



Royal Mail Group

Local Collect API (REST)

Technical User Guide

This API specification details the requirements for integrating with the Local Collect (REST) API. It specifically covers how the Local Collect API can be used by business customers looking to book capacity slots at a Post Office outlet convenient to the recipient, and provides the technical information to build this integration.

15th December 2015

Version 1.3

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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 |
| JSON | JavaScript Object Notation |
| LC | Local Collect |
| REST | Representational State Transfer |
| Swagger | Specification for defining RESTful web services |

Table 1 – Terms and Abbreviations

1.2 Version History

| Version | Date | Author | Notes |
|---------|------------|----------------|---|
| 1.0 | 07/12/2015 | Mark Cornforth | Document created and baselined. |
| 1.1 | 08/12/2015 | Mark Cornforth | Updated section 6.5.2 to detail treatment of the '/' character in the bookingReference field. |
| 1.2 | 08/12/2015 | Mark Cornforth | Updated section 6.5.2 to reference UTF-8 encoding and RFC3986. |
| 1.3 | 15/12/2015 | Mark Cornforth | Updated section 6.5.2 in relation to the encoding of special characters used in the bookingReference field. |

Table 2 – Document Version History

2 Overview

The Royal Mail Local Collect API exposes a web service that allows customers to obtain Post Office location data and subsequently confirm selection of a particular Post Office for parcel delivery.

There are no costs to customers for using the Local Collect 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.

Local Collect is available as an option with Royal Mail shipping solutions Despatch Manager Online (DMO), Shipping API (SAPI) and a Customers own system solution (COSS).

Specifications for these shipping solutions are available from the Royal Mail Customer Solutions team.

Customers wishing to develop or implement a system to produce barcode labels on their own system (COSS) should gain agreement from Royal Mail before commencing work. Labels produced are subject to approval by Royal Mail before being used, and live barcode number ranges will not be issued before this approval is given. Further sample labels will also need to be submitted to Royal Mail periodically for quality checks.

Note that following approval, any changes or additions to the outputs relating to Royal Mail despatches will also need to be discussed and validated before implementation. This includes the addition of new services.

3 Purpose

This document is to provide Royal Mail customers with guidelines and detailed specifications for integrating with the Local Collect RESTful web service.

The document details:

- The specification for the web service interface for customers who want to query Post Office location data and subsequently confirm selection of a Post Office for parcel delivery
- Description of 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 integrated customer systems' with the Local Collect API. This document should be read in conjunction with the following artefacts which are available from the 'Local Collect API (REST)' page on the [Royal Mail API \(Developer\) Portal](#):

- Local Collect API Swagger Definition
- Local Collect API Sample Data

4 Introduction to Local Collect API

4.1 Overview

The Local Collect Service is a delivery enhancement to Royal Mail Tracked and Special Delivery Guaranteed products that enables customers to benefit from 'Click and Collect' options by having their parcels delivered to participating Post Offices. With over 10,000 Post Offices providing collection points, consumers have a wide choice of where their parcel is delivered to, and when they collect it.

To support this delivery enhancement, and to ensure Post Offices have space to accept parcels, a capacity management system has been developed and presented through a set of web services. These web services, using industry standard JSON over HTTPS, have been designed to be simple and easy to integrate while minimising the time it takes to modify e-commerce platforms.

The operations exposed by the Local Collect API enable customers to:

- Retrieve an up-to-date list of Post Offices that offer Local Collect and have sufficient capacity to receive parcels (for a given location and delivery date)
- Confirm selection in a given Post Office for a delivery to ensure there is sufficient physical space for parcels to be held awaiting collection

4.2 Interface Components

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

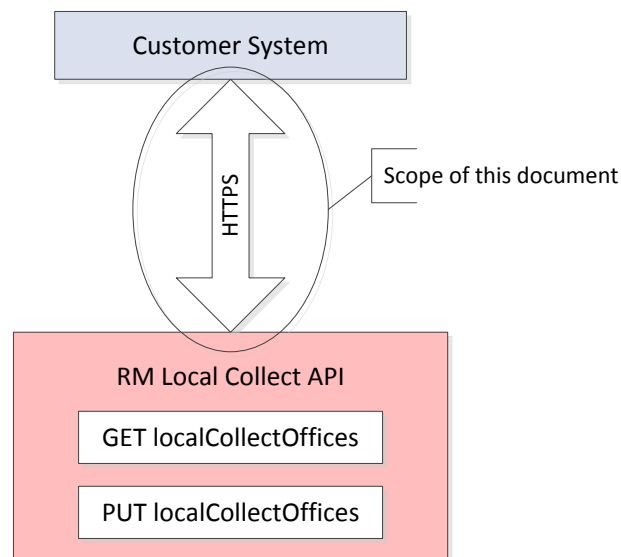


Figure 1 – Local Collect API

5 Integrating with the Local Collect API

The high-level process associated with integrating with the Local Collect API is represented and described in the diagram below.

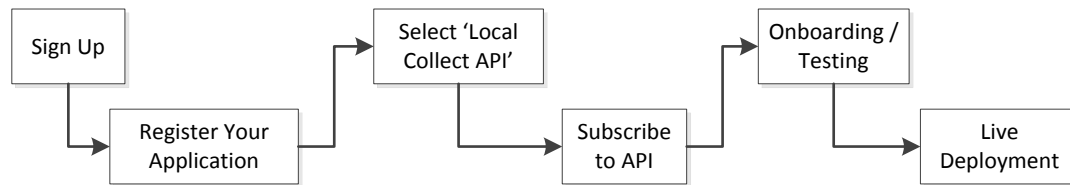


Figure 2 – Process for Integrating with the API

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 onboarding environment that allows you to test the integration.
5. Once all required testing has completed in the onboarding 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 onboarding environment is available 24x7 and has the same functionality as live with the exception that all Post Office locations will always have space available and will never be shown as full.
- The onboarding environment may not be used for performance testing. This is a small scale system for functional testing only.

- 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 onboarding and live access to the API is obtained via the following URL:

<https://api.royalmail.net/localCollectOffices>

The API only supports HTTP GET and PUT operations against the resource and doesn't support HTTP operations to POST, DELETE etc.

Please note:

- Response formats supported: application/json
- If anything is appended to the path and which is unsupported (e.g. .../localCollectOffices/something), then an HTTP 403 Forbidden response will be returned.
- All HTTP operations (e.g. POST, DELETE etc) other than GET and PUT are not supported and a HTTP 405 Method Not Allowed response will be returned.
- 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 6 for all operations and query string parameters which are supported by this API.
- Please see section 7 for a full list of technical and business error codes which are returned by this API.

5.3 Live Deployment

Once you have completed all required testing in the onboarding 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 Local Collect Services

6.1 Business Services

The Local Collect service is a delivery enhancement to Royal Mail products that enables customers to benefit from 'Click and Collect' options by having their parcels delivered to participating Post Offices.

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 |
|------------------------|-------------------------|---|------------------------|--------------------------------|
| Get Delivery Locations | GET localCollectOffices | Returns a list of Post Offices including (for each location) a flag to indicate if the Post Office has capacity available, and a unique booking reference code. | JSON over HTTPS (REST) | Synchronous Request / Response |
| Set Delivery Location | PUT localCollectOffices | Confirm selection in a given Post Office for a delivery to ensure there is sufficient physical space for parcels to be held awaiting collection. | JSON over HTTPS (REST) | Synchronous Request / Response |

Table 3 – Business Services

Royal Mail anticipates that customers will present delivery options and available Post Offices to the consumer as part of the order process within their e-commerce systems. The **GET localCollectOffices** operation returns a list of Post Offices including (for each location) a flag to indicate if the Post Office has capacity available, and a unique booking reference code. There are two RESTful GET operations available, one which allows the service requester system to query by postcode (see section 6.3) and another to search by latitude and longitude (see section 6.4).

Once a consumer has placed the order (which will result in one or more parcels being despatched), the customer's system must make a subsequent call to the **PUT localCollectOffices** operation (using the correct booking reference code returned as part of the GET localCollectOffices call). The response to the PUT localCollectOffices includes a confirmation number (reservation reference), which is not required to collect the parcel, and a repeat of the location details (name, address etc) of the Post Office selected.

It is not permitted for customers to cache results from the GET localCollectOffices call and it should be noted that booking reference codes are only valid for 10 minutes. As such, if a consumer takes longer than 10 minutes from selecting an available Post Office to confirming the order, a further call to GET localCollectOffices must be made to retrieve a new booking reference code. If a call is made to the PUT localCollectOffices operation with an invalid booking reference code the API will return an error (see section 7.2).

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 | No | This attribute accepts requests in application/json 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. |

Table 4 – 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/json |
| X-IBM-Client-Id | f0e4f151-2041-4df2-b31d |
| X-IBM-Client-Secret | kT0IB2dK0wF6mK0rD8sD7oE7vP2mG7l |

Table 5 – Example HTTP Header Information for API Request

6.3 GET localCollectOffices (by Postcode)

6.3.1 Description

The behaviour of the GET localCollectOffices (by Postcode) operation is to return a list of Post Offices that are available and in proximity to the postcode provided as part of the request parameters. The number of results returned is determined by the use of the radius parameter (although if this is omitted a default radius of 99.0 miles is assumed).

6.3.2 Request Message

URL Path:

<https://api.royalmail.net/localCollectOffices/?postcode={postcode}&estDeliveryDate={estDeliveryDate}&radius={radius}>

| Parameter | Optional | Description |
|-----------|----------|--|
| postcode | No | This is the Postcode of the location to search for Post Offices near. Only UK postcodes are supported. |

| Field | Type | Description | Optional |
|--|------------------------|--|----------|
| | | for the location (populated with "Post Office Limited") | |
| locations.locationName | String | Name of the location | No |
| locations.addressLine1 | String | Address line 1 of the location | No |
| locations.addressLine2 | String | Address line 2 of the location | Yes |
| locations.addressLine3 | String | Address line 3 of the location | Yes |
| locations.addressLine4 | String | Address line 4 of the location. This will always be the name of the town the location is in | Yes |
| locations.county | String | Name of county the location is in | Yes |
| locations.postcode | String | Postcode of the location | Yes |
| locations.longitude | Double | Longitude of the location | Yes |
| locations.latitude | Double | Latitude of the location | Yes |
| locations.availability | String | Indicates if the Local Collect service is available at this location. Possible values are "true" and "false". | Yes |
| locations.searchDistance | Double | Distance the location is from postcode or position as provided in the request message (in miles as the crow flies). | Yes |
| locations.openingDays | Array [openingDays] | An array of objects representing days the Post Office is open along with their opening times*. | Yes |
| locations.openingDays.dayOfWeek | String | Day name. Possible values are: <ul style="list-style-type: none"> Monday Tuesday Wednesday Thursday Friday Saturday Sunday Bankhol | Yes |
| locations.openingDays.openingTime | String | Opening time of the location in format "HH:MM:SS" | No |
| locations.openingDays.closingTime | String | Closing time of the location in format "HH:MM:SS". Note: It's not possible to collect items when location is closed (i.e. outside of opening hours) | No |
| locations.openingDays.lunchOpeningTime | String | Time the location closes for lunch in format "HH:MM:SS". Note: It is not possible to collect items when the location is closed (i.e. during lunch hours) | Yes |
| locations.openingDays.lunchClosingTime | String | Time the location opens after | Yes |

| Field | Type | Description | Optional |
|-------------------|--------|--|----------|
| | | lunch in format "HH:MM:SS" | |
| error | Object | Object containing the details of any business errors that have occurred. This element will only be returned in the event that no 'locations' data can be returned. | Yes |
| error.code | String | Code associated with the error condition. See section 7.2 for details. | No |
| error.description | String | Description of the error condition. See section 7.2 for details. | No |
| error.cause | String | Cause of the business error. See section 7.2 for details. | No |
| error.resolution | String | Description of the resolution and action required to correct the error. See section 7.2 for details. | No |

Table 7 – API Response Parameters

*Note: On Local or Public Holidays, individual opening times may vary.

6.3.4 Example Data

Full JSON examples are provided on the [Royal Mail API \(Developer\) Portal](#).

Example Request Data

| Parameter | Value |
|-----------------|------------|
| postcode | TW184PU |
| estDeliveryDate | 2015-10-31 |
| radius | 15 |

Table 8 – Example API Request Data

```
GET https://api.royalmail.net/localCollectOffices/?postcode=TW184PU&estDeliveryDate=2015-10-31&radius=15 HTTP/1.1
Accept: application/json

X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6IROsY0kE1pG8wU3nQ4mA0xP0kB6aU7
X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff
```

Example Response Data

| Field | Value |
|---|---|
| request | |
| request.postcode | TW184PU |
| request.estDeliveryDate | 2015-10-31 |
| request.radius | 15 |
| locations | |
| locations.bookingReference | 515050673190157025311015RM002BQjytz000000000000000000000000blzBILLY7t+LmAOfpZZAs50z4o0b7sJ0QK33CWaQE8Q= |
| locations.organisationName | Post Office Limited |
| locations.locationName | Staines |
| locations.addressLine1 | 49 - 51 High Street |
| locations.addressLine2 | |
| locations.addressLine3 | |
| locations.addressLine4 | Staines |
| locations.county | |
| locations.postcode | TW184QR |
| locations.longitude | -0.51174 |
| locations.latitude | 51.43341 |
| locations.availability | true |
| locations.searchDistance | 0.2 |
| locations.openingDays | |
| locations.openingDays[index].dayOfWeek | Monday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Tuesday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Wednesday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Thursday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Friday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |


```

        "dayOfWeek": "Monday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
    },
    {
        "dayOfWeek": "Tuesday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
    },
    {
        "dayOfWeek": "Wednesday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
    },
    {
        "dayOfWeek": "Friday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
    },
    {
        "dayOfWeek": "Sunday",
        "openingTime": "10:30:00",
        "closingTime": "14:30:00"
    }
]
},
"error": {}
}

```

6.4 GET localCollectOffices (by Latitude and Longitude)

6.4.1 Description

The behaviour of the GET localCollectOffices (by Latitude and Longitude) operation is to return a list of Post Offices that are available and in proximity to the latitude and longitude values provided as part of the request parameters. The number of results returned is determined by the use of the radius parameter (although if this is omitted a pre-determined radius of 99.0 miles is assumed).

6.4.2 Request Message

URL Path:

<https://api.royalmail.net/localCollectOffices/geoSearch?estDeliveryDate={estDeliveryDate}&radius={radius}&longitude={longitude}&latitude={latitude}>

| Parameter | Optional | Description |
|-----------------|----------|--|
| estDeliveryDate | No | This is the date (in YYYY-MM-DD format) when the parcel is anticipated to arrive at the Post Office (taking into account |

| | | |
|-----------|-----|--|
| | | <p>Royal Mail product used to deliver the item e.g. Tracked 24). If customer's do not know when the parcel will be despatched (e.g. due to consumers ordering out of stock items) customers should specify a delivery date that assumes the order will be despatched on the same day (as the order).</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. estimatedDeliveryDate must be at least one day in the future 2. estimatedDeliveryDate cannot be more than 30 days in the future |
| radius | Yes | By setting this value, only Post Offices that are within the specified radius (in miles up to a maximum of 99.0) are returned. Note: there is a system imposed restriction which will limit the number of results returned (to the 20 nearest Post Offices) regardless of how large the radius is set to. |
| longitude | No | Longitude of the location |
| latitude | No | Latitude of the location |

Table 10 – API Request Parameters

6.4.3 Response Message

The body of the JSON response message contains all the Post Office locations as well as any errors that may have occurred. A successful business response will be returned as a standard HTTP response code of 200 (Ok).

| Field | Type | Description | Optional |
|----------------------------|----------------------|---|----------|
| request | Object | Object containing the parameters passed in the request. | No |
| request.longitude | String | The longitude which was supplied in the request. | No |
| request.latitude | String | The latitude which was supplied in the request. | No |
| request.estDeliveryDate | String | The estimated delivery date which was supplied in the request. | No |
| request.radius | String | The radius value in miles which was supplied in the request. | Yes |
| locations | Array [locations] | Array representing available Local Collect locations. This will only be returned in the event that no error condition has occurred. | No |
| locations.bookingReference | String | Unique reference that can be subsequently used to confirm delivery for a location. If the 'availability' field is false, the | Yes |

| Field | Type | Description | Optional |
|--|--------|--|----------|
| locations.openingDays.lunchOpeningTime | String | Time the location closes for lunch in format "HH:MM:SS". Note: It is not possible to collect items when the location is closed (i.e. during lunch hours) | Yes |
| locations.openingDays.lunchClosingTime | String | Time the location opens after lunch in format "HH:MM:SS" | Yes |
| error | Object | Object containing the details of any business errors that have occurred. This element will only be returned in the event that no 'locations' data can be returned. | Yes |
| error.code | String | Code associated with the error condition. See section 7.2 for details. | No |
| error.description | String | Description of the error condition. See section 7.2 for details. | No |
| error.cause | String | Cause of the business error. See section 7.2 for details. | No |
| error.resolution | String | Description of the resolution and action required to correct the error. See section 7.2 for details. | No |

Table 11 – API Response Parameters

*Note: On Local or Public Holidays, individual opening times may vary.

6.4.4 Example Data

Full JSON examples are provided on the [Royal Mail API \(Developer\) Portal](#).

Example Request Data

| Parameter | Value |
|-----------------|------------|
| estDeliveryDate | 2015-10-31 |
| radius | 15 |
| longitude | -0.16317 |
| latitude | 51.49000 |

Table 12 – Example API Request Data

GET <https://api.royalmail.net/localCollectOffices/geosearch?estDeliveryDate=2015-10-31&radius=15&longitude=-0.16317&latitude=51.49000> HTTP/1.1
 Accept: application/json

X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lR0sY0kE1pG8wU3nQ4mA0xP0kB6aU7
 X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff

Example Response Data

| Field | Value |
|---|---|
| request | |
| request.estDeliveryDate | 2015-10-31 |
| request.radius | 15 |
| request.longitude | -0.16317 |
| request.latitude | 51.49000 |
| locations | |
| locations.bookingReference | 515050673190157025311015RM002BQj ytz000000000000000000000000blzBIILY7t+U mA0fPZZAs50z4o0b7sJ0QK33CWaQE8Q= |
| locations.organisationName | Post Office Limited |
| locations.locationName | Staines |
| locations.addressLine1 | 49 - 51 High Street |
| locations.addressLine2 | |
| locations.addressLine3 | |
| locations.addressLine4 | Staines |
| locations.county | |
| locations.postcode | TW184QR |
| locations.longitude | -0.51174 |
| locations.latitude | 51.43341 |
| locations.availability | true |
| locations.searchDistance | 0.2 |
| locations.openingDays | |
| locations.openingDays[index].dayOfWeek | Monday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Tuesday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |
| locations.openingDays[index].lunchClosingTime | |
| locations.openingDays[index].dayOfWeek | Wednesday |
| locations.openingDays[index].openingTime | 09:00:00 |
| locations.openingDays[index].closingTime | 17:30:00 |
| locations.openingDays[index].lunchOpeningTime | |


```

        {
          "dayOfWeek": "Saturday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Thursday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Monday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Tuesday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Wednesday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Friday",
          "openingTime": "09:00:00",
          "closingTime": "17:30:00"
        },
        {
          "dayOfWeek": "Sunday",
          "openingTime": "10:30:00",
          "closingTime": "14:30:00"
        }
      ]
    },
    "error": {}
  }
}

```


6.5 PUT localCollectOffices

6.5.1 Description

The PUT localCollectOffices operation allows customers to confirm that capacity should be reserved for a given location for an estimated delivery date (originally provided in the parameters supplied to the GET localCollectOffices operation).

6.5.2 Request Message

URL Path: <https://api.royalmail.net/localCollectOffices/{bookingReference}>

| Parameter | Optional | Description |
|------------------|----------|---|
| bookingReference | No | This is the reference for the estimated delivery date and location where capacity is to be reserved. This value is returned from the GET call and any special characters need to be correctly encoded using the UTF-8 hex encoding scheme (see Table 15 below). For example any instance of '/' in the bookingReference field (returned from the GET call) must be replaced with '0x2F' in the PUT call. This ensures alignment with RFC3986. |

Table 14 – API Request Parameters

Please see table below for the encoding scheme which must be used for all special characters used in the bookingReference field. All characters not referenced in the table below do not need to be encoded.

| Character | UTF-8 (Hex) |
|-----------|-------------|
| / | 0x2F |
| + | 0x2B |
| % | 0x25 |
| # | 0x23 |
| ? | 0x3F |
| \ | 0x5C |
| ; | 0x3B |

Table 15 – UTF-8 Hex Encoding for bookingReference

6.5.3 Response Message

The body of the JSON response message contains the full details of the chosen location, which is provided as a recap of the information originally provided in the GET localCollectOffices response. A successful business response will be returned as a standard HTTP response code of 201 (Created).

| Field | Type | Description | Optional |
|---------------------------|---------------------|---|----------|
| request | Object | Object containing the parameters passed in the request. | No |
| request.bookingReference | String | The unique booking reference that was provided in the request. | No |
| reservationReference | String | A unique reference for the capacity reservation. Please note that this is not required to collect the item(s). | No |
| location | Object | Object representing a Local Collect location. This element will only be returned in the event that no error condition has occurred. | No |
| location.organisationName | String | This is the organisation name for the location (populated with "Post Office Limited") | No |
| location.locationName | String | Name of the location | No |
| location.addressLine1 | String | Address line 1 of the location | No |
| location.addressLine2 | String | Address line 2 of the location | Yes |
| location.addressLine3 | String | Address line 3 of the location | Yes |
| location.addressLine4 | String | Address line 4 of the location. This will always be the name of the town the location is in | Yes |
| location.county | String | Name of county the location is in | Yes |
| location.postcode | String | Postcode of the location | Yes |
| location.longitude | Double | Longitude of the location | Yes |
| location.latitude | Double | Latitude of the location | Yes |
| location.availability | String | Indicates if the Local Collect service is available at this location. Possible values are "true" and "false". | Yes |
| location.searchDistance | Double | Distance the location is from postcode or position as provided in the request message (in miles as the crow flies). | Yes |
| location.openingDays | Array [openingDays] | An array of objects representing days the Post Office is open along with their | Yes |

| Field | Type | Description | Optional |
|---------------------------------------|--------|--|----------|
| | | opening times*. | |
| location.openingDays.dayOfWeek | String | Day name. Possible values are: <ul style="list-style-type: none"> Monday Tuesday Wednesday Thursday Friday Saturday Sunday Bankhol | Yes |
| location.openingDays.openingTime | String | Opening time of the location in format "HH:MM:SS" | No |
| location.openingDays.closingTime | String | Closing time of the location in format "HH:MM:SS". Note: It's not possible to collect items when location is closed (i.e. outside of opening hours) | No |
| location.openingDays.lunchOpeningTime | String | Time the location closes for lunch in format "HH:MM:SS". Note: It is not possible to collect items when the location is closed (i.e. during lunch hours) | Yes |
| location.openingDays.lunchClosingTime | String | Time the location opens after lunch in format "HH:MM:SS" | Yes |
| error | Object | Object containing the details of any business errors that have occurred. This element will only be returned in the event that no 'location' booking data can be returned. | Yes |
| error.code | String | Code associated with the error condition. See section 7.2 for details. | No |
| error.description | String | Description of the error condition. See section 7.2 for details. | No |
| error.cause | String | Cause of the business error. See section 7.2 for details. | No |
| error.resolution | String | Description of the resolution and action required to correct the error. See section 7.2 for details. | No |

Table 16 – API Response Parameters

*Note: On Local or Public Holidays, individual opening times may vary.

6.5.4 Example Data

Full JSON examples are provided on the [Royal Mail API \(Developer\) Portal](#).

Example Request Data

| Parameter | Value |
|------------------|---|
| bookingReference | 405648409752084900151215RM012BjqksS0000000000000000000000ceZvMJsGG4BljelzZFR0x2BpmG0x2FZckzdYAoplQeaPO1zuE= |

Table 17 – Example API Request Data

| |
|---|
| <p>PUT https://api.royalmail.net/localCollectOffices/405648409752084900151215RM012BjqksS0000000000000000000000ceZvMJsGG4BljelzZFR0x2BpmG0x2FZckzdYAoplQeaPO1zuE= HTTP/1.1 Accept: application/json</p> <p>X-IBM-Client-Secret: C8rG0uG5gl3hK3tR3iW6lROsY0kE1pG8wU3nQ4mA0xP0kB6aU7 X-IBM-Client-Id: a77f6e62-d4c5-4421-9af7-ba8fd3ed6eff</p> |
|---|

Example Response Data

| Field | Value |
|--|---|
| request | |
| request.bookingReference | 405648409752084900151215RM012BjqksS0000000000000000000000ceZvMJsGG4BljelzZFR0x2BpmG0x2FZckzdYAoplQeaPO1zuE= |
| reservationReference | Bq2GcL-BRNdR |
| location | |
| location.organisationName | Post Office Limited |
| location.locationName | Staines |
| location.addressLine1 | 49 - 51 High Street |
| location.addressLine2 | |
| location.addressLine3 | |
| location.addressLine4 | Staines |
| location.county | |
| location.postcode | TW184QR |
| location.longitude | -0.51174 |
| location.latitude | 51.43341 |
| location.availability | true |
| location.searchDistance | 0.2 |
| location.openingDays | |
| location.openingDays[index].dayOfWeek | Monday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |

| Field | Value |
|--|-----------|
| location.openingDays[index].dayOfWeek | Tuesday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |
| location.openingDays[index].dayOfWeek | Wednesday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |
| location.openingDays[index].dayOfWeek | Thursday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |
| location.openingDays[index].dayOfWeek | Friday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |
| location.openingDays[index].dayOfWeek | Saturday |
| location.openingDays[index].openingTime | 09:00:00 |
| location.openingDays[index].closingTime | 17:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |
| location.openingDays[index].dayOfWeek | Sunday |
| location.openingDays[index].openingTime | 10:30:00 |
| location.openingDays[index].closingTime | 14:30:00 |
| location.openingDays[index].lunchOpeningTime | |
| location.openingDays[index].lunchClosingTime | |

Table 18 – Example API Response Data

```

HTTP/1.0 201 OK
Content-Type: application/json
{
  "request": {
    "bookingReference":
"405648409752084900151215RM012BjqksS00000000000000000000ceZvMJsGG4BljelzZFR
0x2BpmGOx2FZckzdYAoplQeaP01zuE="
  },
  "reservationReference": "Bq2GcL-BRNdR",
  "location": {
    "organisationName": "Post Office Limited",
    "locationName": "Staines",
    "addressLine1": "49 - 51 High Street",
    "addressLine4": "Staines",

```

```

    "postcode": "TW184QR",
    "longitude": "-0.51174",
    "latitude": "51.43341",
    "availability": "true",
    "searchDistance": "0.2",
    "openingDays": [
      {
        "dayOfWeek": "Saturday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Thursday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Monday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Tuesday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Wednesday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Friday",
        "openingTime": "09:00:00",
        "closingTime": "17:30:00"
      }, {
        "dayOfWeek": "Sunday",
        "openingTime": "10:30:00",
        "closingTime": "14:30:00"
      }
    ]
  },
  "error": {}
}

```

7 Error Handling

7.1 Overview

There are two types of errors produced by the Local Collect API:

- **Business Errors** (e.g. invalid postcode, delivery date submitted is in the past etc)
- **Technical Errors / Exceptions** (e.g. database unavailable, failed schema validation 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 GET localCollectOffices or PUT localCollectOffices operations, and as such will be accompanied with the standard HTTP successful response code of 200 (for the GET operation) and 201 (for the PUT operation).

Table 19 below lists all business errors which may be returned from the API. Where an X or Y is shown, this will be substituted with the relevant element from the request message (e.g. the description "Postcode X invalid" for E1001 would be returned as "Postcode XX99 9XY invalid").

| code | Description | cause | resolution |
|-------|--|--|--|
| E1001 | Postcode X invalid | Postcode is not a recognised UK Postcode | Resubmit query with a valid Postcode. Alternatively submit with valid Latitude/Longitude coordinates. |
| E1002 | Latitude X or Longitude Y invalid | Either Latitude or Longitude is outside UK boundaries. | Resubmit query with location within UK boundaries. Note the UK Bounding Box is taken as: NE 60.85469, 1.76896 SW 49.16209, -8.638 Alternatively submit request with a valid Postcode. |
| E1003 | Delivery Date X invalid | The delivery date submitted is in the past | Resubmit query with a delivery date in the future. Note that "today's date" is considered invalid. |
| E1005 | Radius X invalid | The radius must fall in the range 1-99 inclusive, | The radius must fall in the range 1-99 inclusive. |
| E1007 | Invalid request for setLCDeliveryLocationRequest | The LCBookingReference is invalid. | Resubmit the GetLCDeliveryLocationsRequest to obtain a valid set of data |
| E1008 | Invalid request for setLCDeliveryLocationRequest | This LCBookingReference code has already been used. | Resubmit the GetLCDeliveryLocationsRequest to obtain a new LCBookingReference |

| | | | |
|-------|--|---|---|
| E1011 | Delivery Date should be on or before X | The Delivery Date submitted is too far into the future. | Resubmit query with a Delivery Date on or before X. |
|-------|--|---|---|

Table 19 – API Business Errors

7.2.1 Example Data

Please see below for an example of a business error which is returned from calling the GET localCollectOffices operation with an invalid postcode. Full JSON examples of responses are provided on the [Royal Mail API \(Developer\) Portal](#).

```
{
  "request": {
    "postcode": "CM220AA",
    "estDeliveryDate": "2015-12-12",
    "radius": "3"
  },
  "locations": [],
  "error": {
    "code": "E1001",
    "description": "Postcode CM220AA invalid",
    "cause": "Postcode is not a recognised UK Postcode",
    "resolution": "Resubmit query with a valid Postcode. Alternatively submit with valid Latitude/Longitude coordinates"
  }
}
```

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 | { "httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Client id missing." } | HTTP 401 (Unauthorised) |
| Client ID not subscribed / registered to API | { "httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Client id not registered." } | HTTP 401 (Unauthorised) |
| Incorrect Client Secret provided | { "httpCode": "401", "httpMessage": "Unauthorized", "moreInformation": "Invalid client id or secret." } | HTTP 401 (Unauthorised) |

| | | |
|-----------------------|--|-------------------------------------|
| Internal Server Error | <pre>{ "httpCode":"500", "httpMessage":"Internal Server Error", "moreInformation":"Please contact the RMG Customer Solutions Team" }</pre> | HTTP 500 (Internal Server Error) |
|-----------------------|--|-------------------------------------|

Table 20 – 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 Local Collect 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 Local Collect API being unavailable, customer systems must be able to display an appropriate message to direct consumers to alternative delivery address options. 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.

8.2 Performance

Performance testing has validated that the Local Collect API responds to calls in less than 2 seconds on average when invoked from the edge of Royal Mail's UK data centre. The API does provide a quicker response to GET localCollectOffices calls when Latitude & Longitude (instead of the post code) is used to search for locations. Additionally, a smaller radius in the search criteria, will render a faster response time.

The API does not support caching the results returned. Customers are required to make a new request each time a consumer intends to send the item with the Local Collect enhancement.

8.3 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 <http://developer.royalmail.net/faq-page> 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 Multipart Deliveries

Question: How do I use the API with multiple parcels for a single order?

Answer: Ideally, customer systems should make one GET and one PUT localCollectOffices call for each parcel within a single order. If it is not possible (e.g. the number of parcels is determined later in the supply chain) for this behaviour to be implemented, it is acceptable for customer systems to only make one GET localCollectOffices and one PUT localCollectOffices call for all of the parcels (even if each parcel is expected to arrive on a different day).

10.2 Cancelling Capacity

Question: How do I un-reserve previously reserved capacity (e.g. if a consumer cancels their order prior to it being despatched)?

Answer: It is not possible or necessary to do this – the system automatically adjusts capacity for items that are not delivered.

10.3 Application Compatibility

Question: What Software Development Kits or tools have been proven to work with the Local Collect API?

Answer: The following applications are known to be compatible with the Royal Mail Local Collect API: SoapUI.

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