



DOTS IP Address Validation

Developer's Guide

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Table of Contents

Introduction	3
Web Service Structure	4
Operation Definitions	6
GetLocationByIP	5
GetCountryByIP	6
GetLocationByIP_V2	7
Error Codes	8
Integration and FAQ	9
Conclusion	11

Introduction

DOTS IP Address Validation (referred to as “IP Address Validation”) is a publicly available XML web service that provides lookup information about an IP address. The service provides city, state, country, latitude and longitude coordinates, and proxy, ISP, and network information.

IP Address Validation can provide instant location verification to websites or data enhancement to contact lists.

Web Service Structure

Web services are methods that integrate with other applications via the web, and encapsulate tricky business logic. Web services are too large of a topic to cover in this document, but ServiceObjects has developed its web services to be as easy to integrate and as accessible as possible.

IP Address Validation is a public XML web service that supports SOAP, POST and GET operations. Note that SOAP is done via POST, only with special XML markup in the post-body.

The host path, or physical location of the web service is here:

<http://trial.serviceobjects.com/gpp/GeoPinPoint.asmx>

The location of the WSDL, or Web Service Definition Language document, is here:

<http://trial.serviceobjects.com/gpp/GeoPinPoint.asmx?WSDL>

(This is also accessible via the “Service Definition” link.)

This WSDL is the definition of the web service, defining its inputs, outputs, operations, etc. You will most likely have a tool read this WSDL and make the operations available to you in your application. Whenever your utilities or IDE asks for a WSDL path to IP Address Validation, you can provide the above path.

Every web service has *operations* that it offers to subscribers – methods that do different work and return different output. Examining the link above, you will notice several of these operations available, which are described in detail later on.

GetLocationByIP – Returns geographic location information for a given IP address. **Deprecated—use GetLocationByIP_V2.**

GetCountryByIP – like GetLocationByIP, but only returns the country name and abbreviations, and the latitude longitude of the country centroid.

GetLocationByIP_V2 – A new version of GetLocationByIP that adds several new elements including proxy information, ISP, and the netblock owner.

Each of these operations will be described in detail later in this document.

Operation Definitions

This document defines the input, output and behavior of the web service operations in IP Address Validation.

GetLocationByIP

Description here.

GetLocationByIP Inputs

Name	Type	Description
IPAddress	String	IP address to look up, for example, "209.85.173.104"
LicenseKey	String	Your license key to use the service. Sign up for a free trial key at www.serviceobjects.com .

GetLocationByIP Outputs

Name	Type	Values	Description
City	String	Varies	The city location of the IP address
Region	String	Varies	The state location of the IP address
Country	String	Varies	The country location of the IP address
Longitude	Double	Varies	The latitude coordinate for the IP address
Latitude	Double	Varies	The longitude coordinate for the IP address
Certainty	Int	0 to 100	Rating of how accurate the outputs are likely to be
IsProxy	String	"TRUE" or "FALSE"	Indicates whether the IP address is a known proxy
IsPublicProxy	String	Varies	Indicates whether the IP address is a known public proxy
Network	String	Varies	The network to which the IP address is registered
Error – Desc	String	Varies	If there was an internal web service error, the description will be displayed here.
Error – Number	String	"1", "2", "4"	See "Error Codes" below.

GetCountryByIP

Description here.

GetCountryByIP Inputs

Name	Type	Description
IPAddress	String	IP address to look up, for example, "209.85.173.104"
LicenseKey	String	Your license key to use the service. Sign up for a free trial key at www.serviceobjects.com .

GetCountryByIP Outputs

Name	Type	Values	Description
Country	String	Varies	The country location of the IP address
Cntry	String	Varies	The 3-letter country abbreviation
Ctry	String	Varies	The 2-letter country abbreviation
Longitude	Double	Varies	The latitude coordinate for the IP address
Latitude	Double	Varies	The longitude coordinate for the IP address
IsPublicProxy	String	Varies	Indicates whether the IP address is a known public proxy
Error – Desc	String	Varies	If there was an internal web service error, the description will be displayed here.
Error – Number	String	"1", "2", "4"	See "Error Codes" below.

GetLocationByIP_V2

Description here.

GetLocationByIP_V2 Inputs

Name	Type	Description
IPAddress	String	IP address to look up, for example, "209.85.173.104"
LicenseKey	String	Your license key to use the service. Sign up for a free trial key at www.serviceobjects.com .

GetLocationByIP_V2 Outputs

Name	Type	Values	Description
City	String	Varies	The city location of the IP address
Region	String	Varies	The state location of the IP address
Country	String	Varies	The country location of the IP address
CountryISO3	String	Varies	The 3-letter country abbreviation
CountryISO2	String	Varies	The 2-letter country abbreviation
Longitude	Double	Varies	The latitude coordinate for the IP address
Latitude	Double	Varies	The longitude coordinate for the IP address
Certainty	Int	0 to 100	Rating of how accurate the outputs are likely to be
IsProxy	String	"TRUE" or "FALSE"	Indicates whether the IP address is a known proxy
ProxyType	String	"NONE", "PRIVATE", "PUBLIC", "ANONYMOUS", "SATELLITE"	Indicates the type of proxy
ISP	String	Varies	The ISP which assigns the IP address
NetblockOwner	String	Varies	The network owner to which the IP address is allocated
Debug	String	Varies	
Error – Desc	String	Varies	If there was an internal web service error, the description will be displayed here.
Error – Number	String	"1", "2", "4"	See "Error Codes" below.

Error Codes

Error codes in IP Address Validation are the same for all operations. They are as follows:

Error Code 1 – “Input cannot be less than zero length”

This error means the web service did not get any input. The connection to the service was made, and data was transferred, but no parameters were passed that the service could understand.

This error often happens when input is passed to the service with namespaces that the service does not understand. Applying a namespace to any of the parameters (Email or LicenseKey, in this service) will cause this error. Additionally, requests made in the “rpc/encoded” format will cause this error. The only namespace that should appear in any element is the “<http://www.serviceobjects.com>” namespace on the root GetLocationByIP_V2 element as so:

```
<GetLocationByIP_V2 xmlns="http://www.serviceobjects.com/">
```

Note, however, that the namespace is not applied to the GetLocationByIP_V2 element, it is only present.

Error Code 2 – Various descriptions

This error code appears when various errors occur, but are of the expected nature. Oftentimes, malformed or incomplete input will cause an error 2.

Error Code 4 – Various descriptions

An error code 4 is a fatal error and it means something has seriously gone wrong. You should never see an error code 4 in a live production environment.

Integration and FAQ

Integrating IP Address Validation into your application should be easy and straightforward. If you are using a common platform, ServiceObjects may already have sample code built that you can use:

<http://www.serviceobjects.com/support/sample-code/category/9->

However, if you are using a common platform that does not already have sample code, you can ask ServiceObjects to build you an example. Email support@serviceobjects.com for more details.

Which Operation Should You Use? GetLocationByIP, GetCountryByIP, or GetLocationByIP_V2?

Picking which operation you want to use is simple. If you only need to know which country an IP address belongs to, GetCountryByIP is the best operation. If you can use more specific data, such as the region or city, then GetLocationByIP_V2 is the best operation. Use of GetLocationByIP is not recommended, as it is deprecated and replaced by GetLocationByIP_V2.

The best suggestion is to try out each operation to find the data you need.

Why are there operations that end with a V2?

When we need to enhance our service in a way that changes input or output interfaces, it's best to create a new operation. If we change the interface of an existing operation, we could potentially adversely affect hundreds of current customers.

If you are a new client or in a position to make a change, it's usually best to switch to the new operation as it likely has important new enhancements.

The Sample Code is Giving Strange Errors or is Crashing!

Most likely, the sample code cannot connect to ServiceObjects. Many environments will not allow you to connect out on port 80, or will clip out XML data from these requests/responses.

The easiest way to check for this is to open a browser on the machine running the sample code. In your browser, navigate to:

<http://trial.serviceobjects.com/gpp/GeoPinPoint.asmx>

Next, try to run one of the operations with your trial key. If you get a browser error, or get no data back, then the sample code won't be able to connect either. Contact your systems or network administrator to resolve why you are not able to connect to ServiceObjects.

I'm Not a Programmer. How Do I Use DOTS IP Address Validation?

Service Objects runs batches for you! A free batch trial is available at <http://www.serviceobjects.com/batch/upload>.

Conclusion

Service Objects is proud to offer you a free trial of DOTS IP Address Validation US.

Sign up today for a free trial at:

<http://www.serviceobjects.com/products/ip-address/ip-address-validation>

Other technical questions or concerns can be directed to

support@serviceobjects.com.

If you are interested in purchasing DOTS IP Address Validation, please contact

sales@serviceobjects.com.

We welcome your feedback! Please do not hesitate to let us know what you think of our web services, documentation, or customer support.

www.serviceobjects.com