

PROGRAMME & DEVELOPMENT SERVICES

XML Services

Ver 6.3

Reference Document - Routing Service



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1 Introduction

This document describes the XML public interface for the DHL Routing service. The document specifies the XML message document used to invoke these service functions, and the response XML message document from the service.

In this document are the Routing Request and Routing Response schema. Tables describe the data elements to be found in each schema.

Note: These schema conform to the May 2, 2001 XML Schema recommendation of the W3C. For more information see the XML Schema page of the W3C Web site at http://www.w3c.org/XML/Schema.

1.1 Implementation of the Service

This service is implemented using XML messaging. The customer/partner is responsible for sending an XML message in the format displayed in the Request schema in this document. The customer/partner is responsible for implementing the capability to receive XML messages in the format displayed in the Response schema in this document.

1.2 About the Routing Service

The Routing service is used to validate the origin and destination addresses.

The following tables describe the elements found in the Routing service Request and

1.3 About the Data Element Definition Tables

the segment is indicated in **Definition**.

□ Element Name is the data element's name within the XML document.
 □ Datatype/Format indicates the data element's type or format if no specific datatype is listed (for example, text strings). To view the complete set of the datatypes for all XML Shipping Services, see the document entitled XML Shipping Services: Datatype Definitions.
 □ Definition is a short description of the data element.
 □ Req(uired) indicates whether an element is required and the number of times the element can occur in the message. Each element occurs only once, unless otherwise specified. If the element can occur more than once, the maximum number of occurrences is indicated in parentheses.
 □ M indicates that the segment is mandatory.
 □ O indicates that segment is optional.
 □ C indicates that segment is conditional. The condition that triggers the requirement of

• **Type** indicates the value type—either numeric, alphanumeric (indicated in the table as A/N), date, or integer.



ength indicates the length of the value. Any special format of the field value is indicated in parentheses.
Valid Values indicates required values, if any. Where specific values are expected, the value passed in the message is indicated in bold text , followed by the literal meaning in parentheses.



2 Routing Request

The following is the Routing request schema. The schema has been defined based on origin and destination routing request. Following the schema is a table outlining the data elements found in the schema. Each element in the schema is defined in brief wherever it occurs.

3 Routing Request Schema

Following is the schema of routing request. All XML request for routing should confirm to the following schema file.

```
<?xml version="1.0"?>
<xsd:schema targetNamespace="http://www.dhl.com" xmlns:dhl="http://www.dhl.com/datatypes_global"
xmlns="http://www.dhl.com" xmlns:xsd="http://www.w3.org/2001/XMLSchema" elementFormDefault="unqualified">
<xsd:import namespace="http://www.dhl.com/datatypes_global" schemaLocation="datatypes_global_v62.xsd"/>
<xsd:element name="RouteRequest">
   <xsd:annotation>
             <xsd:documentation>Root element of Routing (Origin/Destination) request</xsd:documentation>
   </xsd:annotation>
       <xsd:complexType>
       <xsd:sequence>
                 <xsd:element name="Request" type="dhl:Request"/>
                 <xsd:element name="RegionCode" type="dhl:RegionCode" />
                 <xsd:element name="RequestType">
                 <xsd:annotation>
                       <xsd:documentation>Defines the type of routing to be done (O: Origin D:Destination)
                                </xsd:documentation>
                </xsd:annotation>
                     <xsd:simpleType>
                              <xsd:restriction base="xsd:string">
                                <xsd:length value="1"/>
                                <xsd:enumeration value="O"/>
                                 <xsd:enumeration value="D"/>
                              </xsd:restriction>
                     </xsd:simpleType>
                     </xsd:element><xsd:element name="Address1" type="dhl:AddressLine" minOccurs="0"/>
                     <xsd:element name="Address2" type="dhl:AddressLine" minOccurs="0"/>
                     <xsd:element name="Address3" type="dhl:AddressLine" minOccurs="0"/>
                     <xsd:element name="PostalCode" type="dhl:PostalCode" minOccurs="0"/>
                     <xsd:element name="City" type="dhl:City"/>
                     <xsd:element name="Division" type="dhl:Division" minOccurs="0"/>
                     <xsd:element name="CountryCode" type="dhl:CountryCode"/>
                     <xsd:element name="CountryName" type="dhl:CountryName"/>
                     <xsd:element name="OriginCountryCode" type="dhl:CountryCode"/>
           <xsd:attribute name="schemaVersion" type="xsd:decimal" use="required" fixed="2.0"/>
           </xsd:complexType>
 </xsd:element>
 </xsd:schema>
```

Routing Request Data Element Definitions

The following table describes the data elements found in the routing Request schema:



Element Name	Datatype/Format	Req	Definition	Valid Values
Request	dhl:Request	М	Identifies the message as a request message	
RegionCode	dhl:RegionCode	M	Indicate the region code of the Routing request	AP – Asia Pacific + Emerging Market EU – Europe (EU + Non-EU) AM – Americas (LatAm + US + CA)
RequestType	xsd:string	M	Determines the type of routing to be done.	O - Origin, D - Destination
Address1	dhl:AddressLine	0	First line of address	
Address2	dhl:AddressLine	О	Second line of address	
Address3	dhl:AddressLine	О	Third line of address	
PostalCode	dhl:PostalCode	M	Postal code	
City	dhl:City	M	City of the address	
Division	dhl:Division	О	State/ state code for the address	
CountryCode	dhl:CountryCode	M	Country/Region code of address	Please refer to the Reference Data (DHL Country/Region).
CountryName	dhl:CountryName	M	Country/Region Name of address	
OriginCountryCode	dhl:CountryCode	M	Country/Region code of origin.	Please refer to the Reference Data (DHL Country/Region).

3.1 Request Element

The element contains the header information for the message. It is present in both the request and response XML message. The request element contains a complex datatype ServiceHeader and MetaData.

3.1.1 ServiceHeader Element

The Service Header element contains the header information about the request message. This element must be declared only once in the Request element.



ServiceHeader Element Definitions

The following table describes the data elements found in the ServiceHeader schema:

Element Name	Datatype/Format	Req	Definition	Valid Values
MessageTime	xsd:dateTime	О	Identifies the message time. It is a mandatory field in request message	
MessageReference	MessageReference	0	Message reference number.	
SiteID	SiteID	M	Identifies the sender of the request message. It is a mandatory field in the request message.	
Password	Password	M	Authenticates the sender of the message. It is a mandatory field in request message.	

3.1.1.1 MessageTime Element

The Message Time element contains the time at which the message was send by the requestor. The format of the should be YYYY-MM-DD(T)hh-mm-ss-Time Zone where "T" is the separator between date and time.

```
e.g. 2002-12-02T13:23:18-07:00
```

3.1.1.2 Message Reference Element

The Message Reference element contains the unique reference to the message, so that trace of a particular message can be done easily. It must be of minimum length of 28 and maximum 32.

```
<xsd:element name="MessageReference" type="MessageReference" minOccurs="0">
<xsd:annotation>
<xsd:documentation>A string, peferably number, to uniquely identify individual
messages. Minimum length must be 28 and maximum length is 32
</xsd:documentation>
</xsd:annotation>
</xsd:element>
```



3.1.1.3 SiteID Element

The site id element is used to identify the requestor of the message. Each partner/customer is provided with the site id and password. Each request message received is validated with this before proceeding forward.

3.1.1.4 Password Element

The password element is used to identify the requestor of the message. Each partner/customer is provided with the site id and password. Each request message received is validated with this before proceeding forward.

3.1.2 MetaData Element

The Metadata element is used to identify the software name and software version used by customer or third party vendor. It is mandatory field.

```
<xsd:complexType name="MetaData">
    <xsd:annotation>
         <xsd:documentation>MetaData header</xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
         <xsd:element name="SoftwareName">
                   <xsd:simpleType>
                            <xsd:restriction base="xsd:string">
                                      <xsd:maxLength value="30" />
                            </xsd:restriction>
                   </xsd:simpleType>
         </xsd:element>
         <xsd:element name="SoftwareVersion">
                   <xsd:simpleType>
                             <xsd:restriction base="xsd:string">
                                      <xsd:maxLength value="10" />
                            </xsd:restriction>
                   </xsd:simpleType>
         </xsd:element>
    </xsd:sequence>
</xsd:complexType>
```



Element Name	Datatype/Format	Req	Definition	Valid Values
Software Name	xsd:string		Identifies the software name. Max length: 30 characters	Eg. Application Name
Software Version	xsd:string			Eg. Application Version Number

3.2.2.1 Software Name

The Software Name element is used to identify the software name used by customer or third party vendor. It is mandatory field.

3.2.2.2 Software Version

The Software Version element is used to identify the software version used by customer or third party vendor. It is mandatory field.

3.2 RegionCode Element

The RegionCode element indicates the shipment to be route to the specific region eCom backend. It is a mandatory field. The valid values are AP, EU and AM.

3.3 RequestType Element



RequestType element is used to determine whether origin routing or destination routing is to be done.

3.4 Address1 Element

The Address1 element contains the first line of address.

Note: Using a CDATA definition is recommended for contents of this element. It is allowed to use without CDATA definition for extended characters and request XML must be saved in UTF-8 format. This field supports Cyrillic Characters.

3.5 Address2 Element

The Address2 element contains the second line of address.

Note: Using a CDATA definition is recommended for contents of this element. It is allowed to use without CDATA definition for extended characters and request XML must be saved in UTF-8 format. This field supports Cyrillic Characters.

3.6 Address3 Element

The Address3 element contains the third line of address.



Note: Using a CDATA definition is recommended for contents of this element. It is allowed to use without CDATA definition for extended characters and request XML must be saved in UTF-8 format. This field supports Cyrillic Characters.

3.7 PostalCode Element

The Postal Code element contains the postal code of the address to be validated.

3.8 City Element

The City element contains the City of the routing address.

Note: Using a CDATA definition is recommended for contents of this element. It is allowed to use without CDATA definition for extended characters and request XML must be saved in UTF-8 format. This field supports Cyrillic Characters.

3.9 Division Element

The Division element contains the state or state code of the routing place.



```
</xsd:restriction>
</xsd:simpleType>
</xsd:element>
```

Note: Using a CDATA definition is recommended for contents of this element. It is allowed to use without CDATA definition for extended characters and request XML must be saved in UTF-8 format. This field supports Cyrillic Characters.

3.10 CountryCode Element

The Country Code element contains the country/region code of the routing place. It must be of 2 letters. Please refer to the Reference Data (DHL Country/Region) for country/region codes.

3.11 CountryName Element

The CountryName element contains the country/region name of the address to the routing place. The tag is required but even if the value is blanks a valid response will be returned.

3.12 OriginCountryCode Element

The OriginCountryCode element contains the country/region code of origin. Please refer to the Reference Data (DHL Country/Region) for country/region codes.



4 Routing Response Schema

Following is the schema of routing response. All successful routing response confirm to the following schema file.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://www.dhl.com" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.dhl.com" xmlns:dhl="http://www.dhl.com/datatypes global" elementFormDefault="unqualified">
 <xsd:import namespace="http://www.dhl.com/datatypes_global" schemaLocation="datatypes_global.xsd"/>
<xsd:element name="RouteResponse">
<xsd:annotation>
      <xsd:documentation>Routing response root element</xsd:documentation></xsd:annotation>
     <xsd:complexType>
     <xsd:sequence>
               <xsd:element name="Response" type="dhl:Response"/>
<xsd:element name="Note" type="dhl:Note"/>
                <xsd:element name="GMTNegativeIndicator" type="xsd:string"/>
                <xsd:element name="GMTOffset" type="xsd:string"/>
               <xsd:element name="RegionCode" type="dhl:RegionCode"/> <xsd:element name="ServiceArea" type="dhl:ServiceArea" />
     </xsd:sequence>
     </xsd:complexType>
</xsd:element>
</xsd:schema>
```

Routing Response Data Element Definitions

The Routing Response schema contains the following five elements.

Element Name	Datatype/Format	Req	Definition	Valid Values
Response	dhl:Response	M	Response for the routing request	
Note	dhl:Note	M	The note or warning message for the response message	
GMTNegativeIndicator	xsd:string	M	It determines whether the location time is greater than or lesser than the GMT.	'Y' or 'N'
GMTOffset	xsd:string	M	Difference between location time and standard GMT.	
RegionCode	dhl:RegionCode	M	Indicate the region code of the Routing request	AP – Asia Pacific + Emerging Market EU – Europe (EU + Non-EU) AM – Americas (LatAm + US + CA)
ServiceArea	dhl:ServiceArea	M	Details of the service area.	

4.1 Response

The element contains the header information for the message. It is present in both the request and response XML message. The request element contains a complex datatype ServiceHeader.



```
<xsd:element name="ServiceHeader" type="ServiceHeader"/>
</xsd:sequence>
</xsd:complexType>
```

4.1.1 ServiceHeader Element

The Service Header element contains the header information about the response message. This element must be declared only once in the Response element.

```
<xsd:complexType name="ServiceHeader">
<xsd:annotation>
         <xsd:documentation>Standard routing header</xsd:documentation>
</xsd:annotation>
<xsd:sequence>
         <xsd:element name="MessageTime" type="xsd:dateTime" minOccurs="0">
         <xsd:annotation>
                  <xsd:documentation>Time this message is sent</xsd:documentation>
         </xsd:annotation>
         </xsd:element>
         <xsd:element name="MessageReference" type="MessageReference" minOccurs="0">
         <xsd:annotation>
                  <xsd:documentation>A string, peferably number, to uniquely identify individual messages.
                           Minimum length must be 28 and maximum length is 32
                  </xsd:documentation>
         </xsd:annotation>
         </xsd:element>
         <xsd:element name="SiteID" type="SiteID" >
</xsd:sequence>
</xsd:complexType>
```

ServiceHeader Element Definitions

The following table describes the data elements found in the ServiceHeader schema:

Element Name	Datatype/Format	Req	Definition	Valid Values
MessageTime	xsd:dateTime	О	Identifies the message time.	
MessageReference	MessageReference	О	Message reference number.	
SiteID	SiteID	M	Identifies the sender of the response	
			message.	

4.1.1.1 MessageTime Element

The Message Time element contains the time at which the message was send by the requestor. The format of the should be YYYY-MM-DD(T)hh-mm-ss-Time Zone where "T" is the separator between date and time.

```
e.g. 2002-12-02T13:23:18-07:00

<xsd:element name="MessageTime" type="xsd:dateTime" minOccurs="0">

<xsd:annotation>

<xsd:documentation>Time this message is sent</xsd:documentation>

</xsd:annotation>
```

4.1.1.2 Message Reference Element

The Message Reference element contains the unique reference to the message, so that



trace of a particular message can be done easily. It must be of minimum length of 28 and maximum 32.

4.1.1.3 SiteID Element

The site id element is used to identify the requestor of the message. Each partner/customer is provided with the site id and password.

4.2 Note Element

The Note element is a complex element which consists of two child elements "ActionNote" and "Condition" element. The Note element is returned by the backend service while processing the routing request. The element is a mandatory element.

Element Name	Datatype/Format	Req	Definition	Valid Values
ActionNote	xsd:string	О	Response for the routing request	
Condition	Note	О	Note for the routing response	

4.2.1 Action Note



The Action note is returned by the backend service in response to the routing request.

```
<xsd:element name="ActionNote" type="xsd:string" minOccurs="0" />
```

4.2.2 Condition Note

The Condition note element is an optional field. It is a complex element which consists of ConditionCode and ConditionData.

Element Name	Datatype/Format	Req	Definition	Valid Values
ConditionCode	xsd:string	M	Code for the condition	Please refer to the Reference Data (Error Messages)
ConditionData	xsd:string	О	Data for the condition	

4.2.2.1 ConditionCode

The condition code element contains the code for the condition. It is a mandatory field in the Condition segment.

```
<xsd:element name="ConditionCode" type="xsd:string"/>
```



4.2.2.2 ConditionData

The Condition Data element contains the data for the condition. It is an optional field in the Condition segment.

```
<xsd:element name="ConditionData" type="xsd:string" minOccurs="0"/>
```

4.3 GMTNegativeIndicator

The GMTNegativeIndicator element is a simple type of element which depicts whether the service areas time is less than or greater than GMT.

```
<xsd:element name="GMTNegativeIndicator" type="xsd:string"/>
```

4.4 GMTOffset

The GMToffset element is a simple type of element which gives the time difference between the service areas time and GMT.

```
<xsd:element name="GMTOffset" type="xsd:string"/>
```

4.5 RegionCode Element

The RegionCode element indicates the shipment to be route to the specific region eCom backend. The valid values are AP, EU and AM.

4.7 ServiceArea Element

The ServiceArea element is a complex type of element which contains two child elements: ServiceAreaCode and Description.



ServiceArea Element Definitions

The following table describes the data elements found in the ServiceArea schema:

Element Name	Datatype/Format	Req	Definition	Valid Values
ServiceAreaCode	dhl:ServiceAreaCode	О	Identifies the area code.	
Description	xsd:string	0	Detailed description for the Area code	
			such as city, state, country/region etc.	

4.7.1 ServiceAreaCode

This element contains a three letter code for area. It is an optional element.

4.7.2 Description

The Description element contains description of the area code like the city, state and country/region etc. It is an optional element.

