



A Revolutionary Cloud-based Traffic Management Suite

GeoIP Services &  
the Most Accurate  
Geo-DNS

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# Introduction



What makes the most accurate Geo-DNS service in the world? Well, there's no one way to answer to that, but GeoIP has become the cornerstone of achieving the fastest resolution speeds and highest levels of granularity when it comes to Geo-DNS.

GeoIP services are configured using GeoFilters and GeoProximity rules which take Geo-DNS to the next level. These DNS based responses are centered on an IP to location lookup that is done in **real time**. These features can be defined on a per record basis and can be applied to ANAME, CNAME, and AAAA records.

The possibilities of using these features are limitless. Whether you want to reach a new audience in a certain location and have attributable content just for them (GeoFilter), or provide your users with the fastest possible resolution times by automatically directing their queries to the closest server location (GeoProximity).

## Take your business to the next level of speed

- **Optimized for SEO:** search engine algorithms rate sites based on resolution times and accessibility. The faster your site, the higher your rank.
- **Scalability:** with servers at 14 different Points of Presence (POP), ensure that your users have the best chances of getting their queries resolved as close as possible to their location.
- **Customizability:** all Geo-DNS Features are fully customizable, allowing you to get the most accuracy from region, to city lookup, to even an exact longitude and latitude.

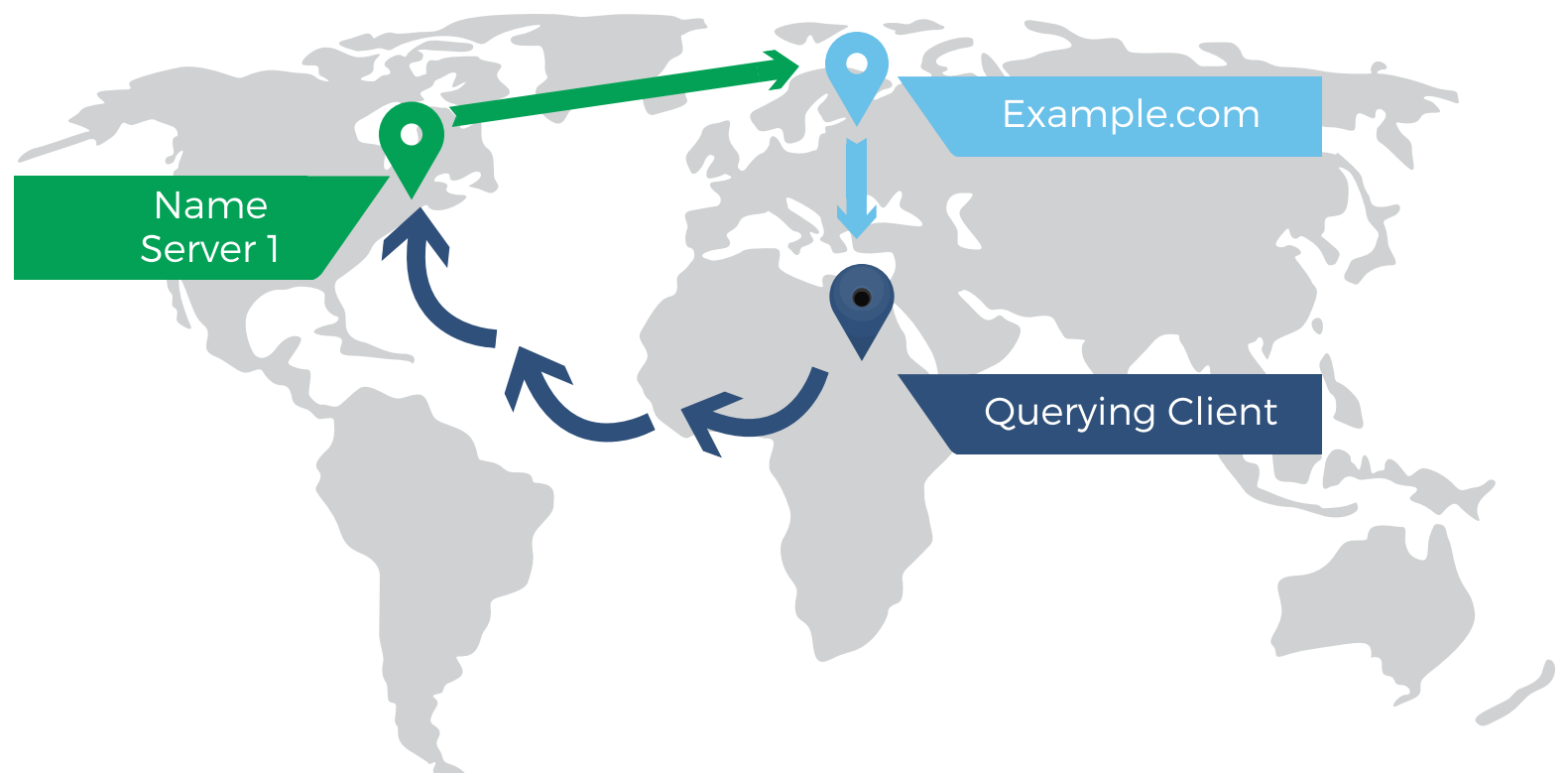
# Understanding GeoIP Services



**GeoIP Services** allow you to match specific queries to an IP address or even a city lookup. These services provide users with the highest level of granularity among Geo-DNS providers. The best way to understand GeoIP services is to see them in action:

1. The **querying client** would send out a query asking "where is Example.com?"
2. The **query** gets sent to **Name Server 1**
3. **Name Server 1** will redirect the querying client to the **IP address** for Example.com that's **relatively closest** to the client's location

This method requires no protocol level redirect, which takes more steps and excessive latency. Rather, clients experience no appreciable delay and are immediately sent to their location with no rerouting, all thanks to Geo-DNS.



# Getting the Most Accuracy



Using a new product can be intimidating, but GeolP services don't have to be. Make sure you're getting the most granularity for your buck by exploring every feature and integration. GeolP services are able to be integrated with the Global Traffic Director so you can always get the closest and fastest response times.

With this level of configurability Constellix lowers the typical wrong resolution based on GeolP lookups that plagues all other DNS providers to almost zero.

Constellix DNS combines both the GTD and GeolP to overcome shortcomings of each feature, in turn creating a product that can detect outliers better than the rest of the competition.

GeolP services can also be used with the EDNS Client Subnet (if supported). Now, you can provide your end users with the most geographically accurate response.

Your technical team can develop rules and custom DNS configurations, to more specifically target your end user's geographic location.

Additionally, the Geo backend can be used to provide service over several clusters. Any of which can be taken out of use easily, for example for maintenance purposes.

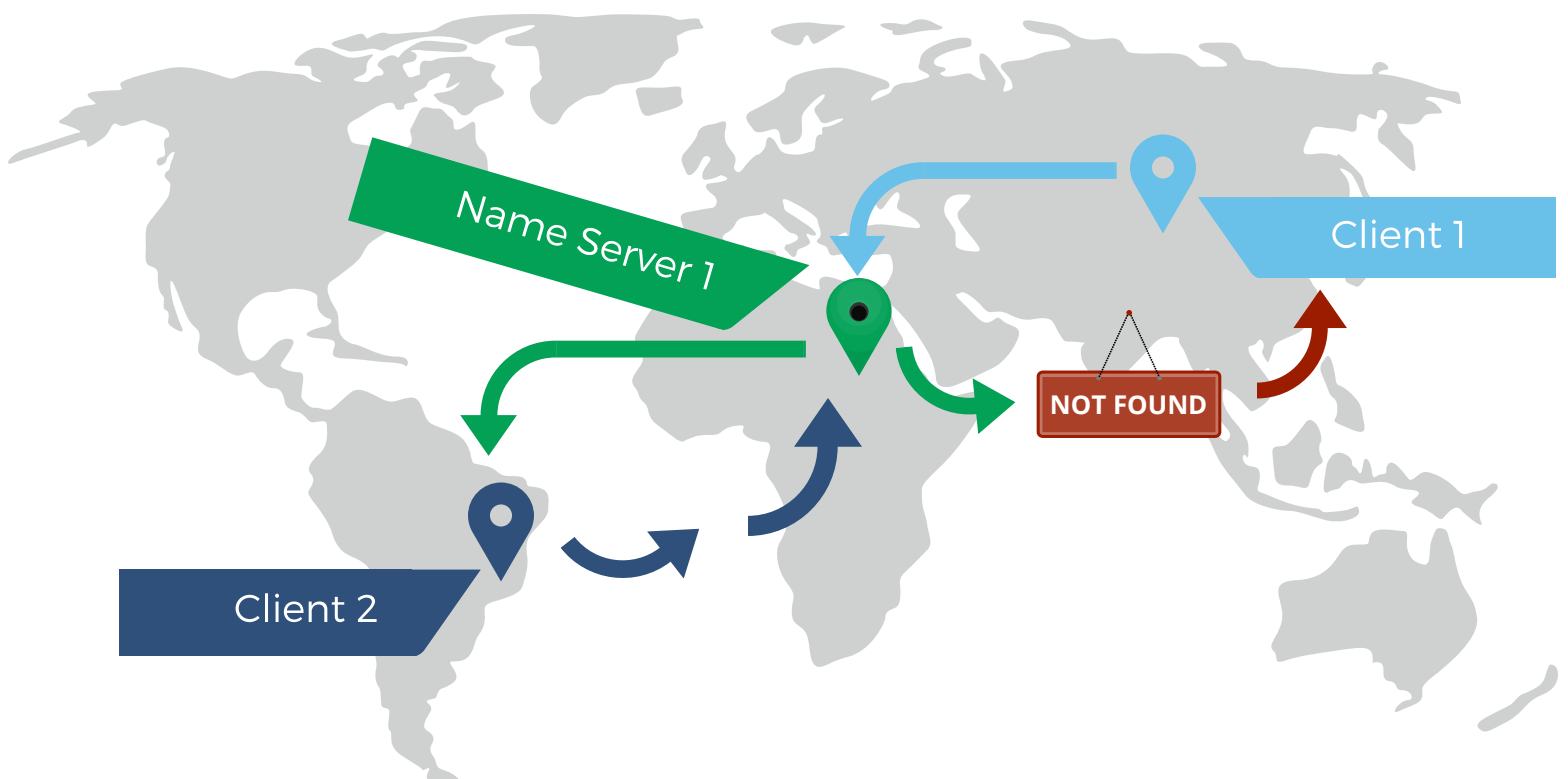
# GeoFilters: Complete Control



GeoFilters allow you to decide how your users will access your site on a geographic basis. You have the ability to either redirect users to a different interface per their location, or even exclude a region from accessing your site.

Some locations are known for being "fraudulent" or because of political affiliations "not to be served" web content from certain locations. Using GeoFilters you can easily specify which locations (by latitude/longitude, zone, or proximity) you want to exclude. Filtered locations will receive an NX domain which simply reports that the site is "not found."

Another way to use GeoFilters is to provide a different IP address to a different location, these alternative IP's may be in a different language, color, orientation, or just another version to see what customers prefer.



# GeoFilter Rules



GeoFilters can "wear many hats," as in they give you the ability to specify a variety of different rules based on Subnet, Drop records, and more (coming soon).

- **GeoFilter Subnet Rules:** add your IPv4 or IPv6 subnets to customize your rules. For example: if you are debating making the switch over to IPv6, use GeoFilters to target IPv6 customers with different material customized for them.
- **GeoFilter Drop Records:** now you can add drop lookups that match any of your GeoFilter rules. For example: you can easily drop query traffic from a particular country or city. This actually serves as a DNS level firewall to stave off DNS attacks!

Filter by region, country, city, or even by IP address. Use these features to make sure your endusers are seeing the content you specified for them.

You can even filter by IPv4 or IPv6 capabilities.

Edit Geo Filter
✕

Use the filters below to add, modify, and delete specific locations for this Geo Filter. You can filter by selecting specific geographic locations or by specifying an IPv4 address or an IPv6 address.

Name:

**Filter by Geographical Location**

World

- World >
- Asia ▾
- Africa ▾
- Europe ▾
- North America ▾
- South America ▾
- Antarctica ▾
- Oceania ▾

French Southern Territories

- Algeria
- 23.23.12.0/24
- 23.23.12.1/24
- 23.23.12.3/24

Add →

**Filter by IPv4 Address**

Add →

**Filter by IPv6 Address**

Add →

Save

[Close](#)

# GeoProximity Gets You Closer



GeoProximity rules are the brains behind GeoIP services, allowing you to narrow down from targeting users by region, to as narrow as city level lookups!

You can even do this by specifying the Longitude and Latitude of your servers, then our powerful GeoIP engine will do the rest for you by automatically calculating which server is closest to your end user in real time.

### Edit Geo Proximity ✕

Name: \*

Enter your geographical coordinates of your data center/ server location

**Geographical Information**

Country

Region/State/Province

City/Location

Latitude \*  Longitude \*

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[Close](#)

Establish your POPs from region, to country, down to city, and even to longitude or latitude with GeoProximity Rules



# Wrap Up: Speed Matters



Speed has become the number one selling point among DNS providers, however this term has become grossly misused. How do you qualify DNS as being the fastest? This is actually a long algorithm that spits out answers that fluctuate and are unreliable as just the time of day can skew results.

We suggest taking the time to research these providers for these 3 main features:

- **Built-in Features:** these come standard with all memberships, not add-on's that hike up your sales guy's commission. Are these features able to integrate with other programs or features? Are they being updated frequently to keep up with the modern market?
- **Scalability:** normally this is limited to number of POP's, but we suggest looking a little deeper. What kind of data centers do they use? Are they using only one, or do they rely on multiple providers for added redundancy?
- **Intelligence:** does this service have a built-in artificial intelligence that helps you troubleshoot and resolve issues? If not, is the support team helpful and friendly? Or sales driven and looking to peddle unwanted features...

All of these factors are what create and maintain the best Geo-DNS speeds and keep your organization at optimal levels of performance.

# About Constellix



Constellix was founded by the engineers who brought you [DNS Made Easy](#), the world leader in providing global IP Anycast+ enterprise DNS services. Constellix provides analysis of your site's performance and helps pinpoint areas of improvement. Constellix reaches across multiple global systems including data systems, cloud services, content delivery networks, and more to provide an in-depth knowledge of your systems to keep you online and optimized at all times.

Constellix services can be configured to grow to with your organization's growth and internal performance goals. It delivers a perfect solution to every organization's challenge of Internet Performance by using proprietary algorithms to build an internal intelligence map of your services.

[Constellix DNS](#) breaks the boundaries of normal DNS with the most advanced DNS solution of its kind written to meet the performance and feature demands of today and beyond. Built in-house, our unique name servers offer many advanced DNS configurations that are not found among any other service of its kind. Constellix DNS features maximum DNS speeds and industry topping layers of redundancy. Built upon DNS Made Easy's industry leading 14 year 100% uptime record, Constellix DNS descends from a proud history of reliability and is the preferred DNS hosting choice for companies big or small.