveIncidents.do?category={String}&type={String}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
category	String	1..1	Incident category as defined by the incident CDF. Possible values are AREA_INCIDENT, LOCAL_INCIDENT, SHIP_INCIDENT
type	String	1..1	Type of incident according to the CDF (MotherShip, PAG, Atttack, SuspiciousApproach, Other)

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
array	object	1..1	

Example

http://iwls55:7010/imdate-incident-services-war/servlet/getActiveIncidents.do

3.4.2 Elements: Get Active Incidents

Elements

Name	Description
array	A JSON array reporting one value for each incident returned by the call.
category [element array]	Category of incident, as defined by the CDF.
description [element array]	Description of the incident.
expireDate [element array]	Expiration date of the incident (defined by the endTime of the CDF).
id [element array]	Unique identifier of the incident.
incidentTypeCode [element array]	Incident type as defined by the CDF element IncidentTypeType.
incidentTypeId [element array]	Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).
position [element array]	Position of the incident.
radius [element array]	Radius of the incident (to be used for the display).
source [element array]	Source of the incident.
TS [element array]	Time stamp of the incident.

Element: array

Description

A JSON array reporting one value for each incident returned by the call.

Defined As

Type object

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Description
SEQUENCE		1..1	
id	integer	1..1	Unique identifier of the incident.
category	string	1..1	Category of incident, as defined by the CDF.
source	string	1..1	Source of the incident.
TS	dateTime	1..1	Time stamp of the incident.
description	string	0..1	Description of the incident.
incidentTypeId	integer	1..1	Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).
incidentTypeCode	string	1..1	Incident type as defined by the CDF element IncidentTypeType.

Component	Type	Occurs	Description
expireDate	dateTime	1..1	Expiration date of the incident (defined by the endTime of the CDF).
radius	integer	0..1	Radius of the incident (to be used for the display).
position	string	1..1	Position of the incident.

Referenced By

- Method getActiveIncidents

Element: category [element array]

Description

Category of incident, as defined by the CDF.

Defined As

Type string

Element: description [element array]

Description

Description of the incident.

Defined As

Type string

Element: expireDate [element array]

Description

Expiration date of the incident (defined by the endTime of the CDF).

Defined As

Type dateTime

Element: id [element array]

Description

Unique identifier of the incident.

Defined As

Type integer

Element: incidentTypeCode [element array]

Description

Incident type as defined by the CDF element IncidentTypeType.

Defined As

Type string

Element: incidentTypeId [element array]

Description

Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).

Defined As

Type integer

Remarks

Mainly for IMDatE internal use.

Element: position [element array]

Description

Position of the incident.

Defined As

Type string

Element: radius [element array]

Description

Radius of the incident (to be used for the display).

Defined As

Type integer

Element: source [element array]

Description

Source of the incident.

Defined As

Type string

Element: TS [element array]

Description

Time stamp of the incident.

Defined As

Type dateTime

3.5 GET INCIDENT DETAILS WEB SERVICE

Description

This method can be used for getting additional information for the incidents of type SHIP_INCIDENT, e.g. data about the ship position, etc.

Type

REST

See Also

- Methods
- Elements

3.5.1 Methods: Get Incident Details

Methods

Name	Description
getIncidentDetail.do	

Method: getIncidentDetail.do

Action

http://iwls55:7010/imdate-incident-services-war/servlet/getIncidentDetail.do?reportId={Long}&category={String}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
reportId	Long	1..1	
category	String	1..1	

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
heading	integer	1..1	
id	integer	1..1	
imdateOvrId	integer	1..1	
position	string	1..1	
source	string	1..1	
speed	integer	1..1	
ts	dateTime	1..1	

3.5.2 Elements: Get Incident Details

Elements

Name	Description
heading	Heading of the ship position.
id	IMDatE ID of the position.
imdateOvrId	ID of the OVR.
position	Position value.
source	Source of the position value.
speed	Speed of the position.
ts	Timestamp of the position.

Element: heading

Description

Heading of the ship position.

Defined As

Type integer

Referenced By

- Method getIncidentDetail.do

Element: id

Description

IMDatE ID of the position.

Defined As

Type integer

Referenced By

- Method getIncidentDetail.do

Element: imdateOvrId

Description

ID of the OVR.

Defined As

Type integer

Referenced By

- Method getIncidentDetail.do

Element: position

Description

Position value.

Defined As

Type string

Referenced By

- Method getIncidentDetail.do

Element: source

Description

Source of the position value.

Defined As

Type string

Referenced By

- Method getIncidentDetail.do

Element: speed

Description

Speed of the position.

Defined As

Type integer

Referenced By

- Method getIncidentDetail.do

Element: ts

Description

Timestamp of the position.

Defined As

Type dateTime

Referenced By

- Method getIncidentDetail.do

3.6 GET INCIDENTS IN AREA BY BOUNDING BOX WEB SERVICE

Description

This method can be used for getting the incidents for an area defined by the bounding box and a time window.

Type

REST

See Also

- Methods
- Elements

3.6.1 Methods: Get Incidents in Area by Bounding Box

Methods

Name	Description
getIncidentsInAreaByBB.do	

Method: getIncidentsInAreaByBB.do

Action

http://iwls55:7010/imdate-incident-services-war/servlet/getIncidentsInAreaByBB.do?beginTimestamp={String}&endTimestamp={String}&maxX={Double}&maxY={Double}&minX={Double}&minY={Double}&category={String}

Style

HTTP GET

Input

The inputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
beginTimestamp	String	1..1	Begin time stamp of the request.
endTimestamp	String	1..1	End time stamp of the request.
maxX	Double	1..1	Max longitude of the request.
maxY	Double	1..1	Max latitude of the request.
minX	Double	1..1	Min longitude of the request.
minY	Double	1..1	Min latitude of the request.
category	String	1..1	Incident category (possible values are: AREA_INCIDENT, LOCAL_INCIDENT, SHIP_INCIDENT)

Output (JSON)

The outputs of this method are the arguments defined by the following table.

Argument	Type	Occurs	Description
ALL		1..1	
array	object	1..1	

3.6.2 Elements: Get Incidents in Area by Bounding Box

Elements

Name	Description
array	
category [element array]	Category of the ship incident.
description [element array]	Description of the incident.
expireDate [element array]	Expiration date of the incident.
id [element array]	Unique ID of the incident.
incidentTypeCode [element array]	Incident type as defined by the CDF element IncidentTypeType.
incidentTypeId [element array]	Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).
position [element array]	Position of the incident.
radius [element array]	Radius of the incident, to be used for the display.
source [element array]	Source of the incident.
TS [element array]	Timestamp of the incident.

Element: array

Defined As

Type object

Content Model

Contains elements as defined in the following table.

Component	Type	Occurs	Description
SEQUENCE		1..1	
id	integer	1..1	Unique ID of the incident.
category	string	1..1	Category of the ship incident.
source	string	1..1	Source of the incident.
TS	dateTime	1..1	Timestamp of the incident.
description	string	0..1	Description of the incident.
incidentTypeId	integer	1..1	Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).
incidentTypeCode	string	1..1	Incident type as defined by the CDF element IncidentTypeType.
expireDate	dateTime	0..1	Expiration date of the incident.

Component	Type	Occurs	Description
radius	integer	0..1	Radius of the incident, to be used for the display.
position	string	1..1	Position of the incident.

Referenced By

- Method getIncidentsInAreaByBB.do

Element: category [element array]

Description

Category of the ship incident.

Defined As

Type string

Element: description [element array]

Description

Description of the incident.

Defined As

Type string

Element: expireDate [element array]

Description

Expiration date of the incident.

Defined As

Type dateTime

Element: id [element array]

Description

Unique ID of the incident.

Defined As

Type integer

Element: incidentTypeCode [element array]

Description

Incident type as defined by the CDF element IncidentTypeType.

Defined As

Type string

Element: incidentTypeId [element array]

Description

Internal ID mapping the incident types (1=MotherShip, 2=PAG, 3=Attack, 4=SuspiciousApproach, 5=other).

Defined As

Type integer

Element: position [element array]

Description

Position of the incident.

Defined As

Type string

Element: radius [element array]

Description

Radius of the incident, to be used for the display.

Defined As

Type integer

Element: source [element array]

Description

Source of the incident.

Defined As

Type string

Element: TS [element array]

Description

Timestamp of the incident.

Defined As

Type dateTime

4 DISSEMINATION SERVICE

The dissemination service, differently from the other services is not a request/response service type, but it will be a push service.

Basically the I/Fs between IMDatE and the client receiving the data (e.g. ship positions) can be as in the following table.

Transfer mechanism	Format
FTP	CSV, CDF
Email attachment	CSV, CDF
Web Service (Push)	CDF

For the CDF format, the 0.5.3 version will be used.

The CSV will be a flat arrangement of the CDF info into a CSV file.

As part of the dissemination service configuration, for each dissemination instance it will be possible to define:

- Details of the receiving channel (e.g. FTP details and credentials)
- Format
- Packaging options, e.g. how many position messages are packaged before the transfer

In the stream data flow (e.g. Web Service) a point-to-point connection shall be established. The recipient of the dissemination shall implement a web service according to the specification (**TBD**). This service will be called by the IMDatE dissemination interface, providing the CDF as input data.