VARNISH SOFTWARE

APA-IT serves multiple media customers by using Varnish Enterprise for flexible live and on-demand video streaming at scale

Case Study:

APA-IT

APA-IT streamlines streaming tech, reducing costs and development time

Background

APA-IT is Austria's leading service provider for media and also offers customized solutions for companies.

APA-IT Informations Technologie GmbH offers support with a focus on media solutions and IT outsourcing. A subsidiary of APA – Austria Press Agency, APA-IT administers the IT service of the Austrian news agency as well as numerous other media enterprises.

This expertise and insight into the industry makes APA-IT an expert for IT solutions for publishers and media companies for content production, distribution and media monitoring. A large part of this suite of services includes top-tier live and on-demand video streaming.

The challenge

Streaming content at scale

As part of APA-IT's work providing streaming video at scale, they needed flexible, advanced CDN services. Serving customers who provide some of the largest streaming platforms in Austria, APA-IT needed to be able to support video streams to a wide audience (up to 80 Gbps from their data centers).

"Originally we delivered these streams directly from our streaming servers. As this required a lot of hardware, and flexibility is a constant target, it was time to scale up with a different approach." -Thomas Wagner, Software Architect, APA-IT

The primary objective to solve for the scale, performance and flexibility issue was to streamline APA-IT's numerous streaming servers and harness the full potential of their bandwidth through high-performance cache servers in order to optimize service and speed for their customers.

APA-IT at a glance

Company

- APA-IT is a specialist provider to media and media-related companies, supporting their digital strategy implementations.
- Selected APA-IT stats:
  - 120PB data average passes through APA internet connections annually.
  - 3.6PB transmitted using video services alone.

Challenge

- Shift streaming directly from own streaming servers to a flexible, scalable, next-level cache CDN solution.

Varnish Enterprise

- Four frontend Varnish servers, each equipped with 700GB RAM, spread across two data centers
- Two backend servers boasting large NVME drives, running a diverse range of HTTP services, from Docker instances to streaming servers.
- Extensive Varnish Configuration Language (VCL) use across multiple use cases.

APA/Ludwig Schedl

The solution

Streamlining streaming for flexibility and performance

Aiming to address current and future video streaming needs, APA-IT looked at Varnish. Already familiar with Varnish Cache as a leading provider of HTTP caching servers, APA-IT investigated Varnish as a solution as soon as they started looking at options.

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>
> ***- Thomas Wagner, Software Architect, APA-IT***

"We soon realized that Varnish servers could further enhance the capabilities of our custom-developed services. With the flexibility of Varnish Configuration Language, we could support special requirements and functions even better, such as geo-protection (limiting delivery to specific countries or IP ranges), token-based stream protection, and load shedding (where we reroute streams to a global CDN during high-traffic periods to maintain service functionality) are now seamlessly managed by the Varnish server." -Thomas Wagner, Software Architect, APA-IT

Results

Enhancing product stability, boosting flexibility and reducing costs

Improved product stability

Serving large streaming providers throughout Austria makes it vital that the product is both stable and performant. By implementing Varnish, APA-IT significantly enhanced stability through the optimization of their streaming servers. These are now powered by high-performance Varnish caching servers, which maximize the efficiency of existing bandwidth. This setup also allows for flexible control over load shedding. Such control is crucial for maintaining peak stability and performance, especially during high-traffic periods, by rerouting streams to global CDNs.

Unlimited flexibility

Implementing different features and use cases has proven to be very comfortable for APA-IT thanks to the Varnish Configuration Language (VCL).

"Development with Varnish Configuration Language, as well as the configuration via parameters, was very fast and easy. What distinguishes our setup is the utilization of distinct VCLs for varied use cases. And if the documentation doesn't provide a solution, Varnish support can always help us find a flexible way to solve problems or create new features." -Thomas Wagner, Software Architect, APA-IT

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Cost optimization

Thanks to the flexibility and performance of Varnish caching, Varnish Controller, and VCL, the APA-IT team has significantly enhanced resource optimization. The comprehensive documentation and robust support have enabled them to streamline the use of existing bandwidth, reducing the reliance on extra hardware. Consequently, this enables developers to focus on new features and cutting down development time, thereby boosting productivity and yielding notable cost savings.

The future

Building on CDN capabilities and beyond

With Varnish, APA-IT is able to serve their customers with fewer resources today while planning for future demand. APA-IT is currently starting to turn their streaming CDN solution into a broader CDN offering, and are also considering adding international nodes to the mix.

"With Varnish, we are ready for the future. In the meantime, we highly value the exceptional support we receive for any inquiries or challenges we encounter. Regardless of the nature of our questions, we always know we can rely on Varnish. This has made setting up and optimizing our intricate system a seamless process, and makes it easier to be ready for anticipated future demand." -Thomas Wagner, Software Architect, APA-IT

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