

How to Perform a GeoIP Lookup in Express.js

Posted on June 4, 2018

If you're building a website (or API) using [Express.js](#), it's often useful to know where your visitors are coming from: the US, the EU, someplace else? The process of locating a web user is typically referred to IP geolocation, and unfortunately, it isn't simple.

The reason it isn't easy to get IP geolocation data is that there is no standard mapping of IPs -> location data. Most companies get this data by purchasing it from GeoIP aggregators that piece together lots of different bits of information to build an accurate database of IP geolocation data.

GeoIP data is typically comprised of:

- WHOIS data
- Regional Internet Registries
- BGP feeds (from internet service providers)
- Latency information manually gathered

In short: it's basically impossible to get IP geolocation data without going through a GeoIP aggregator.

Today, I'll walk you through using the incredibly simple [express-simple-geoip](#) developer library I created which makes performing GeoIP lookups a breeze in Express.js.

Create a GeoPify Lookup Account

The first thing you need to do is go create a free GeolPify account: <https://geopify.whoisxmlapi.com/signup>

[GeolPify](#) is one of the biggest and cheapest GeolP providers. You can use GeolPify to perform 1,000 free GeolP lookups per month, or you can pay them a flat fee of \$27 for 100k lookups. If you need to do more than that, you can always check out the pricing (which is inexpensive): <https://geopify.whoisxmlapi.com/pricing>

Once you've created your free account and logged in, you need to view the [product page](#) and copy your API key, you will need this later in order to make API requests to perform the GeolP lookups.

MY PRODUCTS

Your API key. at 70 

Install express-simple-geoip

Once you've created your GeolPify account, you then need to install the [express-simple-geoip](#) NPM library. To do this, run the following command (I'm assuming you already have Node setup and working):

```
$ npm install express-simple-geoip
```

Plug express-simple-geoip Into Your Express.js App

Now that you've got the express-simple-geoip library installed, all you need to do is hook it up into your Express.js app. To do this, you'll need to import the library, initialize it as a middleware, then test it out.

Here's a simple Express.js app that only contains a single endpoint, `/test`, which returns a simple hello world response:

```
"use strict";

const express = require("express");
const GeoIP = require("express-simple-geoip");

let app = express();

app.use(GeoIP("<your-api-key-here>"));

app.get("/test", (req, res) => {
  res.json({ hello: "world" });
});

app.listen(3000);
```

If you put this code into a `server.js` file and run it, you should see a hello world response when you visit the `/test` endpoint in your browser.

The `app.use` line initializes the GeoIP middleware so that every time a new request comes into your Express.js server, a GeoIP lookup will be performed and a new `req.geoip` object will be tacked onto the request.

To access the GeoIP data in your code, you can simply reference the `req.geoip` object like so:

```
"use strict";

const express = require("express");
const GeoIP = require("express-simple-geoip");

let app = express();

app.use(GeoIP("<your-api-key-here>"));

app.get("/test", (req, res) => {
  res.json({ hello: "world", geoip: req.geoip });
});

app.listen(3000);
```

If you run this new server and visit the `"/test"` URL in your browser, you should see a new response that looks something like this:

```
{
  "hello": "world",
  "geoip": {
    "country": "US",
    "region": "California",
    "city": "Mountain View",
    "lat": 37.40599,
    "lng": -122.078514,
    "postalCode": "94043",
    "timezone": "-08:00"
  }
}
```

```
}
```

As you can see, the ``req.geoip`` data object contains all of the requester's GeoIP data! Pretty neat, right? The ``req.geoip`` object contains everything you need to know about the requester's physical location.

How to Use GeoIP Data

Now that you've seen how simple it can be to get GeoIP lookup functionality working in your Express.js apps, here are some ideas of ways you can use GeoIP data in your projects and services:

- Detect a user's country when they visit your site and provide a customized experience for them (change the language of the page, show certain ads, types of currency, etc.)
- Block users from certain locations from visiting your website. Let's say you are building a video streaming service like YouTube and you only have the rights to show certain videos to users in the US. In this case, having GeoIP data could help you detect a user's location so you could filter any non-US users.
- Reduce fraud and risk. If you notice a lot of malicious traffic coming from a specific country, temporarily blocking visitors from that location can be a quick way to avoid fraud and other issues.

express-simple-geoip Wrap Up

Performing GeoIP lookups can be tricky, but [express-simple-geoip](#) in conjunction with the [GeoIPify](#) service makes it simple and cheap. By using the new `express-simple-geoip` library you can easily build and manage GeoIP lookups for even the largest enterprise sites.

To learn more, go check out the `express-simple-geoip` library on GitHub where you can find all the docs and more in-depth information: <https://github.com/whois-api-llc/express-simple-geoip>

If you have any questions, feel free to [shoot me an email](#).