

# IPv6 Geolocation

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# IPv6 Geolocation

- Master thesis
  - Cooperation between FIT VUT and CZ.NIC Labs
- To be released yet
  - under free license
- Demo of the visualization part
  - <http://staging.labs.nic.cz/ip2geo/>

# Project Parts

- Datamining robot (perl script)
  - Delegated prefixes + whois information (RIPE DB, ...)
  - Best effort
- Coordinates transformation
  - Google Geocoding API
- CLI (C++) + Storage (sqlite3 database)
  - SQL procedure to match IPv6 addresses
- Visualization (Google Maps + PHP)

# Command Line Interface

`./ip2geo -q <IPv6_address>`

- Geolocation of specific IPv6 address

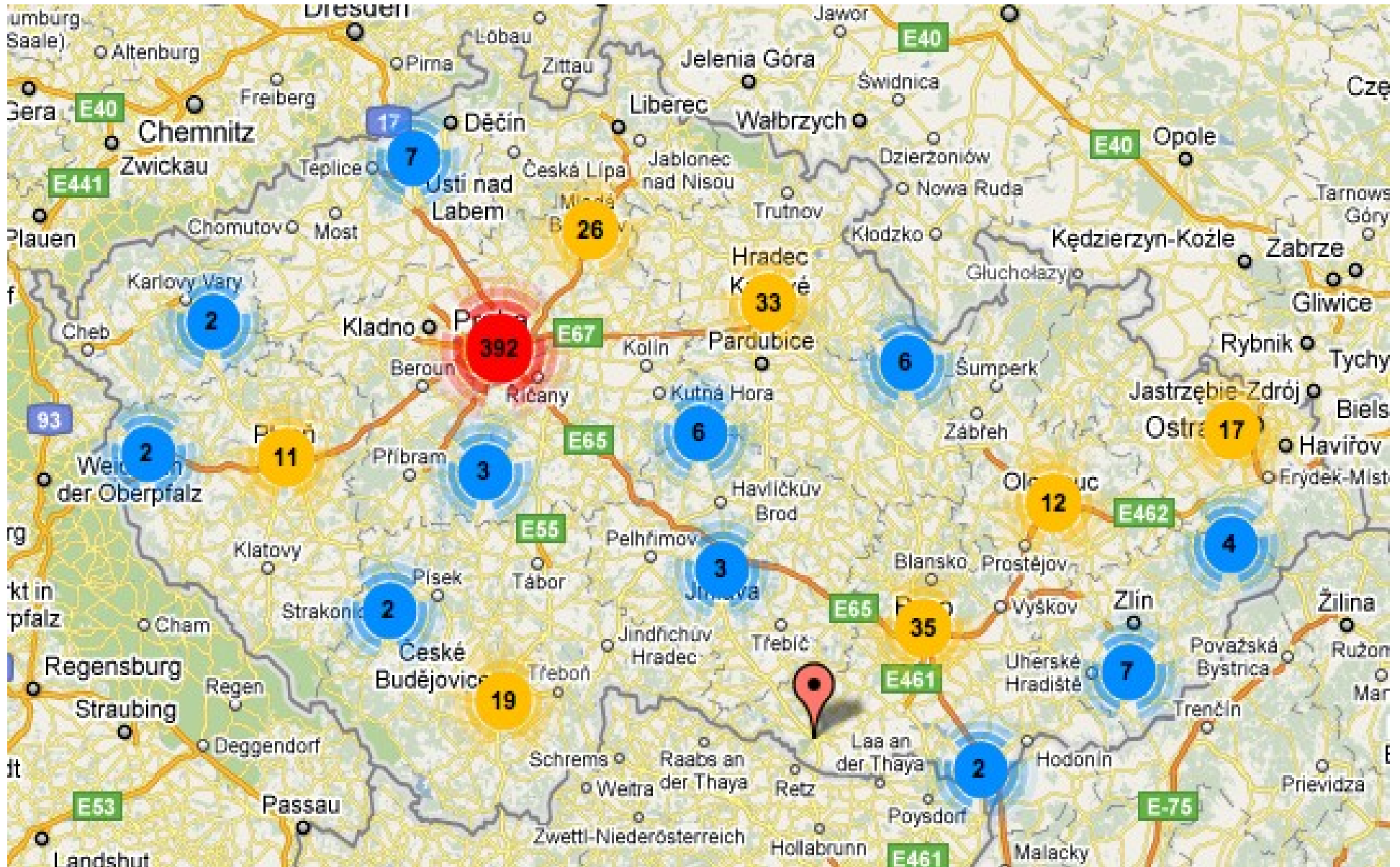
`./ip2geo -s <fulltext>`

- Fulltext search in address

`./ip2geo -z <country_code>`

- Country code search

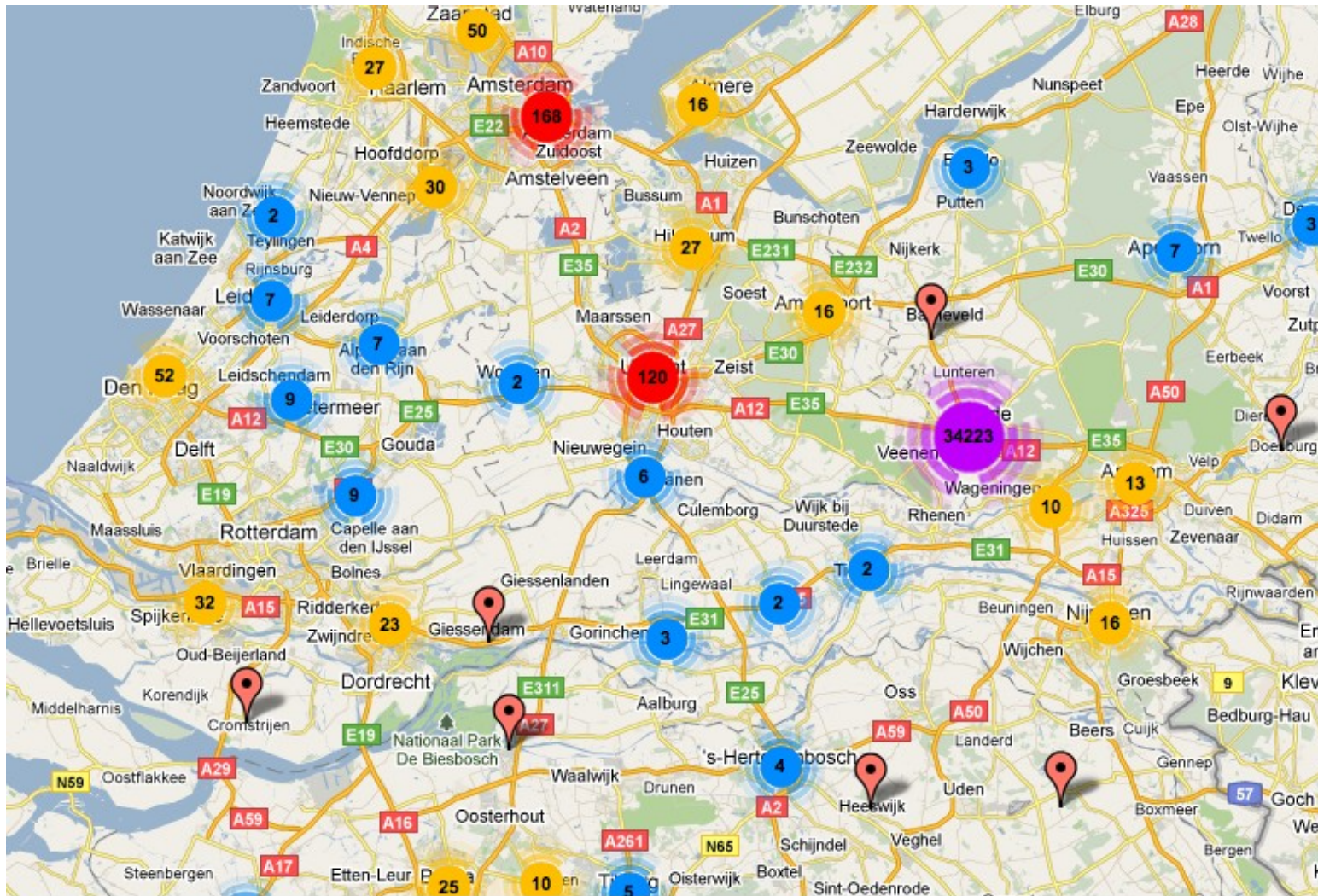
# Czech IPv6 Map



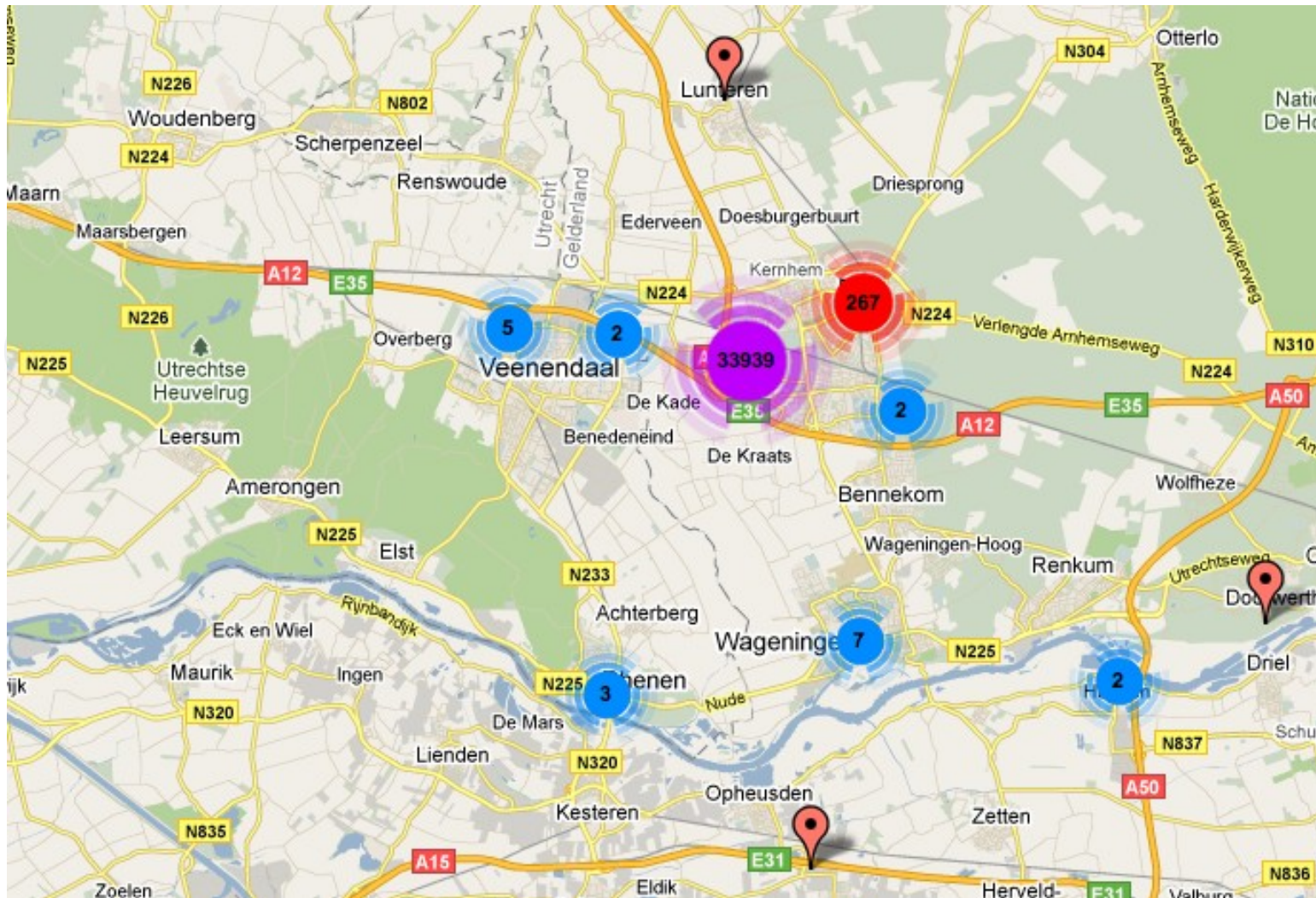
# Netherlands IPv6 Map



# Zoom...

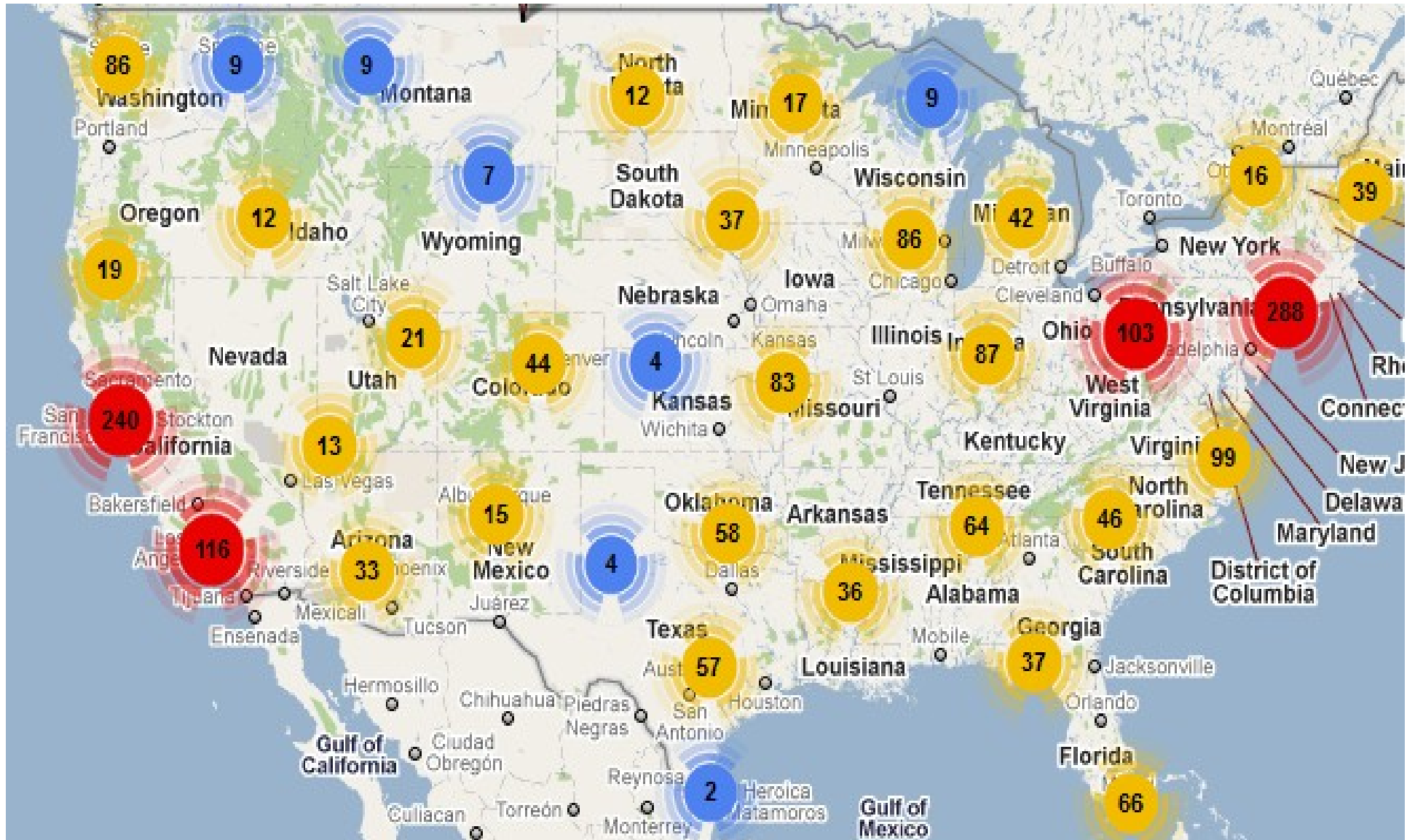


# Zoom...zoom...





# US IPv6 Map



# Sources of errors

- Whois information
  - Although it's better than IPv4
- Region vs. registrant
  - 2001:0DF8::/32 – IETF-CONFERENCE-20070223
    - AU block, but US-based registrant
- Google Geolocation API
  - US states vs. Country Codes
- Errors in the scripts :)

# Questions?

