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Managed DNS and Its Role in IT Modernization

PeerSpot

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Introduction

The Domain Name System (DNS) translates internet domain names into IP addresses and vice versa. It is a critical piece of infrastructure for the internet, as it enables users to navigate easily to websites. DNS is responsible for routing users to the right applications and servers, regardless of where they are located. It also ensures that email messages are delivered to the correct recipient and that users can find their way around the internet even when the IP addresses of the servers they are trying to reach are changing.

As businesses undertake IT modernization initiatives and become almost totally reliant on digital technologies, DNS has taken on an increasingly important role in enabling companies to function effectively. And, businesses are moving more of their operations to the cloud as part of IT modernization. The management of DNS thus becomes even more critical to ensuring that the business, its customers, and partners have reliable access to digital assets from anywhere in the world. This paper explores these issues by looking at the relationship between DNS and IT modernization. It is based on real user reviews of NS1's Managed DNS service on PeerSpot.

Except where noted, the companies referenced in this paper have between 1,000 and 4,999 employees.

DNS Management and Its Role in IT Operations

DNS is one of the most critical pieces of infrastructure in today's IT environment, regardless of line of business. As more traffic is being directed to web resources, failing to ensure good DNS management can have a significant impact on user experience. DNS issues can cause slow website load times. It can even lead to downtime, email delivery failures, or incorrect routing that affects various mission-critical tools.

DNS also affects how effectively businesses can move to the cloud. Many organizations are pursuing multi-cloud strategies, including merging the functionality of Software-as-a-Service (SaaS) services with software hosted on cloud platforms like Amazon Web Services (AWS). For this to be successful, there has to be a high-performing DNS that can route requests to the right resources quickly and reliably. DNS serves as an omnipresent layer for communication between cloud elements. It is essential for inter-SaaS and inter-cloud connectivity.

Deployments are very fast

"It works flawlessly for us."

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In addition, DNS is a critical part of ensuring business continuity and resilience. By routing traffic to backup resources in the event of an outage, businesses can minimize the impact of a disaster on their operations. DNS makes sure that applications will remain available even during disruptions like DDoS attacks or natural disasters.

As IT organizations strive to modernize, DNS management has further emerged as a root factor in enabling better system performance, IT operational efficiency, resiliency, and end user application experience. In this paper, real users of NS1 Managed DNS discuss how the solution has allowed their IT departments to modernize in these areas.

Managed DNS Use Cases

There are a number of different use cases for Managed DNS, each of which can have a significant impact on businesses. For example, a Technical Lead-Production Engineer at a media company uses NS1 as the primary point of contact. He said, "We use NS1 in two ways: We use the Managed DNS product and the Dedicated DNS product, which gives us redundancy. Our primary use-case is for getting users to the CDN [Content Delivery Network] one that is best suited for each user."

Meanwhile, a VP Information Technology & Cyber at a software company manages his internet-facing traffic with NS1. That said, when his team initially started using NS1, they didn't use it in conjunction with Application Programming Interface (API) automation. However, everything they do now is via automation and when any change is made, all the data is backed up with GIT. He went on to say, "Changes are done with an API, so that there is no manual work. It reduces errors significantly and allows us to quickly roll back all the activities on the platform. It works flawlessly for us. Deployments are very fast."

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Another Engineering Manager at a computer software company uses NS1 on a SaaS basis. He stated, "It is a public cloud from our point of view. We are just using their cloud solution or their service. We are not installing it in our data center. They provide us with an API for us to talk to their cloud implementation." More specifically, his team uses Managed DNS and partially uses other products such as Pulsar. He elaborated by saying, "We generate a DNS map and upload it to NS1 using their API to propagate to their service. Then, we use Managed DNS to find the optimal route for our users to connect to the closest point of presence for them."

A Director of Site Reliability Engineering at a media company uses NS1 to serve their public DNS with approximately 500 domains. The Director is pleased with the service, sharing, "It is the public resolver for our website and various other entities we own, and it has been pretty good."

How Managed DNS Enables IT Modernization

IT departments across the world are being called upon to modernize their systems and processes. These efforts are often as much about business and digital transformation as they are about IT. Whatever the mission, however, one of the biggest parts of the transition involves changing how they manage DNS. Managed DNS is essential, as it allows businesses to minimize the time spent on operational work. Managed DNS makes for better business and network resilience, too. It enables higher levels of system performance, along with IT operational efficiency and improved end-user application experiences.

Building business and network resilience

According to PeerSpot users, a popular use case of NS1 Managed DNS is for business and network resilience. The media company Director of Site Reliability Engineering loved that there are no uptime issues during Distributed Denial of Service (DDoS) attacks. He said, "When we have been the subject of an attack, NS1 has been up and stable for us, as well as performant. On top of that, it has been able to provide us with pretty good details of what kinds of attacks we have been subject to and what NS1 was doing at the time. Even if we are undergoing DDoS attacks, NS1 will still serve DNS for us." The Director continued by saying that overall, NS1 is "very simple to do and very powerful, reliable, and accurate."

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Another NS1 user expressed similar sentiments about performance during DDoS attacks. A VP of Technical Operations and Devops at a consultancy with more than 5,000 employees commented, "We needed to have <u>the fastest and most secure and resilient DNS possible</u>, and that's what we got. We don't worry about denial of service attacks on the DNS, as we've seen other large vendors go through.

We have access to a significant and forward-thinking feature set that allows us to use things like DNSSEC [Domain Name System Security Extensions] fairly easily." He also liked that the company's response times have improved significantly. Specifically, he said, "I have not compared data within the past year but at the time, we looked at a 99.9% evaluation and saw that NS1 was the most effective and fastest solution."

Minimizing downtime

System performance and IT operational efficiency

Another big reason for transitioning to a Managed DNS solution is the ability to improve system performance and overall IT operational efficiency. This can be accomplished in a variety of ways, such as reducing load times, minimizing downtime, and improving application response times.

An Engineering Manager at a software company was pleased that NS1 had improved DNS response times. He shared, "We have seen significant improvements for some corner cases with geolocations that have unusual network connections to magistral lines. For some of the use cases, we have seen more than 10% improvement in our latency after we started using the RUM DNS functionality of Pulsar."

He also liked that NS1, "...has reduced the DNS maintenance work in our organization," adding, "We have fully automated tools around NS1 API. So, to do any maintenance, by using the NS1 product, we can easily drain traffic in our point of presence to quickly re-steer our users to other locations." For him, a major advantage comes from the fact that NS1 is fully automated on their site. His team does not spend a lot of engineering time preparing their edge network for maintenance. He went on to say, "This preparation time counts towards maintenance time, so we can save a lot of time on this."

"we looked at a 99.9% evaluation and saw that NS1 was the most effective and fastest solution"

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Time is saved

A VP of Information Technology & Cyber at a software company uses NS1 for its time saving capabilities. He further explained by saying, "NS1's automation has enabled us to assign tasks to other work because we have very little DNS right now because it's all managed. It frees up SRE time to deal with actual internal system and application management, instead of managing the infrastructure that can be managed by a third party."

The consultancy's VP of Technical Operations also appreciated the time saving capabilities of NS1. He specifically stated that, "This product has allowed us to reduce or eliminate DNS maintenance work. I can't estimate how much time this has saved us but being able to use an API versus manual maintenance means that we don't really have to do any maintenance. We've been given a solution that allows us to automate everything that we need to do."

He continued by saying, "The automation provided by NS1 means that we no longer have to focus on that work, which allows us to assign staff to other tasks. Time is saved because we don't really use manual processes with the DNS."

Higher levels of system performance

Additional Benefits: Improved User Experience

Another big benefit of using a Managed DNS solution, according to PeerSpot users, is the ability to improve end-user application experiences. Through optimizing the app experience, companies that do heavy streaming for example, can ultimately improve user engagement and in turn, improve app monetization.

The software company Engineering Manager acknowledged the benefit of NS1 Managed DNS helping to improve end-user experiences. Specifically, he stated, "It <u>reduced our latency dramatically</u>, and our users' experience is much better now. Latency is not the only metric that it has impacted. It has also impacted reliability. We didn't have any major incidents while using NS1 all this time. Our company's SLA is 99.99%, and we can easily maintain it with NS1."

The media company Technical Lead-Production Engineer also valued the end-user experience improvement after deploying NS1 Managed DNS. He remarked, "<u>Knowing the DNS delivery part is taken care of</u> is important; performance is very critical. Taking users to the right CDN or data center is very important for the end-user experience. NS1 is part of the set of tools we have to achieve that better user experience and to get them to the right place."

> "Our company's SLA is 99.99%, and we can easily maintain it with NS1."
>
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> **"The technical support is 100% and they respond really quickly. Their Evergreen support plan is astonishing. They are a leader in this regard."**
>
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The consultancy's VP of Technical Operations also liked the improved user experience. He further noted, "Using the Pulsar feature has certainly improved our user experience. Using Pulsar with telemetry monitoring between the customer and the endpoint, we are able to detect traffic and route it appropriately, which ensures the uptime of our applications and web properties. It also ensures that the lowest latency experience is possible."

Additionally, he thought the "application Telemetry feature is awesome." He continued, relating, "This includes latency detection and it allows us to detect where a customer may run into latency on the internet, giving us the opportunity to route around it. It contributes to providing the best user experience for our clients."

For the software company VP of Information Technology & Cyber, what counted was how NS1 Managed DNS improves the end-user experience. He explained, "It helped to improve our end-user experience because users get better service by accelerating the response time."

Conclusion

DNS management is a key success factor for IT modernization. According to NS1 Managed DNS users on PeerSpot, the technology drives a range of positive outcomes for businesses undertaking such modernization initiatives. Overall, the NS1 Managed DNS improved DNS performance management, including downtime prevention during peak hours and improved service availability. With Managed DNS, they can improve their end-user application experiences. They are able to reduce latency. They also saw gains in telemetry monitoring. These positive outcomes are only possible when companies choose a Managed DNS provider that they can rely on to manage their DNS.

About PeerSpot

PeerSpot (formerly IT Central Station), is the authority on enterprise technology. As the world's fastest growing review platform designed exclusively for enterprise technology, with over 3.5 million enterprise technology visitors, PeerSpot enables 97 of the Fortune 100 companies in making technology buying decisions. Technology vendors understand the importance of peer reviews and encourage their customers to be part of our community. PeerSpot helps vendors capture and leverage the authentic product feedback in the most comprehensive way, to help buyers when conducting research or making purchase decisions, as well as helping vendors use their voice of customer insights in other educational ways throughout their business.

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About NS1

The internet and applications powering our world depend on NS1. Billions of people connect to work, school, entertainment, healthcare and stay informed because of the company's innovative technology. As an ally for innovators, NS1 helps our customers turbocharge their ideas in pursuit of building the better future through connecting applications and audiences at the distributed edge. NS1's application traffic intelligence and automation portfolio makes applications faster, reliable and secure everywhere. With technologies for cloud-native network services, edge to cloud networking, and application traffic optimization, NS1 helps eliminate the barriers between applications, users, infrastructure and data. NS1 has more than 725 customers across the globe such as Dropbox, Fox, Salesforce.com, LinkedIn, and Ebay.