

# DOTS IP Address Validation

## ONLINE HOSTED IP ADDRESS VALIDATION

### OVERVIEW

As scammers become more sophisticated, they attempt to hide their IP address and location by hijacking the IP address of a computer that has already been hacked. Trojans and viruses create backdoors into compromised computers and allow scammers to perform transactions as if they were actually sitting at that computer, thereby hiding their true IP address and location. This method of online fraud makes IP address validation more important than ever in maintaining the security and integrity of your online business processes.

DOTS IP Address Validation is a hosted, programmable XML Web Service that allows you to integrate IP-based location information, distance calculation, and other geographic intelligence into your applications, business processes, and Web sites. It is compatible with virtually all application development technologies, including XML, SOAP, and WSDL.

DOTS IP Address Validation begins working the moment an online visitor hits your Web site, instantly gathering key pieces of information about the visitor - such as geographic location, whether or not the IP address is going through a proxy server, and what Internet Service Provider (ISP) the visitor is using.

### FEATURES

- Instant, up-to-the-minute data updates.
- Over 45,000 Listening Posts worldwide.
- Real-time, dynamically updated "watch list" of fraudulent IP addresses.
- Identification of visitor's geographic location, including city, region, country, and the latitude/longitude of the IP address it's associated with.
- Identification of IP addresses coming through proxy servers.
- Identification of the ISP that the IP address belongs to.
- Identification of organizations that may own the block that the IP address belongs to.
- Real-time XML Service. Batch also available.

### BENEFITS

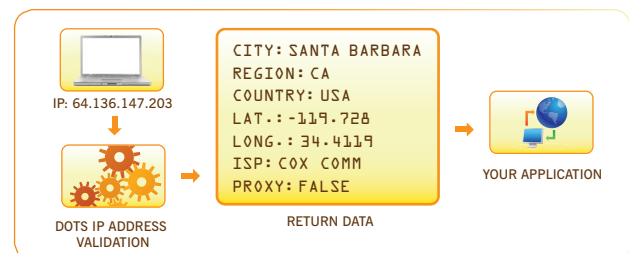
- On-the-spot IP address validation.
- Increase sales with geographically focused product displays.
- Engage site visitors with geographically customized content.
- Increase traffic to retail locations by highlighting local resources.
- Improve lead and customer conversion rates.
- Reduce the cost of collecting, storing, and processing bogus customer contact data.

### HOW IT'S USED

Different factors and variables are considered when validating and scoring an IP address. The country of origin for an IP address is a leading indicator of potential fraud. IP addresses designated by a country labeled as "high-risk," for example, countries like Malaysia, Indonesia, China, Vietnam, and Pakistan, are among the highest in soliciting fraudulent transactions. To combat this form of fraud, some e-commerce sites already track IP-to-Country information, which is commonly known and very accurate. However, with the increased threat of scammers and hackers using hijacked computers to conceal their true IP address and location, simple IP-to-Country detection is no longer sufficient.

Service Objects' DOTS IP Address Validation<sup>SM</sup> is the most accurate IP validation service available in today's market. DOTS IP Address Validation has over 45,000 listening posts worldwide. The moment that suspect activity is identified by a listening post, the computer address (IP) is added to our current watch list of suspect IP addresses. This information is then instantly made available to all DOTS Lead Validation<sup>SM</sup> and DOTS IP Address Validation users. By combining the use of listening posts and IP-to-Country fraud detection, Service Objects has leveled the playing field; quickly identifying possible fraudulent transactions before they occur.

DOTS IP Address Validation also identifies many types of proxy servers, including public, private, anonymous, and satellite proxy addresses. While some ISPs, like AOL® and EarthLink™, employ private proxies as a way for users to connect to the Internet, other proxy servers act as a mask for scammers to hide behind. For example, anonymous proxies allow hackers to log into a remote computer undetected and connect to the Internet. Identifying proxy server type is a strong indicator of suspicious activity. DOTS IP Address Validation uncovers deceiving IP addresses using proxy servers and allows users to measure the integrity of their online transactions.



By integrating DOTS IP Address Validation into your business processes, you acquire the tools to automatically and immediately verify the accuracy of a visitor's IP address. By blending multiple IP-to-Country databases and over 45,000 listening posts, DOTS IP Address Validation can identify fraud faster and more reliably than other commercially available services.

## OPERATIONS

DOTS IP Address Validation offers two unique operations to suit the inputs and informational needs of its users.

### 1. GetCountryByIP

Returns the country that the IP address is located in, and checks the IP address against listening post watch list information.

### 2. GetLocationByIP\_v2

Returns geographic location and proxy information for a given IP address, and checks the IP address against listening post watch list information.

## HOW IT WORKS

DOTS IP Address Validation is a hosted, programmable XML Web Service which can be used in either a real-time environment or through batch processing. Using DOTS IP Address Validation in a real-time environment allows for on-the-spot requests to the Web Service with an immediate response. Batch processing allows large numbers of IP addresses to be processed in one bulk order, and returns data in a comma separated value file. Both formats use the same Web Service and return the same data, but neither collect or store the contact information that you submit.

DOTS IP Address Validation incorporates directly into a client's Web forms, CRM application, or other business contact dependent processes, to verify IP address data in real-time. The input for DOTS IP Address Validation is the IP address of a given residential or business prospect. This IP data is run through an XML Web Service interface where it is validated, and then returned in real-time or as a batch process. Each IP address is analyzed to determine if it is valid, if the Bill-to, Ship-to, and IP-to-Country addresses are within the same 10 mile region, and if the IP address is on Service Objects' watch list of fraudulent IP addresses.

## XML RESPONSE EXAMPLE

```
<?xml version="1.0" encoding="utf -8" ?>
- <IP xmlns:xsd="http://www.w3.org/2001/XMLSchema "
  xmlns:xs="http://www.w3.org/2001/XMLSchema-instance "
  xmlns="http://www.serviceobjects.com/ ">
  <City>Mountain View</City >
  <Region>CA</Region>
  <Country>United States</Country>
  <CountryISO3>USA</CountryISO3>
  <CountryISO2>US</CountryISO2>
  <Longitude >-122.057404</Longitude>
  <Latitude>37.419201</Latitude>
  <Certainty>95</Certainty>
  <IsProxy>FALSE</IsProxy>
  <ProxyType>NONE</ProxyType>
  <ISP>Google</ISP>
  <NetblockOwner>Google</NetblockOwner>
  <Debug />
</IP>
```

This is a sample of an XML Response generated from Service Objects' DOTS IP Address Validation Web Service. By providing us with an IP address, DOTS IP Address Validation will return detailed information about the IP address to help you determine its validity. The return data includes the IP address's approximate physical location, ISP, and whether or not it is a proxy.

As shown in the example above, we return a city name, the region

in the country (e.g. a state in the USA), the country name with its ISO2 and ISO3 codes, and the IP's approximate latitude and longitude. A percentage certainty for this geographic location is also provided in the "Certainty" node. If it is a proxy address, we flag it as such and return the type of proxy (e.g. "Public" or "Private"). Lastly, we provide the name of the ISP and the owner of the range of IP addresses containing the provided address.

## DATA

Data is a crucial component for any automated validation solution. DOTS IP Address Validation utilizes up-to-the-minute IP address data for each transaction submitted. There are millions of real-time updates made to our data every month.

## SECURITY & AVAILABILITY

- HTTPS encrypts sensitive data sent to and from the DOTS IP Address Validation Web Service.
- All data is protected by an internal privacy policy and security guarantee.
- No customer data is retained or stored.
- A 99.995% Service Level Agreement is provided.
- Third Party Sentry testing immediately notifies Service Objects' technicians of issues.
- Primary and backup data centers on opposite coasts.
- Fully redundant, load-balanced hardware and Internet connections are used.

## INTEGRATION & SUPPORT

Standard integration of DOTS IP Address Validation is very straightforward and takes a developer only days to implement. Almost any language can integrate with DOTS Web Services, allowing users to program their applications in the language of their choice. Service Objects also offers a developer's guide and sample code for most programming environments. Service Objects' expert developers are ready to help with your integration process and can even write custom sample code for you. They are also available to discuss integration quality and verify that it is fully robust.

Once fully integrated, the Service Objects support team is always ready to answer questions and help you with any issues that may arise. In the event of a problem with the service, a support ticket will be created immediately and a member of the support team will contact you within 90 minutes.

## EMERGENCY SUPPORT

Emergency support is available 24/7, should you need to speak with an engineer immediately.

## NEXT STEP

To try an online demo, signup for a Free 30-day Trial; or, to learn more about DOTS IP Address Validation please visit: [www.serviceobjects.com/products/ip-address-validation](http://www.serviceobjects.com/products/ip-address-validation)

Service Objects also offers free presentations and demo trial batches. Please call 800.694.6269 or email [info@serviceobjects.com](mailto:info@serviceobjects.com) for more information.