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API Spec Sheet For HLR v1.4

INTRODUCTION

The Wholesale SMS HLR API provides an easy to use method of accessing the HLR (Home Location Register) for all networks worldwide that support HLR. For large batch files we recommend using the HLR data cleaning feature in the SMS toolbox of your user admin panel of the web portal.

You can perform individual real-time lookups and receive each result separately or if you want the API to produce the results of a batch of lookups in a file then simply provide a unique reference for each batch and post this to the report API. Full details of how to achieve this are provided below.

PERFORMING AN HLR LOOKUP

To access the HLR API you need your unique 40 character API key and account number both of which can be found in the account details area of your admin panel. You will also need to post the required fields detailed below.

HLR LOOKUPS

These are the details you need to be able to check a number through the HLR system.

FIELD	REQUIRED	DETAILS & VALID OPTIONS
key	YES	Your 40 character API key. You can find this in your user portal settings page.
account	YES	Your user account number (this can be found in your account area).
number	YES	The full MSISDN mobile phone number including country code eg: 447123456789
format	NO	The format of the API response. Default is "xml" other options: "plain", "json"
ref	NO	Set this to a unique ID for each batch. This allows you to receive results in a file. Only alpha numeric characters allowed to a maximum of 50 characters.

PLEASE NOTE:

Field names and valid options ARE case sensitive - please ensure the data you send takes this into account.

Post to this URL for to perform a lookup over HTTP:

<https://wsms.uk/API/hlr>

You can send the above fields using methods POST or GET. See page 5 for example post strings.



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SERVER RESPONSES FOR HLR LOOKUP

These are the possible responses for each query sent to the API server:

RESPONSE	DESCRIPTION/MEANING
invalid credentials	Either your account number and/or API key are wrong or your API access is not active.
no credits	The request could not be processed as you have no credits available.
failed	"failed" followed by the reason for the failure. Example: failed: missing number
error	An unknown error occurred.

On successful posting the response will be provided in XML format by default. Here is an example:

```
<?xml version="1.0" encoding="utf-8" ?>
  <hlr xmlns="http://tempuri.org/wholesalesms.hlr.xsd">
    <response>
      <ref>12345</ref>
      <msisdn>447474747474</msisdn>
      <imsi>123207056381123</imsi>
      <mccmnc>23420</mccmnc>
      <ported>yes</ported>
      <PortedFrom>O2 (Telefonica UK Ltd)</PortedFrom>
      <CurrentNetwork>3 (Hutchison 3G UK Ltd)</CurrentNetwork>
      <roaming>No</roaming>
      <result>Request delivered to handset</result>
      <country>United Kingdom</country>
      <countryCode>44</countryCode>
      <error>No Error</error>
      <date>2016-11-06 23:41:43</date>
    </response>
  </hlr>
```

If you include the optional "format" field and set this to "plain" eg **&format=plain** then the resulting response would look like this:

```
number=447474747474;imsi=123207056381123;mccmnc=23420;result=Request delivered to handset;ported=yes;roaming=no;PortedFrom=O2 (Telefonica UK Ltd);CurrentNetwork=3 (Hutchison 3G UK Ltd);country=United Kingdom;countryCode=44;error=No Error;date=2016-11-06 23:44:29
```

Setting the format field to json eg **&format=json** will result in a JSON formatted response.



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HLR REPORTING

By default the system will respond with the lookup results for each number pushed to it through the API individually. However it is possible to create a batch file by passing to the HLR API URL an optional "ref" field containing the same reference for all the numbers you want to batch together.

This will enable you to post this reference to the HLR report API which will then provide the results in a CSV batch file. This report will be created on the fly and emailed to the email address of the account user.

These are the details you need to be able to produce a CSV batch report containing the HLR results.

FIELD	REQUIRED	DETAILS & VALID OPTIONS
key	YES	Your 40 character API key. We generate this for you.
account	YES	Your portal account number (this can be found in your account area).
ref	YES	Set this to the batch reference you want to generate a CSV batch file of.

PLEASE NOTE:

Field names and valid options ARE case sensitive - please ensure the data you send takes this into account.

Post to this URL to generate a CSV file:

https://wsms.uk/API/hlr_report

You can send the above fields using methods POST or GET. See page 5 for example post strings.

Successful requests made to this API will result in the generation of a CSV file containing the HLR results for every lookup made using the same reference number.



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SERVER RESPONSES FOR HLR REPORTING

For each query sent to the processing server an appropriate message will be returned. These are the possible responses:

RESPONSE	DESCRIPTION/MEANING
invalid credentials	Either your account number and/or API key are wrong or your API access is not active.
success	The request was processed successfully.
failed	"failed" followed by the reason for the send failure. Message could not be sent for another reason eg the number is no longer active.
error	An unknown error occurred.

On successful submission the resulting file will be created on the fly and emailed to the account user email address.

The on screen response will be in plain text. Here are some examples:

failed: missing reference

Success: HLR file ref: 123456 emailed to: user@youremail.com

PLEASE NOTE:

You can also generate a report for a batch file of up to 10,000 numbers by using the HLR data cleaning feature in the SMS toolbox of your user admin panel of the web portal.



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EXAMPLE POST STRINGS

EXAMPLE POST STRING for HLR LOOKUP

`https://wsms.uk/API/hlr?key=zP9KOSajJJ61pgSypN6U47dAbIQw9DBWtLHhEiAn&account=12345&number=447123456789&ref=123456&format=plain`

EXAMPLE cURL POST for HLR LOOKUP

```
<?php
$fields =
"key=zP9KOSajJJ61pgSypN6U47dAbIQw9DBWtLHhEiAn&account=12345&number=447123456789&format=plain";

// post fields to API
$ch = curl_init();
curl_setopt($ch, CURLOPT_URL,"https://wsms.uk/API/hlr");
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_POSTFIELDS,"$fields");
curl_setopt($ch, CURLOPT_RETURNTRANSFER,1);
$returnValue = curl_exec($ch);

// display the result
echo $returnValue;
exit();
?>
```

EXAMPLE POST STRING for HLR REPORT BATCH FILE GENERATION

Assuming the optional field "ref" has been included in the above request eg: **&ref=123456** then you can set the "ref" field to this reference in the HLR Report API to generate a CSV batch file.

`https://wsms.uk/API/hlr_report
?key=zP9KOSajJJ61pgSypN6U47dAbIQw9DBWtLHhEiAn&account=12345&ref=123456`

In both examples the response from the API server is captured by the \$returnValue variable which you can adapt the processing scripts at your end to handle accordingly if required.

Possible responses from the HLR lookup may be found on the following page.



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POSSIBLE HLR RESPONSES

Response

REQUEST DELIVERED TO HANDSET
ABSENT SUBSCRIBER
RESTRICTED
MISSING DATA
NOT SUPPORTED
ABORTED
CANCELLED
REJECTED
LOOKUP BLOCKED
INVALID DATA
INVALID RANGE
LOOKUP THROTTLED
SYSTEM FAILURE
NO SMS SERVICE
TIMEOUT
UNEXPECTED VALUE
UNKNOWN SUBSCRIBER
ERROR

Description

A successful response was received
The subscriber is absent; the handset is off or out of range
The network has restricted this service
Some required data is missing
SMS is not supported
Request was aborted
No response for the HLR request was received
HLR request was rejected
Request is blocked
Some required data is invalid
Invalid number or format
Maximum allowed requests reached
An HLR system failure occurred
SMS service is not available
No response received
An unexpected data value in the request
The subscriber is unknown; this number is not active
On failed requests an error message will be provided

Further information on the HLR API can be obtained by emailing: **support@wholesalesms.co.uk**

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