IP Check
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Dear Developer,

I would like to take this opportunity to introduce you to Melissa Data Corp. Founded in 1985, Melissa Data provides data quality solutions, with emphasis on address and phone verification, postal encoding, and data enhancements.

We are a leading provider of cost-effective solutions for achieving the highest level of data quality for lifetime value. A powerful line of software, databases, components, and services afford our customers the flexibility to cleanse and update contact information using almost any language, platform, and media for point-of-entry or batch processing.

This manual will guide you through the functions of our easy-to-use programming tools. Your feedback is important to me, so please don't hesitate to email your comments or suggestions to Ray@MelissaData.com.

I look forward to hearing from you.

Best Wishes,

Raymond F. Melissa
President
INTRODUCTION

The IP Check returns geographic data for a given IP address. Since IP addresses are typically given in blocks to large institutions such as internet service providers, this service will most often provide you with an approximate location based on the location of that institution.

The level of detail may also vary considerably according to the country in which the IP address' owner is located.

REQUEST FIELDS

The following list of the fields that are either required for each request or may only be found in some requests. See descriptions.

<table>
<thead>
<tr>
<th>BatchID</th>
</tr>
</thead>
<tbody>
<tr>
<td>This field accepts a batch ID number which can be used to match the response to the related request.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use this field to specify the culture for the current request.</td>
</tr>
</tbody>
</table>

ENTRY FIELDS

The following list of the fields that are either required or may only be found in some entries. See descriptions.

<table>
<thead>
<tr>
<th>RecordID</th>
</tr>
</thead>
<tbody>
<tr>
<td>This can be any unique identifier assigned to each record, which allows the applications to match the return data to the original record.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IPAddress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required.</strong> This field is a required 15-character string value containing four three-digit numbers, separated by periods.</td>
</tr>
</tbody>
</table>

The service currently processes IPv4 addresses. IPv6 addresses are not supported.
See the listing below for a description and explanation of every field returned by the IP Check service.

**PER RESPONSE**

The following fields are returned once per response.

**STATUS_CODE**

This field returns the HTTP status code, indicating the success or failure of the most recent request.

**STATUS_DESCRIPTION**

This field returns the descriptive that matches the HTTP status code returned by the Status Code field.

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Status Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>OK</td>
<td>The request was successfully sent</td>
</tr>
<tr>
<td>400</td>
<td>Bad Request</td>
<td>The request returned an error</td>
</tr>
<tr>
<td>401</td>
<td>Unauthorized</td>
<td>Access was denied. You may have entered your credentials incorrectly, or you might not have access to the requested resource or operation</td>
</tr>
<tr>
<td>404</td>
<td>Not Found</td>
<td>The requested resource was not found</td>
</tr>
<tr>
<td>500</td>
<td>Internal Server Error</td>
<td>Your request could not be completed because there was a problem with the service</td>
</tr>
<tr>
<td>503</td>
<td>Service Unavailable</td>
<td>There’s a problem with the service right now. Please try again later</td>
</tr>
</tbody>
</table>

**BATCH_ID**

This field returns the batch ID number submitted to the related request.
TOTAL RECORDS

This field returns the total number of records included in the response.

PROCESSED RECORD COUNT

Returns a value containing the number of records successfully processed.

NOT PROCESSED RECORD COUNT

Returns a value containing the number of records unsuccessfully processed.

PER RECORD FIELDS

The following fields are returned with each individual record.

RESPONSE RECORD ID

This field returns the Response record ID.

RECORD ID

This field returns the content of the RecordID field from the original request, making it possible to match the returned suggestions with the original records.

CONFIDENCE

Each record returned is assigned a confidence value from 0 to 1, which indicates how certain IP Check can be that the suggestion represents a valid IP address. A successfully verified IP address will have a confidence score of 1.0, indicating 100% confidence.

RESULTS

This field returns a string value containing status and error codes for the current record. Multiple codes are separated by commas.

The Results field may return one or more four-character strings, separated by commas, depending on the result generated by the current record.

If the IP address in the current record was verified, this field will contain the value “IS01” or “IS02” at the very minimum and may include more of the “IS” codes. If the address could not be verified, the codes beginning with “IE” will indicate the reason or reasons why verification failed.
The possible values are:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS01</td>
<td>IP Address Found in Database</td>
</tr>
<tr>
<td>IS02</td>
<td>IP Address Unknown</td>
</tr>
<tr>
<td>IE01</td>
<td>IP Address was empty or not well formed</td>
</tr>
</tbody>
</table>

If IS01 is returned, that will usually indicate that the IPCheck service can return a complete set of results for that IP address. In some cases, usually for non-U.S. IP addresses, IP Check will return a positive result with a partial set of data.

A well-formed IP address contains four numbers between 0 and 255, separated by periods. An IP address is not well-formed if the following conditions apply:

- Missing digits: 216.231.3.
- Missing dots: 216 231.3
- Value contains more than 3 digits: 1111111111.231.232.245
- Value greater than 255: 333.231.232.245
- Negative value: -1.231.232.245
- Non-digit: 213.231.X3.166

**Domain**

This field returns the domain name associated with the submitted IP address.

**Latitude**

This field returns a string value containing the latitude for the submitted IP address, if available.

Latitude is the geographic coordinate of a point measured in degrees north or south of the equator.

If no latitude is available, this field will be empty.

**Longitude**

This field returns a string value containing the longitude for the submitted IP address, if available.
Longitude is the geographic coordinate of a point measured in degrees east or west of the Greenwich meridian.

**ZIP**

This field returns a string value of the ZIP Code associated with the submitted IP address, if available.

**Region**

This field returns a string value containing the name of any regional subdivision within the country of origin for the submitted IP address, if any.

For IP addresses based in the United States, this will return the name of the State in which the IP address is located. In other countries, this field may return the name of the city, another regional description or nothing at all.

**City**

This field returns a string value containing the name of the city where the institution owning the submitted IP address is located, if available.

**Country**

This field returns the name of the country in which the ISP that owns the submitted IP address is located, if this information is available.

Records that do not contain a city, and in the U.S., a ZIP Code will not return country information.

Records for an ISP located within the following U.S. territories will return the territory name and abbreviation for the country, rather than that of the United States.

<table>
<thead>
<tr>
<th>Abbrev.</th>
<th>Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>American Samoa</td>
</tr>
<tr>
<td>MH</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>PR</td>
<td>Puerto Rico</td>
</tr>
<tr>
<td>VI</td>
<td>U.S. Virgin Islands</td>
</tr>
</tbody>
</table>

**Country Abbrev**
This field returns the abbreviation for the country in which the ISP that owns the submitted IP address is located, if this information is available.

**ISP**

For each record in the Response Array, this field returns the name of the Internet service provider (ISP) to which the submitted IP address is assigned.