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# REST API

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# User Guide

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# 1. Overview

*Magrathea* has always provided an API which enabled customers to control their numbering products via a TCP/IP API.

All of that functionality is now also available via a REST API that enables the creation of custom interfaces focusing on the operations customers most require. Transmitted data is sent and returned in JSON format. Empty returns will be simple HTTPS response codes.

## Documentation

Resource documentation is available here:

<https://restapi.magrathea.net:8443/docs/>

## Endpoint

<https://restapi.magrathea.net:8443/v1/>

## Authentication

The REST API client requires a valid username and password, presented with Basic HTTPS authentication.

## Supported HTTP Methods

GET	Lists objects and includes the information needed to perform additional operations on the number. Sample use: Get status of a number.
POST	Creates or updates numbers. Sample use: Activate a block of numbers.
PUT	Used to perform an action on a number. Sample use: Activate a number.
DELETE	Used to deactivate numbers. Sample use: Deactivate a block of numbers.

Parameters and Responses are listed in the abovementioned base HTML interface document.

## Access

Users will need a main account and one or more of the following permissions, depending on what they will be doing:

CPORTAL, ACCMGMT, CP999, FTRANSFER, INVOICES, NTSAPIUSER,  
PORTING, SIPAUTH

## Misuse

1. Misuse of a large number of requests or test credentials is not allowed
2. Do not try to guess user credentials

## 2. Services available through the REST API

The name and parameters of each call are listed here:  
<https://restapi.magrathea.net:8443/docs/>

### 1. Account Services ..... /account

Functionality to access account details, perform transfers, and check user services.

#### *addsipip*

Add a SIP IP address to the account.

#### *balance*

Outputs the balance and promo funds of an account.

#### *cdrs*

Outputs details of the last few calls of the account.

#### *detail*

Outputs various details held for the account.

You can only *view* and check this information, you cannot **change** it.  
If incorrect, you need to email [support@magrathea-telecom.co.uk](mailto:support@magrathea-telecom.co.uk).

#### *getlabel*

Returns the *label* for an account, if there is one.

#### *gettariff*

Returns the tariff *band* and tariff *restriction* for the account in question.

#### **Band:**

STANDARD	Standard Rates
DIRECT	Direct Connect rates
GOLD	Gold rates

VoIP TIER C	Mid-range
VoIP TIER D	Best

**Restriction:**

NONE	Calls to all destinations allowed.
HIGH	A base set of UK business destinations and international routes priced at 3p per minute and under.
MEDIUM	A base set of UK business destinations and international routes priced at 15p per minute and under

***listsipip***

Lists all the SIP IP addresses for the account

***removesipip***

Removes a SIP IP address from the account

***services***

Lists the services available to the client

Response Fields:

CPORTAL	Gives user permission to access the portal.
FTRANSFER	Allows user to transfer funds, and set Restricted Tariff options on your accounts.
MACCOUNT	Your master account.
ACCOUNT	Your other (sub-) accounts, if any.
INVOICES	For future functionality.

### ***setlabel***

Sets a *label* for an account. The purpose of this is to help clients remember which account is which.

Passed as a Body parameter:

```
{  
  "label": "Gold account"  
}
```

### ***setsippw***

Sets the SIP password for the account.

This presupposes a SIP Reg User has already been set up via Support. This cannot be done via the RESTAPI.

### ***settariff***

Sets the tariff *restriction* for the account in question.

It is not possible to change the account's tariff *band* by this means; for that you will need to contact Support.

Standard VoIP accounts have tariffs that allow calls to all destinations at all times. In addition we offer some Restricted Tariffs, which can be set by clients to exclude calls above various rates. You might for example prefer an unrestricted tariff during the week, but a restricted one at the weekend when most fraud occurs.

Bands and restrictions as described in **gettariff** above..

Passed as a Body parameter:

```
{  
  "restriction" : "MEDIUM"  
}
```

### ***transfer***

Transfers funds (but not promo funds) between the user's accounts.

For this request to transfer funds successfully, you must have the FTRANSFER service set to '1' for user/password, and the account transferred *from* requires a minimum of £50..

### ***transfer history***

Shows fund transfers on one or more of the user's accounts.

Needs FTRANSFER service set to '1'.

## Examples

(These are all body parameters).

1. Transfers on account 111638 from 4 weeks back.

```
{  
  "accounts": "111638",  
  "fromweeksago": "4"  
}
```

2. Transfers on accounts 111638 and 111390 from 8 to 4 weeks ago.

```
{  
  "accounts": "111638,1113490",  
  "fromweeksago": "8",  
  "toweeksago": "4"  
}
```

3. Transfers on account 111390 from 2021-04-04 till now.

```
{  
  "accounts": "111390",  
  "fromdate": "2021-04-04"  
}
```

4. Transfers on accounts 111390 and 111638 from 2020-12-15 till 2021-05-12.

```
{  
  "accounts": "111390,111638",  
  "fromdate": "2021-04-04",  
  "todate": "2021-05-12"  
}
```

## 2. Block Number Services..... /block

These requests operate on *blocks* of numbers.

The allocation and deallocation of contiguous blocks of numbers through the REST API is performed by single operations. You cannot use the standard requests **activate/deactivate/reactivate** on a number within a block – requests **blkactivate**, **blkdeactivate** or **blkreactivate** must be done on the block as a whole.

**Note** that this means that any given block is to be treated as an entire DDI range, and each block should therefore only be allocated to a single end-user.

You should not sub-allocate parts of blocks which were allocated using the **blkactivate** request to multiple users.

Requests to **deactivate** part of a block are not supported and any portability requests on part of a block will be refused.

However, all *other* requests are usable on these numbers; so once **allocated/activated** you are able to use the other requests to manage the numbers; for example, use **set** request to set the targets and query the status using **status** request.

### **blkactivate**

Searches the specified number range and attempts to allocate a block of numbers of the requested size to your account. Once the numbers have been allocated using this request, they are ready to be **set**.

Note that because blocks of numbers may be spread throughout our allocated ranges, the block returned may not match a very specific request.

The response to this command is the standard REST API success code of 200, with the first and last numbers in the block returned.

### **blkdeactivate**

Deactivates and returns a block of numbers to the pool. You need to pass in the first number of the block.

### **blkinfo**

Determines if a given number is part of a block. If it is, the first number and size of the block are returned.

## ***blkreactivate***

Reactivates a previously ***deactivated*** block, subject to no numbers in the block having been reallocated to other clients since then.

### 3. 999 Services ..... /nine

Access to the emergency services in the UK is handled initially by an Emergency Handling Authority who answer the phone call, confirm address details, and then pass the call to the appropriate local emergency services operator.

In order that name and address details are available, data must be submitted in advance to the EHA for each phone number that may make 999 calls.

The primary concern is that ALL data submitted should be valid as the purpose of the information is to speed up handling of 999 calls and the despatch of the relevant emergency services.

#### **Response Codes and Status**

You can generally expect a 200 OK Status with a successful command. Note that for nine commands, 400 is an informational response.

#### ***nineaddress***

Allows the setting of 999 address information.

The number must already have been allocated/activated and set as a 999 number using the request ***ninecreate***.

Where restrictions on the values apply, they have been listed with each particular parameter. The Max Size cannot be altered; if you need to abbreviate it, take care to ensure it still provides meaningful information for the emergency services.

Note that the submission and validation criteria applied by the EHA are extremely strict, and often records that fail any automated checking, are then validated manually.

You should supply as many of the fields as possible to give the best possible chance of the emergency services locating the caller.

This information is used to validate that the address the caller gives is the same as the data held, especially in the event that they get a 'silent call'.

<b>UK Address Data</b>			
<b>Address Item</b>	<b>Max Size</b>	<b>Description</b>	<b>Other Information</b>
TITLE	20	This is to be used for Honorary or Professional titles ONLY	
FORENAME	20	This can be used for either the forename or initials. If more than one initial is included these MUST be separated by a full stop. eg D.R.A Smith	
NAME	50	The surname or business name for the entry.	<b>Mandatory.</b> The EHA provides a list of required abbreviations for this item. See the end of this document
HONOURS	30	Any officially received Honours to be placed after the name fields.	
BUSSUFFIX	50		
PREMISES	60	Identifies the actual premises, ie house name and/or number. eg "24, Bleak House"	
THOROUGHFARE	55	The thoroughfare (street) name. eg "Byron Close", "Suffolk Lane", "High Street".	

LOCALITY	30	<p>For the purposes of submitting 999 information the locality field is used to indicate <i>both</i> the village/area <i>and</i> town/city of the address. This concatenation of two items is specified by the EHA.</p> <p>This means that if you need to provide an area as well as a town/city, they should be comma-separated:</p>	
POSTCODE	Valid Postcode	Valid UK postcode that must match the address details given in the other address fields.	<p><b>Mandatory.</b> Magrathea does not perform validation of address matching the postcode; this may be performed by the EHA</p>

Irish Address Data			
Address Item	Max Size	Description	Other Information
UNITNO	5	The number of the unit within a building	
UNITNAME	35	The name of the unit within a building. eg "Flat", "Apartment", "Office".	
UNITFLOOR	3	The floor number of a unit within a building..	
PREMISES	35	The name of the building.	
STREETNUM	10	The street number of the building.	
THOROUGHFARE	55	The Street name, Townland name or Town name.	

TOWN	50	The City or Town name or Dublin Postal area.	
COUNTY		The county name without the prefix, such as "Co." or "County".	

***ninecreate***

Creates a 999 record for the number given. This is a prerequisite for doing any other 999 data updates. It will not affect any existing data.

***ninedataj***

Retrieves data stored for the number given, with a single entry on each line consisting of the entry name followed by a space and the entry value.

***ninestatus***

Returns the status of submission for the number. A variety of responses are possible.

<b>Response</b>	<b>Meaning</b>
200 OK:0 Accepted	This response means that the information was submitted to the EHA and has been processed and validated by them successfully and is now live in the 999 database
400: 1 Info received	Some data has been provided for the number but this has NOT yet been submitted to the EHA because it has not yet been validated. You MUST issue a successful VALIDATE command for the data to be submitted to the EHA.
400:2 Info awaiting further validation	Data has been provided and is awaiting our secondary validation processing after which it will be automatically submitted to the EHA.

400:3 Info submitted	Data has been provided, passed all Magrathea validation and has been submitted to the EHA for processing.
400:6 Submitted	Awaiting manual processing. We will set the record to this state if we get a response from the EHA that the record has gone into their manual checking queue. Usually we will get a response back after a day or two and the status will change, but it can take seven days for them to fully process it.
400:8 Rejected (message)	The information was rejected by the EHA. This is a final error code and means you must check the data and resubmit it for processing. The 'message' text in brackets provides further details were available
400:9 No record found	No data was found for the number given

**Note** It is not unusual for it to take several days for the status to change from a status of 2 or 3 to a final '0 Accepted' or '8 Rejected' state.

This is due to the fact that processing the address record may have to be done manually.

You should therefore **not** issue a STATUS request more than once per day for any given number. And you should **not** contact Magrathea about the status for a number unless at least 7 working days have elapsed since you successfully issued a VALIDATE command on the number.

### ***ninevalidate***

Commences the data submission process. Before doing this, check that the data provided in all fields is correct and present.

There are several stages to the validation process. Initial basic validation is performed immediately to ensure that fields are completed and that the data appears valid.

You can expect the following results in response 400

Status	Response
400 Bad Request	<pre data-bbox="470 237 1225 398"> {   "code": 1,   "ntsapiresponse": "Parsed OK. Check later for status.",   "message": "NTSAPI returned a non-zero value" } </pre> <p data-bbox="470 436 1281 528">This means that whilst initial checks are satisfactory, a further set of checks are being performed before the information is transmitted to the EHA.</p>
400 Bad Request	<pre data-bbox="470 542 1139 703"> {   "code": 2,   "ntsapiresponse": "Validation failed",   "message": "NTSAPI returned a non-zero value" } </pre> <p data-bbox="470 741 1273 871">This means that validation of the address data submitted has failed. This is a fatal error – until you check and resubmit the data and issue another VALIDATE command, nothing will be submitted to the EHA</p>

## Examples of correct usage for 999 requests

### Example sequence

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/create/{FullNumber}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/TITLE/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/FORNEMAE/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/NAME/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/HONOURS/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/BUSSUFFIX/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/PREMISES/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/THOROUGHFARE/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/LOCALITY/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/nineaddress/{FullNumber}/POSTCODE/{NineAddressValue}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/nine/validate/{FullNumber}"
```

#### 4. Number Services...../number

These requests operate on individual numbers

##### **activate**

Activates a number which has been obtained using the **allocate** request. This is a necessary step that finalises the reservation process.

##### **alist**

Provides a selection of available numbers from the range requested, to enable a choice of number to allocate.

The request operates in a similar way to the **allocate** request; but rather than returning a single number, returns a random list of currently available numbers.

If you wish to have any of these numbers, you still need to issue the requests to **allocate/activate** and **set** the numbers in the normal way.

Numbers found are returned as an array of strings.

##### **allocate**

Attempts to allocate a phone number.

The <PartialNumber> can either be an entire number, or may include trailing underscores to indicate any digit is acceptable in those positions.

This is the only request that accepts underscore wildcards as part of the <PartialNumber> parameter.

**Note** - This request does **not** reserve the number – you must immediately thereafter perform an **activate** to ensure the number is allocated to your account, and so made unavailable for allocation by other users.

Example of <PartialNumber >:

The last four digits are replaced by underscores : 0128686\_\_\_\_\_

## ***deactivate***

Deactivates the specified number; it will then no longer operate when dialled.

The exact number must be used; underscores are not permitted when using this request.

**Note** - If you deactivate a number it becomes available for others to allocate. You therefore cannot rely on being able to later retrieve the number.

## ***feature***

Retrieve, set or unset a particular feature for a number, depending on use of the optional path parameter *enabled*

<b><i>enabled</i></b>	<b>Action taken</b>
Not used	Feature is only retrieved
=true	Feature is set and retrieved
=false	Feature is unset and retrieved

Available features:

CALLERID	Presents the called number as the CLI. The number dialled will then be shown to the recipient of the call.
ACR	Anonymous Call Rejection (ACR) for the number.  ACR is operative if the caller deliberately withholds their number (with 141 or similar) – in this case the call does not go through, and instead the originating network (eg BT) will play a message (eg “This number does not accept anonymous calls”).  ACR is not in effect if the caller ID does not exist, is international, or the caller is unable to withhold their number.

## *info*

Stores information about the user of the number.

For standard (UK) numbers, the only keyword available is 'GENERAL' for general information.

For International numbers, the only keyword available is 'INT' to store the address information (which may be required due to local regulations).

### Example

```
curl -X POST -u "username:password" -H "Content-Type:
application/json" --data '{"source":"GENERAL","information":"This is
some information"}'
"https://restapi.magrathea.net:8443/v1/number/info/fullnumber"
```

The information portion is a freeform text field of up to 80 characters, in which relevant information which has been requested from you by Magrathea can be stored, to enable Magrathea to comply with certain statutory obligations.

## *order*

Sets destination usages by time of day, allowing (for advanced NTS only) multiple targets to be set up and configuration when each target is active.

The <target index> relates directly to the <index> used in the SET request - the allowable values for this are 1, 2 or 3.

The <list of periods by position> item defines the order when a target is active and must contain four digits.

The four digits each represent a different time period, so the field should be thought of as DEWS where D = daytime, E=evening, W = weekend, S=special (unused). In each position, the numeric digit defines whether the target is active and in what order.

The allowable entries are 0, 1 and 2 which enables you to set up to three destinations for each time period. A period '1' in any position indicates the number is never to be used during that time period. When setting multiple destinations, the call will be initially passed to the destination that has a ZERO in that time period.

If the call fails, or does not complete after 20 seconds, then it will be passed to the destination that has a ONE in that time period.

If that call also fails, or goes unanswered for 20 seconds, then the destination with TWO in that time period will be called. Each time-period should only have ONE entry for each digit - you should not set both target 1 and target 2 to have a ZERO in the daytime as this will NOT result in both destinations ringing simultaneously – only the first will ring and the second will not be used at all.

## Examples

To set target 1 as first choice at all times (this is the default behaviour)

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/
{FullNumber}/1/0000}"
```

To set target 1 as first choice daytime, and second choice at all other times, with target 2 first choice for everything except daytime:

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/
{FullNumber}/1/00..}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/{Full
Number}/2/..00}"
```

To return to the default behaviour where target 1 is first choice at all times and targets 2 and 3 are unused:

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/{Full
Number}/1/0000}"
```

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/{Full
Number}/2/...."
```

```
curl -X PUT -u "USERNAME:PASSWORD"
"https://restapi.magrathea.net:8443/v1/number/order/{Full
Number}/3/...."
```

## **reactivate**

Reactivates a previously deactivated number (if it has not since been allocated by someone else).

## **set**

Sets destinations for when the number is dialled.

The index allows setting of multiple destinations, which in combination with the order request, allows time-based routing. If only one number is set, the index should always be 1. The destination can be a variety of entries, depending on the type of service that is to be performed.

### **Example**

```
curl -X POST -u "username:password" -H "Content-Type:
application/json" --data
'{"destinationType":"NUMBER","index":1,"destinationIdentifi
fier":"1234"}'
"https://restapi.magrathea.net:8443/v1/number/set/fullnum
ber"
```

Note : Even if you receive the 'Number updated OK' response you should still check the number actually works. The API does not validate that target number is valid or reachable.

The tariff on your account may not allow calls to certain chargeable destinations if the revenue from the incoming number is insufficient. For example, whilst you can set a UK geographic number to divert to a UK mobile phone in the NTSAPI, calls will not work because the mobile call is chargeable. If you wish to enable chargeable NTS diversions, please contact support for the costs involved.

For all of the following entries the case of the initial letter is important; in most cases the letter indicating the function required is uppercase.

As mentioned above, you can run fax-to-email by quoting a destination of For Fax to Email use F:<email address>

**Note:** For Fax-to-Email you may only enter a single email address. If you wish the faxes to go to multiple recipients, then a 'collector' address such as 'fax@mydomain.com' should be set up on your mail server, which you can then address to as many individuals as required.

## **setpin**

Sets a PIN for the number. The [pin] is optional – if no pin is provided then any existing pin on the number is removed. The PIN should be numeric and up to a maximum of 10 digits.

## **status**

Queries the current status of the specified number. A successful reply contains information about the number's current settings.

<status> can be Y for an active number or N for a deactivated number

<expiry> is the date the number expires and will become non-active

<target> contains one or more targets that will be used to deliver the call. Multiple targets are separated by a vertical bar '|' character.

### **Example of correct usage for number requests**

#### **Example sequence**

```
curl -X POST -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/number/allocate/0123456  
_____"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/number/activate/0123456  
7890"
```

```
curl -X GET -u "USERNAME:PASSWORD "  
"https://restapi.magrathea.net:8443/v1/number/status/012345678  
90"
```

```
curl -X POST -u "USERNAME:PASSWORD" -H "Content-Type:  
application/json" -data  
'{"destinationType":"NUMBER","index":3,"destinationIdentifier"  
:"1234"}'  
"https://restapi.magrathea.net:8443/v1/number/set/01234567890"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/number/order/0123456789  
0/1/0000"
```

```
curl -X PUT -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/number/feature/01234567  
890/CALLERID?enabled=true"
```

```
curl -X GET -u "USERNAME:PASSWORD"  
"https://restapi.magrathea.net:8443/v1/number/status/012345678  
90"
```

```
response{"status":"ACTIVATED","expiry":"2018-06-  
29","targets":[{"index":3,"value":"1234"}]}
```

## 5. Singleport...../singleport

This interface enables Magrathea customers to submit Geographic single line porting orders and check for subsequent responses and completion notices.

### ***neworder***

Captures an order requesting the porting of a number

### ***getorder***

Retrieves a previously captured order. Includes full details of the order, including when the order was captured and what state it is currently in.

### ***listcurrent***

A summary list of orders that are still in progress  
Meaning status is [ ENTER | ACCEPT | RH ]

### ***listarchive***

A summary list of orders that are no longer in progress.  
Meaning status is [ COMPLETE | CLOSE | REJECT | CLREJECT |  
REJECTFOC | CLREJECTFOC ]

### ***listall***

A summary list of all orders – *all* states and *all* dates.

### *listcustom*

A summary list of all orders, selectable by *age*, *status* and *linetype*. The required selection is set up in body parameters to the call (examples below)

1. All of *age*, *status* and *linetype* are optional.  
So if you omit all three, you will get back the entirety of your orders so far - of *any* age, *any* status, and *any* linetype.
2. *Age* is formed from four component parts  
To query on age, it is necessary to specify all four, and date1 must be <= date2.
  - a. Date1 Name  
One of : *submitdate portdate today*
  - b. Date2 Name  
As for date1
  - c. Comparison to apply to the dates  
One of : = <> < > <= >=
  - d. Desired days difference between the two dates  
An integer, eg 21
3. These are the order *statuses* and what they mean

<b>Code</b>	<b>Name</b>	<b>Description</b>
ENTER	Enter	New order has been submitted but has not yet been actioned by Magrathea.
RH	With RH	Order has been sent to the RH, and we now await their response.
ACCEPT	Accepted	The RH has accepted the port date and Magrathea has informed the client.
COMPLETE	Completed	The number has been ported and client informed.
CLOSE	Closed	Magrathea has closed the order. This could be for a number of reasons, commonly because the client or RH has cancelled the order.
REJECT	Rejected	The RH has rejected the port and the client has been informed of the reason.
REJECTFOC	Rejected - FOC	Same AS REJECT but Magrathea has decided not to charge the client for the rejection.
CLREJECT	Rejected - Closed	No longer used.
CLREJECTFOC	Rejected -	No longer used.

	FOC - Closed	
--	--------------	--

These can also be found by means of a *Lookup Query* (see below)

4. These are the *linetypes* and what they mean

Code	Name	Description
S	Single	Single line port
M	Multi	Multiline port.

These can also be found by means of a *Lookup Query* (see below)

## Examples

5. Body parameters for :

A summary list of all orders submitted up to 21 days ago

```
{
  "comparison": "<=",
  "days": "21",
  "date1": "submitdate",
  "date2": "today"
}
```

6. Body parameters for :

A summary list of all accepted orders

```
{
  "statuses": "accept"
}
```

7. Body parameters for :

A summary list of all in-progress orders, regardless of age

```
{
  "statuses": "enter, rh, accept"
}
```

(Does the same as *listcurrent*)

8. Body parameters for :

A summary list of all no-longer-in-progress orders, regardless of age

```
{
  "statuses": "complete, close, reject,
```

```
clrreject, rejectfoc, clrrejectfoc"
}
```

(Does the same as *listarchive*)

9. Body parameters for :

A summary list of all in-progress orders submitted over 30 days ago

```
{
  "comparison": ">",
  "days": "30",
  "date1": "submitdate",
  "date2": "today",
  "statuses": "enter, rh, accept"
}
```

10. Body parameters for :

A summary list of all orders with a port date over 30 days ago that are either closed or complete

```
{
  "comparison": ">",
  "days": "30",
  "date1": "portdate",
  "date2": "today",
  "statuses": "close, complete"
}
```

11. Body parameters for :

A summary list of all in-progress orders whose port date is 90 days or more after the submit date

```
{
  "comparison": ">=",
  "days": "90",
  "date1": "portdate",
  "date2": "submitdate",
  "statuses": "enter, rh, accept"
}
```

12. Body parameters for :

A summary list of all orders that are *Rejected FOC*

```
{
  "statuses": "rejectfoc"
}
```

13. Body parameters for :

A summary list of *all* orders – *all* statuses and *all* dates

```
{
}
```

(Does the same as *listall*)

## **query**

A means to do assorted other queries on the database.  
The query in question is set up in one or more of a set of body parameters – *Function*, *MainBillNo*, *LookupName*, *LookupKey*.

### 1. **Soonest Port Date query**

Discover the soonest port date possible, taking into account a lead time of 4 days, weekends and bank holidays.

Body params

```
{
    "function": "soonestportdate"
}
```

Response:

```
{
    "soonestportdate": "2020-01-24"
}
```

### 2. **RH and LCP query**

Discover the Rangepicker and Losing Communications Provider for a number.

Body params

```
{
    "function": "rh_lcp",
    "mainbillno": "01183210321"
}
```

Success Response:

```
{
    "rh": "Magrathea Telecommunications Limited",
    "lcp": "Magrathea Telecommunications Limited"
}
```

Warning Response (200) :

```
{
    "warning": "'01183210321' is already being
                ported..."
}
```

Warning Response (200) :

```
{
    "warning": "The number '01202030608' cannot
                be ported. Please contact Support."
}
```

Warning Response (200)

```
{
  "warning": "Invalid Geographic phone number
'07740836181' Required format: 0[12][0-9]*"
}
```

### 3. Lookup queries

To look up descriptions of list items.

The available lists being `status`, `linetype` and `rejection`.

To look up the meaning of the rejection code "C23":

Body params:

```
{
  "function": "lookup",
  "lookupname": "rejection",
  "lookupkey": "C23"
}
```

Response:

```
{
  "C23": "Order incomplete"
}
```

To list *all* the rejection codes

Body params

```
{
  "function": "lookup",
  "lookupname": "rejection",
  "lookupkey": "~all~"
}
```

Response:

```
{
  "C01": "Order number missing or invalid",
  "C02": "CUPID missing or invalid",
  "C03": "Order sent date and time missing or
        invalid",
  ...
}
```

## Appendices

### 1. Appendix A - BUSINESS DESCRIPTIONS, SUFFIXES & PROFESSIONS

**Any of the abbreviations included in the tables below are MANDATORY. If they are not used in any input record, that record will be rejected by the EHA system!**

If a Business Description or Business Suffix abbreviation is not shown in the table below (for example – the abbreviation for Gun-Slinger is not shown) then the system will accept the text used in the relevant field, whether in full, or abbreviated.

For plurals add 's' to abbreviation.

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Academy	Acad	Anaesthetist	Anaesthst
Accessories	Acces	Analytical	Analyt
Accommodation	Accom	And	&
Account	Acct	Animal	Anml
Accountancy	Acctcy	Antiques	Antiq
Accountant	Acctnt	Apartments	Apts
Accumulators	Accumlrs	Apparatus	Appar
Actuary	Acty	Appliances	Appl
Acupuncture	Acupunc	Appointments	Appts
Adding	Addg	Architect	Archt
Addressing	Addsg	Architectural	Archtl
Adjutant	Ajd	Artificial	Artif
Administration	Admin	Artist	Art
Advertisement	Advt	Asbestos	Asb
Advertising	Advtg	Asphalt	Asph
Advocate	Advc	Assessor	Assr
Aeronautical	Aero	Assistant	Asst
Agency	Agcy	Associated	Assoc
Agents	Agt	Association	Assn
Agricultural	Agric	Assurance	Assnce
Agriculture	Agric	Auction	Auct
Aircraft	Aircft	Auctioneer	Auctnr
Alderman	Ald	Automatic	Autmtc
Aluminium	Alnm	Automobile	Auto

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Baker	Bkr	Book	Bk
Bakery	Bkry	Booking	Bkg
Bank	Bnk	Bookmaker	Bkmkr
Banker	Bnkr	Bottler	Botlr
Banking	Bnkg	Branch	Bch
Barber	Barb	Brass	Brss
Barracks	Brks	Breakdown	Brkdn
Barrel	Brl	Breaker	Break
Barrister-at-Law	Barrstr	Breeder(s)	Brdr(s)
Basket	Bskt	Brewer	Brew
Bearings	Brngs	Broker	Brok
Beater	Beatr	Bronze	Brnz
Billposter	Bilpstr	Builder	Bldr
Binder	Bndr	Building	Bldg
Blacksmith	Blksmith	Bureau	Bur
Blockmaker	Blckmkr	Business	Bsns
Board	Bd	Butcher	Btchr
Boarding	Bdg	Butter	Bttr
Boatbuilder	Btbldr	Button	Bttn
Boiler	Blr		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Cabinet	Cabt	Clothier	Clothr
Cafeteria	Cfteria	Clothing	Clothg
Calculating	Calc	Coach	Cch
Canteen	Cantn	Collector	Collr
Caravan	Crvn	College	Coll
Cardboard	Cdbrd	Commercial	Comml
Carpenter	Cpntr	Commission	Commn
Carpet	Crpt	Commissioned	CD
Carriage	Carrge	Commissioner	Commr
Carrier	Carr	Company	Co
Cartage	Ctge	Component	Compnt
Carter	Cartr	Computer	Cmptr
Cartwright	Crtwrt	Conditioning	Cond
Caterer	Caterer	Confectioner	Confec
Catering	Catrng	Conference	Conf
Certified	Cert	Constructional	Constr
Chandler	Chdlr	Constructor	Constr
Chartered	Chrtd	Consultant	Conslt
Chartered Accountant	Chrtd Acctnt	Consulting	Consltg
Chemical	Chem	Continental Foods	Contl Fds
Chemist	Chemst	Contractor	Contr
Chief	Chf	Controller	Contrlr
Children's	Chldns	Convalescent	Convalct
Chimney Sweep	Chim Swp	Convent	Cnvt
Chiropodist	Chrpdst	Co-operative	Co-op
Chiropodist (State Registered)	Chrpdst (SR)	Copper	Cop
Chiropractor	Chiroprctr	Corporation	Corpn
Chocolate	Choc	Cosmetic	Cosm
Church	Ch	Costumier	Costum
Cigarette	Ciggte	Cotton	Cottn
Cinematograph	Cinemat	Council	Ccl
Civil	Civ	County	Co
Classified	Classfd	Court	Ct
Cleaners	Clnrs	Cycle	Cyc
Cleaning	Clng		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Dairyman	Dairymn	Dispensory	Dispnsy
Dancing	Dncg	Distiller	Dstlr
Dealer	Dlr	Distillery	Dstly
Decorator	Dectr	Distribution	Distrib
Delivery	Dlvry	Distributor	Distrib
Demolition	Demol	District	Dist
Dental	Dent	Division	Div
Dentist	Dent	Doctor	Dr
Department	Dept	Do-it-yourself	D-I-Y
Deputy	Dep	Domestic	Dom
Designer	Desnr	Draper	Drpr
Detective	Detec	Draughtsman	Drghtsmn
Development	Dvlpmt	Dresser	Drsr
Diamond	Diamd	Dressmaker	Drsmkr
Director	Dir	Driving	Drvg
Discount	Dscnt	Drysalter	Drysltr
Dispensing	Dispng	Duplicating	Dup

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Economical	Econ	Enquiry	Enq
Electric	Elec	Entertainments	Entrtnmts
Electrical	Elec	Equipment	Eqpt
Electrician	Elecn	Establishment	Estab
Electronic	Elecn	Estate	Est
Embroider	Embrdr	Examination	Exam
Employers	Emplyrs	Excavation	Excav
Employment	Emplymt	Export	Exp
Enamellers	Enamlrs	Exporter	Exprr
Engineer	Eng	Exporters	Exprrs
Engineering	Engng	Extension	Extn
Engraver	Engrvr		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Fabricator	Fabctr	Footwear	Footwr
Factor	Fctr	Foreign	Fgn
Factory	Fcty	Forwarding	Fwrddg
Farmer	Fmr	Founder	Fndr
Fashion(s)	Fash(s)	Foundry	Fndy
Federation	Fed	Freezer	Frzr
Financier	Financr	Freight	Frght
Finisher	Fnshr	Frozen Food	Frzn Fd
Firewood	Firewd	Fruit	Frt
Fishmonger	Fishmgr	Fruiterer	Ftrr
Fitter	Ftr	Funeral Director	Funrl Dir

Fittings	Ftngs	Furnished Rooms	Furn Rms
Flesher	Flshr	Furnisher	Furn
Flight	Flt	Furnishings	Furn
Floor Coverings	Flr Cvrngs	Furniture	Furn
Florist	Flor	Furrier	Furr

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Gallery	Gall	Goods	Gds
Garage	Gar	Govenor	Gov
Garden	Gdn	Government	Govt
Gardener	Gdnr	Greengrocer	Grngrcr
General	Gen	Grocer	Grcr
Gentlemen's	Gents	Group	Gp
Girls	Grls	Grower	Grwr
Glass	Glss	Gynaecologist	Gynaecol
Glazier	Glaz		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Haberdasher	Hbdshr	Horticultural	Hortl
Hairdresser	Hrdsr	Hosier	Hosr
Hairdressing	Hrdsg	Hosiery	Hosry
Hardware	Hdwre	Hospital	Hosp
Haulage	Hlge	Hostel	Hstl
Hauliers	Hlrs	Hotel	Htl
Head	Hd	House	Ho
Headquarters	Hdqrs	Household	Hsehld
Heating	Htg	Housing	Hsng
Hire Purchase	H.P	Hydraulic	Hydr
		Hypermarket	Hypmkt

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Ice Cream	Ice Cr	Installation	Instl
Implements	Implmts	Institute	Inst
Import	Impt	Institution	Instn
Importer	Imptr	Instructor	Instr
Importing	Imptg	Instrument	Instmt
Incorporated	Inc	Insurance	Ins
Industrial	Indust	Interior	Int
Infants	Inf	International	Internat
Infirmary	Infmy	Investment	Invest
Inspector	Insp	Iron	Irn

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Jeweller	Jwlr	Journalist	Journ
Jewellery	Jwly	Junior	Jun
Joiner	Joinr	Justice of the Peace	J.P

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Kitchen	Kitch	Knitwear	Knitwr
Knitting	Kntg		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Laboratory	Lab	Lighter	Lightr
Launderer	Laund	Lighterage	Lightge
Laundrette	Laund	Lighting	Ltg
Laundry	Laund	Limited	Ltd
Lawyer	Lwyr	Linoleum	Lino
Leader	Ldr	Lithographer	Lthgphr
Leather	Lthr	Lithographic	Lthgphc
Library	Lib	Lithography	Lthgphy
Licensed	Licsd	Locomotive	Loco

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Machine	Mach	Mercantile	Merc
Machinery	Mach	Merchandise	Merch
Mail Order	Mail Ord	Merchant	Mrcnt
Maintenance	Maintce	Metal	Mtl
Maker	Mkr	Metallurgist	Metallgst
Making	Mkg	Midwife	Midwfe
Management	Mngmt	Miller	Milr
Manager	Mgr	Milliner	Milnr
Mantles	Mntls	Millinery	Milny
Manufacturer	Mfr	Mineral	Min
Manufacturing	Mfg	Mixed	Mxd
Margarine	Margn	Modern	Mod
Market	Mkt	Monger	Mgr
Marketing	Mktg	Monumentall	Monmt
Mason	Masn	Mortgage	Mortg
Materials	Matls	Motor	Mtr
Mechanic	Mech	Municipal	Mun
Medical	Med	Museum	Musm
Medicine	Med	Music	Mus
Members	Mbrs	Musician	Musn
Menswear	Menswr	Mutual	Mutl

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
National	Nat	Novelties	Novlts
Neckwear	Nckwr	Nurse	Nrse
Needlework	Ndlwk	Nurseries	Nrsries
News	Nws	Nursery	Nrsry
Newsagent	Nwsagt	Nursing	Nrsg
Newspaper	Nwsprr		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Obstetrician	Obstet	Operator	Opr
Occupational	Occpnl	Ophthalmic	Ophthal
Off Licence	Off Lic	Optical	Optcl
Office	Off	Optician	Optcn
Officer	Offr	Ornamental	Ornmtl
Offices	Offs	Orthopaedic	Orthpdc
Operatic	Oprtc	Osteopath	Osteo
Operating	Optg	Outfitter	Outftr
Operation	Oprtn	Overseas	O/Seas

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Packer	Pckr	Pottery	Pottry
Painter	Pntr	Poulterer	Poultr
Painting	Pntg	Poultry	Poultr
Paper	Ppr	Practitioner	Pract
Parlour	Plr	Preparation	Prep
Parsonage	Prsnge	Presbytery	Prsbyty
Passenger	Pass	President	Pres
Patent	Pat	Primary	Primy
Pathology	Pathlgy	Printer	Pntr
Patternmaker	Ptrnmkr	Printing	Prntg
Pawnbroker	Pwnbrkr	Private	Prvt
Perfumer	Pfumr	Product	Prod
Permanent	Perm	Products	Prod
Pharmaceutical	Pharm	Professional	Profssnl
Photocopying	Photocpyg	Professor	Prof
Photographer	Photog	Property	Prpty
Photographic	Photog	Proprietor	Prop
Physician	Physn	Provision	Provn
Physiotherapist	Physthpst	Psychiatrist	Psychtr
Pianist	Pnst	Psychoanalyst	Psychan
Pianoforte	Piano	Psychologist	Psychol
Pilot	Plt	Public	Pblc
Plasterer	Plstr	Public Limited Company	Plc (always lower case)
Plastering	Plstr	Publication	Pubn

Plastic	Plstc	Publicity	Pubcty
Plater	Platr	Publisher	Pubr
Plumber	Plmbr	Publishing	Pubg
Plumbing	Plmbg	Purchasing	Purch
Polisher	Polshr	Purveyor	Purvr

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Quantity	Qty	Quarters	Qrs

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Radiation	Radtn	Removing	Remov
Radiator	Radtr	Repairers	Rprs
Railway	Rly	Repairs	Rprs
Reception	Recptn	Repository	Repos
Reconditioned	Recond	Representatives	Reps
Recruitment	Recrutmt	Requisites	Reqs
Refiners	Refin	Research	Resch
Refreshments	Refresh	Residence	Res
Refrigeration	Refrig	Residents	Resdts
Regimental	Regtl	Restaurant	Rstnt
Regional	Regnl	Retail	Ret
Registered	Regd	Retailer	Retlr
Registrar	Regr	Roofing	Rfg
Registration	Regstrn	Rooms	Rms
Registry	Regy	Rubber	Rubr
Removals	Remov		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Salesman	Sismn	Specialist	Spclst
Sa-lo(o)n	Sal	Spinners	Spinrs
Sanitary	San	Spirits	Spir
Sawmill	Swmil	Sports	Spts
Scaffolding	Scffdg	Sprayers	Spray
Scenery	Sceny	Squadron	Sqn
School	Sch	Stables	Stabs
Scientific	Sci	Stamp	Stp
Sculptor	Sclptr	State Registered Nurse	S.R.N
Second Hand	Sec Hd	Station	Stn
Secondary	Sec	Stationer	Stnr
Secretary	Secy	Stationery	Stny
Sellers	Sellrs	Statistician	Statsn
Senior	Sen	Statistics	Stats
Service	Serv	Stevedores	Stevdrs
Sheet	Sht	Stock	Stk
Shipping	Shpg	Stockholder	Stkhldr

Shopfitter	Shopftr	Stockist	Stkst
Shorthand	Shthd	Storage	Strge
Showroom	Shwrm	Structural	Structl
Sign	Sgn	Sundries	Sunds
Silver	Silv	Superintendent	Supt
Silversmith	Silvsmth	Supermarket	Supmkt
Slater	Slatr	Supervisor	Supvr
Slaughterer	Slgtr	Supplies	Supps
Smallholder	Smlher	Surgeon	Surg
Society	Soc	Surgical	Surg
Solicitor	Solr	Surveyor	Survyr
Spares	Sprs	Sweets	Swts
Special	Spl		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Tailor	Tlr	Ticket	Tkt
Tailoring	Tlrg	Timber	Timb
Teacher	Tchr	Tinplate	Tinpl
Technical	Tech	Tobacconist	Tbcnst
Technician	Tech	Tourist	Tour
Telecommunications	Telecom	Trading	Trdg
Telegraph	Teleg	Translator	Transl
Telephone	Tele	Transport	Transp
Television	TV	Travel	Trvl
Textile	Txtl	Typewriter	Typw
Theatre	Theat	Typewriting	Typwrg
Theatrical	Theat	Typsetters	Typstrs
Thermometer	Thermtr		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Undertaker	Undtkr	Unfurnished	Unfurn
Underwriter	Undwtr	Upholsterer	Uphol

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Valuer	Val	Veterinary Surgeon	Vet Surg
Vegetable	Veg	Violinist	Vlnst
Vehicle	Vhcle	Visitor	Vstr
Vendor	Vdr	Vocalist	Voclst
Ventilating	Ventlg	Voluntary	Vol

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Wallpaper	Wlppr	Wholesale	Whsle
Ware	Wre	Wholesaler	Whslr
Warehouse	Wreho	Window	Wndw

Watch	Wtch	Women's	Wmns
Watchmakers	Wtchmkrs	Woodworkers	Wdwkrs
Weaver	Weav	Workers	Wkrs
Welder	Wldr	Works	Wks
Welding	Wldg	Workshops	Wkshps
Wharf	Whf	Worsted	Wrstd
Wharfingers	Whfgrs	Wrecker	Wrckr
Wheelwright	Whlwrt	Writer	Wtr

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Yard	Yd		

DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
Zinc	Zn		