pygeoip Documentation

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This library is based on Maxmind's GeoIP C API.

Tested with Python version 2.6, 2.7, 3.2 and 3.3.

CHAPTER 1

Installation

You can easily install pygeoip from PyPi.

```
pip install pygeoip
```

CHAPTER 2

Issues and Contribution

Bug reports are done by creating an issue on Github. If you want to contribute you can always create a pull request for discussion and code submission.

CHAPTER 3

Documentation

3.1 Getting Started

Create your GeoIP instance with appropriate access flag. `STANDARD` reads data from disk when needed, `MEMORY_CACHE` loads database into memory on instantiation and `MMAP_CACHE` loads database into memory using mmap.

```
>>> import pygeoip
>>> gi = pygeoip.GeoIP('GeoIP.dat')
>>> gi.country_name_by_addr('64.233.161.99')
'United States'
```

3.1.1 Country Lookup

```
>>> gi = pygeoip.GeoIP('GeoIP.dat')
>>> gi.country_code_by_name('google.com')
'US'
>>> gi.country_code_by_addr('64.233.161.99')
'US'
>>> gi.country_name_by_addr('64.233.161.99')
'United States'
```

```
>>> gi = pygeoip.GeoIP('GeoIPv6.dat')
>>> gi.country_code_by_addr('2a00:1450:400f:802::1006')
'IE'
```

3.1.2 Region Lookup

```
>>> gi = pygeoip.GeoIP('GeoIPRegion.dat')
>>> gi.region_by_name('apple.com')
{'region_code': 'CA', 'country_code': 'US'}
```

3.1.3 City Lookup

```
>>> gi = pygeoip.GeoIP('GeoIPCity.dat')
>>> gi.record_by_addr('64.233.161.99')
{
    'city': u'Mountain View',
```

```
    'region_code': u'CA',
    'area_code': 650,
    'time_zone': 'America/Los_Angeles',
    'dma_code': 807,
    'metro_code': 'San Francisco, CA',
    'country_code3': 'USA',
    'latitude': 37.41919999999999,
    'postal_code': u'94043',
    'longitude': -122.0574,
    'country_code': 'US',
    'country_name': 'United States',
    'continent': 'NA'
}
>>> gi.time_zone_by_addr('64.233.161.99')
'America/Los_Angeles'
```

3.1.4 Organization Lookup

```
>>> gi = pygeoip.GeoIP('GeoIPOrg.dat')
>>> gi.org_by_name('dell.com')
'Dell Computer Corporation'
```

3.1.5 ISP Lookup

```
>>> gi = pygeoip.GeoIP('GeoIPISP.dat')
>>> gi.isp_by_name('cnn.com')
'Turner Broadcasting System'
```

3.1.6 ASN Lookup

```
>>> gi = pygeoip.GeoIP('GeoIPASNum.dat')
>>> gi.asn_by_name('cnn.com')
'AS5662 Turner Broadcasting'
```

3.2 Supported Databases

Type	IPv4	IPv6	Details
Country	Yes	Yes	MaxMind Country product page
City	Yes	Yes	MaxMind City product page
Organization	Yes		MaxMind Organization product page
ISP	Yes		MaxMind ISP product page
Region	Yes		MaxMind Region product page
ASN	Yes	Yes	MaxMind ASN product page
Netspeed	Yes		MaxMind Netspeed product page

3.3 API Reference

3.3.1 GeoIP

class `pygeoip.GeoIP` (*filename*, *flags=0*, *cache=True*)

`__init__` (*filename*, *flags=0*, *cache=True*)
Create and return an GeoIP instance.

Parameters

- **filename** – File path to a GeoIP database
- **flags** – Flags that affect how the database is processed. Currently supported flags are STANDARD (default), MEMORY_CACHE (preload the whole file into memory) and MMAP_CACHE (access the file via mmap)
- **cache** – Used in tests to skip instance caching

`country_code_by_addr` (*addr*)
Returns 2-letter country code (e.g. US) from IP address.

Parameters **addr** – IP address (e.g. 203.0.113.30)

`country_code_by_name` (*hostname*)
Returns 2-letter country code (e.g. US) from hostname.

Parameters **hostname** – Hostname (e.g. example.com)

`country_name_by_addr` (*addr*)
Returns full country name for specified IP address.

Parameters **addr** – IP address (e.g. 203.0.113.30)

`country_name_by_name` (*hostname*)
Returns full country name for specified hostname.

Parameters **hostname** – Hostname (e.g. example.com)

`id_by_addr` (*addr*)
Returns the database ID for specified address. The ID might be useful as array index. 0 is unknown.

Parameters **addr** – IPv4 or IPv6 address (eg. 203.0.113.30)

`last_netmask` ()
Returns the netmask depth of the last lookup.

`netspeed_by_addr` (*addr*)
Returns NetSpeed name from address.

Parameters **addr** – IP address (e.g. 203.0.113.30)

`netspeed_by_name` (*hostname*)
Returns NetSpeed name from hostname. Can be Unknown, Dial-up, Cable, or Corporate.

Parameters **hostname** – Hostname (e.g. example.com)

`org_by_addr` (*addr*)
Returns Organization, ISP, or ASNum name for given IP address.

Parameters **addr** – IP address (e.g. 203.0.113.30)

org_by_name(*hostname*)
Returns Organization, ISP, or ASNum name for given hostname.

Parameters **hostname** – Hostname (e.g. example.com)

record_by_addr(*addr*)
Returns dictionary with city data containing *country_code*, *country_name*, *region*, *city*, *postal_code*, *latitude*, *longitude*, *dma_code*, *metro_code*, *area_code*, *region_code* and *time_zone*.

Parameters **addr** – IP address (e.g. 203.0.113.30)

record_by_name(*hostname*)
Returns dictionary with city data containing *country_code*, *country_name*, *region*, *city*, *postal_code*, *latitude*, *longitude*, *dma_code*, *metro_code*, *area_code*, *region_code* and *time_zone*.

Parameters **hostname** – Hostname (e.g. example.com)

region_by_addr(*addr*)
Returns dictionary containing *country_code* and *region_code*.

Parameters **addr** – IP address (e.g. 203.0.113.30)

region_by_name(*hostname*)
Returns dictionary containing *country_code* and *region_code*.

Parameters **hostname** – Hostname (e.g. example.com)

time_zone_by_addr(*addr*)
Returns time zone in tzdata format (e.g. America/New_York or Europe/Paris)

Parameters **addr** – IP address (e.g. 203.0.113.30)

time_zone_by_name(*hostname*)
Returns time zone in tzdata format (e.g. America/New_York or Europe/Paris)

Parameters **hostname** – Hostname (e.g. example.com)

3.3.2 GeoIPError

exception pygeoip.**GeoIPError**
Thin wrapper of *Exception*, will be thrown in case of an unrecoverable error.

For more information, check out the documentation over at Read the Docs.

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