



IP2LOCATION™

WEB SERVICE

User Manual

By Hexasoft Development Sdn. Bhd.

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~ Bringing Geography to the Internet ~

TABLE OF CONTENTS

1. INTRODUCTION.....	2
2. SEARCH REQUEST & RESPONSE FORMAT.....	2
2.1 Search Parameters.....	2
2.2 Search Web API.....	3
3. SEARCH RESULT STATUS.....	3
3.1 Error Codes	4
4. PRICING	4
4.1 Pricing Table.....	4
4.2 Auto Recharge.....	5
5. SETUP AND INSTALLATION	5
5.1 Active Server Pages	6
5.2 VB.NET	6
5.3 C#.....	7
5.4 PHP: Hypertext Preprocessor.....	7
5.5 Perl/CGI.....	7
5.6 Web Browser	8
6. APPENDIX I: ISO3166 COUNTRY CODE	9

1. INTRODUCTION

IP2Location™ web service is providing a service to reverse lookup of IP address to an *ISO3166 country code, region, city, latitude & longitude of city, ZIP code, time zone, connection speed, ISP, domain name, IDD country code, area code, weather station code and name, mobile carrier, elevation and usage type* of your site visitors in real-time by using IP address. This document explains in details the semantics of the URL function calls you can make to use this web service for demonstration or commercial purposes. In this document, you will learn:

- How to install, setup and test the IP2Location™ Web API
- How IP2Location™ web service query syntax works
- How to interpret the search results from IP2Location™ Web API

If you have comments or just have questions, please contact sales@ip2location.com.

2. SEARCH REQUEST & RESPONSE FORMAT

Search requests submit a query string and a set of parameters to the IP2Location™ web service and receive a search result. Search results are derived from IP2Location™ index of over 4 billion unique IP addresses.

2.1 Search Parameters

This table lists all the valid name-value pairs that can be used in a search request and describes how these parameters will modify the search results.

Name	Description
ip	(required) IP address for reverse lookup purpose. Both IPv4 and IPv6 are supported. If not present, the server IP address will be used for the reverse lookup.
key	(required) API key.
package	(optional) If not present, the web service will assume the WS1 package query. Valid value: WS1 WS2 WS3 WS4 WS5 WS6 WS7 WS8 WS9 WS10 WS11 WS12 WS13 WS14 WS15 WS16 WS17 WS18 WS19 WS20 WS21 WS22 WS23 WS24 Please refer to the below pricing table for value returned.
format	(optional) If not present, text format will be returned as the search result. Valid value: json xml

Notes: Different credits will be consumed for different package call. Please refers to [Pricing Table](#) for details.

2.2 Search Web API

IP2Location™ web service uses a single web interface to perform the reverse lookup logic. The protocol used is HTTP or HTTPS GET. You can test this API as easy as using a web browser.

Basic syntax:

<http://api.ip2location.com/?ip=<ipadd>&key=<key>>

Search with different package (default is WS1)

<http://api.ip2location.com/?ip=<ipadd>&key=<key>&package=<package>>

Search with different search result format (default is text)

<http://api.ip2location.com/?ip=<ipadd>&key=<key>&package=<package>&format=<format>>

(Note: if you need a text format return, do not enter the &format into the query string)

API Examples:

WS1 Query: *http://api.ip2location.com/?ip=<ip_address>&key=<your_api_key>*

WS1 Response: *US*

WS5 Query: *http://api.ip2location.com/?ip=<ip_address>&key=<your_api_key>&package=WS5*

WS5 Response: *US;UNITED STATES;CALIFORNIA;MOUNTAIN VIEW;37.405992;-122.078515*

WS9 Query: *http://api.ip2location.com/?ip=<ip_address>&key=<your_api_key>&package=WS9*

WS9 Response: *US;UNITED STATES;CALIFORNIA;MOUNTAIN VIEW;37.405992;-122.078515;94043*

WS10 Query: *http://api.ip2location.com/?ip=<ip_address>&key=<your_api_key>&package=WS10*

WS10 Response: *US;UNITED STATES;CALIFORNIA;MOUNTAIN VIEW;37.405992;-122.078515;94043;GOOGLE INCORPORATED;GOOGLE.COM*

3. SEARCH RESULT STATUS

All successful HTTP request will return a response code of 200. In our web API, it also returns the lookup country code if successful or error code if failed.

3.1 Error Codes

Name	Description
INSUFFICIENT CREDIT	Account has not enough credit to perform the lookup. Users need to top-up the account in order to continue using the service again.
LICENSE EXPIRED	License has been expired. Users need to renew the license before can use the service again.
DEMO QUOTA EXCEED	Maximum attempts reached for demo version. The demo version allows 20 queries per day from an IP address. You could try the demo again from the same IP address after our server refresh once per day.
INVALID IP ADDRESS	Invalid IP address or missing IP address in query string.

4. PRICING

4.1 Pricing Table

Package	Information Returned	Credit
WS1	Country Code	1 credit (0.0005/query)
WS2	Country, ISP	2 credits (0.0010/query)
WS3	Country, Region, City	2 credits (0.0010/query)
WS4	Country, Region, City, ISP	3 credits (0.0015/query)
WS5	Country, Region, City, Latitude, Longitude	3 credits (0.0015/query)
WS6	Country, Region, City, Latitude, Longitude, ISP	4 credits (0.0020/query)
WS7	Country, Region, City, ISP, Domain	4 credits (0.0020/query)
WS8	Country, Region, City, Latitude, Longitude, ISP, Domain	5 credits (0.0025/query)
WS9	Country, Region, City, Latitude, Longitude, ZIPCode	4 credits (0.0020/query)
WS10	Country, Region, City, Latitude, Longitude, ZIPCode, ISP, Domain	6 credits (0.0029/query)
WS11	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone	5 credits (0.0025/query)
WS12	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain	7 credits (0.0034/query)

WS13	Country, Region, City, Latitude, Longitude, TimeZone, NetSpeed	5 credits (0.0025/query)
WS14	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed	8 credits (0.0039/query)
WS15	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, AreaCode	7 credits (0.0034/query)
WS16	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed, AreaCode	10 credits (0.0049/query)
WS17	Country, Region, City, Latitude, Longitude, TimeZone, NetSpeed, Weather	6 credits (0.0029/query)
WS18	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed, AreaCode, Weather	11 credits (0.0054/query)
WS19	Country, Region, City, Latitude, Longitude, ISP, Domain, Mobile	8 credits (0.0039/query)
WS20	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed, AreaCode, Weather, Mobile	13 credits (0.0064/query)
WS21	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, AreaCode, Elevation	8 credits (0.0039/query)
WS22	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed, AreaCode, Weather, Mobile, Elevation	14 credits (0.0069/query)
WS23	Country, Region, City, Latitude, Longitude, ISP, Domain, Mobile, UsageType	11 credits (0.0054/query)
WS24	Country, Region, City, Latitude, Longitude, ZIPCode, TimeZone, ISP, Domain, NetSpeed, AreaCode, Weather, Mobile, Elevation, UsageType	18 credits (0.0088/query)

4.2 Auto Recharge

User can configure the auto recharge on the license page to allow the system to automatically top up the credits when it falls below the 10% threshold. Users will be required to enter the payment information before enabling the recharge option.

Note: The system performs the threshold check in every 10 minutes interval. Therefore, the recharge maybe not happening immediately upon hitting the threshold, but within 10 minutes period.

5. SETUP AND INSTALLATION

This section demonstrates how to setup and to use the API from server-side scripts such as ASP and PHP. However, it does not limit to the example listed here. Any other programming languages or scripting languages that support HTTP should be able to use this web API

5.1 Active Server Pages

```
Dim objHttp, strQuery

StrQuery = "http://api.ip2location.com/" & _
"ip=" & ipaddress & _
"&key=" & key

set objHttp = Server.CreateObject("Msxml2.ServerXMLHTTP")
objHttp.open "GET", strQuery, false
objHttp.send
Response.Write objHttp.ResponseText
Set objHttp = Nothing
```

Requirements:

1. ASP 3.0+
2. Microsoft® XML 3.0 Component

Microsoft® XML 3.0 Component is free to be downloaded at <http://msdn.microsoft.com/xml/general/xmlparser.asp>

5.2 VB.NET

```
Imports System.Net
Imports System.IO

Private Sub WebAPI()
    Dim strQuery As String
    Dim IPAddress As String = "218.111.156.5"
    Dim Key As String = "demo"
    Dim HttpWReq As HttpWebRequest
    Dim HttpWResp As Net.HttpWebResponse

    strQuery = "http://api.ip2location.com/" & _
    "ip=" & IPAddress & _
    "&key=" & Key

    HttpWReq = WebRequest.Create(strQuery)
    HttpWReq.Method = "GET"
    HttpWResp = HttpWReq.GetResponse()
    Dim reader As System.IO.StreamReader = _
    New IO.StreamReader(HttpWResp.GetResponseStream())
    Response.Write(reader.ReadToEnd)
End Sub
```

Requirements:

1. Microsoft® .NET Framework 1.1 and above

5.3 C#

```
using System.Net;
using System.IO;

private void WebAPI()
{
    string strQuery;
    string IPAddress = "218.111.156.5";
    string key = "demo";

    HttpWebRequest HttpWReq;
    HttpResponse HttpWResp;
    strQuery = "http://api.ip2location.com/?" +
        "ip=" + IPAddress +
        "&key=" + key;

    HttpWReq = (HttpWebRequest)WebRequest.Create(strQuery);
    HttpWReq.Method = "GET";
    HttpWResp = (HttpResponse)HttpWReq.GetResponse();
    System.IO.StreamReader reader = new
    System.IO.StreamReader(HttpWResp.GetResponseStream());
    Response.Write(reader.ReadToEnd());
}
```

Requirements:

1. Microsoft® .NET Framework 1.1 and above

5.4 PHP: Hypertext Preprocessor

```
<?php
$ipaddress = $_SERVER['REMOTE_ADDR'];
$key = "API_KEY";
$query = "http://api.ip2location.com/?ip=" . $ipaddress . "&key=" . $key .
"&format=json";

$result = file_get_contents($query);
$json = json_decode($result, true);

echo "Country : " . $json["country_code"] . "<br/>\n";
?>
```

Requirements: PHP 5.4 or later

5.5 Perl/CGI

```
use LWP::UserAgent;
use HTTP::Request::Common qw(GET);
```



```
my $ipaddress = $ENV{"REMOTE_ADDR"};
my $query = "http://api.ip2location.com/?ip=" . $ipaddress . "&acc=" .
$key;
my $ua = new LWP::UserAgent;
my $res = $ua->request(GET $query);
if ($res->is_success())
{
    my $co = $res->content;
}
print $co;
```

5.6 Web Browser

Copy URL below into a web browser. Replace all parameters with the correct values.

Basic syntax:

<http://api.ip2location.com/?ip=<ipadd>&key=<key>>

Search with different package (default is WS1)

<http://api.ip2location.com/?ip=<ipadd>&key=<key>&package=<package>>

Search with different search result format (default is text)

<http://api.ip2location.com/?ip=<ipadd>&key=<key>&package=<package>&format=<format>>

(Note: if you need a text format return, do not enter the &format into the query string)

6. APPENDIX I: ISO3166 COUNTRY CODE

This table lists all valid ISO3166 two characters country codes that returns from IP2Location™ .NET component and explain the full country names for these country codes.

Country Code	Country Name
AD	ANDORRA
AE	UNITED ARAB EMIRATES
AF	AFGHANISTAN
AG	ANTIGUA AND BARBUDA
AI	ANGUILLA
AL	ALBANIA
AM	ARMENIA
AO	ANGOLA
AQ	ANTARCTICA
AR	ARGENTINA
AS	AMERICAN SAMOA
AT	AUSTRIA
AU	AUSTRALIA
AW	ARUBA
AX	ÅLAND ISLANDS
AZ	AZERBAIJAN
BA	BOSNIA AND HERZEGOWINA
BB	BARBADOS
BD	BANGLADESH
BE	BELGIUM
BF	BURKINA FASO
BG	BULGARIA
BH	BAHRAIN
BI	BURUNDI
BJ	BENIN
BL	SAINT BARTHÉLEMY
BM	BERMUDA
BN	BRUNEI DARUSSALAM
BO	BOLIVIA
BQ	BONAIRE, SINT EUSTATIUS AND SABA
BR	BRAZIL
BS	BAHAMAS
BT	BHUTAN
BV	BOUVET ISLAND
BW	BOTSWANA
BY	BELARUS
BZ	BELIZE
CA	CANADA
CC	COCOS (KEELING) ISLANDS
CD	CONGO, THE DEMOCRATIC REPUBLIC OF THE

Country Code	Country Name
CF	CENTRAL AFRICAN REPUBLIC
CG	CONGO
CH	SWITZERLAND
CI	CÔTE D'IVOIRE
CK	COOK ISLANDS
CL	CHILE
CM	CAMEROON
CN	CHINA
CO	COLOMBIA
CR	COSTA RICA
CU	CUBA
CV	CAPE VERDE
CW	CURAÇAO
CX	CHRISTMAS ISLAND
CY	CYPRUS
CZ	CZECH REPUBLIC
DE	GERMANY
DJ	DJIBOUTI
DK	DENMARK
DM	DOMINICA
DO	DOMINICAN REPUBLIC
DZ	ALGERIA
EC	ECUADOR
EE	ESTONIA
EG	EGYPT
EH	WESTERN SAHARA
ER	ERITREA
ES	SPAIN
ET	ETHIOPIA
FI	FINLAND
FJ	FIJI
FK	FALKLAND ISLANDS (MALVINAS)
FM	MICRONESIA, FEDERATED STATES OF
FO	FAROE ISLANDS
FR	FRANCE
GA	GABON
GB	GREAT BRITAIN
GD	GRENADA
GE	GEORGIA
GF	FRENCH GUIANA
GG	GUERNSEY
GH	GHANA
GI	GIBRALTAR
GL	GREENLAND
GM	GAMBIA
GN	GUINEA

Country Code	Country Name
GP	GUADELOUPE
GQ	EQUATORIAL GUINEA
GR	GREECE
GS	SOUTH GEORGIA & SOUTH SANDWICH ISLANDS
GT	GUATEMALA
GU	GUAM
GW	GUINEA-BISSAU
GY	GUYANA
HK	HONG KONG
HM	HEARD ISLAND AND MCDONALD ISLANDS
HN	HONDURAS
HR	CROATIA
HT	HAITI
HU	HUNGARY
ID	INDONESIA
IE	IRELAND
IL	ISRAEL
IM	ISLE OF MAN
IN	INDIA
IO	BRITISH INDIAN OCEAN TERRITORY
IQ	IRAQ
IR	IRAN, ISLAMIC REPUBLIC OF
IS	ICELAND
IT	ITALY
JE	JERSEY
JM	JAMAICA
JO	JORDAN
JP	JAPAN
KE	KENYA
KG	KYRGYZSTAN
KH	CAMBODIA
KI	KIRIBATI
KM	COMOROS
KN	SAINT KITTS AND NEVIS
KP	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
KR	KOREA, REPUBLIC OF
KW	KUWAIT
KY	CAYMAN ISLANDS
KZ	KAZAKSTAN
LA	LAO PEOPLE'S DEMOCRATIC REPUBLIC
LB	LEBANON
LC	SAINT LUCIA
LI	LIECHTENSTEIN
LK	SRI LANKA
LR	LIBERIA
LS	LESOTHO

Country Code	Country Name
LT	LITHUANIA
LU	LUXEMBOURG
LV	LATVIA
LY	LIBYA
MA	MOROCCO
MC	MONACO
MD	MOLDOVA, REPUBLIC OF
ME	MONTENEGRO
MF	SAINT MARTIN (FRENCH PART)
MG	MADAGASCAR
MH	MARSHALL ISLANDS
MK	MACEDONIA, THE FORMER YUGOSLAV
ML	MALI
MM	MYANMAR
MN	MONGOLIA
MO	MACAU
MP	NORTHERN MARIANA ISLANDS
MQ	MARTINIQUE
MR	MAURITANIA
MS	MONTserrat
MT	MALTA
MU	MAURITIUS
MV	MALDIVES
MW	MALAWI
MX	MEXICO
MY	MALAYSIA
MZ	MOZAMBIQUE
NA	NAMIBIA
NC	NEW CALEDONIA
NE	NIGER
NF	NORFOLK ISLAND
NG	NIGERIA
NI	NICARAGUA
NL	NETHERLANDS
NO	NORWAY
NP	NEPAL
NR	NAURU
NU	NIUE
NZ	NEW ZEALAND
OM	OMAN
PA	PANAMA
PE	PERU
PF	FRENCH POLYNESIA
PG	PAPUA NEW GUINEA
PH	PHILIPPINES
PK	PAKISTAN

Country Code	Country Name
PL	POLAND
PM	SAINT PIERRE AND MIQUELON
PN	PITCAIRN
PR	PUERTO RICO
PS	PALESTINIAN, STATE OF
PT	PORTUGAL
PW	PALAU
PY	PARAGUAY
QA	QATAR
RE	RÉUNION
RO	ROMANIA
RS	SERBIA
RU	RUSSIAN FEDERATION
RW	RWANDA
SA	SAUDI ARABIA
SB	SOLOMON ISLANDS
SC	SEYCHELLES
SD	SUDAN
SE	SWEDEN
SG	SINGAPORE
SH	SAINT HELENA, ASCENSION AND TRISTAN DA CUNHA
SI	SLOVENIA
SJ	SVALBARD AND JAN MAYEN
SK	SLOVAKIA
SL	SIERRA LEONE
SM	SAN MARINO
SN	SENEGAL
SO	SOMALIA
SR	SURINAME
SS	SOUTH SUDAN
ST	SAO TOME AND PRINCIPE
SV	EL SALVADOR
SX	SINT MAARTEN (DUTCH PART)
SY	SYRIAN ARAB REPUBLIC
SZ	SWAZILAND
TC	TURKS AND CAICOS ISLANDS
TD	CHAD
TF	FRENCH SOUTHERN TERRITORIES
TG	TOGO
TH	THAILAND
TJ	TAJIKISTAN
TK	TOKELAU
TL	TIMOR-LESTE
TM	TURKMENISTAN
TN	TUNISIA
TO	TONGA

Country Code	Country Name
TR	TURKEY
TT	TRINIDAD AND TOBAGO
TV	TUVALU
TW	TAIWAN, PROVINCE OF CHINA
TZ	TANZANIA, UNITED REPUBLIC OF
UA	UKRAINE
UG	UGANDA
UK	UNITED KINGDOM
UM	UNITED STATES MINOR OUTLYING ISLANDS
US	UNITED STATES
UY	URUGUAY
UZ	UZBEKISTAN
VA	HOLY SEE (VATICAN CITY STATE)
VC	SAINT VINCENT AND THE GRENADINES
VE	VENEZUELA
VG	VIRGIN ISLANDS, BRITISH
VI	VIRGIN ISLANDS, U.S.
VN	VIET NAM
VU	VANUATU
WF	WALLIS AND FUTUNA
WS	SAMOA
YE	YEMEN
YT	MAYOTTE
ZA	SOUTH AFRICA
ZM	ZAMBIA
ZW	ZIMBABWE

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