



IP2Location™

Java Component

User Manual



Developed by Hexasoft Development Sdn. Bhd.

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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.

Developers use this Java 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™ Java component is written for Java SDK and optimized for any platforms with a Java Virtual Machine performance.

SYSTEM REQUIREMENT

IP2Location™ Java Component has been developed to run exclusively under any platforms with a Java Virtual Machine. This component required a local IP2Location™ database for lookup purpose. No Internet connection required to execute this component.

Minimum Configuration Requirements

This section describes the minimum configuration requirements for a computer where the Java JDK 1.1 or later is to be installed. If the minimum requirements are not met, the IP2Location™ Java Component may not work properly.

Minimum Platform Requirements

- Microsoft Windows 98 (1st and 2nd edition)
- Microsoft Windows ME
- Microsoft Windows NT (sp6a)
- Microsoft Windows 2000 (sp3)
- Microsoft Windows XP Home
- Microsoft Windows XP Professional (sp1)
- Microsoft Windows 2003 Server Editions
- Microsoft Windows Vista
- Solaris 7
- Solaris 8
- Solaris 9
- Red Hat 7.3
- Red Hat 8.0
- Red Hat Enterprise Linux WS 2.1
- Red Hat Enterprise Linux ES 2.1
- Red Hat Enterprise Linux AS 2.1
- SuSE 8.0
- TurboLinux 7.0
- SLEC 8

Minimum Configuration Requirements

Scenario	CPU Required	RAM Required
Client	Pentium 166 MHz*	32 MB**
Server	Pentium 166 MHz*	128 MB**

* Or the minimum CPU required running the operating system, whichever is higher.

** Or the minimum RAM required running the operating system, whichever is higher.

Quick Start Guide

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

1. Download and installing IP2Location Java Component
2. Test your Java 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 JAVA COMPONENT

1.1. Download Setup File

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

<http://www.ip2location.com/download/IP2LocationJavaComponent1.0.ZIP>

1.2. Component Installation

Installing the IP2Location Java component system is very easy. You just need to extra the ZIP file to your local machine.

2. TESTING IP2LOCATION™ JAVA COMPONENT

2.1 Folders and Files Structure

You should find the following folders and files in the installation directory.

```
/demos/IP-COUNTRY-SAMPLE.BIN
/demos/Main.java
/libs/ip2location.jar
/docs/index.html
/README.txt
/License.txt
/IP2Location_Java_User_Manual.pdf
```

2.2 Component Testing

Please open command prompt to rebuild and execute the application.

Sample Code for IP2Location Java Component

File located in :

<your sample code path>/demos/Main.java

Windows Platform

Compile Sample Code

```
javac -classpath <your classpath>\IP2LocationJavaComponent\libs\ip2location.jar Main.java
```

Running Sample Code

You will need Java JDK 1.1 or later. You can run Main.java like this:

```
java -cp <your classpath>\IP2LocationJavaComponent\libs\ip2location.jar;. Main <dbfile>
<ipaddr> <license> (optional)
```

with License.key

```
java -cp <your classpath>\IP2LocationJavaComponent\libs\ip2location.jar;. Main <your
database path>\Database\IP-COUNTRY-SAMPLE.BIN 200.0.0.1 <license.key>
```

without License.key

```
java -cp <your classpath>\IP2LocationJavaComponent\libs\ip2location.jar;. Main <your
database path>\Database\IP-COUNTRY-SAMPLE.BIN 200.0.0.1
```

3. IMPLEMENTING IP2LOCATION™ JAVA COMPONENT

3.1 IP2Location™ Objects Reference

Object: IP2Location.Component

Class Variables	Description	Type
IPDatabasePath	Sets the IP2Location™ database path. The component will use the database in the component directory by default.	Static String
IPAddress	The IP Address you wish to query	Static String
IPLicensePath	Sets the license file path for component registration. The component will use the license key in the component directory by default.	Static String

Method	Description	Return Type
Open(String IPDatabasePath)	Open IP2Location™ database	void
Close()	Close IP2Location™ database	void
getIP2LocationRecord(String IPAddress, String IPLicensePath)	This function to query IP2Location data	com.IPResult

Object: IP2Location.IPResult

Method	Description	Return Type
getIPAddress()	Returns the IP Address.	String
getCountryShort()	Returns the two-character country code based on ISO 3166.	String
getCountryLong()	Returns the country name based on ISO 3166.	String
getRegion()	Returns the region or state name.	String
getCity()	Returns the city name.	String
getLatitude()	Returns the city latitude.	Float
getLongitude()	Returns the city longitude.	Float
getZIPCode()	Returns the United States ZIP code.	String
getTimeZone()	Returns the Time zone in UTC (Coordinated Universal Time)	String
getISP()	Returns the Internet Service Provider (ISP) name.	String
getDomain()	Returns the Internet domain name associated to IP address range.	String
getNetSpeed()	Returns the Internet Connection Speed (DIAL) DIAL-UP,(DSL) DSL/CABLE or(COMP) COMPANY	String
getIDDCode	The IDD prefix to call the city from another country	String
getAreaCode	A varying length number assigned to geographic areas for call between cities	String
getWeatherStationCode	Special code to identify the nearest weather observation station	String
getWeatherStationName	Name of the nearest weather observation station	String
getStatus()	Returns the status code of query.	String

Object: IP2Location.IPResult

Method	Description	Return Type
toString()	Returns the result in String format	String

* Note: Before retrieving the result please check the status of the result. If the result is successfully retrieved it will return "OK" status. If not an error has occurred. Please see sample code below for example.

** Note: In case of fields not supported by the database the field will return the result "NOT_SUPPORTED".

3.2. Sample Codes in Java

```

import com.ip2location.*;

public class Main
{
    public Main()
    {
    }
    public static void main(String[] args)
    {
        try
        {
            IP2Location loc = new IP2Location();
            if (args.length == 2 || args.length == 3)
            {
                loc.IPDatabasePath = args[0];
                if (args.length == 3)
                {
                    loc.IPLicensePath = args[2];
                }
                IPResult rec = loc.IPQuery(args[1]);
                if ("OK".equals(rec.getStatus()))
                {
                    System.out.println(rec);
                }
                else if ("EMPTY_IP_ADDRESS".equals(rec.getStatus()))
                {
                    System.out.println("IP Address cannot be blank.");
                }
                else if ("INVALID_IP_ADDRESS".equals(rec.getStatus()))
                {
                    System.out.println("Invalid IP Address.");
                }
                else if ("MISSING_FILE".equals(rec.getStatus()))
                {
                    System.out.println("Invalid Database Path.");
                }
                else
                {
                    System.out.println("Unknown Error.");
                }
                if (rec.getDelay() == true)
                {
                    System.out.println("The last query delayed for 5
                    second due to evaluation copy.");
                }
                System.out.println("Java Component: " + rec.getVersion());
                loc.close();
            }
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
    }
}

```

4. Purchase IP2LOCATION™ JAVA 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.

4.3 Purchase Instructions

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 as IP2Location.jar in IP2Location directory to remove the random 5-second query delay. Please visit <http://www.ip2location.com> for online order.

5. UPDATE COMPONENT DATABASE

5.1 Update Component Internal Database

The IP2Location™ Java Component depends to 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.

6. UPDATE OR UNINSTALL COMPONENT

6.1 Upgrade Component

To upgrade a new version of IP2Location database, you need to download and extract the new setup file.

6.2 Update Database

To update the latest database, you can just replace the existing database binary file at IP2Location /bin binary folder.

6.3 Uninstall Component

To uninstall IP2Location™ Java Component, you need to delete the whole folder.

APPENDIX I: ISO3166 COUNTRY CODE

This table lists all valid ISO3166 two characters country codes that returns from IP2Location™ Java 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
AN	NETHERLANDS ANTILLES
AO	ANGOLA
AP	ASIA PACIFIC
AQ	ANTARCTICA
AR	ARGENTINA
AS	AMERICAN SAMOA
AT	AUSTRIA
AU	AUSTRALIA
AW	ARUBA
AZ	AZERBAIJAN
BA	BOSNIA AND HERZEGOWINA
BB	BARBADOS
BD	BANGLADESH
BE	BELGIUM
BF	BURKINA FASO
BG	BULGARIA
BH	BAHRAIN
BI	BURUNDI
BJ	BENIN
BM	BERMUDA
BN	BRUNEI DARUSSALAM
BO	BOLIVIA
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	COTE D'IVOIRE
CK	COOK ISLANDS
CL	CHILE
CM	CAMEROON
CN	CHINA
CO	COLOMBIA
CR	COSTA RICA
CS	CZECHOSLOVAKIA (FORMER)
CU	CUBA
CV	CAPE VERDE
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
EU	EUROPEAN UNION
FI	FINLAND
FJ	FIJI
FK	FALKLAND ISLANDS (MALVINAS)
FM	MICRONESIA, FEDERATED STATES OF
FO	FAROE ISLANDS
FR	FRANCE
FX	FRANCE, METROPOLITAN
GA	GABON
GB	GREAT BRITAIN
GD	GRENADA
GE	GEORGIA
GF	FRENCH GUIANA
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
IN	INDIA
IO	BRITISH INDIAN OCEAN TERRITORY
IQ	IRAQ
IR	IRAN, ISLAMIC REPUBLIC OF
IS	ICELAND
IT	ITALY
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	LIBYAN ARAB JAMAHIRIYA
MA	MOROCCO
MC	MONACO
MD	MOLDOVA, REPUBLIC OF

Country Code	Country Name
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 TERRITORY, OCCUPIED
PT	PORTUGAL
PW	PALAU
PY	PARAGUAY
QA	QATAR
RE	REUNION
RO	ROMANIA

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
SI	SLOVENIA
SJ	SVALBARD AND JAN MAYEN
SK	SLOVAKIA
SL	SIERRA LEONE
SM	SAN MARINO
SN	SENEGAL
SO	SOMALIA
SR	SURINAME
ST	SAO TOME AND PRINCIPE
SU	RUSSIAN FEDERATION
SV	EL SALVADOR
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
TM	TURKMENISTAN
TN	TUNISIA
TO	TONGA
TP	EAST TIMOR
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
YU	YUGOSLAVIA
ZA	SOUTH AFRICA
ZM	ZAMBIA
ZW	ZIMBABWE

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