DNS-based Global Load Balancing

Web content owners face significant challenges in delivering content to their users. The number of users has exploded, fueled especially by the melting of online cultures across geographies. The variability in the type of content has increased manifold. A typical web site can now be composed of text, images, videos and animations to name just a few. Further, in an age where customer stickiness is directly correlated to online revenue, there is a tremendous need to deliver personalization resulting in an increase in dynamic content.

The above challenges can be readily addressed by content distribution networks (CDN) which are optimized for performance, scale and reliability. But traditional CDNs lack the flexibility to be controlled in real time by content owners. This is often necessary for business needs – such as reacting to specific segments of the market - while never compromising the multiple objectives of availability, performance and operational efficiency.

CDNetworks offers a cloud-based load balancing service that is designed to solve this specific problem. CDNetworks Cloud Load Balancer works at the DNS layer. It is a powerful and flexible software solution that allows you to manage your traffic by giving you the control over your content deliverer, whether it is a CDN or a datacenter. It is a policy-based engine that allows you to manage traffic by specifying business and technical rules. The policies are applied in real-time and include weighted distribution between CDNs, load balancing across multiple servers, whitelist/blacklist users based on geo-location and route traffic based on infrastructure health. It allows you to quickly react to new markets, customize content delivery based on market-specific conditions and in the process allow you to control price and performance while increasing operational efficiency.

CDNetworks Cloud Load Balancer is built on CDNetworks Cloud DNS infrastructure which is secure, reliable and scalable and offers high performance under any traffic conditions from anywhere in the world. Outsourcing your traffic management needs to CDNetworks allows you to focus on your core business without the need to make capital investment in infrastructure and personnel.

Cloud Load Balancer has been purpose-built to address the web performance needs of enterprises. It is natively integrated with our Web Performance Suite and provides optimal performance when used in conjunction with other products in the suite, such as Dynamic Web Acceleration.

CDNetworks Cloud Load Balancer provides sophisticated and flexible traffic management capabilities at the DNS level without capital investment in deploying and maintaining complex hardware and software systems. Traffic management is realized through policies which are a combination of conditions and actions. Conditions could either be static such as geographic origin of users, or dynamic such as percentage of traffic or time of day. Actions define how content is to be served.
Typical examples include using a single CDN, or using multiple CDNs or combining CDNs and servers maintained in datacenters. Conditions and actions can be combined in any manner. For example, one rule could specify that all dynamic content be served by CDNetworks Dynamic Web Accelerator. Another rule could specify that all users from the US are served from the customer’s origin server while everyone else is directed to CDNetworks CDN. Yet another rule could specify that all traffic be usually served from a cheaper CDN but when traffic crosses a certain threshold, to switch over to a more reliable CDN. Conditions and actions can be combined in any manner to generate a set of extremely powerful policies for traffic management.

In addition, CDNetworks Cloud Load Balancer offers failover and blacklisting services. The former provides a round-the-clock monitoring of critical servers. When the server fails, the DNS response for that service is replaced by a standby server until the former is restored online. The latter allows no response be sent to service requests from certain IP addresses or geographical regions.

CDNetworks Cloud Load Balancer is built on a globally distributed platform across 20+ strategic locations - from the US to Australia. The large infrastructure provides high degree of availability, scalability and superior performance for your users every single time, irrespective of their location. It provides you unrivaled management and reporting ability through a Web-based portal. Setting your load balancing rules is as easy as clicking a few buttons. New policies are propagated in minutes, ensuring that DNS requests are always resolved with the latest data. The exhaustive near real-time reporting features provide you tremendous visibility into your DNS traffic and your customers.

CDNetworks Cloud Load Balancer is natively integrated with our CDN platform and works very well in conjunction with other technologies such as Content Acceleration and Dynamic Web Acceleration. An additional step of resolving the location of the CDN is eliminated which further improves the overall performance of your website.

CDNetworks Cloud Load Balancer provides you unprecedented flexibility to set up traffic management policies in real-time that increase performance and efficiency while reducing cost.

**Key Features and Benefits**

- **On-Demand Traffic Management** – Near real-time propagation and application of policies. Allows instant reaction to market needs.

- **Geo-Based Traffic Control** – Better performance and cost control.


- **Traffic Distribution Between Servers and CDNs** – Easily reach out to newer markets. Quickly react to market specific needs. Control costs.

- **Traffic Distribution Between CDNs** – Content and market specific delivery choices. Provide a higher degree of redundancy and improve operational efficiency.

- **Automatic Failover** – Higher availability and redundancy reducing costly outages.
Blacklisting – Deny services to certain users based on business (for example cost) or technical (for example prevention of attacks) reasons.

Completely Outsourced Solution – Reduced IT investment since there is cost of deploying and maintaining complex network and systems.

Advanced Control and Reporting – Web based portal for easy DNS administration. Near real-time advanced reporting that provides unparalleled insights into your DNS traffic.

POP Map

To find out more about CDNetworks Cloud Load Balancer solution, visit http://www.cdnetworks.com/products/cloud-load-balancer/ or contact us at info@cdnetworks.com

About CDNetworks

CDNetworks is a global content delivery network (CDN) with fully integrated Cloud Security DDoS protection and web application firewall. Our mission is to transform the Internet into a secure, reliable, scalable, and high-performing Application Delivery Network. CDNetworks accelerates more than 40,000 websites and cloud services over a network of 200 global PoPs in established and emerging markets including China and Russia. We have been serving enterprise customers for 15 years across industries such as gaming, finance, ecommerce, high tech, manufacturing, and media. CDNetworks offices are located in the U.S., UK, South Korea, China, Japan, and Singapore. For more information, please visit: http://www.cdnetworks.com