Non-Relational Databases

MongoDB --- 6

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■ GeoLite2 Free Databases

➢ **Databases**

GeoLite2 databases are free IP geolocation databases comparable to, but less accurate than, MaxMind's GeoIP2 databases. The GeoLite2 Country and City databases are updated on the first Tuesday of each month. The GeoLite2 ASN database is updated every Tuesday.

➢ **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.

Use the Accuracy Radius as an indication of geolocation accuracy for the latitude and longitude coordinates we return for an IP address. The actual location of the IP address is likely within the area defined by this radius and the latitude and longitude coordinates.

➢ **License**

The GeoLite2 databases are distributed under the Creative Commons Attribution-ShareAlike 4.0 International License. The attribution requirement may be met by including the following in all advertising and documentation mentioning features of or use of this database.

10 – MongoDB Data Import

- GeoLite2 Files

  - **GeoLite2-Country-Locations-en.csv**

    - Columns

      ```
      geoname_id,
      locale_code,
      continent_code,
      continent_name,
      country_iso_code,
      country_name
      ```

    - Example lines

      ```
      1861060,en,AS,Asia,JP,Japan
      1873107,en,AS,Asia,KP,"North Korea"
      1880251,en,AS,Asia,SG,Singapore
      1899402,en,OC,Oceania,CK,"Cook Islands"
      ```

10 – MongoDB Data Import

- GeoLite2 Files

  - **GeoLite2-Country-Blocks-IPv4.csv**

    - Columns

      ```
      network,
      geoname_id,
      registered_country_geoname_id,
      represented_country_geoname_id,
      is_anonymous_proxy,
      is_satellite_provider
      ```

    - Example lines

      ```
      1.0.16.0/20,1861060,1861060,,0,0          1861060 == Japan, see prev page
      1.0.32.0/19,1814991,1814991,,0,0
      1.0.64.0/18,1861060,1861060,,0,0
      1.0.128.0/17,1605651,1605651,,0,0
      ```

10 – MongoDB Data Import

- MongoDB Challenge

    - Data Import CSV2MongoDB (20 points)

        1. Develop a JSON document structure for storing Country-IPv4-Information in a MongoDB fulfilling the following conditions (8 points).

            a) For each country only one document is accepted!

            b) For each country all information from GeoLite2-Country-Locations-en.csv must appear in the country document.

            c) For each country all IPv4 networks must appear in the country document.

        2. Write a PHP-Skript (loadCountryIPv4.php) that loads the complete Country-IPv4-Structure into MongoDB CountryIPv4_ddmmyy (12 points).

Literature

- GeoLite 2 Free Downloadable Databases
  https://dev.maxmind.com/geoip/geoip2/geolite2/

- MongoDB Mongorestore
  http://docs.mongodb.org/manual/reference/program/mongorestore/