

REPORT REPRINT

NS1 aims Pulsar, managed DNS at Web-scale enterprise market

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NS1 is an early stage company that is already busy providing managed DNS service to a number of Internet companies and CDN providers. Starting with these customers as proof of an ability to provide this building block of infrastructure services, the company is branching out with the addition of its Pulsar DNS and traffic management service. Adding in real-user measurement, along with network monitoring, makes for a traffic management service that NS1 believes will be critical to the hybrid- and multi-cloud deployments that will become a commonplace enterprise IT architecture.

THE 451 TAKE

As IT departments evolve into service delivery organizations there's a need to align cloud service spend with business results. Measuring the impact of application performance on the business is critical. Beyond measurement, the ability to adjust infrastructure strategies on the fly in programmatic fashion is the piece of the puzzle that NS1 is aiming to address with the addition of Pulsar. The company is on target with its offering; the next step is to build more market awareness, perhaps in combination with partners in the cloud and network service provider space who want to expand their managed service offerings.

CONTEXT

NS1 (formerly known as NSOne) was founded in 2013 by a number of hosting industry veterans from Voxel, a New York-based hosting company that was acquired in 2011 by Internap. Voxel had its own internally developed CDN offering, and that experience has informed NS1's development of its DNS technology.

The company raised its first round of outside funding this year, a \$5.35m series A that was led by Flybridge Capital Partners and Sigma Prime Ventures, with participation from Founder Collective, Center Electric, among other investors.

PRODUCTS

Managed DNS is NS1's main calling. Like other vendors, NS1 is eyeing opportunities for leveraging DNS beyond the everyday use as the 'address book' for websites. Pulsar is the newest addition to NS1's portfolio. Pulsar adds a real user measurement (RUM) steering component to go along with the network and infrastructure performance data that feeds into its cloud-based DNS offering.

Customers are able to use real-time telemetry on latency, throughput, packet loss, jitter, application specific information and other data to route customers to an optimal server location. A javascript code is used to gather end user telemetry, but data can also be application specific, or specific to an object such as a large file download. For example, in the case of a gaming customer where packet loss and jitter affect download throughput and game play, the Pulsar service takes those measurements and builds routing tables based on those criteria. That way, instead of just referring a DNS query to the nearest datacenter, the routing decision is made based on live data.

NS1's services can be managed via APIs. Executives say the APIs are already in use by developers, and there has been some uptake by bigger companies that are moving into containers and have lots of virtual machine instances to manage. The APIs are necessary, because IT staff can't keep up with cloud VM deployments if they have to manually adjust DNS settings all the time. On the intake side, customers are sending data into the system via APIs to enable custom routing decisions based on their own business needs.

In addition to its managed DNS service for public traffic, NS1 also offers private DNS networks for large enterprises. Customers can choose from a managed, cloud-based DNS offering, a virtual appliance, or a hybrid of the two, depending on customer requirements for privacy and security.

Pricing for managed DNS service starts at \$200 per month for 25 million queries per month; pricing starts at \$5,000 per month for 3 billion queries, for example, and can range on up from there depending on traffic. Pulsar is available at an additional cost based on data usage, according to NS1.

STRATEGY

NS1 sees itself as a provider of managed DNS & traffic optimization services and a component of the broader application performance ecosystem. One thing NS1 says it isn't aiming to do is be an infrastructure monitoring company, although its service does include monitoring capabilities. The DevOps approach to application development is driving a need for enterprises to understand where infrastructure should be placed, and how much is needed; NS1 is hoping that a tool that provides those insights and enables real-time management of traffic will resonate with buyers.

CUSTOMERS

A fair number of NS1 customers are CDN service providers such as MaxCDN. CDN providers can save time off DNS lookups by using linked records between a provider's global routing map and NS1's system. The lookup process is likened to a CNAME lookup, but is internal to its system, allowing the service to return the IP address to the requester with fewer roundtrips between client and server.

Not surprisingly, the same customers using CDNs to boost Web performance are another subset of NS1 customers, namely, ad-serving technology companies and e-commerce companies, particularly luxury goods brands. Other publicly referenced customers include Imgur, Dealnews, Integral Ad Science, and SurePayroll.

COMPETITION

NS1's primary competitors in the managed DNS space are Dyn and Neustar's UltraDNS, along with Verisign. DNS services provided by Amazon (Route53), CDN providers (Akamai) and a variety of smaller providers also vie for customers in a variety of market segments.

When looking at competitors in traffic management or global load balancing, there are services from managed DNS providers. Also, there are companies like Cedexis, Conviva, and Webscale Networks (formerly LaGrange Systems) on the service side, but they don't offer integrated DNS service. In the same vein, there's ADCs and load balancing hardware or virtual appliances from vendors like Citrix, F5 and Riverbed, among others.

For enterprise networks, NS1 is vying for business against incumbents like Bluecat, Infoblox and Fortinet that have a tradition of supplying appliance-based solutions for DNS. NS1 would mostly be aiming at deployments where there is greenfield opportunity or DNS appliance-only. NS1 doesn't intend to compete in the space for DHCP and IP address management – an area where the aforementioned competitors have solid positions.

SWOT ANALYSIS

STRENGTHS

NSI's team has experience building and selling Internet infrastructure products, and already has a list of recognizable customers (some still unannounced) that rely on NSI's service for their business.

WEAKNESSES

Further traction in the enterprise will require more market education on DNS and its role in application performance, as it is still early days for enterprise adoption of multi-cloud architecture.

OPPORTUNITIES

DevOps and cloud have enabled enterprises to deploy applications more rapidly in response to shifting demand. But networks and related infrastructure are still a fairly inflexible piece in the enterprise IT architecture; services that enable better monitoring and management of network traffic will be key components to fully realizing the promise of cloud-based infrastructure.

THREATS

While DNS is still an overlooked component of Internet infrastructure, there are many large vendors in security, application delivery, routing, CDN and network monitoring that could turn their attention to DNS-based services.