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TRAFFIC MANAGEMENT FOR PEACE OF MIND

By Jonathan Morgan April 17, 2019 11:00 AM

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Ensure Quality of Experience and Readiness with CDN Capacity Overflow

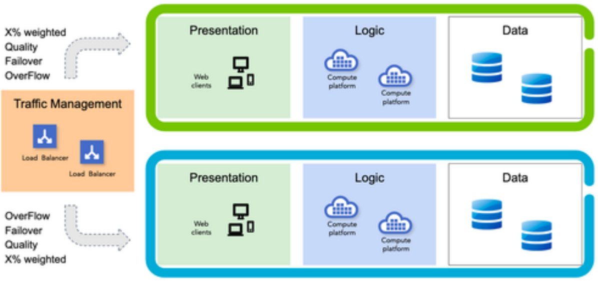
Have you ever planned and launched a system with painstaking detail and, at some point in time, something unexpected breaks the system? An unexpected event might be an unanticipated scenario (a bug!) or user adoption beyond expectations (hello Fortnite!). These events can lead to gut-wrenching times when a fix to address the event takes a long time even though the need to address the issue is right now. No one can replace the experience of watching a game winning touchdown live!

Plan for the Worst and Hope for the Best

As the next generation of the Internet continues to fold into our everyday lives, an opportunity is emerging to leverage multi-provider edge services as a means for not only new services but also disaster avoidance and, more importantly, to always deliver a great quality of experience.

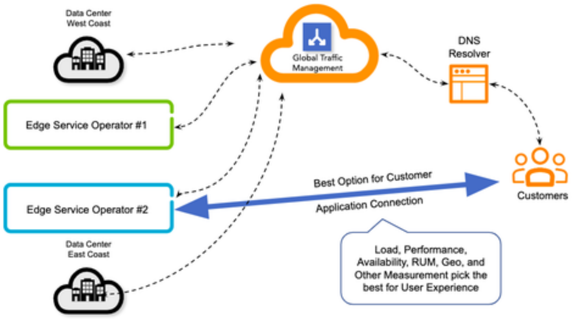
Using traffic management for edge services makes disaster avoidance possible and helps a service owner manage unknowns and quality. While we design networks and systems to be reliable, it is inevitable that something unexpected will happen. User behaviour is becoming less predictable while computers and networks have moving parts that break. Continual change brings the risk of affecting the status quo too.

Global traffic management provides more flexibility for an operator or an enterprise to build their service or network. With global traffic management, systems engineers, architects, operators, and administrators can push the first touchpoint closer to the edge and across multiple providers. The traffic manager can distribute and optimize load to multiple back ends, e.g., data centers or even CDNs, given a set of constraints and settings. Ultimately, utilizing a smart dynamic traffic management system allows the service operator to optimize for quality, failover risk, overflow resilience, and balance.



A Compelling Use Case and Gut-Wrenching Surprise

One of the more interesting Internet trends is the adoption of video streaming and "cutting (or shifting) the cord." For streaming services, forecasting user adoption and event attendance is a challenge as consumption habits are continually evolving and streaming services are



What to Do

One way to manage the streaming scenario is to front-end the service with a traffic management capability. In this way, clients first connect to the traffic management edge service that selects the best destination for the client's request given the origin of the request, the state of the Internet connection, the location of the edge capable of delivering the service, and the service owner traffic rules. This selection can be really smart and optimize for a number of parameters such as cost, quality, and risk. In one scenario, the service owner might want traffic to terminate at one primary provider unless the load at this destination is above a target threshold and, in that case, start to use a secondary provider to deliver the overflow requests. In another scenario, the service owner might want to utilize many providers to balance risk and demand.

In both cases, the service owner is in control and can avoid that gut-wrenching experience that we as engineers, architects, operators, managers, and administrators dread and seek to avoid. Using APIs or a user interface, a service owner can send traffic to the overflow provider on demand and switch back to normal operations as the primary service platform stabilizes. At any time, the service owner can also follow traffic flows to particular destinations and monitor what's happening.

Akamai's Global Traffic Management (GTM) for Overflow

Akamai's GTM is a modern, highly reliable, dev-ops optimized, GSLB service that operates at the edge of the network across a diverse, distributed network of networks. GTM is an integral part of Akamai's Intelligent Edge Platform. Akamai's leading Information Security program governs with world-class controls and compliance and its Network Operations Command Center is on 24/7.

GTM allows for a range of load balancing, traffic routing, performance monitoring, geo-mapping, and fault monitoring. GTM's global deployment provides organizations options to move their services to optimal geographic locations. GTM services such as geo-mapping allow operations to deploy applications on multiple clouds. The geo-mapping routes user's application connections to the geographically or topologically closest edge servers. Akamai's performance monitoring is an outside-in approach, setting up monitors worldwide and leverages the same monitoring used for Akamai's media, web, cloud, and security products that some the largest application, media, and network providers depend on every minute of every day.

Akamai's GTM continues to evolve with usability and routing logic improvements such as APIs to get and set policy data (see Akamai's GTM Developer API Documentation). These API improvements continue GTM's evolution to tightly integrate into a DevOps driven workflow.

To Learn More about Akamai's GTM

To find more information about Akamai's GTM services, use the "Get in Touch" icon on Akamai.com to chat with someone in Akamai right now. Or, follow these links to materials.

- Global Traffic Management (GTM) - Ensure fast and reliable user experiences by balancing traffic across all your data sources - both cloud and on-premise.
- Global Traffic Management for cloud, data centers, and CDNs - a discussion about the role of Global Service Load Balancing for modern Internet computing.
- Architecting DNS for DDoS durability and resilience - at the heart of any DNS-based traffic management solution is the capability to withstand massive DDoS attacks without a sweat.

What does the Future Hold?

GTM is an integral part of Akamai's Intelligent Edge Platform. Tune in to Akamai's blogs and subscribe to Akamai's Community to follow updates, articles, and presentations on GTM's evolution.

- Achieve domain stability and resilience with Akamai's Fast DNS service.
- Load balance your data centers, cloud deployments, and CDNs with Akamai's Cloud Based Global Server Load Balancing (GSLB) solution - GTM.
- Massively scale your application with layer 7 load balancing using Akamai's Application Load Balancing (ALB) Cloudlet.
- Ensure every device in your network checks a DNS security tool - ensuring the domain name resolved is NOT malware, phishing, or a botnet. Akamai's Enterprise Threat Protection (ETP) and DNSi/SPS solutions transform your basic DNS resolver into a security tool.
- Sign-up and Search Akamai's Community. This provides you access to a range of Akamai resources.
- DevOps Professionals are welcomed to join developers.akamai.com. Akamai's DNS solutions are API and DevOps aligned ... enabling cloud to cloud innovation.