

“VGR uses Varnish Enterprise and support for availability of services and to reduce latency while ensuring uptime to deliver the most current information in emergency situations.”

Case Study:

Västra Götaland Regional Council (VGR) - Sweden

VGR uses Varnish Enterprise and support for availability of services and to reduce latency

Background

VGR is a large county council authority in western Sweden, responsible for administering county-wide services, such as healthcare, public transport and culture.

VGR's digital media services rely on a complex infrastructure and require high availability, uptime and responsiveness to deliver on their mission.

The challenge

VGR's digital media and web department is tasked with ensuring availability of web and digital services in the day to day operations of the county, as well as uptime and responsiveness in emergency situations. To do this, VGR would need to achieve scalability, security and high availability. The large and complex nature of VGR's IT infrastructure and the importance of ensuring the availability of county services and information made consistency a key consideration.

Like most public sector providers of citizens' services, uptime and scalability is key. During political events, health crises and natural disasters, citizens seeking information on the VGR website form an unusually high demand, so the website needs to serve thousands of requests per second, making availability and resilience a must.

VGR at a glance

Organization

- VGR, the public administration authority overseeing Västra Götaland county region in western Sweden

Challenge

- Increase and ensure day-to-day availability of internal and external services
- Lower page response times
- Ensure uptime and scalability in emergency situations

Varnish API and Web Acceleration and Varnish Support

- Varnish API and Web Acceleration for scalability, security and high availability
- Professional support from Varnish core developers with Varnish
- Varnish servers in production and Varnish Controller

The solution: Consistent performance for public sector e-service site

VGR had encountered Varnish a few years before they decided to implement Varnish, but it was not until a bit later that they conducted a proof-of-concept. As VGR was engaged in emergency and disaster preparedness planning, the evaluation process led VGR back to Varnish, in large part for its high availability functions.

Varnish implementation and configuration

VGR has a large and complex IT infrastructure, and Varnish sits deep within it. Varnish servers in production with Hitch handle traffic as well as Varnish Controller (formally VAC). VGR load balances the traffic to Varnish, and web servers, database servers and different application servers all sit behind Varnish to take advantage of the performance gains enabled by caching.

While the Varnish implementation has been relatively easy, a more time-consuming process, which ultimately allowed VGR to reap the greatest performance and efficiency benefits, was customizing the different backend application solutions that sit behind Varnish. For example, when VGR needed to implement purges when something updated in a backend application, it depended on sessions, which isn't ideal when you're caching. These kinds of changes are being developed according to what priority they take and rolled out in stages over time.

Always available

By 2020, VGR had been running Varnish for about three years, proving its value by answering availability problems and reducing latency in response times. With availability, in the event of an emergency, the latest information is always available to both internal employees as well as external, public facing information - and this is something that has not gone unnoticed.

"Varnish implementation was easy. We knew our part of the infrastructure and what we wanted to achieve, and we had valuable consulting help with the Varnish-specific configuration itself. Both our clear goals and the Varnish-specific consulting expertise were key to a successful setup."

Technical Specialist, Datacenter, VGR

Results: Emergency preparedness: Implementing Varnish to be "ready for anything"

Varnish has led to intangible savings in terms of human resources and infrastructural efficiency. VGR chose a Varnish Enterprise subscription in large part because they rely on Varnish support for help in configuration and ensuring that they are getting the most from their Varnish use.

Responsive Varnish support and the VGR-Varnish future

"With Varnish, we have saved ourselves from downtime and eased maintenance for ourselves. We have been able to scale down some solutions because Varnish helps us use our resources in a better, more efficient way."

- *Solution Architect, Digital Media/Web, VGR*

As VGR moves forward with Varnish, they are focusing first and foremost on maintaining and developing the Varnish platform itself, having recently moved from Varnish 4 to Varnish 6. Today VGR uses Varnish High Availability, Massive Storage Engine and Varnish Controller (VAC), and they are evaluating what other Varnish features they can implement to support their goals.

"We aren't finished with our Varnish implementation. There is a lot of value in other features we've yet to adopt, and we are looking at those in conjunction with ensuring that we use Varnish the right way, continuing to support the primary reasons for our Varnish use."

- *Solution Architect, Digital Media/Web, VGR*

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