



minFraud

GeoIP

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GeoIP and GeoLite City and Country Databases

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Determine the country, subdivisions (regions), city, and postal code associated with IPv4 and IPv6 addresses worldwide.

Terms and pricing for the GeoIP City and GeoIP Country databases may be found on our product pages:

- [GeoIP City](#)
- [GeoIP Country](#)

IP Geolocation Usage

IP geolocation is inherently imprecise. Locations are often near the center of the population. Any location provided by a GeoIP database should not be used to identify a particular address or household.

Data Privacy

To comply with data privacy regulations, please monitor our [Do Not Sell My Personal Information Requests page](#) (login required) for IP addresses and networks that should not be used for advertising or marketing purposes. You can automate retrieval of this list using our [privacy exclusions API](#).

Binary Databases

Binary databases make use of the [MaxMind DB file format](#). MaxMind provides [official client APIs](#) that are open source. We also provide a list of [unsupported and unofficial client APIs](#) and [unsupported and unofficial integrations](#) with various applications.

You can also use the [mmdbsinspect tool](#) (in beta), a command line interface built with Go, to look up one or more IPs from one or more MMDB databases and receive output in a parseable JSON format.

CSV Databases

In addition to our MaxMind DB binary format, we also offer GeoIP and GeoLite databases in a CSV format suitable for importing into a SQL database. The CSV files are shipped as a single [zip file](#).

The zip file itself is named `{GeoIP2,GeoLite2}-{City,Country}-CSV-{YYYYMMDD}.zip`. The downloaded zip file contains a single directory which in turn contains several files. That directory is named `{GeoIP2,GeoLite2}-{City,Country}-CSV-{YYYYMMDD}`.

The downloaded .zip file contains a single directory which in turn contains 13 files:

Filename	Description
<code>COPYRIGHT.txt</code>	Copyright statement
<code>LICENSE.txt</code>	End user license
<code>README.txt</code>	Information file
<code>{GeoIP2,GeoLite2}-{City,Country}-Blocks-IPv4.csv</code>	CSV file containing data on IPv4 addresses
<code>{GeoIP2,GeoLite2}-{City,Country}-Blocks-IPv6.csv</code>	CSV file containing data on IPv6 addresses
<code>{GeoIP2,GeoLite2}-{City,Country}-Locations-{locale}.csv</code>	Eight CSV files containing data on locations for each locale code, where <code>{locale}</code> can be <code>de</code> , <code>en</code> , <code>es</code> , <code>fr</code> , <code>ja</code> , <code>pt-BR</code> , <code>ru</code> , and <code>zh-CN</code> .

All the CSV files start with a single header row containing column names. The specific column names and their contents are detailed below. The files are encoded as UTF-8.

Blocks Files

There are two CSV files for network blocks, one each for IPv4 and IPv6 blocks. These files are named `{GeoIP2,GeoLite2}-{City,Country}-Blocks-IPv4.csv` and `{GeoIP2,GeoLite2}-{City,Country}-Blocks-IPv6.csv` respectively. An example name would be `GeoIP2-City-City-Blocks-IPv4.csv`.

City subset by continent databases blocks files have the same columns as the City database.

Name	Type	Description	Included in...
network	IP network as a string	This is the IPv4 or IPv6 network in CIDR format such as "2.21.92.0/29" or "2001:4b0::/80". We offer a utility to convert this column to start/end IPs or start/end integers. See the conversion utility section for details.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
geoname_id	integer	A unique identifier for the network's location as specified by GeoNames . This ID can be used to look up the location information in the Location file.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
registered_country_geoname_id	integer	The registered country is the country in which the ISP has registered the network. This column contains a unique identifier for the network's registered country as specified by GeoNames . This ID can be used to look up the location information in the Location file.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
represented_country_geoname_id	integer	The represented country is the country which is represented by users of the IP address. For instance, the country represented by an overseas military base. This column contains a unique identifier for the network's represented country as specified by GeoNames . This ID can be used to look up the location information in the Location file.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
is_anonymous_proxy	boolean	Deprecated. Please see our GeoIP Anonymous IP Database to determine whether the IP address is used by an anonymizing service.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
is_satellite_provider	boolean	Deprecated.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
postal_code	string	A postal code close to the user's location. For the following countries, we return partial postal codes with the number of characters indicated below: <ul style="list-style-type: none">United States: 5Canada: 3United Kingdom: 2-4Brazil: 5Ireland: 3Japan: 7 (specified for the first 6. The last digit defaults to 1)Netherlands: 4Portugal: 7 (accurate for the first 4. The last 3 often defaults to -001)Singapore: 2	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
latitude*	decimal	The approximate WGS84 latitude of the location associated with the network.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
longitude*	decimal	The approximate WGS84 longitude of the location associated with the network.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
accuracy_radius	integer	The radius in kilometers around the specified location where the IP address is likely to be.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
is_anycast	boolean	This is 1 if the network is an anycast network. This column will be empty in GeoLite2-City and GeoLite2-City.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City

* The coordinates are not precise and should not be used to identify a particular street address or household. To better represent a level of accuracy, please include the `accuracy_radius` when displaying `latitude` and `longitude` and make it clear that the coordinates refer to a larger geographical area instead of a precise location.

Locations Files

The zip file includes one location file for each locale code for which data is available. There will always be an "en" file containing a record for every `geoname_id` used in the blocks files. Files corresponding to other locales will exist and have a record for a `geoname_id` only if data is available. The other possible locales are "de", "es", "fr", "ja", "pt-BR", "ru", and "zh-CN".

These files are named `{GeoIP2,GeoLite2}-{City,Country}-Locations-{locale}.csv`. An example name would be `GeoIP2-City-Locations-en.csv`.

City subset by continent databases locations files have the same columns as the City database.

Name	Type	Description	Included in...
geoname_id	integer	A unique identifier for the location as specified by GeoNames . This ID can be used as a key for the Location file.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
locale_code	string	The locale that the names in this row are in. This will always correspond to the locale name of the file.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
continent_code	string (2)	The continent code for this location. Possible codes are: <ul style="list-style-type: none">AF - AfricaAN - AntarcticaAS - AsiaEU - EuropeNA - North AmericaOC - OceaniaSA - South America	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
continent_name	string	The continent name for this location in the file's locale.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
country_iso_code	string (2)	A two-character ISO 3166-1 country code for the country associated with the location.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
country_name	string	The country name for this location in the file's locale.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
subdivision_1_iso_code	string (1-3)	A string of up to three characters containing the region portion of the ISO 3166-2 code for the second level region associated with the IP address. Some countries have two levels of subdivisions, in which case this is the least specific. For example, in the United Kingdom this will be a country like "England", not a county like "Devon".	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
subdivision_1_name	string	The subdivision name for this location in the file's locale. As with the subdivision code, this is the least specific subdivision for the location.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
subdivision_2_iso_code	string (1-3)	A string of up to three characters containing the region portion of the ISO 3166-2 code for the second level region associated with the IP address. Some countries have two levels of subdivisions, in which case this is the most specific. For example, in the United Kingdom this will be a county like "Devon", not a country like "England".	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
subdivision_2_name	string	The subdivision name for this location in the file's locale. As with the subdivision code, this is the most specific subdivision for the location.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
city_name	string	The city name for this location in the file's locale.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
metro_code	integer	Deprecated. This is a no-longer-maintained code for targeting advertisements in Google.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
time_zone	string	The time zone associated with location, as specified by the IANA Time Zone Database, e.g., "America/New_York".	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City
is_in_european_union	boolean	This is 1 if the country associated with the location is a member state of the European Union. It is 0 otherwise.	<input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> City

Returned Values as Database, Map, Dict, or Hash Keys

We strongly discourage you from using a value from any `*_name` field as a key in a database or map/dict/hash data structure.

These names may change between releases. Instead we recommend using one of the following:

Data object	Recommended key
city	<code>geoname_id</code>
continent	<code>continent_code</code>
country	<code>country_iso_code</code>
postal	<code>postal_code</code>
subdivisions	<code>subdivision_{1,2}_iso_code</code>