VARNISH SOFTWARE

Nowcom uses Varnish for both frontend and backend caching to achieve up to 15x savings on Azure bandwidth costs

Case Study:

Nowcom

Nowcom's mission is to provide innovative technology solutions to their clients

Background

Nowcom is a technology company, developing solutions for the automotive and financial services verticals.

Nowcom's mission is to provide innovative technology and business solutions to their clients so they can achieve sustainable competitive advantage within their markets.

Nowcom's offering includes DealerCenter, which is a fully integrated mobile and web-based solution for product/vehicle dealer management system in a single platform. Delivering the experience dealers required meant focusing on cache performance and building efficiencies. One key activity is helping auto dealer customers (of which there are several thousand) submit images to reach aggregator sites like cars.com for the templated website customized to the specific dealer. Nowcom has to resize and standardize these images.

Nowcom had used the open-source Varnish Cache solution for some time, but in time, outgrew the open-source version, as their cache size was often too large, i.e., closer to a terabyte. It wouldn't scale well, and then when the system experienced a failover, the cache didn't replicate.

The challenge

Nowcom's DealerCenter product dealer website is run from two data centers (DCs). Each time Nowcom experienced a failover event, they switched between the two DCs. This was when Nowcom realized that open-source Varnish Cache could not meet their needs any longer. The cache hit ratio would decrease significantly, and managing and maintaining the system as it was no longer time well spent. Storage problems initially drove Nowcom to consider an upgrade to Varnish Enterprise.

Nowcom at a glance

Organization

Nowcom develops technology solutions for the automotive and financial services verticals.

Challenges Varnish solves

Resolves storage challenges with MSE, leading to more resilient cache and up to 15x Azure bandwidth cost savings

Reliability and stability in failover situations

Varnish Enterprise for Nowcom

Features used include frontend caching, Massive Storage Engine

The solution

Varnish Enterprise as a powerful storage and standardization caching layer

Nowcom's CTO, Vimal Nair, described how they decided to look at Varnish Enterprise as a solution to the failover bottleneck. "Varnish's Massive Storage Engine (MSE) ended up being really helpful."

In another move to build efficiency, Varnish engineers proposed that Nowcom move from their existing solution for resizing images to adding a backend cache for standardizing everything before uploading to Azure. The resulting resizing and caching increased the cache size while reducing the actual storage required, leading to reduced use of Azure. Vimal continued, "Now we have increased our cache, and even more significantly, we see cost savings because we store our files on Azure but have cached them on Varnish beforehand. The standardization of images and single format conversion (to web-p) happened before being sent to the client."

"We were actively trying to see how to expand and determine what happens when the cache size increases and if there are any mechanisms to replicate the cache, " Vimal explained. "There's nothing other than Varnish Enterprise that does this today. The proof of concept built up our confidence that Varnish Enterprise would deliver, and the team went above and beyond to help us optimize for our use case."

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>
> *- Vimal Nair,*
> *CTO, Nowcom*

Results

Nowcom achieved significant savings and reliability in implementing Varnish Enterprise.

Reduced costs and time savings: Up to 15x lower Azure costs and 1 week developer time every 2 months

Vimal shared, "We were able to reduce our Azure costs up to 15 times, and the investment more or less pays for itself. We also reduce the burden on engineering resources in terms of people having to manage this on their own, which could be up to one week savings every two months as a rough estimate."

Performance boost

Response times overall were improved by cutting down the need to pull images from Azure.

Improved storage

Varnish Enterprise enables images to be resized and cached using efficient image formats, thereby allowing for greater storage capacity on disk cache and offers cache persistence. Nowcom no longer experiences latency spikes during maintenance-triggered Varnish restarts.
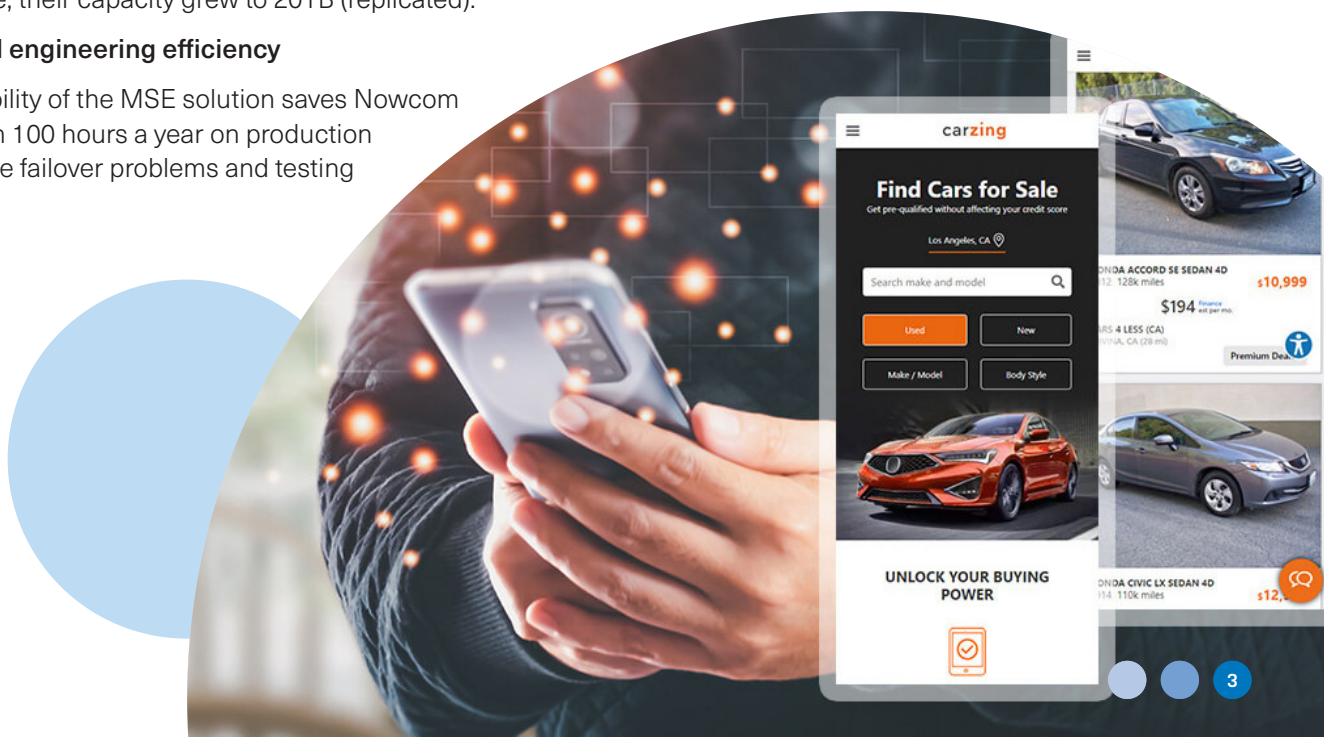
With MSE, Nowcom achieved 10x more local cache storage without maintenance overhead or stability issues. Before, with Varnish Cache, they had a capacity of 1TB (non-replicated) while after implementing Varnish Enterprise, their capacity grew to 20TB (replicated).

Improved engineering efficiency

The reliability of the MSE solution saves Nowcom more than 100 hours a year on production issues, site failover problems and testing efforts.

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