IP2LOCATION™

.NET Component User Manual

Developed by **Hexasoft Development Sdn. Bhd.**

Visit our Web site at
http://www.ip2location.com

~ Bringing Geography to the Internet ~

INTRODUCTION

IP2Location™ is the solution for identifying the *country origin*, *region*, *city*, *latitude*, *longitude*, *ZIP code*, *ISP* and *domain name* of your site visitors in real-time by using IP address. This documentation provides detailed information to help you quickly get up to speed with our products and master it in no time at all. The component is thread-safe.

Developers use this .NET component for projects related to:

- Display native language and currency
- Redirect based on country
- Digital rights management
- Prevent password sharing and abuse of service
- Reduce credit card fraud
- Web log stats and analysis
- Auto-selection of country on forms
- Filter access from countries you do not do business with
- Geo-targeting for increased sales and click-through

IP2Location™ .NET component is written for .NET Framework and optimized for Windows® operating system performance.

SYSTEM REQUIREMENT

IP2Location™ .NET Component has been developed to run exclusively under Windows based machines with support for both WinForm and ASP.NET (for web form). This component required a local IP2Location™ database for lookup purpose. No Internet connection is required to execute this component.

Minimum Requirements

- .NET Framework 4.0 or later

Supported Platforms

- Microsoft® Windows XP (Home or Professional)
- Microsoft® Windows Server 2003 family
- Microsoft® Windows Vista
- Microsoft® Windows 7
- Microsoft® Windows 8
- Microsoft® Windows 10
- Microsoft® Windows Server 2008 family
- Microsoft® Windows Server 2012 family

Quick Start Guide

In this document, you will go through these basic steps to use IP2Location™ .NET component:

1. Download and installing IP2Location .NET Component
2. Test your .NET Component installation
3. Start using IP2Location™ in your projects
4. Purchase license to remove random 5 second delay in demo version
5. Update IP2Location™ Component database

Note: For demo version, you will have a random 5-second delay. Registered version has unlimited real-time query without delay.

1. DOWNLOAD AND INSTALLING IP2LOCATION .NET COMPONENT

1.1 Download ZIP File

Please use the following URL to download the latest IP2Location™ .NET Component together with sample database.

http://www.ip2location.com/downloads/ip2location-dot-net-component-dotnet4.zip

1.2 Component Installation

Installing the IP2Location .NET component system is very easy.

General steps in installing IP2Location™ .NET component.

1. Unzip the "ip2location-dot-net-component-dotnet4.zip" into a temporary directory.
2. Just copy the IP2Location.dll file into your bin folder of your .NET project.
3. In your .NET project, add a reference to that IP2Location.dll in your bin folder.
4. There is a strong named version of the IP2Location.dll in the Strongnamed folder if you need it.

2. TESTING IP2LOCATION™ .NET COMPONENT

2.1 Folders and Files Structure

The unzipped folder should look like below:

> \IP2Location.dll
> \ip2location-dotnet4.0-component-user-manual.pdf
> \IP2LOCATION_LICENSE_AGREEMENT.PDF
> \Database\IP2LOCATION-LITE-DB1.BIN
> \Database\IP2LOCATION-LITE-DB1.IPV6.BIN
> \SampleCodes\dotNET4.0\WebForm\C#
> \SampleCodes\dotNET4.0\WebForm\VBnet
> \SampleCodes\dotNET4.0\WinForm\C#
> \SampleCodes\dotNET4.0\WinForm\VBnet
> \Strongnamed\IP2Location.dll

2.2 Component Testing using WinForm

For desktop-based sample applications, please open the project or solution file to rebuild and execute the application.

> Sample WinForm Written in VB.NET
> \SampleCodes\dotNET4.0\WinForm\VBnet

> Sample WinForm Written in C#
> \SampleCodes\dotNET4.0\WinForm\C#

2.3 Component Testing using WebForm

For web-based sample applications, please copy the sample to a web directory that has been configured to run web scripts. Then run these samples using your browser from local web server. Please make sure you have copied the IP2Location.dll and sample database to the web application directory /bin.

> Sample WebForm Written in VB.NET
> \SampleCodes\dotNET4.0\WebForm\VBnet

> Sample WebForm Written in C#
> \SampleCodes\dotNET4.0\WebForm\C#

3. IMPLEMENTING IP2LOCATION™ .NET COMPONENT

3.1 IP2Location™ Objects Reference

Object: IP2Location.Component

Parameter	Description
IPDatabasePath	Set IP2Location™ IPv4 database path. The component will use the database in the component directory by default.
IPLicensePath	Set license file path for component registration. The component will use the license key in the component directory by default.
UseMemoryMappedFile	Set to True to enable memory mapped file feature. This will increase query speed but require more memory. It is set to False by default.
Method	**Description**
IPQuery(ByVal _IPAddress As String)	Query IP address. This method returns results in IP2Location.IPResult object.
IsRegistered()	Returns True if license key registered. Returns False if license key not registered.

Object: IP2Location.IPResult

Parameter	Description
IPAddress	IP Address.
IPNumber	IP Address in decimal format.
CountryShort	Two-character country code based on ISO 3166.
CountryLong	Country name based on ISO 3166.
Region	Region or state name.
City	City name.
Latitude	City latitude.
Longitude	City longitude.
ZIPCode	United States ZIP code.
TimeZone	Time zone in UTC (Coordinated Universal Time)
InternetServiceProvider	Internet Service Provider (ISP) name.
DomainName	Internet domain name associated to IP address range.
NetSpeed	Internet Connection Speed (DIAL) DIAL-UP,(DSL) DSL/CABLE or(COMP) COMPANY
IDDCode	The IDD prefix to call the city from another country
AreaCode	A varying length number assigned to geographic areas for call between cities
WeatherStationCode	Special code to identify the nearest weather observation station
WeatherStationName	Name of the nearest weather observation station
MCC	Mobile country code
MNC	Mobile network code
MobileBrand	Mobile brand
Status	Status code of query.
Elevation	Average height of city above sea level in meters (m).
UsageType	Usage type classification of ISP or company; (COM) Commercial, (ORG) Organization, (GOV) Government, (MIL) Military, (EDU) University/College/School, (LIB) Library, (CDN) Content Delivery Network, (ISP) Fixed Line ISP, (MOB) Mobile ISP, (DCH) Data Center/Web Hosting/Transit, (SES) Search Engine Spider & (RSV) Reserved

*Note: The result will return a not supported field message if the field of the result is not supported by the current database.

Possible Status Code returned from a query.

Status Code	Description
OK	The query has been successfully performed.
EMPTY_IP_ADDRESS	The IP address is empty.
INVALID_IP_ADDRESS	The format of the IP address is wrong.
MISSING_FILE	The BIN file path is wrong or the BIN file is unreadable.
IP_ADDRESS_NOT_FOUND	The IP address does not exists in the BIN file.
IPV6_NOT_SUPPORTED	The BIN file does not contain IPv6 data.

4. Purchase IP2LOCATION™ .NET COMPONENT

4.1 License Agreement

A license is required for each machine the product is installed on, including development or staging machines. Please refer to the end of this document for the complete license agreement.

4.2 Purchase Instruction

Proceed to our order page. Fill out the online form and choose the correct number of licenses. Once your order has been approved, you will receive your license file (License.Key) immediately through email. Save the license file to the same directory of IP2Location.dll in WinForm or /bin directory for WebForm the remove the random 5-second query delay.

Please visit http://www.ip2location.com for online order.

5. UPDATE COMPONENT DATABSE

5.1 Update Component Internal Database

The IP2Location™ .NET Component depends on an internal database for lookup purpose. All users with valid license will be allowed to download the monthly updates from the IP2Location™ download area during subscription period. To update, users need to replace the BIN database with the latest one from the download area. The component will use the latest database once the local copy has been updated. Please refer to the welcome email for more information regarding download updates and account information.

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
CF	CENTRAL AFRICAN REPUBLIC
CG	CONGO

Country Code	Country Name
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
GP	GUADELOUPE
GQ	EQUATORIAL GUINEA
GR	GREECE

Country Code	Country Name
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
LT	LITHUANIA
LU	LUXEMBOURG
LV	LATVIA
LY	LIBYA
MA	MOROCCO
MC	MONACO
MD	MOLDOVA, REPUBLIC OF

Country Code	Country Name
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
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

Country Code	Country Name
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
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

Country Code	Country Name
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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