



Royal Mail Group

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## **International Tracked Direct API (REST)**

### **Technical User Guide**

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This API specification details the requirements for integrating with International Tracked Direct API (REST). It specifically covers how International Tracked Direct API can be used by business customers to create their international tracked shipments and provides the technical information to build this integration.

24<sup>th</sup> October 2016

Version 1.0

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# 1 Document Control

## 1.1 Terms and Abbreviations

Term	Meaning
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol over SSL
IP	Internet Protocol
REST	REpresentational State Transfer
Swagger	Specification for defining RESTful web services
Bagged	Shipments are ready for despatch and generates the required label(s) for your parcel(s)
Manifested	Customer Collection Receipt has been created and Customer Collection Receipt has been printed

Table 1 – Terms and Abbreviations

## 1.2 Version History

Version	Date	Author	Notes
0.1	03/10/2016	RMG	Document created and baselined.
1.0	24/10/2016	RMG	Update following internal review

Table 2 – Document Version History

## 2 Overview

International Tracked Direct API provides the integration method to Royal Mail business customers for using Royal Mail's international tracked direct service. This API offers the capability of creation and cancellation of an international shipment, printing/getting bag label(s) and manifest and tracking international tracked direct shipments. Built on industry standards, the International Tracked Direct API provides a simple and low cost method for customers to integrate with Royal Mail, and allows them to get international shipping quickly.

There are no costs to customers for using the International Tracked Direct API, however customers' own development costs must be covered by the customer developing the solution. Royal Mail will not accept any responsibility for these development, implementation and testing costs.

Customers should address initial enquiries regarding development of systems for these purposes to their account handler.

### 3 Purpose

This document is to provide Royal Mail customers with guidelines and detailed specifications for integrating with the International Tracked Direct API RESTful web service.

The document details:

- The specification for the web service interface for customers who want to
  - Create their International Tracked Direct shipment
  - Get bag label and manifest for these shipments
  - Cancel any shipment that has not been confirmed yet
  - Get tracking history for an International Tracked Direct shipment
- The errors the API can return
- Non-functional characteristics of the API including response times, service availability and security considerations

This document is primarily intended to be read by developers and other technical roles involved with integrating customer systems' with the International Tracked Direct API. This document should be read in conjunction with the following artefacts which are available from the 'International Tracked Direct API (REST)' page on the [Royal Mail API \(Developer\) Portal](#):

- International Tracked Direct API Swagger Definition
- International Tracked Direct API XSDs
- International Tracked Direct API Reference Data
- International Tracked Direct API Sample Data

## 4 Introduction to International Tracked Direct API V1

### 4.1 Overview

The International Tracked Direct API provides the capability for customers to create and cancel an international tracked direct shipment, getting bag label(s) and manifest for these shipments and obtaining tracking information.

In simplest terms the logical flow is as follows:

- **Create Shipment** – The customer creates an international direct shipment in the system, which will provide the final mile carrier label. The shipment will remain in an 'un-processed' state until closed out.
- **Cancel Shipments** – The customer will be able to cancel the shipments before they are 'confirmed'.
- **Create Bag Label** – The customer will be able to close out (finalise) the shipments. This will return the container label(s) along with the manifest. A successful close out will change the shipment status to 'confirmed'.
- **Track Shipment** – The customer can retrieve the tracking history of a shipment once it has been 'confirmed'.

### 4.2 Interface Components

Please see Figure 1 below for a graphical representation of the interface between Royal Mail and customers for the International Tracked Direct API. This document covers what information is to be exchanged, how this information is structured and the means by which it is transferred.

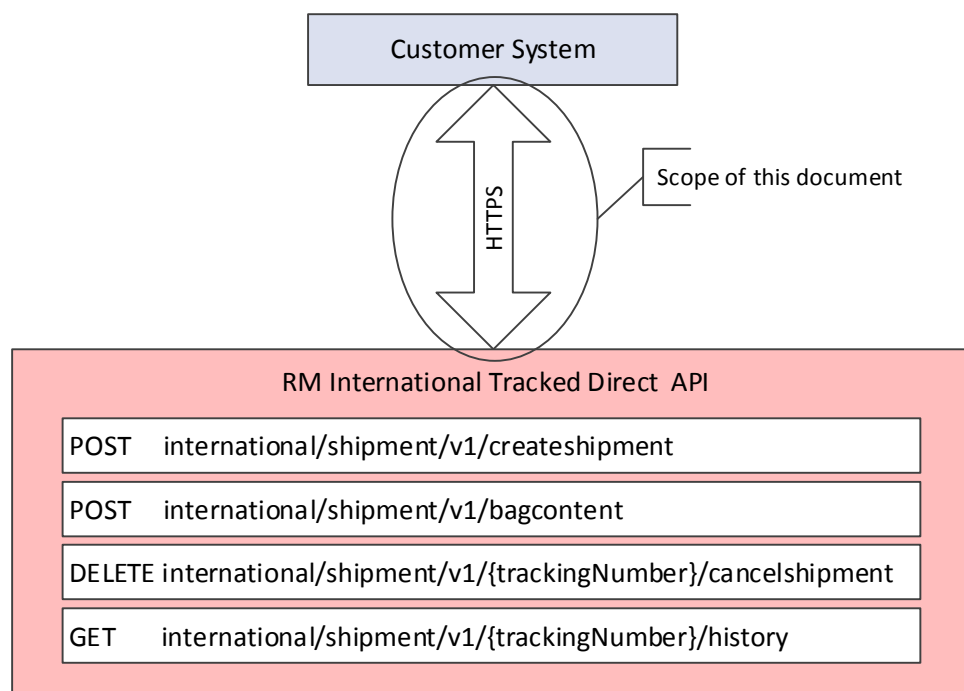


Figure 1 – International Tracked Direct API

## 5 Integrating with the International Tracked Direct API

The high-level process associated with integrating with the International Tracked Direct API is represented and described in the diagram below.

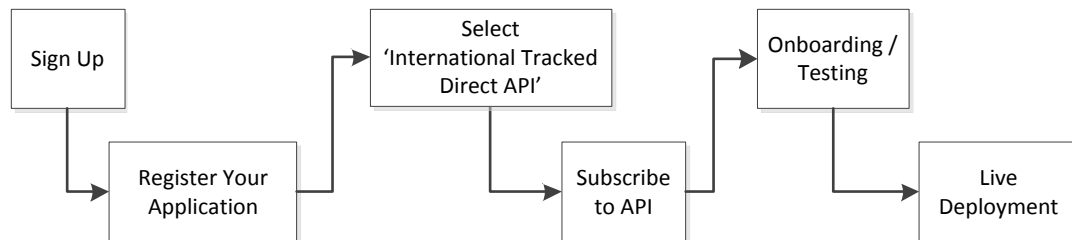


Figure 1 – Process for Integrating with the API

Access to the service is managed through RMG's API Management system.

New users of the system will need to:

1. Sign up for an account and accept the terms and conditions on the [Royal Mail API \(Developer\) Portal](#).
2. Register the 'application' which will be calling the API. When the application is registered, it will be assigned a unique system-generated Client ID and Secret which is needed to securely access the API. It is important that these credentials are noted and securely stored.
3. Request to subscribe to the API. This will result in an e-mail being automatically generated and sent to the Royal Mail Customer Solutions team.
4. Once approved, testing can be performed against the API in a sandboxed on-boarding environment that allows you to test the integration.
5. Once all required testing has completed in the on-boarding environment, access to the live production system will be provided at a mutually agreed date/time.

Existing users who already have an account with Royal Mail's API Management system will need to perform step 2 onwards if the application accessing the API is different to any currently registered applications. If the application accessing the API is already registered, existing customers will need to perform step 3 onwards.

### 5.1 Terms & Conditions

You must accept the Royal Mail Terms and Conditions when creating your customer account. These cover the ways in which the service may be used and any integration activities must abide by these.

Of particular note to developers:

- The on-boarding environment is available 24x7 and is a small scale system for functional testing only. It may not be used for performance testing.
- Royal Mail expects customers to use the service in a responsible way; this includes refraining from continuously polling the API for updates.



- The API imposes a cap on the number of transactions per second for each customer. Excessive volumes of traffic over the configured throttling limit will result in transactions being rejected.

## 5.2 API Access

Both on-boarding and live access to the API is obtained via the following URL:

<https://api.royalmail.net/international/shipment/v1/{resource}>

The API supports HTTP POST, DELETE and GET for its different operations (see Figure 1 above).

Please note:

- Response formats supported: application/xml
- See section 6 for all operations and parameters which are supported by this API.
- The Client ID and Secret must be provided in the HTTP header of all API requests otherwise access to the API will be rejected and a HTTP 401 (Unauthorised) will be returned. The Client ID and Secret are obtained by registering an application on the [Royal Mail API \(Developer\) Portal](#).
- Please see section 7 for a full list of technical and business error codes which are returned by this API.

You must complete all required test activities in the on-boarding environment prior to being permitted access to the live environment by the Royal Mail Customer Solutions Team. The on-boarding test environment is available 24x7, has the same functionality as live (though with a reduced capacity) and allows you to test your integration.

You will be provided with a contact in Royal Mail who will take you through the on-boarding process.

## 5.3 Live Deployment

Once you have completed all required testing in the on-boarding environment you will be provided with access to the live production system.

## 5.4 API Versioning

Royal Mail is continuously working to improve its technology, and as part of this process updates to the services provided may on occasion necessitate a new API version. Royal Mail will look to maintain three versions of the API; as new versions are introduced, previous versions move down the stack until they are ultimately removed completely:

- Latest version
- Previous version
- Deprecated version

Customers will always be encouraged to integrate against the latest version as this will give them the longest stable period without the need to change, but if they have already begun integration activities when a new version is released then they will be able to

integrate against the previous version. Customers should not integrate against the deprecated version.

## 6 International Tracked Direct API Services

### 6.1 Business Services

The table below provides an overview of the business services that are supported by this interface.

Business Service	Web Service Operation	Description	Technology	Conversation Style
Create Shipment	POST international/shipment/v1/ createshipment	Creates an international tracked direct shipment in the system and returns a final mile carrier label.  Shipment stays in unprocessed state until confirmed by CreateBag operation.	XML over HTTPS (REST)	Synchronous Request / Response
Cancel Shipment	DELETE international/shipment/v1/ {trackingNumber}/ cancelshipment	Cancels a shipment which has yet not been confirmed.	XML over HTTPS (REST)	Synchronous Request / Response
Create Bag	POST international/shipment/v1/ bagcontent	Confirms the list of shipments created by createShipment operation. This will put the shipments in the 'processed' state in the system and returns the bag label and manifest for the shipments.	XML over HTTPS (REST)	Synchronous Request / Response
Tracking	GET international/shipment/v1/ {trackingNumber}/history	Retrieves full tracking history of a confirmed shipment.	XML over HTTPS (REST)	Synchronous Request / Response

**Table 1 – Business Services**

### 6.2 HTTP Header Information

#### 6.2.1 Description

The purpose of the HTTP header is to support security and logging functionally within the Royal Mail systems and it is mandatory that it is provided in the request message.

## 6.2.2 Request Message

All service requests to this API will be authorised in accordance with the Client ID and Secret passed in the HTTP headers. Please see table below for the elements which need to be populated in the HTTP header.

Parameter	Optional	Description
Host	No	This is the domain name.
Accept	Yes	This attribute accepts requests in application/xml format.
X-IBM-Client-Id	No	Similar to a client username. Required to access the API.
X-IBM-Client-Secret	No	Similar to a client password. Required to access the API.
X-RMG-Application-Id	No	This is the ten digit Customer Account Number allocated by Royal Mail
X-RMG-Transaction-Id	No	This is a unique number used to identify the transaction as provided by the customer system. Any value can be provided in this field but must contain only the characters 'a-z', 'A-Z', '0-9', '/' and '-'. It allows the consuming application to correlate the response message to its request.
X-RMG-DateTime	Yes	This should be populated with the date timestamp when the message was generated.

Table 2 – HTTP Header Information in the API Request

## 6.2.3 Example Data

Example Request Data for the HTTP Header:

Parameter	Value
Host	api.royalmail.net
Accept	application/xml
X-IBM-Client-Id	f0e4f151-2041-4df2-b31e
X-IBM-Client-Secret	kT0IB2dK0wF6mK0rD8sD7oE7vP2mG7l
X-RMG-Application-Id	0123456789
X-RMG-Transaction-Id	111111111
X-RMG-DateTime	2016-10-11T09:49:45

Table 3 – Example HTTP Header Information for API Request

## 6.3 POST international/shipment/v1/createshipment

### 6.3.1 Description

The *POST international/shipment/v1/createshipment* request operation creates an international tracked direct shipment in the system and returns a final mile carrier label and the tracking number in response. The shipment stays in unprocessed state until confirmed by Create Bag operation.

### 6.3.2 Request Message

URL Path: <https://api.royalmail.net/international/shipment/v1/createshipment>

The createShipmentRequest message structure is detailed below:

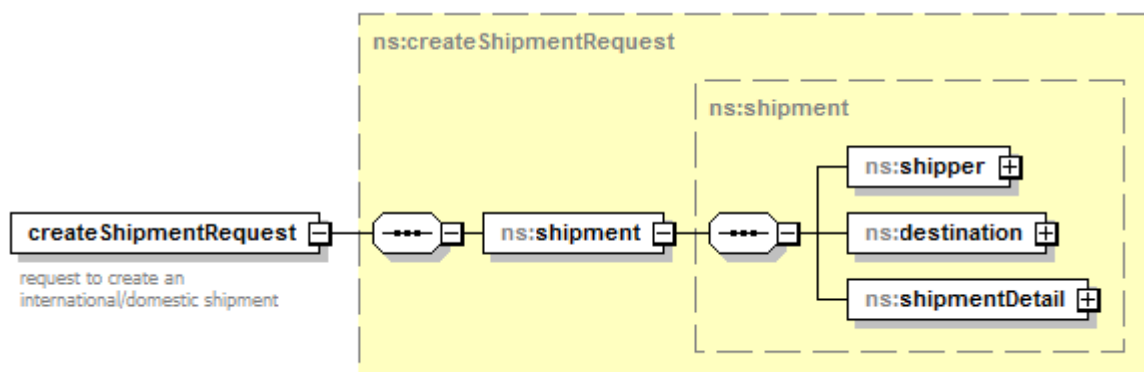


Figure 1 – createshipment Request Message Structure

All elements in the table below are relative to the root createShipmentRequest element.

Field	Type	Max Length	Description	Optional
shipment	element	N/A	Container element for the shipment	No
shipment/shipper	element	N/A	Details of the shipper. Explained further in the table below.	No
shipment/destination	element	N/A	Details of the recipient. Explained further in the table below.	No
shipment/shipmentDetail	element	N/A	Details of the shipment. Explained further in the table below.	No

Table 4 – createshipment Element

### 6.3.2.1 shipper

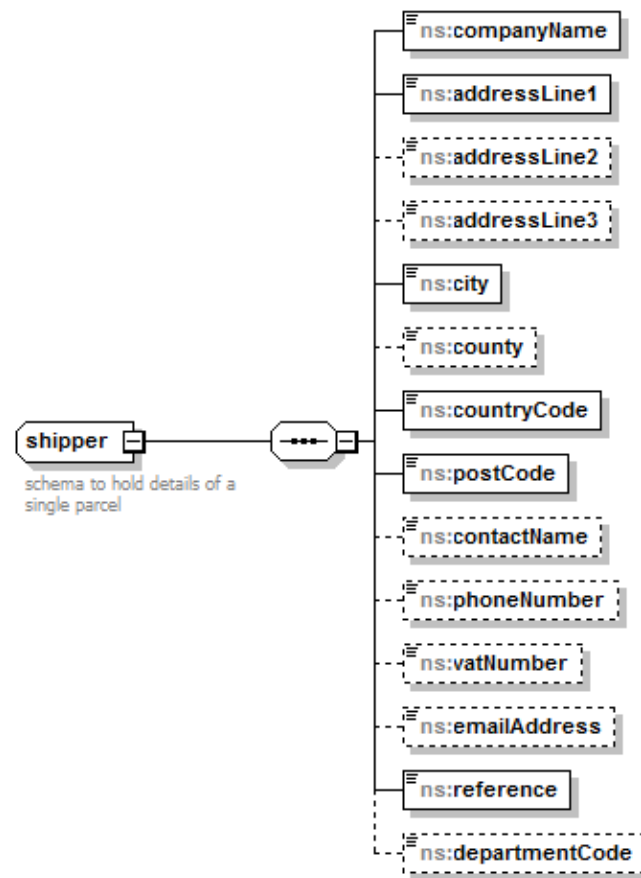


Figure 2 – shipper Structure

All elements defined below are relative to the 'shipper' element:

Field	Type	Max Length	Description	Optional
companyName	string	35	Shipper company name	No
addressLine1	string	35	Shipper address Line1	No
addressLine2	string	35	Shipper address Line2	Yes
addressLine3	string	35	Shipper address Line3	Yes
city	string	20	Shipper city	No
county	string	35	Shipper county	Yes
countryCode	string	2	Shipper country Code	No
postCode	string	10	Shipper post Code	No
contactName	string	40	Shipper contact Name	Yes
phoneNumber	string	N/A	Shipper phone Number	Yes
vatNumber	string	17	Shipper vat Number	Yes
emailAddress	string	40	Shipper email Address	Yes
reference	string	20	Shipper reference	No
departmentCode	string	17	Shipper department Code	Yes

Table 7 – shipper Element

### 6.3.2.2 destination

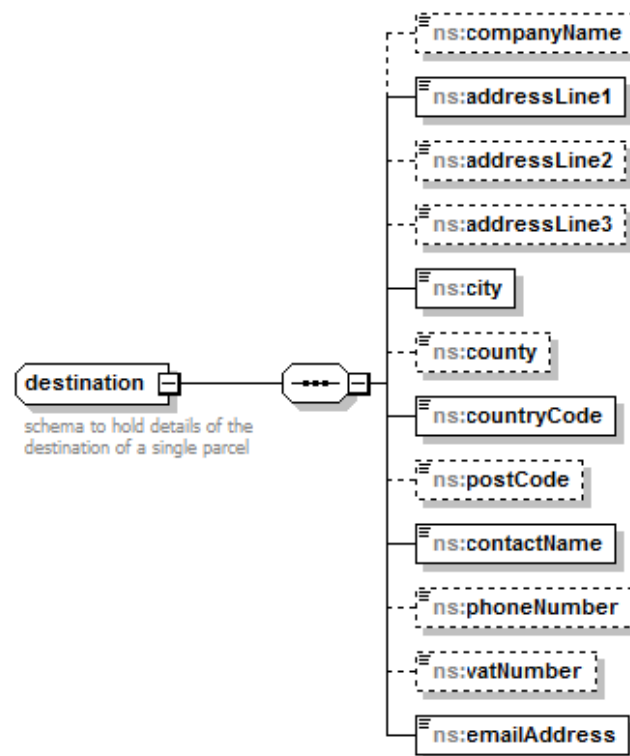


Figure 3 – destination Structure

All elements defined below are relative to the 'destination' element:

Field	Type	Max Length	Description	Optional
companyName	string	35	Recipient company name	Yes
addressLine1	string	35	Recipient address Line1	No
addressLine2	string	35	Recipient address Line2	Yes
addressLine3	string	35	Recipient address Line3	Yes
city	string	20	Recipient city	No
county	string	35	Recipient county	Yes
countryCode	string	2	Recipient country Code	No
postCode	string	10	Recipient post Code	Yes
contactName	string	40	Recipient contact Name	No
phoneNumber	string	N/A	Recipient phone Number	Yes
vatNumber	string	17	Recipient vat Number	Yes
emailAddress	string	40	Recipient email Address	Yes

Table 8 – destination Element

### 6.3.2.3 shipmentDetail

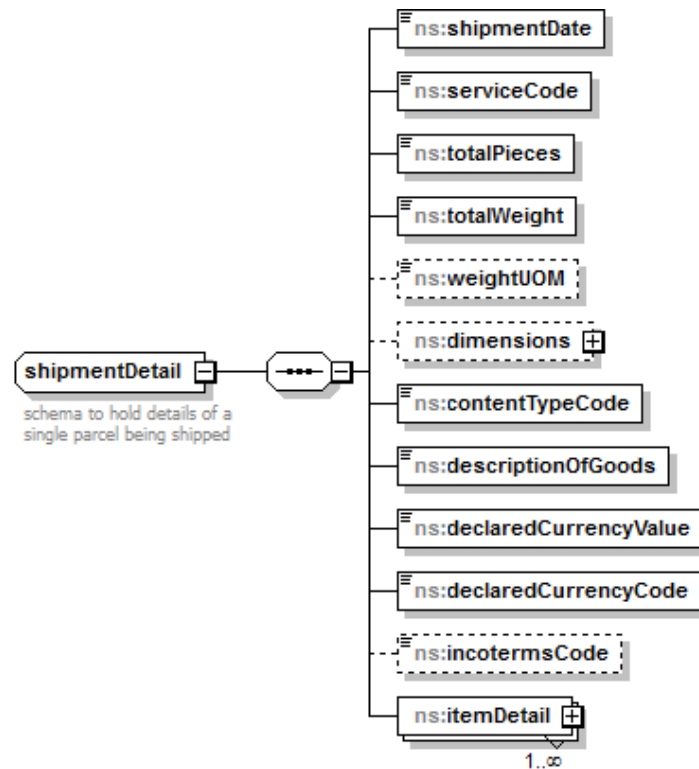


Figure 4 – shipmentDetail Structure

All elements defined below are relative to the 'shipmentDetail' element:

Field	Type	Max Length	Description	Optional
shipmentDate	date	35	Date of despatch	No
serviceCode	string	4	Service code used	No
totalPieces	number	5	Single piece shipment. This should be '1'.	No
totalWeight	string	7,2	Total weight of the parcel including packaging	Yes
weightUOM	string	1	K = Kgs / L = Lbs – Defaults to K if blank	No
dimensions	element	N/A	Container for dimensions. This is explained further in the table below.	Yes
dimensions/uom	string	1	Always "C" for Centimetres	No
dimensions/length	number	4	Shipment length	No
dimensions/width	number	4	Shipment width	No
dimensions/height	number	4	Shipment height	No
contentTypeCode	string	3	'NDX' for parcels	No
descriptionOfGoods	string	70	General description of the goods being sent	Yes
declaredCurrencyValue	decimal	10,2	Total shipment value	No
declaredCurrencyCode	string	3	3 digit ISO Currency code for shipment value	No



Field	Type	Max Length	Description	Optional
incotermsCode	string	3	DDU Only at this time	Yes
itemDetail	element	N/A	Container for item details. This is explained further in the table below	No

Table 9 – shipmentDetail Element

#### 6.3.2.4 dimensions

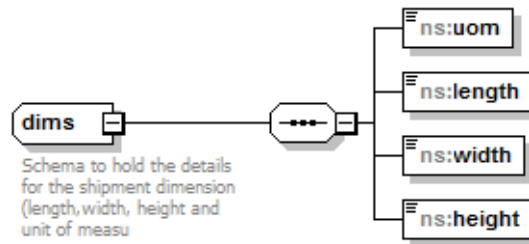


Figure 5 – dimensions Structure

All elements defined below are relative to the 'dimensions' element:

Field	Type	Max Length	Description	Optional
uom	string	1	Always "C" for Centimetres	No
length	number	4	Shipment length	No
width	number	4	Shipment width	No
height	number	4	Shipment height	No

Table 10 – dimensions Element

#### 6.3.2.5 itemDetail

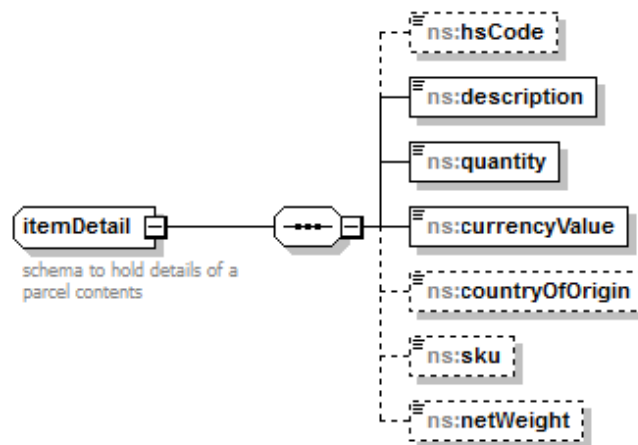


Figure 6 – itemDetail Structure

All elements defined below are relative to the 'itemDetail' element:

Field	Type	Max Length	Description	Optional
hsCode	number	10	Used by Customs to calculate potential duties/taxes	Yes
description	string	255	Description of item	No
quantity	number	5	Number of items in parcel	No
currencyValue	decimal	5,2	Item value	No
countryOfOrigin	string	2	ISO Country Code of item country of origin	Yes
sku	string	10	Individual item SKU code	Yes
netWeight	decimal	5,2	Individual item weight	Yes

Table 11 – itemDetail Element

### 6.3.3 Response Message

The createShipmentResponse message structure is detailed below. A successful business response will be returned as a standard HTTP response code of 200.

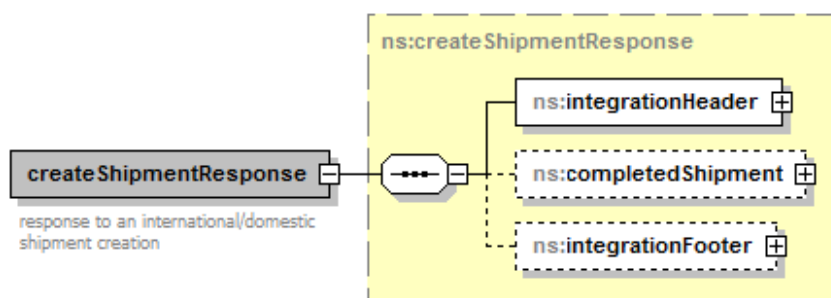


Figure 7 – createShipmentResponse Structure

All elements defined below are relative to the 'createShipmentResponse' element:

Field	Type	Max Length	Description	Optional
integrationHeader	element	N/A	As described in section 6.3.3.1 below	No
completedShipment	element	N/A	As described in section 6.3.3.2 below	Yes
integrationFooter	element	N/A	As described in section 6.3.3.3 below	Yes

Table 12 – createShipmentResponse Element

### 6.3.3.1 integrationHeader

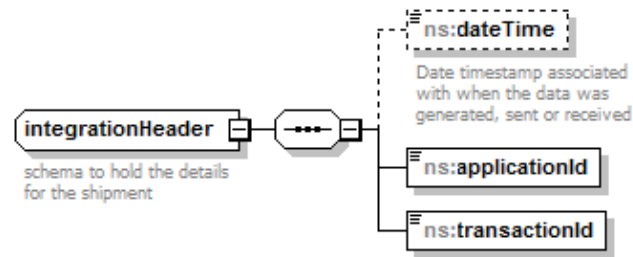


Figure 8 – integrationHeader Structure

All elements defined below are relative to the 'integrationHeader' element:

Field	Type	Max Length	Description	Optional
dateTime	dateTime	N/A	DateTime when the response was processed	Yes
applicationId	identifier	N/A	This is always returned with the same ten digit Customer Account Number provided in the request header.	No
transactionId	identifier	N/A	This is always returned with the same ten digit Customer Account Number provided in the request header.	No

Table 24 – integrationHeader Element

### 6.3.3.2 completedShipment

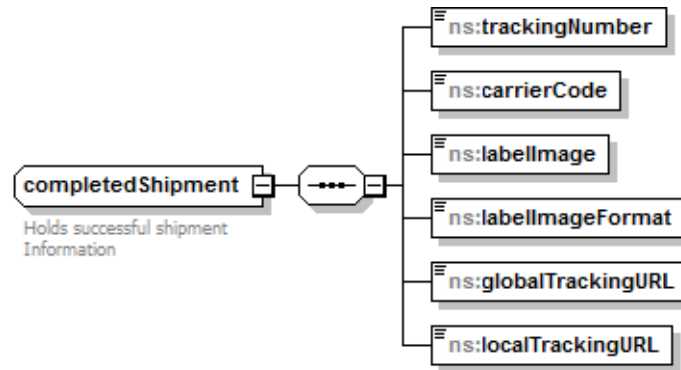


Figure 9 – completedShipment Structure

All elements defined below are relative to the 'completedShipment' element:

Field	Type	Max Length	Description	Optional
trackingNumber	string	70	Final Mile carrier tracking number	No
carrierCode	string	4	Service Requested	No
labelImage	base64Binary	N/A	Label image for user system to print	No
labelImageFormat	string	3	Always PDF currently	No
globalTrackingURL	string	250	Final Mile carrier tracking URL	No
localTrackingURL	string	250	Local platform tracking URL	No

Table 13 – completedShipment Element

### 6.3.3.3 integrationFooter

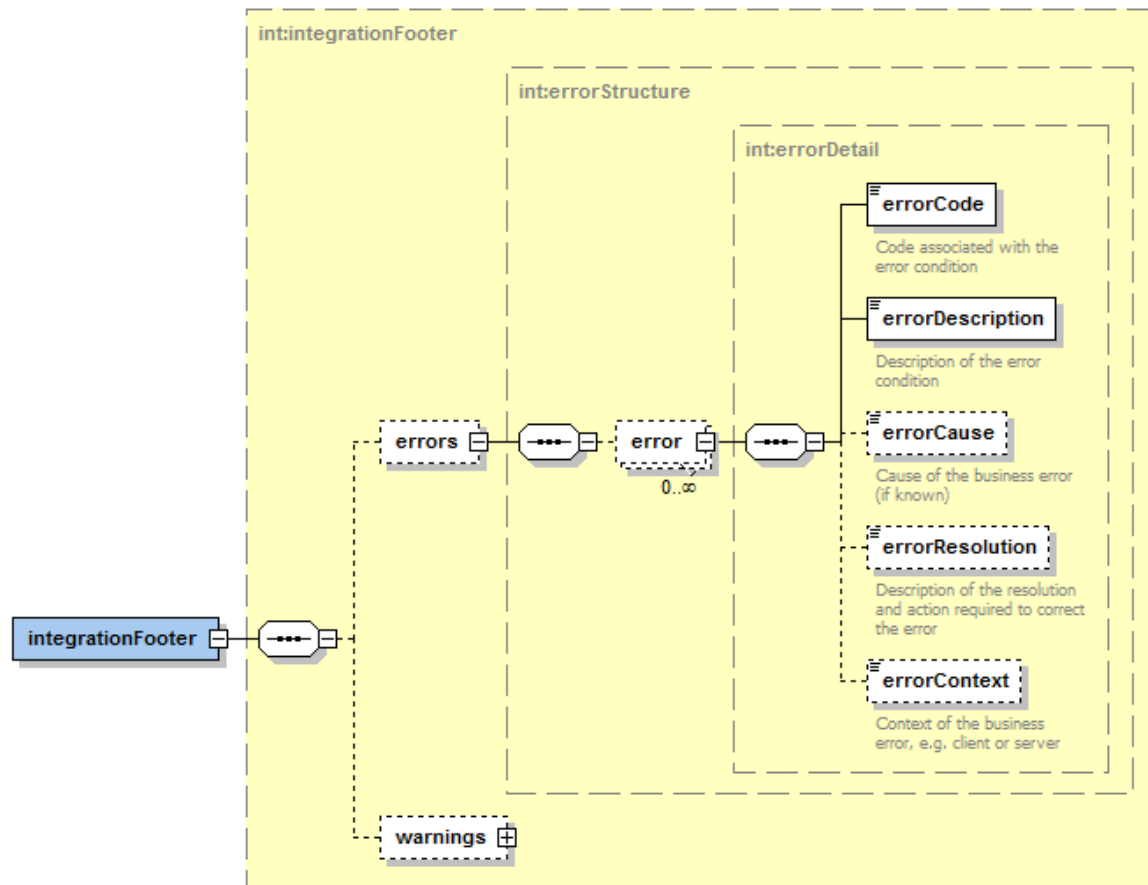


Figure 10 – integrationFooter Structure

All elements defined below are relative to the ‘integrationFooter’ element:

Field	Type	Max Length	Description	Optional
errors	element	N/A	Contain details of any errors encountered in processing the api request	Yes
errors/error	element	N/A	Element containing from zero to many errors.	Yes
errors/error/errorCode	string	5	Error Code	No
errors/error/errorDescription	string	32	Description of the error condition	No
errors/error/errorCause	string	N/A	Cause of the business error	Yes
errors/error/errorResolution	string	N/A	Description of the resolution and action required to correct the error	Yes
errors/error/errorContext	string	N/A	Context of the business error	yes
warnings	element	N/A	This is not currently used for v1	Yes

Table 24 – integrationFooter Element

### 6.3.4 Example Data

Full XML example request and responses are provided on the [Royal Mail API \(Developer\) Portal](#).

#### Example Request Data

```
POST https://api.royalmail.net/ international/shipment/v1/createshipment
Host:api.royalmail.net
Accept: application/xml
X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lR0sY0kE1pG8wU3nQ4mA0xP0kB6aU7
X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff
X-RMG-Application-Id: 0123456789
X-RMG-Transaction-Id: 111111111
X-RMG-DateTime:2016-10-11T09:49:45

<ns:createShipmentRequest xmlns:dt="http://www.royalmailgroup.com/cm/rmDatatypes/V1"
xmlns:int="http://www.royalmailgroup.com/integration/core/V3"
xmlns:ns="http://www.royalmailgroup.com/api/international/shipment/V1"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.royalmailgroup.com/api/international/shipment/V1
InternationalShippingAPI_V1_APIM.xsd ">
  <ns:shipment>
    <ns:shipper>
      <ns:companyName>INTERSOFT</ns:companyName>
      <ns:addressLine1>THE MILL STUDIO</ns:addressLine1>
      <ns:addressLine2>HORTON ROAD</ns:addressLine2>
      <ns:addressLine3/>
      <ns:city>STANWELL MOOR</ns:city>
      <ns:county>MIDX</ns:county>
      <ns:countryCode>GB</ns:countryCode>
      <ns:postCode>TW19 6BJ</ns:postCode>
      <ns:contactName>ARNOLD</ns:contactName>
      <ns:phoneNumber>017536892921234567891</ns:phoneNumber>
      <ns:vatNumber>GB123456912345678</ns:vatNumber>
      <ns:emailAddress>SUPPORT@INTERSOFT.CO.UK</ns:emailAddress>
      <ns:reference>INPSAUSSSYD</ns:reference>
      <ns:departmentCode/>
    </ns:shipper>
    <ns:destination>
      <ns:companyName>12345678901234567890123456789012345</ns:companyName>
      <ns:addressLine1>11 Town Terrace</ns:addressLine1>
      <ns:addressLine2/>
      <ns:addressLine3/>
      <ns:city>Glenmore Park</ns:city>
      <ns:county>NSW</ns:county>
      <ns:countryCode>AU</ns:countryCode>
      <ns:postCode>2745</ns:postCode>
      <ns:contactName>ARNOLD</ns:contactName>
      <ns:phoneNumber>1545554455</ns:phoneNumber>
      <ns:vatNumber>GB123456912345678</ns:vatNumber>
      <ns:emailAddress>arnold.christian@intersoft.co.uk</ns:emailAddress>
    </ns:destination>
    <ns:shipmentDetail>
      <ns:shipmentDate>2011-07-14</ns:shipmentDate>
```

```

<ns:serviceCode>INPS</ns:serviceCode>
<ns:totalPieces>1</ns:totalPieces>
<ns:totalWeight>5</ns:totalWeight>
<ns:weightUOM>K</ns:weightUOM>
<ns:dimensions>
  <ns:uom>C</ns:uom>
  <ns:length>20</ns:length>
  <ns:width>20</ns:width>
  <ns:height>20</ns:height>
</ns:dimensions>
<ns:contentTypeCode>NDX</ns:contentTypeCode>
<ns:descriptionOfGoods>SKIN CARE</ns:descriptionOfGoods>
<ns:declaredCurrencyValue>80.33</ns:declaredCurrencyValue>
<ns:declaredCurrencyCode>GBP</ns:declaredCurrencyCode>
<ns:incotermsCode>DDU</ns:incotermsCode>
<ns:itemDetail>
  <ns:hsCode>999999999</ns:hsCode>
  <ns:description>FOREO LUNA MINI</ns:description>
  <ns:quantity>1</ns:quantity>
  <ns:currencyValue>52.33</ns:currencyValue>
  <ns:countryOfOrigin>GB</ns:countryOfOrigin>
  <ns:sku/>
  <ns:netWeight>1</ns:netWeight>
</ns:itemDetail>
<ns:itemDetail>
  <ns:hsCode>999999999</ns:hsCode>
  <ns:description>FOREO LUNA MINI</ns:description>
  <ns:quantity>1</ns:quantity>
  <ns:currencyValue>52.33</ns:currencyValue>
  <ns:countryOfOrigin>GB</ns:countryOfOrigin>
  <ns:sku/>
  <ns:netWeight>1</ns:netWeight>
</ns:itemDetail>
</ns:shipmentDetail>
</ns:shipment>
</ns:createShipmentRequest>

```

## Example Response Data

HTTP/1.0 200 OK

Content-Type: application/xml

```

<createShipmentResponse xmlns="http://www.royalmailgroup.com/api/international/shipment/V1">
  <integrationHeader>
    <dateTime>2016-11-07T12:02:26</dateTime>
    <transactionId>ec1b7419-179b-4b3c-99e1-7cd662b83a93</transactionId>
    <applicationId>0703386001</applicationId>
  </integrationHeader>
  <completedShipment>
    <trackingNumber>TES100711401000930205</trackingNumber>
    <carrierCode>SSYD</carrierCode>
    <labellImage>JVBERi0xLjQKJdP0zOEKMSAwIGGCg==</labellImage>
    <labellImageFormat>PDF</labellImageFormat>
  </completedShipment>
</createShipmentResponse>

```

```
<globalTrackingURL>https://parcelsend.royalmail.com/tracking?shipmentRef=TES100711401000930205</gl  
obalTrackingURL>  
  <localTrackingURL>http://auspost.com.au/parcels-  
mail/track.html#/track?id=TES100711401000930205</localTrackingURL>  
  </completedShipment>  
</createShipmentResponse>
```

## 6.4 POST international shipment/v1/bagcontent

### 6.4.1 Description

The *POST international/shipment/v1/bagcontent* operation confirms that shipments are ready for despatch and generates the required paperwork to despatch your parcels. It produces a customer collection receipt and bag label(s) for your parcels.

### 6.4.2 Request Message

URL Path: <https://api.royalmail.net/international/shipment/v1/bagcontent>

The createBagRequest message structure is detailed below:

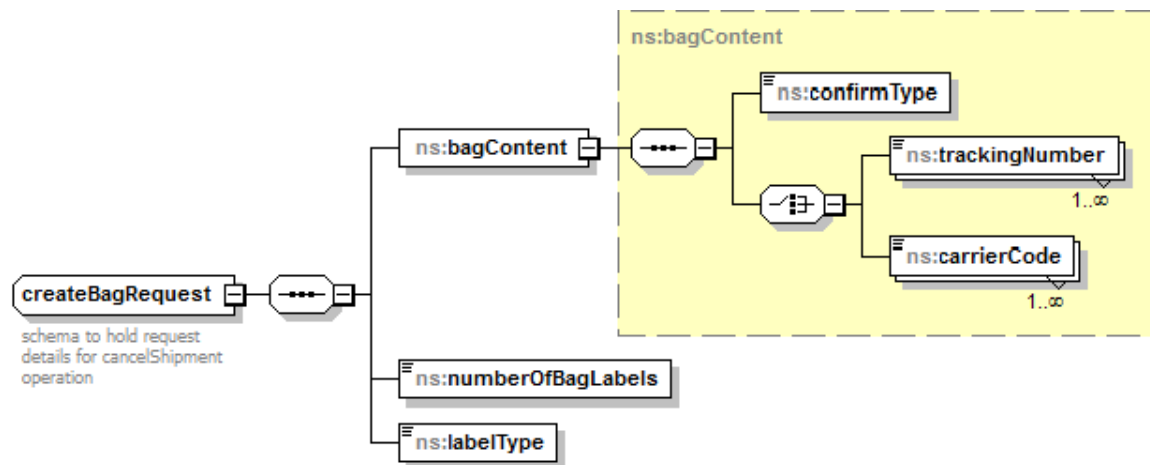


Figure 11 – createBagRequest Structure

All elements defined below are relative to the 'createBagRequest' element:

Field	Type	Max Length	Description	Optional
bagContent	element	N/A	Container element for bag closing method and details. Please see section 6.4.2.1 below.	No
numberOfBagLabels	number	3	Number of bag labels required	No
labelType	string	3	PDF only	No

Table 14 – createBagRequest Element



### 6.4.2.1 bagContent

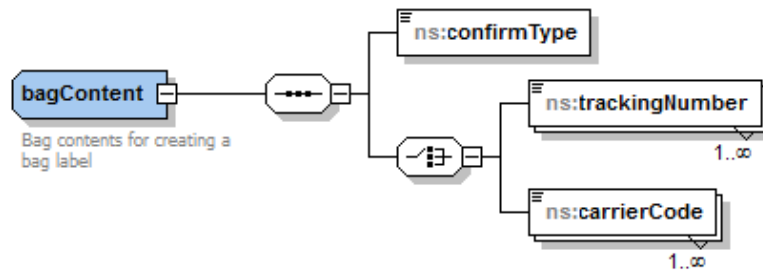


Figure 12 – bagContent Structure

All elements defined below are relative to the 'bagContent' element:

Field	Type	Max Length	Description	Optional
confirmType	number	10	1 = by Tracking Number 2 = by Final Mile carrier code	Yes
trackingNumber	string	255	Tracking Number and carrier code are passed in createShipment response. Tracking Number and Carrier Code are mutually exclusive.	No
carrierCode	number	5	Carrier/agent code for close out.	No

Table 15 – bagContent Element

### 6.4.3 Response Message

The createBagResponse message structure is detailed below. A successful business response will be returned as a standard HTTP response code of 200.

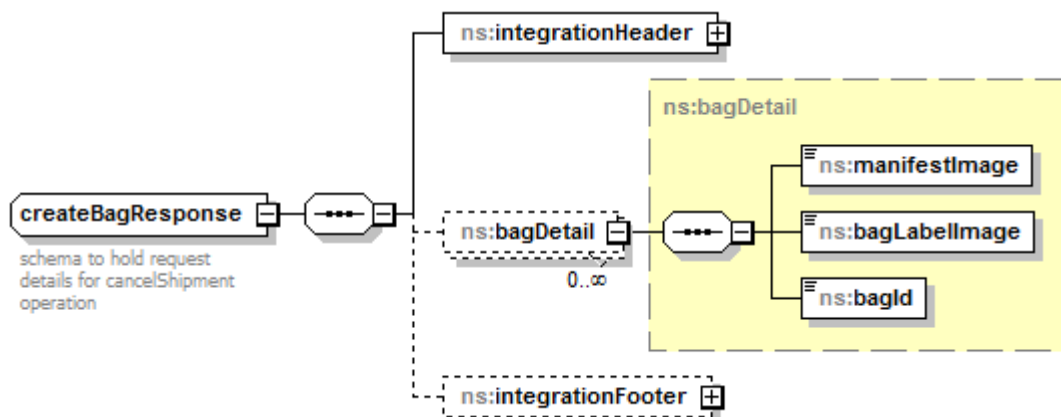


Figure 13 – createBagResponse Structure

All elements defined below are relative to the 'createBagResponse' element:

Field	Type	Max Length	Description	Optional
integrationHeader	element	N/A	As described in section 6.3.3.1	No
bagDetail	element	N/A	As described in section 6.4.3.1 below	Yes
integrationFooter	element	N/A	As described in section 6.3.3.3	Yes

Table 16 – createBagResponse Element

#### 6.4.3.1 bagDetail

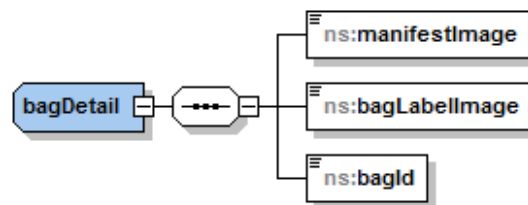


Figure 14 – bagDetail Structure

All elements defined below are relative to the 'bagDetail' element:

Field	Type	Max Length	Description	Optional
manifestImage	Base64 String	N/A	Base64 encoded PDF image of Sales order Summary Print	No
bagLabelImage	Base64 String	N/A	Base64 encoded PDF image of Bag Label(s)	No
bagId	string	13	Unique identifier for Bag.	No

Table 17 – bagDetail Element

#### 6.4.4 Example Data

Full XML example responses are provided on the [Royal Mail API \(Developer\) Portal](#).

##### Example Request Data

```

POST https://api.royalmail.net/ international/shipment/v1/bagcontent
Host:api.royalmail.net
Accept: application/xml
X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lR0sY0kE1pG8wU3nQ4mA0xP0kB6aU7
X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff
X-RMG-Application-Id: 0123456789
X-RMG-Transaction-Id: 111111111
X-RMG-DateTime:2016-10-11T09:49:45

<ns:createBagRequest xmlns:dt="http://www.royalmailgroup.com/cm/rmDatatypes/V1"
xmlns:int="http://www.royalmailgroup.com/integration/core/V3"
xmlns:ns="http://www.royalmailgroup.com/api/international/shipment/V1"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  
```

```
xsi:schemaLocation="http://www.royalmailgroup.com/api/international/shipment/V1
InternationalShippingAPI_V1_APIM.xsd ">
  <ns:bagContent>
    <ns:confirmType>1</ns:confirmType>
    <ns:trackingNumber>TES100712901000930209</ns:trackingNumber>
  </ns:bagContent>
  <ns:numberOfBagLabels>1</ns:numberOfBagLabels>
  <ns:labelType>PDF</ns:labelType>
</ns:createBagRequest>
```

### Example Response Data

```
HTTP/1.0 200 OK
Content-Type: application/xml

<createBagResponse xmlns="http://www.royalmailgroup.com/api/international/shipment/V1">
  <integrationHeader>
    <dateTime>2016-11-08T10:08:12</dateTime>
    <transactionId>ec1b7419-179b-4b3c-99e1-7cd662b83a93</transactionId>
    <applicationId>0703386001</applicationId>
  </integrationHeader>
  <bagDetail>
    <manifestImage>JVBERi0xLj==</manifestImage>
    <bagLabelImage>JVBERi0xLjQNCiXi48=</bagLabelImage>
    <bagId>070338600136490788</bagId>
  </bagDetail>
</createBagResponse>
```

## 6.5 DELETE international shipment/v1/cancelshipment

### 6.5.1 Description

The *DELETE international/shipment/v1/{trackingNumber}/cancelshipment* operation cancels a shipment created by create shipment operation. This operation can be used before the shipment has been confirmed by 'bagcontent' operation (see section 6.4) or by closing out via the portal.

### 6.5.2 Request Message

URL Path: <https://api.royalmail.net/international/shipment/v1/{trackingNumber}/cancelshipment>

Please see below for the API request parameters:

Parameter	Optional	Description
trackingNumber	No	Final Mile carrier tracking number

Table 5 – API Request Parameters

### 6.5.3 Response Message

The cancelShipmentResponse message structure is detailed below. A successful business response will be returned as a standard HTTP response code of 200 (Ok).

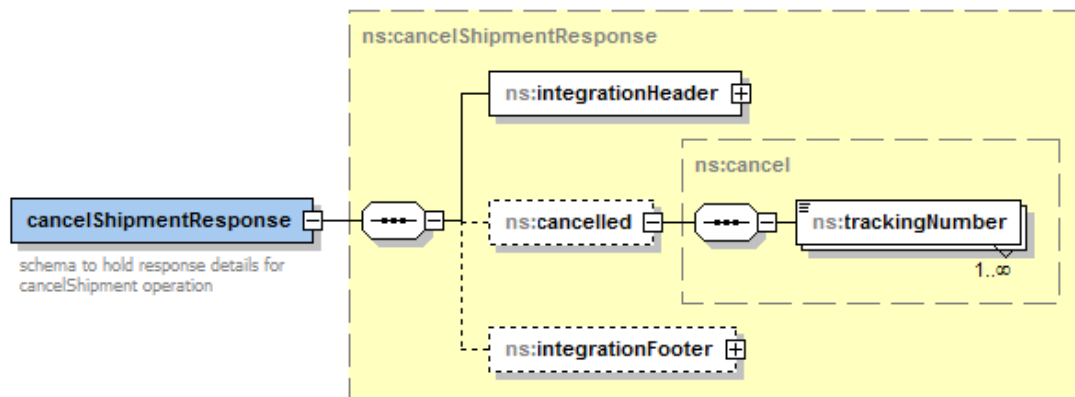


Figure 15 – cancelShipmentResponse Structure

All elements defined below are relative to the 'cancelShipmentResponse' element:

Field	Type	Max Length	Description	Optional
integrationHeader	element	N/A	As described in section 6.3.3.1	No
cancelled	element	N/A	Container for cancelled shipments	Yes
cancelled/trackingNumber	string	70	Tracking number of the shipment deleted	No
integrationFooter	element	N/A	As described in section 6.3.3.3	Yes

Table 19 – cancelShipmentResponse Element

#### 6.5.4 Example Data

Full XML example for request and responses are provided on the [Royal Mail API \(Developer\) Portal](#).

##### Example Request Data

```
DELETE https://api.royalmail.net/international/shipment/v1/{trackingNumber}/cancelshipment
Host:api.royalmail.net
Accept: application/xml
X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lR0sY0kE1pG8wU3nQ4mA0xP0kB6aU7
X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff
X-RMG-Application-Id: 0123456789
X-RMG-Transaction-Id: 111111111
X-RMG-DateTime:2016-10-11T09:49:45
```

##### Example Response Data

```
HTTP/1.0 200 OK
Content-Type: application/xml

<cancelShipmentResponse xmlns="http://www.royalmailgroup.com/api/international/shipment/V1">
  <integrationHeader>
    <dateTime>2016-11-07T12:02:39</dateTime>
    <transactionId>ec1b7419-179b-4b3c-99e1-7cd662b83a93</transactionId>
    <applicationId>0703386001</applicationId>
  </integrationHeader>
  <cancelled>
    <trackingNumber>TES100711401000930205</trackingNumber>
  </cancelled>
</cancelShipmentResponse>
```

## 6.6 GET international shipment/v1/tracking

### 6.6.1 Description

The *GET international/shipment/v1/international/shipment/v1/{trackingNumber}/history* operation returns the history of all tracking events for a shipment.

### 6.6.2 Request Message

URL Path: <https://api.royalmail.net/international/shipment/v1/{trackingNumber}/history>

Parameter	Optional	Description
trackingNumber	No	Final Mile carrier tracking number

Table 21 – API Request Parameters

### 6.6.3 Response Message

The trackingResponse message structure is detailed below. A successful business response will be returned as a standard HTTP response code of 200 (Ok).

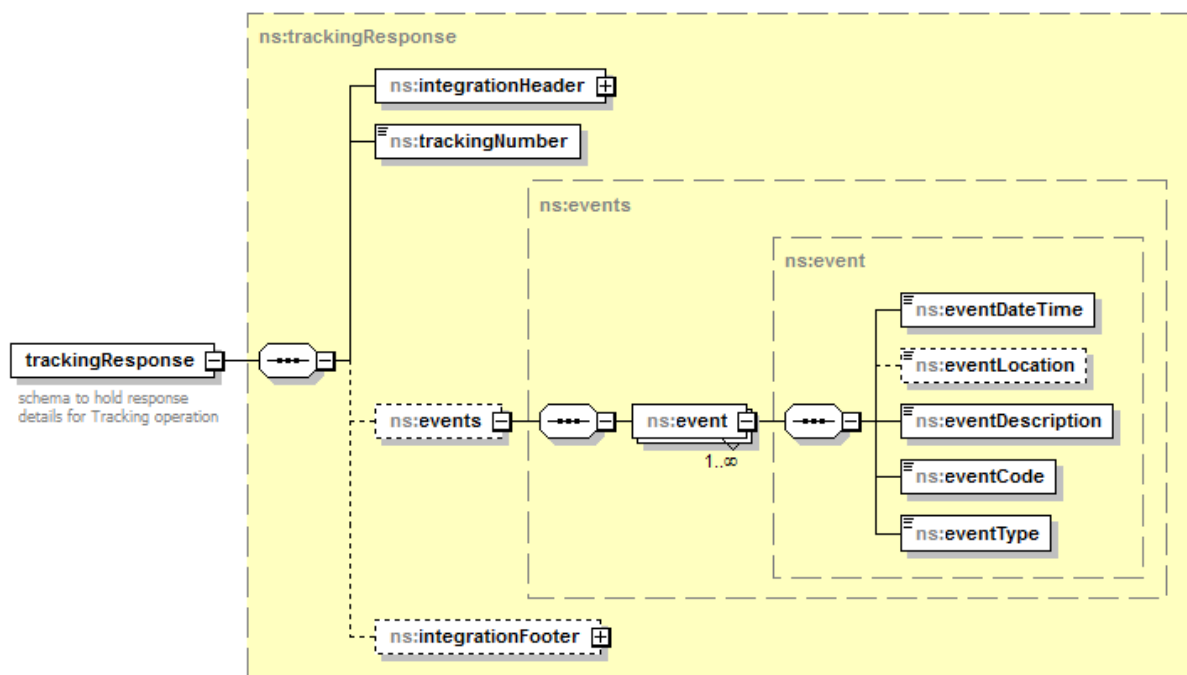


Figure 16 – trackingResponse Structure

All elements defined below are relative to the 'trackingResponse' element:

Field	Type	Max Length	Description	Optional
integrationHeader	element	N/A	As described in section 6.3.3.1	No
trackingNumber	string	70	Tracking number being requested	No
events	element	N/A	Container element for event	Yes

Field	Type	Max Length	Description	Optional
			history	
events/event	element	N/A	Container for event data	No
events/event/eventDateTime	dateTime	N/A	Date and Time of event	No
events/event/eventLocation	Identifier	128	Location of event	Yes
events/event/eventDescription	Identifier	128	Description of event	No
events/event/eventCode	Identifier	128	Code of event	No
events/event/eventType	Identifier	128	T = Tracking Event P = Proof of Delivery	No
integrationFooter	element	N/A	As described in section 6.3.3.3	Yes

**Table 22 – API Response Parameters**

#### 6.6.4 Example Data

Full XML example for requests and responses are provided on the [Royal Mail API \(Developer\) Portal](#).

##### Example Request Data

```
GET https://api.royalmail.net/international/shipment/v1/{trackingNumber}/history
Host:api.royalmail.net
Accept: application/xml
X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lR0sY0kE1pG8wU3nQ4mA0xP0kB6aU7
X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff
X-RMG-Application-Id: 0123456789
X-RMG-Transaction-Id:111111111
X-RMG-DateTime:2016-10-11T09:49:45
```

##### Example Response Data

```
HTTP/1.0 200 OK
Content-Type: application/xml

<trackingResponse xmlns="http://www.royalmailgroup.com/api/international/shipment/V1">
  <integrationHeader>
    <dateTime>2016-11-07T16:26:31</dateTime>
    <transactionId>ec1b7419-179b-4b3c-99e1-7cd662b83a93</transactionId>
    <applicationId>0069786000</applicationId>
  </integrationHeader>
  <trackingNumber>9205590165863400046676</trackingNumber>
  <events>
    <event>
      <eventDateTime>2016-06-16 12:19:43</eventDateTime>
      <eventLocation>GB</eventLocation>
      <eventType>T</eventType>
      <eventDescription>DATA PROCESSED</eventDescription>
      <eventCode/>
    </event>
  </events>
</trackingResponse>
```

```
<event>
  <eventDateTime>2016-06-16 12:22:07</eventDateTime>
  <eventLocation>GB</eventLocation>
  <eventType>T</eventType>
  <eventDescription>ARRIVED AT INTL - LHR</eventDescription>
  <eventCode>AISF</eventCode>
</event>
<event>
  <eventDateTime>2016-06-16 12:22:15</eventDateTime>
  <eventLocation>GB</eventLocation>
  <eventType>T</eventType>
  <eventDescription>DEPARTED FROM INTL - LHR</eventDescription>
  <eventCode>DFSF</eventCode>
</event>
<event>
  <eventDateTime>2016-06-16 16:11:43</eventDateTime>
  <eventLocation>GB</eventLocation>
  <eventType>T</eventType>
  <eventDescription>DEPARTED FROM INTL - LHR</eventDescription>
  <eventCode>DFSF</eventCode>
</event>
</events>
</trackingResponse>
```



## 7 Error Handling

### 7.1 Overview

There are two types of errors produced by International Tracked Direct API:

- **Business Errors** (e.g. invalid service etc)
- **Technical Errors / Exceptions** (e.g. Authorization failure etc)

Both sets of errors should be appropriately handled by your systems, and technical details of the error should not be displayed directly to consumers.

### 7.2 Business Errors

All client data errors are provided in the response part of the API operations and will be accompanied with the standard HTTP successful response code of 200 (Ok).

Table 25 below lists all business errors which may be returned from the API.

code	Description
6001	Access Denied
7003	Missing Destination Company Name
7010	Missing Shipper Reference
7014	Shipment Pieces Weight Exceeds allowed Piece Weight for the selected service
7006	Invalid Service Requested
7008	Unable to Create Label
8001	Invalid item Quantity

Table 25 – API Business Errors

#### 7.2.1 Example Data

Please see below for an example of a business error which is returned from calling the POST international/shipment/v1/createshipment operation and which results in an E1145 error being returned. Full XML example responses are provided on the [Royal Mail API \(Developer\) Portal](#).

```
<createShipmentResponse xmlns="http://www.royalmailgroup.com/api/international/shipment/V1">
  <integrationHeader>
    <dateTime>2016-11-07T11:31:51</dateTime>
    <transactionId>ec1b7419-179b-4b3c-99e1-7cd662b83a93</transactionId>
    <applicationId>0703386001</applicationId>
  </integrationHeader>
  <integrationFooter>
    <errors>
      <errorDetail>
        <errorCode>7003</errorCode>
        <errorDescription>Missing Destination Company Name.</errorDescription>
        <errorCause/>
      </errorDetail>
    </errors>
  </integrationFooter>
</createShipmentResponse>
```

```

    <errorResolution/>
    <errorContext/>
  </errorDetail>
</errors>
  <warnings/>
</integrationFooter>
</createShipmentResponse>

```

### 7.3 Technical Errors / Exceptions

The following technical exceptions / error scenarios will be caught and handled as described below:

Error Cause	Error Response Message	HTTP Response Status Code
No Client ID supplied in API request	<pre> &lt;errorResponse&gt;   &lt;httpCode&gt;401&lt;/httpCode&gt;   &lt;httpMessage&gt;Unauthorized&lt;/httpMessage&gt;   &lt;moreInformation&gt;Client id not registered.&lt;/moreInformation&gt; &lt;/errorResponse&gt; </pre>	HTTP 401 (Unauthorised)
Client ID not subscribed / registered to API	<pre> &lt;errorResponse&gt;   &lt;httpCode&gt;401&lt;/httpCode&gt;   &lt;httpMessage&gt;Unauthorized&lt;/httpMessage&gt;   &lt;moreInformation&gt;Client id not registered.&lt;/moreInformation&gt; &lt;/errorResponse&gt; </pre>	HTTP 401 (Unauthorised)
Incorrect Client Secret provided	<pre> &lt;errorResponse&gt;   &lt;httpCode&gt;401&lt;/httpCode&gt;   &lt;httpMessage&gt;Unauthorized&lt;/httpMessage&gt;   &lt;moreInformation&gt;Client id not registered.&lt;/moreInformation&gt; &lt;/errorResponse&gt; </pre>	HTTP 401 (Unauthorised)
Internal Server Error	<pre> &lt;errorResponse&gt;   &lt;httpCode&gt;500&lt;/httpCode&gt;   &lt;httpMessage&gt;Internal Server Error &lt;/httpMessage&gt;   &lt;moreInformation&gt;Please contact the RMG Customer Solutions Team&lt;/moreInformation&gt; &lt;/errorResponse&gt; </pre>	HTTP 500 (Internal Server Error)

**Table 26 – API Technical Errors**

For all other technical issues please contact a Royal Mail Support representative by visiting the [Royal Mail API \(Developer\) Portal Support](#) pages.

## 8 Non-Functional Characteristics

### 8.1 Availability

#### 8.1.1 Service Hours

The International Tracked Direct API is available 24 hours per day x 365 days per year.

#### 8.1.2 Maintenance Windows

Royal Mail Online Services Terms and Conditions define the maintenance for this service.

#### 8.1.3 Unavailability

In the unlikely event of the International Tracked Direct API being unavailable, customer systems should make provision to handle this appropriately. Royal Mail will endeavour to proactively contact customers in the event of an outage to this API.

If you experience issues with the availability of this API please contact a Royal Mail Support representative by visiting the [Royal Mail API \(Developer\) Portal Support](#) pages.

#### 8.1.4 Security

The REST API will only accept requests and return responses over HTTPS. All service requests via the API Management solution will be authorised in accordance with the Client ID and Secret passed in the HTTP headers. This will ensure that any external service requests are authorised and authenticated in line with RMG Security Policies and Standards.

## 10 Frequently Asked Questions

Please see the [FAQ page](#) on the [Royal Mail API \(Developer\) Portal](#) for a general list of frequently asked questions with responses.

All FAQs specific to the API described in this document are listed below.

### 10.1 Latest versions of Swagger Definition

Question: Where can I find the latest version of the International Tracked Direct API Swagger definition?

Answer: The latest version of the Swagger definition can be found on the 'International Tracked Direct API (REST)' page on the [Royal Mail API \(Developer\) Portal](#).

### 10.2 API Programming

Question: Can Royal Mail complete the API programming for me?

Answer: Royal Mail only provides user guides to enable an understanding of the API and therefore cannot complete any programming or system development for your business.

### 10.3 Business Account

Question: I don't have a business account with Royal Mail. Can I use the International Tracked Direct API?

Answer: No – International Tracked Direct API is only available to Royal Mail account holders.

### 10.4 HTTP 500 / Throttling Errors

Question: Why do HTTP 500 errors occur?

Answer: As demand for International Tracked Direct API calls is unpredictable it is sometimes necessary to manage the volume of tracking requests hitting the tracking database. The number of requests that you have raised within a period has caused the request to be rejected at this time. Please try again later.

### 10.5 Application Compatibility

Question: What Software Development Kits or tools have been proven to work with the International Tracked Direct API?

Answer: The following applications are known to be compatible with the Royal Mail International Tracked Direct API: SoapUI.

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