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Case Study:

RTÉ

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# Varnish Plus - an essential part of RTÉ's toolkit

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## Background

Before Ireland's National Public Service Broadcaster (RTÉ) started using Varnish Cache Plus for web acceleration and enhanced web server performance they were using Squid, a reverse proxy server. John Moylan, Senior Systems Administrator at RTÉ shared with us RTÉ's journey from using Squid to deploying Varnish instead. "I'm a big fan of Squid and of reverse proxies in general. Squid is pretty good at what it does, it supports a ton of protocols and it has a good track record as far as security and stability are concerned. But for our use case the main benefits of Varnish, namely performance and the flexibility of VCL (Varnish Configuration Language), go beyond the advantages of Squid."

John goes on to explain that Squid would not scale their website as easily as Varnish does. "We had a large squid farm but were typically only able to serve about 800 requests per server per second before performance started to degrade. After we deployed Varnish Cache Plus we saw fantastic performance improvements both in terms of response times and availability. Varnish allows us to make more efficient use of the higher memory densities in today's servers. Being able to use memory only, rather than memory and disk is advantageous for a caching system with a high level of requests per second because caching servers like Squid and Varnish are usually IO bound. Compared to Squid, Varnish is never a bottleneck. The load on our server has now more or less flatlined. We've been curious to find out if we can challenge Varnish," John said.

## Unforeseen traffic peaks

The RTÉ news site frequently suffers from unforeseen spikes in web traffic. "The site is constantly being redeveloped. New features are released almost daily, so it's a constant task to monitor the site's performance and health. But now that we have Varnish Cache Plus running in front of our site this unforeseen traffic does not cause us problems anymore," John told us.

John adds that RTÉ is using fewer Varnish servers than what they needed when they were using Squid. "We see at least 10 times more traffic now than before but we are able to maintain the same number of physical servers. All in all, Varnish Cache Plus makes our work much easier. We are delivering vastly more content now than we could before without having to increase the fleet of servers which saves us a lot of money."

"It's been a pleasure working with Varnish Cache Plus and VCS. It is not often that one can say that about technology. In fact, it has become an essential part of our toolkit."

*John Moylan, Senior Systems Administrator at RTÉ*

## Using VCS to open up new possibilities

“To tell you the truth we had Varnish Custom Statistics (VCS) in production for several months before we started using it,” John shares when we ask how RTÉ is using the VCS product. “We didn’t know that this was something we needed. But then last summer we started experiencing major performance issues and our site crashed a number of times during high traffic sports events. Using VCS, I was able to quickly find out what the issue was, track it and resolve it.”

The issue turned out to have been caused by a misconfiguration of certain content requested via XmlHttpRequest. Without VCS, it would have been next to impossible to track down this issue.” John tells us that with VCS, RTÉ can pinpoint problem requests and fix issues quickly and effortlessly. “Being able to do that is a huge improvement from the old ways of doing things here at RTÉ. It’s been a pleasure working with Varnish Cache Plus and VCS. It is not often that one can say that about technology. It has become an essential part of our toolkit,” said John.

## Future plans for VCS

John tells us that RTÉ is planning on using VCS even more in the future. “We’d like to use it to do some more real-time tracking, for example, of our most popular stories and slowest pages.” Furthermore John’s colleague, Computer Engineer Michael Kennedy, who looks after the HTTP streaming at RTÉ, is looking into how it will benefit him for streaming. “We use both HLS, HDS and smooth streaming. We are currently caching that with Varnish Cache Plus and for optimal performance we also use multiple Content Delivery Networks (CDNs) for on-demand content requested from abroad (not Ireland and Europe). VCS is a new tool for us and we are still exploring how we can use it even more,” said Kennedy.

## About Varnish Software

Varnish Software is the company behind Varnish Cache, a widely trusted open source web accelerator. Varnish Cache significantly enhances web performance for online businesses and powers influential content providers such as BBC, Morningstar, The New York Times and Vimeo. It supports more than 2.3 million websites worldwide. Varnish Plus is the commercial offering by Varnish Software which includes tools for scalability, customization, monitoring, content delivery and expert services.

## About RTÉ

Ireland’s National Public Service Broadcaster (Raidió Teilifís Éireann RTÉ) is a semi-state owned company and the national public service broadcaster of Ireland. It produces programmes and broadcasts them on television, radio and over the Internet. The RTÉ.ie website has been powered by Varnish Plus since 2011.



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