VARNISH SOFTWARE

NZZ Media Group

Case Study:

Neue Zürcher Zeitung (NZZ)

NZZ uses **Vanish Enterprise** to ensure fast performance and content delivery

Background

Neue Zürcher Zeitung (NZZ) is a media group in Switzerland, publishing several titles including the internationally well known “Neue Zürcher Zeitung”. NZZ is known for high-quality, independent journalism and represents liberal perspectives.

NZZ runs its own IT department in-house. A team of developers and systems engineers manage the online platform around nzz.ch. Within the IT department is a four-person team, Web Services, Internet, Security (WIS), which manages Varnish and Varnish Configuration Language (VCL).

The challenge:

NZZ had used open source Varnish Cache for a number of years. Caching was central making sure the old, slow PHP-based backend would not be overloaded while also serving as an essential element of performance.

Once the backend technology was replaced with more efficient Node.js based technology, NZZ achieved higher throughput and performance became less of an issue. Caching nevertheless remained crucial in order to be able to serve content to as many concurrent visitors as required.

With the switch to a Node-based backend, NuxtJS, NZZ also implemented a new feature, Edge Side Includes (ESI), for which the engineering team needed to make some adjustments.

NZZ at a glance

Organization

- Neue Zürcher Zeitung AG (NZZ AG) is a media group in Switzerland, publishing several titles.
- The IT department manages the technology and tech stack powering NZZ publications as well as partner publications in Switzerland.

Challenge

- Initially, ensure fast performance behind slow PHP-based backend and provide backend protection
- Later, continue to deliver more page impressions for more concurrent visitors while relieving the backend
- Implementing ESI support

Varnish Enterprise

- Caching to speed up content delivery and serve more concurrent users
- Backend relief/protection
- Average response time with caching: About 5x faster than uncached
- Future: Persistent storage

The solution: High-performance caching for content delivery, backend relief and ESI support

As NZZ implemented ESI, they decided to upgrade from the open source Varnish Cache solution to Varnish Enterprise.

The switchover from Varnish Cache to Varnish Enterprise posed no problems in and of itself, but with the change to the NuxtJS-based backend using ESI, performance and load issues arose in Varnish Cache. NZZ needed to learn more about ESI and create VCL to manage this.

> Varnish has performed consistently and given us the ability to deliver more page impressions for more concurrent users while relieving the backend. Setup has been really simple with everything running as expected. Changing from Varnish Cache to Varnish Enterprise was surprisingly easy with little effort.
>
> ***- Claudio Kuenzler, Senior Systems Engineer, WIS, NZZ Media Group***

> When we adopted ESI, we wanted to be ready for anything, in case we needed Varnish professional support.
>
> ***- Claudio Kuenzler, Senior Systems Engineer, WIS, NZZ Media Group***

Results: Cached versus non-cached performance

With caching NZZ experienced:

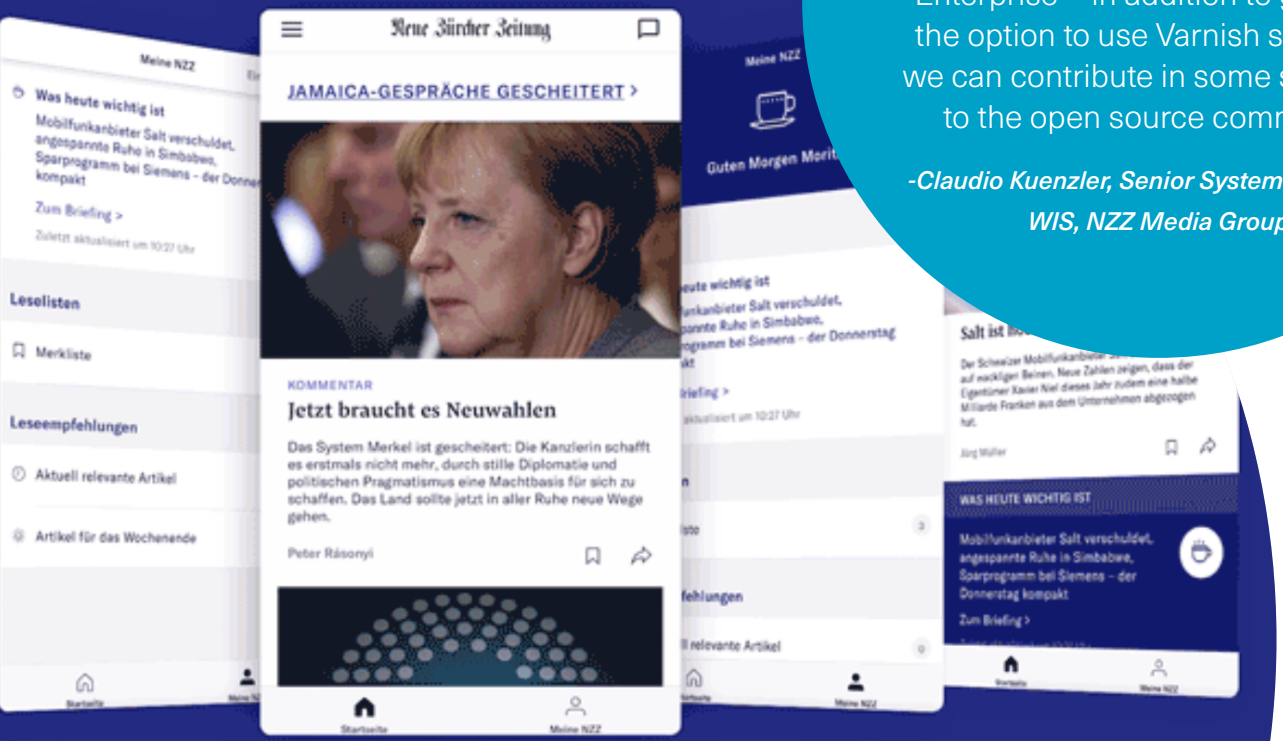
- Greater efficiency
- Backend protection
- Ability to serve more concurrent users
- Significantly reduced response times, even as the number of concurrent users grew.
- Average: With caching, the average response time was about 5x faster than uncached content (sometimes even faster).
- Maximum: With caching, the maximum response time was about half that of uncached content.

> While most of the traffic levels we see are consistent, we saw a massive spike during the first-wave of the coronavirus. We faced no problems with Varnish in place.
>
> ***-Claudio Kuenzler, Senior Systems Engineer, WIS, NZZ Media Group***

NZZ and Varnish: What's coming in the future

NZZ's future plans include persistent memory storage to ensure that there is always a warm standby storage that will allow for a hot cache at all times.

> We chose Varnish Enterprise because my colleagues and I believe strongly in open source. Varnish Software creates and shares Varnish Cache, and by subscribing to Varnish Enterprise -- in addition to giving us the option to use Varnish support -- we can contribute in some small way to the open source community.
>
> ***-Claudio Kuenzler, Senior Systems Engineer, WIS, NZZ Media Group***



Los Angeles - Paris - London
Stockholm - Singapore - Karlstad
Dusseldorf - Oslo - Tokyo

VARNISH
SOFTWARE

www.varnish-software.com