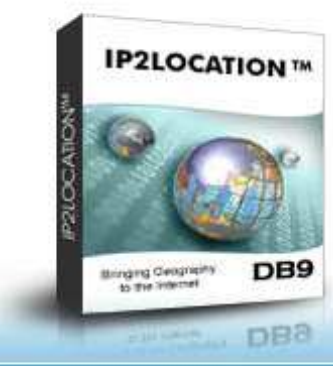
IP2LOCATION™ IP-COUNTRY-REGION-CITY-LATITUDE-LONGITUDE-ZIPCODE DATABASE

DATA FILE SPECIFICATIONS

Product:	IP2Location™ IP-Country-Region-City-Latitude-Longitude-ZIPCode Database [DB9]
File Name:	IP2Location_IP_Country_Region_City_Latitude_Longitude_ZIPCode_Specification.PDF
Total Records:	3,388,524
Total Fields:	9
Last Updated:	August 2010
Data Format Available:	i. CSV [Comma-Delimited ASCII] ii. BIN [IP2Location™ Binary Format]

FIELD #	FIELD NAME	DATA TYPE	FIELD DESCRIPTION
1	IP_FROM	NUMERICAL (DOUBLE)	Beginning of IP address range. The data is represented in IP number[1] format.
2	IP_TO	NUMERICAL (DOUBLE)	Ending of IP address range. The data is represented in IP number[1] format.
3	COUNTRY_CODE	CHAR(2)	Two-character country code based on ISO 3166.
4	COUNTRY_NAME	VARCHAR(64)	Country name based on ISO 3166.
5	REGION	VARCHAR(128)	Region name.
6	CITY	VARCHAR(128)	City name.
7	LATITUDE	NUMERICAL (DOUBLE)	City latitude. Default to capital city latitude if city is unknown.
8	LONGITUDE	NUMERICAL (DOUBLE)	City longitude. Default to capital city longitude if city is unknown.
9	ZIPCODE	CHAR(10)	ZIP codes for US and Canada cities only.



Note:

[1] IP Address to IP Number Conversion

If the IP address 161.132.13.1, then the IP number is 2709785857.

IP Number, X = 161 x (256*256*256) + 132 x (256*256) + 13 x (256) + 1
= 2709785857

In general, this is the formula to convert an IP Address to IP Number.

Let assume the IP Address is A.B.C.D.

IP Number, X = A x (256*256*256) + B x (256*256) + C x 256 + D

[2] Record Matching

First, convert the search IP Address to IP Number, X. Search a record that matches the range condition. You will get only one match per query. The country and city information is attached to country fields of the record.

IP_FROM <= X <= IP_TO