

CASE STUDY

Magnetic Revolutionizes Its Online Advertising Delivery Infrastructure and Automates Traffic Routing Among Three Clouds Using Pulsar.

Publishers demand fast and accurate online advertising performance to support seamless user experiences.

Magnetic leveraged Pulsar's real-time traffic routing to automatically send requests to the optimal server in one of three clouds, boosting performance speed up to 300 percent. And with Pulsar's advanced analytics, this forward-looking adtech innovator pinpointed latency hotspots and deployed a progressive edge computing infrastructure that has it beating even the largest Internet advertising giants.

INDUSTRY

Advertising Technology

SOLUTIONS

Managed DNS

Pulsar

“Magnetic's performance is now beating even the largest Internet advertising giants. We've decreased latency by 70 percent – and have the same number of servers. They're just now deployed in a far more cost-effective, flexible and resilient infrastructure that isn't locked into a single cloud provider.”

James Marcus

Vice President of Technical Operations, Magnetic

Magnetic is an artificial intelligence company that uses machine learning to deliver smarter, faster, and more effective online advertising. It promises clients a dramatic improvement in campaign performance with less marketer effort.

According to James Marcus, Magnetic's Vice President of Technical Operations, the volume of traffic and data traversing networks and the unpredictable nature of the internet creates enormous challenges in ad tech. Publishers care first and foremost about the user experience, yet the tracking pixels required for real-time advertising bidding are notorious for adding crippling latency of 500 milliseconds to one second.

Typically, ad tech providers, including the largest Internet advertising giants, have to throw massive amounts of staff, budget and computing resources behind content delivery networks (CDNs), data centers, and complex infrastructure to try and drive down latency. Delivering the high performance that publishers demand can require a steep infrastructure investment. Not so for Magnetic.

With NS1 Managed DNS with Pulsar, Marcus and his team got both real-time application traffic routing to increase performance for some users by up to 300 percent and unique analytics based on actual user and Internet behavior to pinpoint latency bottlenecks for capacity planning, and a new, simplified edge computing architecture.

Magnetic initially used a typical configuration of one cloud provider with servers split on the East and West Coasts. But with Pulsar's automation and unique analytics on actual conditions, Marcus was able to confidently plan and spread the same number of servers across three strategically located cloud providers – moving infrastructure to the edge for actual (not perceived) usage patterns and latency issues.

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“NS1 Managed DNS with Pulsar let us take edge computing from a buzzword to a business reality,” says Marcus. “With 100-150ms pixel load times across hundreds of thousands of connections per second, Magnetic’s performance is now beating even the largest Internet advertising giants. We’ve decreased latency by 70 percent – and have the same number of servers. They’re just now deployed in a far more cost-effective, flexible and resilient infrastructure that isn’t locked into a single cloud provider.”

A Simplified and Familiar Foundation in DNS

According to Marcus, teams can only handle so many different technologies and vendors at once. The new edge computing strategy let Marcus avoid spinning up unnecessary and expensive CDNs. Setting up and tuning just one more CDN was a month or more of work for a DevOps engineer, and required a significant financial investment to scale and manage.

Marcus and his team needed control and flexibility without vendor sprawl, added cost and complexity. They looked to use DNS – a foundational and familiar technology – in new ways. The desire for fewer vendors initially made “bundled” technologies attractive, like the basic DNS offered by different cloud providers. Although it appeared easier to run on the cloud provider’s DNS, Magnetic quickly found NS1 more practical for multi-vendor cloud deployments.

Previously, Magnetic’s DNS solutions routed based on simple geography, which doesn’t recognize that sometimes even a server across the country – or at another cloud provider – would deliver far better performance due to the actual conditions at that moment in time. Consolidating around NS1 Managed DNS with Pulsar delivered the automation and interoperability to move seamlessly between clouds to deliver the best user experience regardless of Internet conditions. It also simplified management and dramatically cut DNS costs by nearly 40 percent.

Marcus is always looking for ways to streamline his infrastructure and gain a competitive performance advantage – disrupting his infrastructure in the same manner that Magnetic successfully disrupted the advertising industry. NS1’s API-first architecture fits into his team’s DevOps approach and enables rapid deployment and confident experimentation and operationalization of new infrastructure.

“We want to get to the point where we can move our cloud infrastructure to the best price/performance combination in a matter of hours based on market and network conditions, and automatically ‘follow the sun’ based on when users are active in different regions. With next generation foundations like NS1, we’re well on our way to that kind of nimble and reliable infrastructure.”

About Magnetic

Magnetic is an artificial intelligence company that uses machine learning to deliver smarter, faster, and more effective advertising. Our powerful AI platform continuously analyzes the attributes of 350 million live user profiles alongside real-time inventory supply and bid opportunities to deliver highly performant and profitable campaigns for our clients. Magnetic offers products and solutions to meet the needs of any media buyer, from fully managed service solutions to our completely automated and transparent self-serve media platform, Magnetic Force. For more information, email contactus@magnetic.com or visit magnetic.com.

MAGNETIC™

NS1.