What is Varnish?

Varnish is a state-of-the art web accelerator for dynamic content, such as websites, APIs, and mobile applications. Varnish is designed for high-performance content delivery and real-time management. It's an open source software, available for free under a modified BSD license.

Varnish is the heart of Fastly's content delivery network. Fastly uses a heavily customized version of Varnish that is optimized for large scale deployments. Due to its instant purging capabilities, Varnish is able to cache dynamic content.

Fastly takes this to the next level using a distributed system that synchronizes purges across all of our global caches. Fastly's Varnish-based caches have up to 12x the performance and capacity of traditional caches, offering new capabilities that traditional content delivery networks can't provide.

Fastly currently uses Varnish 2.1, as well as select features from Varnish 3.0 and 4.0. Fastly CEO Artur Bergman and engineer Rogier Mulhuijzen wrote parts of the Varnish code and continue to contribute to the open source project.

Benefits of Varnish

Total Control + Flexibility

Varnish is configured using VCL (Varnish Configuration Language), which is more of a programming language than a configuration file. This allows Fastly customers to create specialized configurations for more intelligent caching and run application logic at the edge. Fastly customers frequently use the power of VCL to gloss over small imperfections in their applications.

Fastly offers a user interface for configuring, which will generate VCL for our customers. Alternatively, Fastly customers can upload their own VCL files. Because Varnish can load and unload these configurations on the fly, Fastly customers can make changes to their configuration and deploy them immediately -- which means no waiting for maintenance windows and no server downtime. Fastly also keeps a history of all deployed versions of your configuration, so you can instantly roll back to a previous version.

Real-time Management + Monitoring

Using Fastly and Varnish, you can monitor your content delivery services as those services operate. Fastly's unique capabilities let authorized administrators:

- Monitor real-time per second statistics, either in an in-browser 2-minute rolling display or as a JSON stream to a dashboard of your own.

- Create custom statistical reports of historical data (data over 3 minutes old), specifying a granularity level and filtering by date range, and transaction type(s).

- Configure an access log feed directly from the Varnish Cache's memory log, which, combined with log analysis tools, can provide even more detailed information about your service.

"We had such complex systems, the only way we could get a CDN in front of it was if we had something as powerful as Varnish to get around all the crazy idiosyncrasies of our website. We used support quite a lot, and they were always really responsive."

Matthew O'Brien , Software Architect

the guardian

"Fastly introduced us to the power and flexibility of Varnish. That's a big advantage we didn't necessarily anticipate, and it's a welcomed one!"

Konstantin Gredeskoul , CTO

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