

Using Business-Specific Route Maps with NS1

Precise, Custom Routing Without Sacrificing Intelligent Automation



SOLUTION BRIEF

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Pulsar Route Maps simplifies the use of custom-defined data models (i.e., subnet to optimal PoP) to route traffic at scale. Whether an enterprise is targeting specific IP prefixes for steering, has created unique mappings between user IPs and their POPs, or has a data science analysis output of millions specific routing policies, Pulsar Route Maps can put it into action.



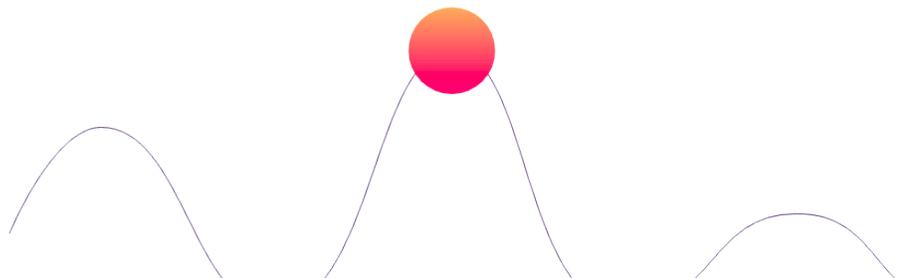
Solution Benefits

- ✓ Overcome the limitations of geo or ASN targeting for steering different types of users to specific application resources.
- ✓ Improve latency-based routing when various network topology factors result in low performance between physically close locations.
- ✓ Increase redundancy and resiliency when security policies prohibit sharing internal telemetry or custom business data with secondary DNS providers.

Make Customer Analytics Actionable

As organizations tackled the need to segment customers based on business metrics, they also desire more precise control over the online services and performance delivered to different customer groups. As a result, the traffic steering capabilities must grow beyond the accuracy of geo-location and ASN to deliver precise, personalized experiences to specific user segments.

Route Maps gives these organizations a declarative method of expressing the results of their analysis as routing policies for millions of IP prefixes. Organizations can analyze any number of business KPIs, performance telemetry or technology metrics to make the determination of the optimal PoP for each prefix. Route Maps enables organizations to upload all of their mappings to a JSON formatted file that can be attached to multiple records utilizing NS1's Filter Chain technology.



Improve Latency Routing

The lack of connectivity/peering a provider has or the lack of mappings that a third party Geo-IP database causes this. Route Maps makes it easy for organizations to create exceptions to traditional geolocation filtering. Route Maps can take conditional mappings for matching subnets without affecting baseline traffic management decisions.

Provide Redundancy for Proprietary Routing Policies

DNS redundancy is an important aspect of assuring application availability and resiliency. Yet some organizations hesitate to share internal infrastructure performance telemetry or custom business data needed to mirror their advanced routing policies with third-party, secondary DNS providers.

With Route Maps, NS1 can mirror an organization's proprietary DNS-based traffic steering policies without directly importing custom business analysis or internal infrastructure performance data. As a result, NS1 continues to steer users to optimal application resources. Organizations can improve resiliency while complying with data security policies.

Key Capabilities



Granular Routing Control

Express routing policies with the granularity of network prefix targeting. NS1 can support files containing millions of IP prefixes.



Flexible Map Design

A declarative approach provides flexibility to associate an IP prefix or range with single or multiple targets. Multiple maps can be associated with each DNS record, enabling customers to quickly create smaller maps for hotfixes or shunts.



Simple Upload and Propagation

Maps uploaded through our API are propagated across NS1's managed network within minutes, providing rapid responses to users.



Easy Configuration with Filter Chain

Seamless inclusion into Filter Chain configurations enable more precise routing control without sacrificing intelligent automation and failover capabilities. Teams have complete control over routing around availability and performance issues at target locations.

About NS1

NS1 optimizes delivery of the world's most critical internet and enterprise applications. Only NS1's platform is built on a modern API-first architecture that acts on real-time data and grows more powerful in complex environments, transforming DNS, DHCP, and IP Address Management (IPAM) into an intelligent, efficient, and automated system. NS1's technology drives dramatic gains in IT efficiency and application performance, reliability, and security for the largest global enterprises.

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