



Resource Management

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## 1. INTRODUCTION

Resource Management profile describes how organizations (resource consumer and resource supplier) can communicate about allocation of resources across the emergency incident life-cycle. This includes preparedness, pre-staging of resources, initial and on-going response, recovery and demobilization/release of resources.

## 2. OBJECTIVES

The objectives of implementing this profile are:

1. Expediting all activities associated with resources needed to respond and adapt to emergency incidents, such as
  - a. Querying and finding out about available resources,
  - b. Requesting and allocating resources,
  - c. Releasing resources.
2. Facilitating emergency information sharing and data exchange across different organizations of different professions that provide emergency response and management services.
3. Supporting everyday events and incident preparedness, as well as disasters

## 3. SCOPE

This profile supports a process of discovering, ordering and deploying resources needed in emergency situations. The intended scope for this profile includes:

- During and after emergency situations
- By emergency managers, incident commanders and other first responders
- Among on-site coordination centers, local organizations, national organizations and non-governmental organizations

The transactions, specified in this profile are intended to be exchanged between organizations taking part in emergency operations. It is expected that resource consumer and resource supplier organizations have had necessary infrastructure, which is specified in the profile, to enable them to send and receive the messages in a secured way, using an agreed syntax.

## 4. PROFILE DETAILED DESCRIPTION

### 4.2. Roles Involved

Actor	Description
Resource Consumer	The Resource Consumer is the legal organization who queries, requests, allocates and releases the resources.
Resource Supplier	The Resource Supplier is the legal organization who responds to requests of Resource Consumer and commits resources.

### 4.3. Actor Diagram



Figure above shows the actors directly involved in the Resource Management Profile and the possible messages to be exchanged between them.

### 4.4. Transaction Information

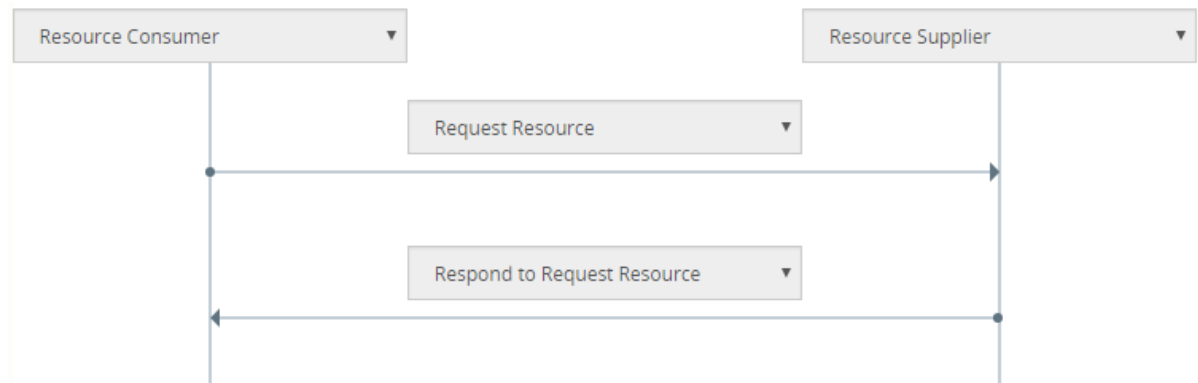
#### 4.4.1. Query Resource

##### 4.4.1.1. Description

Categories	Description and Values
Identifier	1457341060502
Description	The Resource Consumer queries resources from one or many Resource Suppliers. The Resource Suppliers respond to the Resource Consumer by

	listing available resources.
Actors	Resource Consumer, Resource Supplier
Pre-conditions	The Resource Consumer and the Resource Supplier have already identified each other.
Post-conditions	The Resource Consumer has received the list of available resources.

#### 4.4.1.2. Interaction Diagram



#### 4.4.1.3. Request Resource Message

##### 4.4.1.3.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
xmlns:rmsg="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg"
xmlns:rm="urn:oasis:names:tc:emergency:EDXL:RM:1.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg" elementFormDefault="qualified"
attributeFormDefault="unqualified">
  <import namespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0" schemaLocation="EDXL-
RMCommonTypes.xsd"/>
  <element name="RequestResource">
    <complexType>
      <sequence>
        <element name="MessageID" type="rm:MessageIDType"/>
        <element name="SentDateTime" type="rm:DateTimeType"/>
        <element name="MessageContentType">

```

```

    <simpleType>
      <restriction base="rm:MessageContentTypeType">
        <enumeration value="RequestResource"/>
      </restriction>
    </simpleType>
  </element>
  <element name="MessageDescription" type="rm:MessageDescriptionType" minOccurs="0"/>
  <element name="OriginatingMessageID" type="rm:MessageIDType"/>
  <element name="IncidentInformation" type="rm:IncidentInformationType" minOccurs="0"
maxOccurs="unbounded"/>
  <element name="ContactInformation" type="rm:ContactInformationType"
maxOccurs="unbounded"/>
  <element name="ResourceInformation" maxOccurs="unbounded">
    <complexType>
      <sequence>
        <element name="ResourceInfoElementID" type="rm:ResourceInfoElementIDType"/>
        <element name="Resource">
          <complexType>
            <sequence>
              <element name="ResourceID" type="rm:ResourceIDType"/>
              <element name="Name" type="rm:ResourceNameType"/>
              <element name="TypeStructure" type="rm:ValueListType"
minOccurs="0"/>
              <element name="TypeInfo" type="rm:TypeInfoType" minOccurs="0"/>
              <element name="Keyword" type="rm:ValueListType" minOccurs="0"
maxOccurs="unbounded"/>
              <element name="Description" type="rm:DescriptionType"
minOccurs="0"/>
              <element name="Credentials" type="rm:CredentialsType"
minOccurs="0"/>
              <element name="SpecialRequirements"
type="rm:SpecialRequirementsType" minOccurs="0"/>
            </sequence>
          </complexType>
        </element>
        <element name="AssignmentInformation" minOccurs="0">
          <complexType>
            <sequence>
              <element name="Quantity" type="rm:QuantityType" minOccurs="0"/>
              <element name="AnticipatedFunction"
type="rm:AnticipatedFunctionType" minOccurs="0"/>
            </sequence>
          </complexType>
        </element>
        <element name="ScheduleInformation" minOccurs="0" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="ScheduleType">
                <simpleType>
                  <restriction base="rm:ScheduleTypeType">
                    <enumeration value="RequestedArrival"/>

```

```

        <enumeration value="RequestedDeparture"/>
        <enumeration value="EstimatedReturnDeparture"/>
        <enumeration value="EstimatedReturnArrival"/>
        <enumeration value="ReportTo"/>
        <enumeration value="Route"/>
    </restriction>
</simpleType>
</element>
<element name="DateTime" type="rm:DateTimeType" minOccurs="0"/>
<element name="Location" type="rm:LocationType" minOccurs="0"/>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</schema>

```

#### 4.4.1.3.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxld="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
    <documentation>C2SENSE Distribution Web Service</documentation>
    <types>
        <xsd:schema>
            <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
        </xsd:schema>
    </types>
    <message name="SendMessage_Message">
        <documentation>Send Message</documentation>
        <part name="body" element="edxld:EDXLDistribution"/>
    </message>
    <message name="ReceiveResponseMessage_Message">
        <documentation>Receive Response Message</documentation>
        <part name="body" element="edxld:EDXLDistribution"/>
    </message>
    <portType name="Distribution_PortType">

```



```

    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
      <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
  </portType>
  <binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
      <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
      <input>
        <soap12:body use="literal"/>
      </input>
      <output>
        <soap12:body use="literal"/>
      </output>
    </operation>
  </binding>
  <service name="Distribution">
    <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
      <soap12:address location="https://localhost:8080/Distribution"/>
    </port>
  </service>
</definitions>

```

#### 4.4.1.4. Respond to Request Resource Message

##### 4.4.1.4.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:rmsg="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg"
  xmlns:rm="urn:oasis:names:tc:emergency:EDXL:RM:1.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  targetNamespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg" elementFormDefault="qualified"
  attributeFormDefault="unqualified">
  <import namespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0" schemaLocation="EDXL-
  RMCommonTypes.xsd"/>
  <element name="ResponseToRequestResource">
    <complexType>
      <sequence>
        <element name="MessageID" type="rm:MessageIDType"/>
        <element name="SentDateTime" type="rm:DateTimeType"/>
        <element name="MessageContentType">
          <simpleType>
            <restriction base="rm:MessageContentTypeType">
              <enumeration value="ResponseToRequestResource"/>
            </restriction>
          </simpleType>
        </element>
      </sequence>
    </complexType>
  </element>

```

```

        </simpleType>
    </element>
    <element name="MessageDescription" type="rm:MessageDescriptionType" minOccurs="0"/>
    <element name="OriginatingMessageID" type="rm:MessageIDType"/>
    <element name="PrecedingMessageID" type="rm:MessageIDType"/>
    <element name="IncidentInformation" type="rm:IncidentInformationType" minOccurs="0"
maxOccurs="unbounded"/>
    <element name="ContactInformation" type="rm:ContactInformationType"
maxOccurs="unbounded"/>
    <element name="ResourceInformation" maxOccurs="unbounded">
        <complexType>
            <sequence>
                <element name="ResourceInfoElementID" type="rm:ResourceInfoElementIDType"/>
                <element name="ResponseInformation" type="rm:ResponseInformationType"/>
                <element name="Resource">
                    <complexType>
                        <sequence>
                            <element name="ResourceID" type="rm:ResourceIDType"/>
                            <element name="Name" type="rm:ResourceNameType"/>
                            <element name="TypeStructure" type="rm:ValueListType"
minOccurs="0"/>
                            <element name="TypeInfo" type="rm:TypeInfoType" minOccurs="0"/>
                            <element name="Keyword" type="rm:ValueListType" minOccurs="0"
maxOccurs="unbounded"/>
                            <element name="Description" type="rm:DescriptionType"
minOccurs="0"/>
                            <element name="Credentials" type="rm:CredentialsType"
minOccurs="0"/>
                            <element name="SpecialRequirements"
type="rm:SpecialRequirementsType" minOccurs="0"/>
                            <element name="ResponsibleParty" type="rm:ContactInformationType"
minOccurs="0"/>
                            <element name="OwnershipInformation"
type="rm:OwnershipInformationType" minOccurs="0"/>
                            <element name="ResourceStatus" minOccurs="0">
                                <complexType>
                                    <sequence>
                                        <element name="InventoryRefreshDateTime"
type="rm:DateTimeType" minOccurs="0"/>
                                        <element name="DeploymentStatus" type="rm:ValueListType"
minOccurs="0"/>
                                        <element name="Availability" type="rm:AvailabilityType"
minOccurs="0"/>
                                    </sequence>
                                </complexType>
                            </element>
                        </sequence>
                    </complexType>
                </element>
            </sequence>
        </complexType>
    </element>
    <element name="AssignmentInformation" minOccurs="0">
        <complexType>
            <sequence>

```

```

        <element name="Quantity" type="rm:QuantityType" minOccurs="0"/>
        <element name="AnticipatedFunction"
type="rm:AnticipatedFunctionType" minOccurs="0"/>
        <element name="PriceQuote" type="rm:PriceQuoteType" minOccurs="0"/>
        <element name="AssignmentInstructions"
type="rm:AssignmentInstructionsType" minOccurs="0"/>
    </sequence>
</complexType>
</element>
<element name="ScheduleInformation" minOccurs="0" maxOccurs="unbounded">
    <complexType>
        <sequence>
            <element name="ScheduleType">
                <simpleType>
                    <restriction base="rm:ScheduleTypeType">
                        <enumeration value="EstimatedArrival"/>
                        <enumeration value="EstimatedDeparture"/>
                        <enumeration value="RequestedReturnDeparture"/>
                        <enumeration value="RequestedReturnArrival"/>
                        <enumeration value="BeginAvailable"/>
                        <enumeration value="EndAvailable"/>
                        <enumeration value="RequestedArrival"/>
                        <enumeration value="RequestedDeparture"/>
                        <enumeration value="EstimatedReturnDeparture"/>
                        <enumeration value="ReportTo"/>
                        <enumeration value="Route"/>
                    </restriction>
                </simpleType>
            </element>
            <element name="DateTime" type="rm:DateTimeType" minOccurs="0"/>
            <element name="Location" type="rm:LocationType" minOccurs="0"/>
        </sequence>
    </complexType>
</element>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</schema>

```

#### 4.4.1.4.2. Protocol Requirements

```
<?xml version="1.0" encoding="UTF-8"?>
```

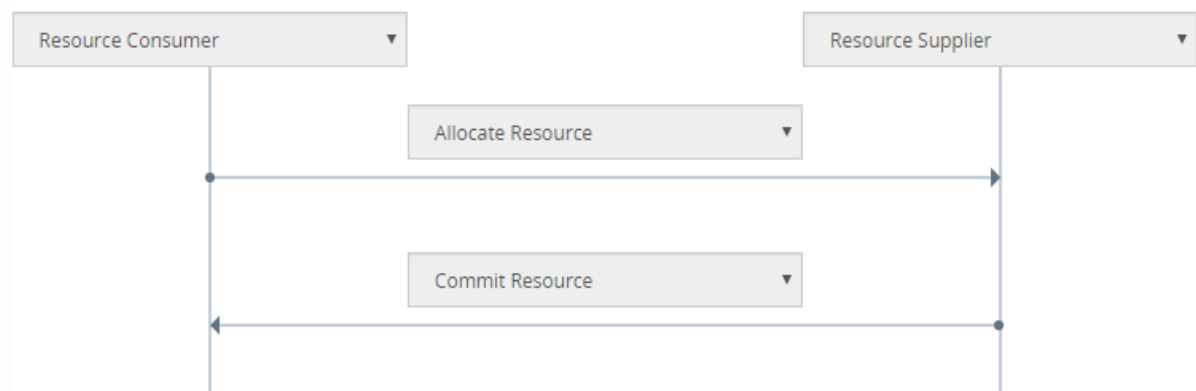
```
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxld="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxld:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>
    <part name="body" element="edxld:EDXLDistribution"/>
  </message>
  <portType name="Distribution_PortType">
    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
      <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
  </portType>
  <binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
      <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
      <input>
        <soap12:body use="literal"/>
      </input>
      <output>
        <soap12:body use="literal"/>
      </output>
    </operation>
  </binding>
  <service name="Distribution">
    <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
      <soap12:address location="https://localhost:8080/Distribution"/>
    </port>
  </service>
</definitions>
```

## 4.4.2. Allocate Resource

### 4.4.2.1. Description

Categories	Description and Values
Identifier	1457341060579
Description	The Resource Consumer orders resources from Resource Suppliers. The Resource Supplier allocates resources for the Resource Consumer and responds that resources have been committed to Resource Consumer.
Actors	Resource Consumer, Resource Supplier
Pre-conditions	<p>The Resource Consumer and the Resource Supplier have already identified each other.</p> <p>The Resource Consumer has already checked the availability of resources and the Resource Supplier has enough number of resources available to meet the request.</p>
Post-conditions	Requested amount of resources are allocated for Resource Consumer.

### 4.4.2.2. Interaction Diagram



### 4.4.2.3. Allocate Resource Message

#### 4.4.2.3.1. Message Semantics

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
xmlns:rmsg="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg"
xmlns:rm="urn:oasis:names:tc:emergency:EDXL:RM:1.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg" elementFormDefault="qualified"
attributeFormDefault="unqualified">
  <import namespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0" schemaLocation="EDXL-
RMCommonTypes.xsd"/>
  <element name="RequisitionResource">
    <complexType>
      <sequence>
        <element name="MessageID" type="rm:MessageIDType"/>
        <element name="SentDateTime" type="rm:DateTimeType"/>
        <element name="MessageContentType">
          <simpleType>
            <restriction base="rm:MessageContentTypeType">
              <enumeration value="RequisitionResource"/>
            </restriction>
          </simpleType>
        </element>
        <element name="MessageDescription" type="rm:MessageDescriptionType" minOccurs="0"/>
        <element name="OriginatingMessageID" type="rm:MessageIDType"/>
        <element name="PrecedingMessageID" type="rm:MessageIDType" minOccurs="0"/>
        <element name="IncidentInformation" type="rm:IncidentInformationType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="Funding" type="rm:FundingType" maxOccurs="unbounded"/>
        <element name="ContactInformation" type="rm:ContactInformationType"
maxOccurs="unbounded"/>
        <element name="ResourceInformation" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="ResourceInfoElementID" type="rm:ResourceInfoElementIDType"/>
              <element name="Resource">
                <complexType>
                  <sequence>
                    <element name="ResourceID" type="rm:ResourceIDType"/>
                    <element name="Name" type="rm:ResourceNameType"/>
                    <element name="TypeStructure" type="rm:ValueListType"
minOccurs="0"/>
                    <element name="TypeInfo" type="rm:TypeInfoType" minOccurs="0"/>
                    <element name="Keyword" type="rm:ValueListType" minOccurs="0"
maxOccurs="unbounded"/>
                    <element name="Description" type="rm:DescriptionType"
minOccurs="0"/>

```

```

        <element name="Credentials" type="rm:CredentialsType"
minOccurs="0"/>
        <element name="SpecialRequirements"
type="rm:SpecialRequirementsType" minOccurs="0"/>
        <element name="ResponsibleParty" type="rm:ContactInformationType"
minOccurs="0"/>
        <element name="OwnershipInformation"
type="rm:OwnershipInformationType" minOccurs="0"/>
    </sequence>
</complexType>
</element>
<element name="AssignmentInformation">
    <complexType>
        <sequence>
            <element name="Quantity" type="rm:QuantityType"/>
            <element name="Restrictions" type="rm:RestrictionsType"
minOccurs="0"/>
            <element name="AnticipatedFunction"
type="rm:AnticipatedFunctionType" minOccurs="0"/>
            <element name="PriceQuote" type="rm:PriceQuoteType" minOccurs="0"/>
            <element name="AssignmentInstructions"
type="rm:AssignmentInstructionsType" minOccurs="0"/>
        </sequence>
    </complexType>
</element>
<element name="ScheduleInformation" minOccurs="0" maxOccurs="unbounded">
    <complexType>
        <sequence>
            <element name="ScheduleType">
                <simpleType>
                    <restriction base="rm:ScheduleTypeType">
                        <enumeration value="EstimatedArrival"/>
                        <enumeration value="EstimatedDeparture"/>
                        <enumeration value="EstimatedReturnDeparture"/>
                        <enumeration value="EstimatedReturnArrival"/>
                        <enumeration value="ReportTo"/>
                        <enumeration value="RequestedArrival"/>
                        <enumeration value="RequestedDeparture"/>
                        <enumeration value="Route"/>
                    </restriction>
                </simpleType>
            </element>
            <element name="DateTime" type="rm:DateTimeType" minOccurs="0"/>
            <element name="Location" type="rm:LocationType" minOccurs="0"/>
        </sequence>
    </complexType>
</element>
</sequence>
</complexType>
</element>
</sequence>

```

```
</complexType>
</element>
</schema>
```

#### 4.4.2.3.2. Protocol Requirements

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxld="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxld:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>
    <part name="body" element="edxld:EDXLDistribution"/>
  </message>
  <portType name="Distribution_PortType">
    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
      <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
  </portType>
  <binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
      <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
      <input>
        <soap12:body use="literal"/>
      </input>
      <output>
        <soap12:body use="literal"/>
      </output>
    </operation>
  </binding>
```



```
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>
```

#### 4.4.2.4. Commit Resource Message

##### 4.4.2.4.1. Message Semantics

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:rmsg="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg"
  xmlns:rm="urn:oasis:names:tc:emergency:EDXL:RM:1.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  targetNamespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg" elementFormDefault="qualified"
  attributeFormDefault="unqualified">
  <import namespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0" schemaLocation="EDXL-
  RMCommonTypes.xsd"/>
  <element name="CommitResource">
    <complexType>
      <sequence>
        <element name="MessageID" type="rm:MessageIDType"/>
        <element name="SentDateTime" type="rm:DateTimeType"/>
        <element name="MessageContentType">
          <simpleType>
            <restriction base="rm:MessageContentTypeType">
              <enumeration value="CommitResource"/>
            </restriction>
          </simpleType>
        </element>
        <element name="MessageDescription" type="rm:MessageDescriptionType" minOccurs="0"/>
        <element name="OriginatingMessageID" type="rm:MessageIDType"/>
        <element name="PrecedingMessageID" type="rm:MessageIDType"/>
        <element name="IncidentInformation" type="rm:IncidentInformationType" minOccurs="0"
        maxOccurs="unbounded"/>
        <element name="ContactInformation" type="rm:ContactInformationType"
        maxOccurs="unbounded"/>
        <element name="ResourceInformation" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="ResourceInfoElementID" type="rm:ResourceInfoElementIDType"/>
              <element name="ResponseInformation" type="rm:ResponseInformationType"/>
              <element name="Resource">
                <complexType>
                  <sequence>
```

```

<element name="ResourceID" type="rm:ResourceIDType"/>
<element name="Name" type="rm:ResourceNameType"/>
<element name="TypeStructure" type="rm:ValueListType"
minOccurs="0"/>
<element name="TypeInfo" type="rm:TypeInfoType" minOccurs="0"/>
<element name="Keyword" type="rm:ValueListType" minOccurs="0"
maxOccurs="unbounded"/>
<element name="Description" type="rm:DescriptionType"
minOccurs="0"/>
<element name="Credentials" type="rm:CredentialsType"
minOccurs="0"/>
<element name="SpecialRequirements"
type="rm:SpecialRequirementsType" minOccurs="0"/>
<element name="ResponsibleParty" type="rm:ContactInformationType"
minOccurs="0"/>
<element name="OwnershipInformation"
type="rm:OwnershipInformationType" minOccurs="0"/>
<element name="ResourceStatus" minOccurs="0">
<complexType>
<sequence>
<element name="InventoryRefreshDateTime"
type="rm:DateTimeType" minOccurs="0"/>
<element name="DeploymentStatus" type="rm:ValueListType"
minOccurs="0"/>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
<element name="AssignmentInformation" minOccurs="0">
<complexType>
<sequence>
<element name="Quantity" type="rm:QuantityType"/>
<element name="Restrictions" type="rm:RestrictionsType"
minOccurs="0"/>
<element name="AnticipatedFunction"
type="rm:AnticipatedFunctionType" minOccurs="0"/>
<element name="PriceQuote" type="rm:PriceQuoteType" minOccurs="0"/>
<element name="OrderID" type="rm:OrderIDType" minOccurs="0"/>
<element name="AssignmentInstructions"
type="rm:AssignmentInstructionsType" minOccurs="0"/>
</sequence>
</complexType>
</element>
<element name="ScheduleInformation" minOccurs="0" maxOccurs="unbounded">
<complexType>
<sequence>
<element name="ScheduleType">
<simpleType>
<restriction base="rm:ScheduleTypeType">
<enumeration value="ActualDeparture"/>

```

```

        <enumeration value="Committed"/>
        <enumeration value="RequestedArrival"/>
        <enumeration value="RequestedDeparture"/>
        <enumeration value="EstimatedReturnDeparture"/>
        <enumeration value="RequestedReturnArrival"/>
        <enumeration value="EstimatedReturnArrival"/>
        <enumeration value="ReportTo"/>
        <enumeration value="EstimatedArrival"/>
        <enumeration value="EstimatedDeparture"/>
        <enumeration value="RequestedReturnDeparture"/>
        <enumeration value="BeginAvailable"/>
        <enumeration value="EndAvailable"/>
        <enumeration value="Current"/>
        <enumeration value="Route"/>
    </restriction>
</simpleType>
</element>
<element name="DateTime" type="rm:DateTimeType" minOccurs="0"/>
<element name="Location" type="rm:LocationType" minOccurs="0"/>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</sequence>
</complexType>
</element>
</schema>

```

#### 4.4.2.4.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxlde="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
    <documentation>C2SENSE Distribution Web Service</documentation>
    <types>
        <xsd:schema>
            <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../../DE/EDXL-DE.xsd"/>
        </xsd:schema>
    </types>

```

```

<message name="SendMessage_Message">
  <documentation>Send Message</documentation>
  <part name="body" element="edxlde:EDXLDistribution"/>
</message>
<message name="ReceiveResponseMessage_Message">
  <documentation>Receive Response Message</documentation>
  <part name="body" element="edxlde:EDXLDistribution"/>
</message>
<portType name="Distribution_PortType">
  <operation name="SendMessage">
    <input message="tns:SendMessage_Message"/>
    <output message="tns:ReceiveResponseMessage_Message"/>
  </operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
  <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="SendMessage">
    <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
    <input>
      <soap12:body use="literal"/>
    </input>
    <output>
      <soap12:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>

```

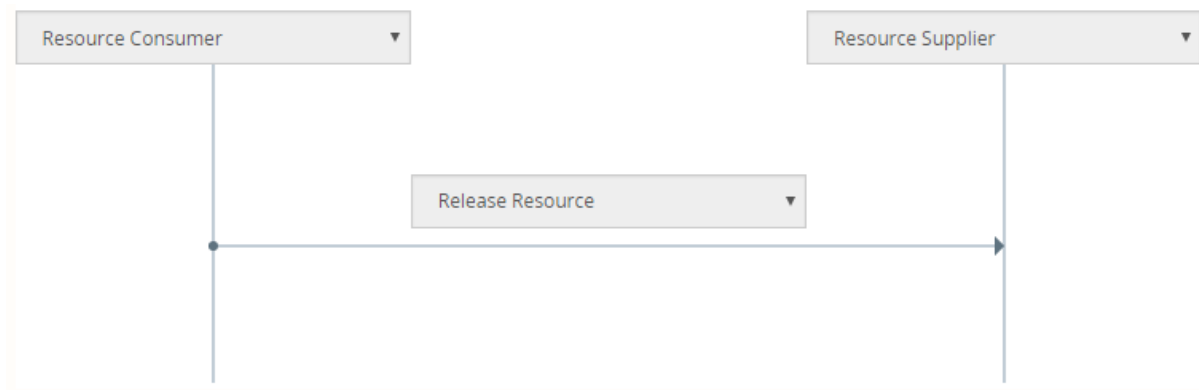
### 4.4.3. Release Resource

#### 4.4.3.1. Description

Categories	Description and Values
Identifier	1457341060617
Description	The Resource Consumer releases a resource back to the Resource Supplier.

Actors	Resource Consumer, Resource Supplier
Pre-conditions	<p>The Resource Consumer and the Resource Supplier have already identified each other.</p> <p>The Resource Consumer has already allocated resources from the Resource Supplier.</p>
Post-conditions	Resources are released back to the Resource Supplier.

#### 4.4.3.2. Interaction Diagram



#### 4.4.3.3. Release Resource Message

##### 4.4.3.3.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:rmsg="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg"
  xmlns:rm="urn:oasis:names:tc:emergency:EDXL:RM:1.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  targetNamespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0:msg" elementFormDefault="qualified"
  attributeFormDefault="unqualified">
  <import namespace="urn:oasis:names:tc:emergency:EDXL:RM:1.0" schemaLocation="EDXL-
  RMCommonTypes.xsd"/>
  <element name="ReleaseResource">
    <complexType>
      <sequence>
        <element name="MessageID" type="rm:MessageIDType"/>
        <element name="SentDateTime" type="rm:DateTimeType"/>
      
```

```

    <element name="MessageContentType">
      <simpleType>
        <restriction base="rm:MessageContentTypeType">
          <enumeration value="ReleaseResource"/>
        </restriction>
      </simpleType>
    </element>
    <element name="MessageDescription" type="rm:MessageDescriptionType" minOccurs="0"/>
    <element name="OriginatingMessageID" type="rm:MessageIDType"/>
    <element name="PrecedingMessageID" type="rm:MessageIDType" minOccurs="0"/>
    <element name="IncidentInformation" type="rm:IncidentInformationType" minOccurs="0"
maxOccurs="unbounded"/>
    <element name="ContactInformation" type="rm:ContactInformationType"
maxOccurs="unbounded"/>
    <element name="ResourceInformation" maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="ResourceInfoElementID" type="rm:ResourceInfoElementIDType"/>
          <element name="ResponseInformation" type="rm:ResponseInformationType"
minOccurs="0"/>
          <element name="Resource">
            <complexType>
              <sequence>
                <element name="ResourceID" type="rm:ResourceIDType"/>
                <element name="Name" type="rm:ResourceNameType"/>
                <element name="TypeStructure" type="rm:ValueListType"
minOccurs="0"/>
                <element name="TypeInfo" type="rm:TypeInfoType" minOccurs="0"/>
                <element name="Keyword" type="rm:ValueListType" minOccurs="0"
maxOccurs="unbounded"/>
                <element name="Description" type="rm:DescriptionType"
minOccurs="0"/>
                <element name="Credentials" type="rm:CredentialsType"
minOccurs="0"/>
                <element name="SpecialRequirements"
type="rm:SpecialRequirementsType" minOccurs="0"/>
                <element name="ResponsibleParty" type="rm:ContactInformationType"
minOccurs="0"/>
                <element name="OwnershipInformation"
type="rm:OwnershipInformationType" minOccurs="0"/>
                <element name="ResourceStatus" minOccurs="0">
                  <complexType>
                    <sequence>
                      <element name="DeploymentStatus" type="rm:ValueListType"
minOccurs="0"/>
                      <element name="Availability" type="rm:AvailabilityType"
minOccurs="0"/>
                    </sequence>
                  </complexType>
                </element>
              </sequence>
            </complexType>
          </element>
        </sequence>
      </complexType>
    </element>

```

```

        </element>
        <element name="AssignmentInformation" minOccurs="0">
          <complexType>
            <sequence>
              <element name="Quantity" type="rm:QuantityType"/>
              <element name="Restrictions" type="rm:RestrictionsType"
minOccurs="0"/>
              <element name="AnticipatedFunction"
type="rm:AnticipatedFunctionType" minOccurs="0"/>
              <element name="PriceQuote" type="rm:PriceQuoteType" minOccurs="0"/>
              <element name="OrderID" type="rm:OrderIDType" minOccurs="0"/>
              <element name="AssignmentInstructions"
type="rm:AssignmentInstructionsType" minOccurs="0"/>
            </sequence>
          </complexType>
        </element>
        <element name="ScheduleInformation" minOccurs="0" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="ScheduleType">
                <simpleType>
                  <restriction base="rm:ScheduleTypeType">
                    <enumeration value="ActualReturnDeparture"/>
                    <enumeration value="Current"/>
                    <enumeration value="RequestedArrival"/>
                    <enumeration value="EstimatedArrival"/>
                    <enumeration value="ActualArrival"/>
                    <enumeration value="RequestedDeparture"/>
                    <enumeration value="EstimatedDeparture"/>
                    <enumeration value="ActualDeparture"/>
                    <enumeration value="RequestedReturnDeparture"/>
                    <enumeration value="RequestedReturnArrival"/>
                    <enumeration value="BeginAvailable"/>
                    <enumeration value="EndAvailable"/>
                    <enumeration value="Committed"/>
                    <enumeration value="ReportTo"/>
                    <enumeration value="EstimatedReturnDeparture"/>
                    <enumeration value="EstimatedReturnArrival"/>
                    <enumeration value="Route"/>
                  </restriction>
                </simpleType>
              </element>
              <element name="DateTime" type="rm:DateTimeType" minOccurs="0"/>
              <element name="Location" type="rm:LocationType" minOccurs="0"/>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </complexType>
  </element>

```

```

    </sequence>
  </complexType>
</element>
</schema>

```

#### 4.4.3.3.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxlde="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxlde:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>
    <part name="body" element="edxlde:EDXLDistribution"/>
  </message>
  <portType name="Distribution_PortType">
    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
      <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
  </portType>
  <binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
      <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
      <input>
        <soap12:body use="literal"/>
      </input>
      <output>
        <soap12:body use="literal"/>
      </output>
    </operation>
  </binding>

```





```
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>
```