

Solution Brief

NetApp StorageGRID with Varnish

High-Performance Caching Layer for Object Fetching

Key Benefits

Accelerate Access to Critical Data with Reduced Latency

- Easily set up server caching to ensure lightning-fast delivery of high-fidelity assets.

Scale Globally

- Scale with ease with features like global CDN caching and cross-server content replication to distribute on-premises content to markets across the world.

Ensure Maximum Availability

- Leverage high availability to guarantee site performance—regardless of demand—without overprovisioning.

Taking Unstructured Data Beyond Archive

Companies across industries rely on unstructured data as a foundation to deliver and utilize high-fidelity assets. The size and quantity of unstructured data continue to grow as object storage expands as the flexible choice for large data stores. More frequently, this data needs to be accessed quickly for primary workloads across platforms.

Traditionally, object storage has been used for backup and archiving, but the nature of the growing digital world requires that certain high-use assets be available for access at much higher speeds. For example, dynamic and content-rich web applications have become an absolute necessity for many businesses. Heavy or unpredictable traffic can degrade performance and lead to unnecessary strain on infrastructure and budgets. A reverse cache stores copies of frequently accessed files in memory on the host. The speed advantage of using a caching solution on top of your object store can guarantee performance from your most used assets.

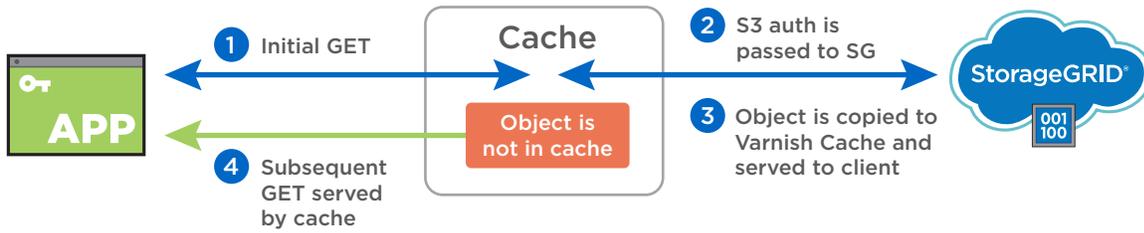
Varnish Software

Varnish Software provides a content delivery caching platform that helps transport data with increased throughput and lower latency at scale. By alleviating slowdowns from heavy or unpredictable web traffic, Varnish can cache, store, and deliver content faster for all HTTP requests and most API protocols. Varnish solutions include Web & API Acceleration, DIY CDN, and Streaming Server, are architecture agnostic, and can work with virtually any kind of content. Cross-server content replication ensures that your data is always available anywhere at a moment's notice, and Varnish offers end to end TLS transport encryption and Total Encryption for the highest levels of data security. The software acts as a proxy layer that caches frequently requested content to allow significantly faster load speeds on the server's most used assets. Varnish uses VCL (Varnish Configuration Language) to communicate with NetApp® StorageGRID® software, allow simple configuration of request handling. VCL means Varnish can function as a logic layer in front of applications, enabling true edge computing functionality. Varnish can span data centers globally and deliver massive scale and high throughput to web applications of any size.

Technology Partner



VARNISH SOFTWARE



NetApp StorageGRID Object Storage

NetApp StorageGRID is a software-defined object storage solution that supports industry-standard object APIs such as the Amazon Simple Storage Service (Amazon S3) API. You can create multiple service levels with metadata-driven object lifecycle policies, optimizing durability, protection, performance, cost, and location across multiple geographies. As requirements change, you can adjust policies and realign their data landscape. Enterprises have the flexibility of deploying StorageGRID as an enterprise-grade turnkey solution or as a software-only solution on physical or virtual servers, using heterogeneous storage underneath. With nearly two decades of enterprise deployments, customers can depend on StorageGRID for managing their unstructured data with speed and consistency from anywhere in the world.

Software-Defined Functionality

Both StorageGRID and Varnish Software are fully configurable to allow each use case to be tuned at each site to fit specifications. Spikes in traffic can be handled easily by quickly deploying in multiple regions and decommissioning when demand falls off. VCL is an easy-to-learn, domain-specific language in a structure similar to C. The language allows complete configuration of both the client and back-end sides of requests. NetApp StorageGRID provides a VCL file that enables Varnish to authenticate using a storage tenant's S3 credentials. With StorageGRID, you can optimize data durability, performance, and cost by choosing replica or geo-distributed erasure coding. To comply with regulations or optimize availability, you can geo-fence data to specific data centers.

Video Production and Distribution at Scale

Compared to most enterprise use cases, the media and entertainment industry has an extraordinary reliance on a combination of massive files, collaborative work groups, and global distribution. Varnish is the perfect companion to StorageGRID to enable rapid access to millions of huge project files for workflows such as animation and rendering, video editing and finishing, and broadcast operations. Varnish and StorageGRID also handle video on demand (VoD) at scale with ease, making the solution ideal for rapidly delivering high resolution streaming video and audio without undue strain on resources.

How Varnish and NetApp Technology Work Together

With StorageGRID and Varnish, you can ensure a consistent and dependable speed for delivery of high-fidelity assets and manage it all through the Varnish Enterprise dashboard. Using Varnish on StorageGRID can increase the scale and capacity of your storage solution and unify an unlimited number of your StorageGRID sites around the world. Varnish can grow to hundreds of nodes and massive scale. By greatly increasing download speeds, reducing latency, and maintaining security, you can ensure that your assets are delivered quickly and securely.

About NetApp

NetApp is the leader in cloud data services, empowering global organizations to change their world with data. Together with our partners, we are the only ones who can help you build your unique data fabric. Simplify hybrid multicloud and securely deliver the right data, services and applications to the right people at the right time. Learn more at www.netapp.com.