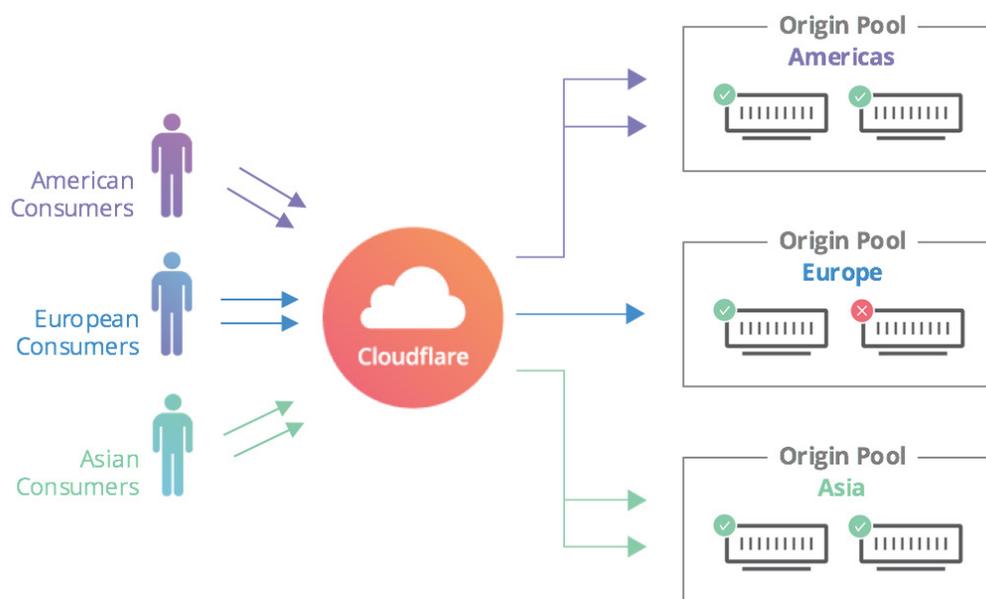


# Load Balancing with Cloudflare

Consumers expect fast and reliable access to their online experiences. In a 2014 research report, Gartner found that the average loss associated with downtime was \$5,600 per minute, or well over \$300K per hour. Google reported that site latency of only 100 to 400 milliseconds has a measurable impact on consumer behavior. For example, Amazon found that every 100 milliseconds of extra latency resulted in a loss of 1% in sales.

Visitors have a lack of visibility into the health of websites, web apps or APIs, and rarely have the opportunity of choosing which server they're routed to. The visitor experience can become heavily degraded and traffic completely dropped when reaching servers that are unreliable or misconfigured. Additionally, over-utilized or geographically distant servers can result in added latency. Poor visitor experiences have a direct impact on revenue, reputation, and customer loyalty

Cloudflare Load Balancing safeguards your website, web app, or API from service disruptions with local and global traffic load balancing, geographic routing, server health checks, and failover, ensuring the continuous availability of critical resources.



## LOAD BALANCING WITH CLOUDFLARE

**Health checks with fast failover** - Gain visibility into the availability of services and rapidly route traffic to only the healthy ones

**Local and global load balancing** - Reduce latency by load balancing traffic across multiple servers or by routing traffic to the closest geolocation region

## HEALTH CHECKS WITH FAST FAILOVER

Cloudflare helps customers gain visibility into the availability of services and to rapidly route traffic to only the healthy ones. Active availability monitoring checks the health of your servers from Cloudflare's datacenters around the globe. Through periodic HTTP/HTTPS requests, monitoring can be configured for specific URLs with customizable intervals, timeouts, and



*The combination of Load Balancing's geolocation steering and Cloudflare's caching makes sure customers are getting the fastest load times possible."*

**-Nigel Hepworth,**  
Managing Director at Active Solutions Limited

## Key Capabilities

- **Failover** happens fast. Requests proxied through Cloudflare's DNS infrastructure get re-routed within seconds to healthy servers
- **Load balancing** evenly distributes requests to healthy servers defined in a pool
- **Health checks** granularly monitors individual servers from each server on the Cloudflare network for availability
- **Global load balancing** allows traffic to be routed to specific geographic locations
- **Administration and configuration** - Load balancing is managed through a dashboard or through an API

status codes. Availability monitoring can check the health of origin servers as often as every 15 seconds, with reporting via email notifications and a REST API. As soon as a server is marked as unhealthy, multi-region failover happens within seconds to intelligently route traffic to an available server.

Cloudflare Load Balancing is powered by Cloudflare's DNS, which is the fastest DNS provider globally. Cloudflare DNS changes propagate orders of magnitude faster than public DNS since Cloudflare can avoid waiting for public time-to-lives (TTLs) to expire. This means migrating web hosts or switching over to a disaster recovery server happens almost instantaneously.

**12ms**

Average DNS lookup speed

**30 seconds**

Worldwide DNS record propagation

## GLOBAL AND LOCAL LOAD BALANCING

Cloudflare helps customers reduce latency by load balancing traffic across multiple servers or by routing traffic to the closest geolocation region. While Cloudflare's Anycast-based Content Delivery Network distributes content across all of Cloudflare's 102 global datacenter for fast local access, global load balancing provides additional control especially for dynamic content. With global load balancing, dynamic content gets accessed from servers that are in the same geographic location as the visitors to ensure fast local access to ensure a stellar end user experience. Both TCP and UDP traffic can be easily configured to utilize global geolocation based routing with regional granularity through the Cloudflare dashboard.



### Configuration made simple

Easy configuration through Cloudflare's dashboard, or automation through a powerful API



### DDoS Resilient Service

Anycast network that is 10X bigger than the largest DDoS attack ever recorded ensures traffic continues to be routed even under stress



### Global DNS Network

Health checks from all of Cloudflare's datacenters enables fast failover unbound by DNS propagation delays

Sign up for Cloudflare Load Balancing to improve the performance and availability of your website, web app, or API. The configuration is easy and it only takes a few minutes to get Load Balancing up and running. Check out the plans and the Load Balancer add-on at [www.cloudflare.com/dashboard](http://www.cloudflare.com/dashboard).