Mobile App Acceleration — How It Works

Mobile apps for gaming, financial services, travel & hospitality, mobile commerce and SaaS all serve audiences that are highly sensitive to network delays. Many mobile app developers have tried to accelerate their apps using a website CDN, but CDN technology does little for last-mile acceleration to mobile users, resulting in continued performance problems. In fact, mobile apps still take an alarming 8-30 seconds to download on average. As a result, businesses are losing valuable app users and consumers to performance-related churn.

Neumob provides a simple, yet powerful solution that makes mobile apps faster and helps businesses gain and retain a loyal audience of app users. By accelerating the entire app delivery process, Neumob optimizes mobile app speed and enhances user experiences. Whether mobile app users are local to the origin server or halfway across the globe, Neumob accelerates app performance by a factor of 2-10x.

Acceleration Across *All* the Miles

The Neumob solution overcomes mobile app performance obstacles throughout the app delivery process — in the first mile, middle mile and last mile. We uniquely achieve this through our Neumob Accelerator SDK that uses just two lines of code to run inside an app and our massively distributed network that provides network-to-edge and edge-to-device acceleration for both local and global acceleration. The image below clarifies how Neumob speeds mobile user experiences, regardless of user location or proximity to a mobile app's point of origin.

As the image below demonstrates, Neumob is necessary for accelerating mobile apps even when a CDN manages middle mile performance, because 70-90 percent of mobile app latency occurs in the last mile.

Website CDNs versus Neumob Mobile Acceleration
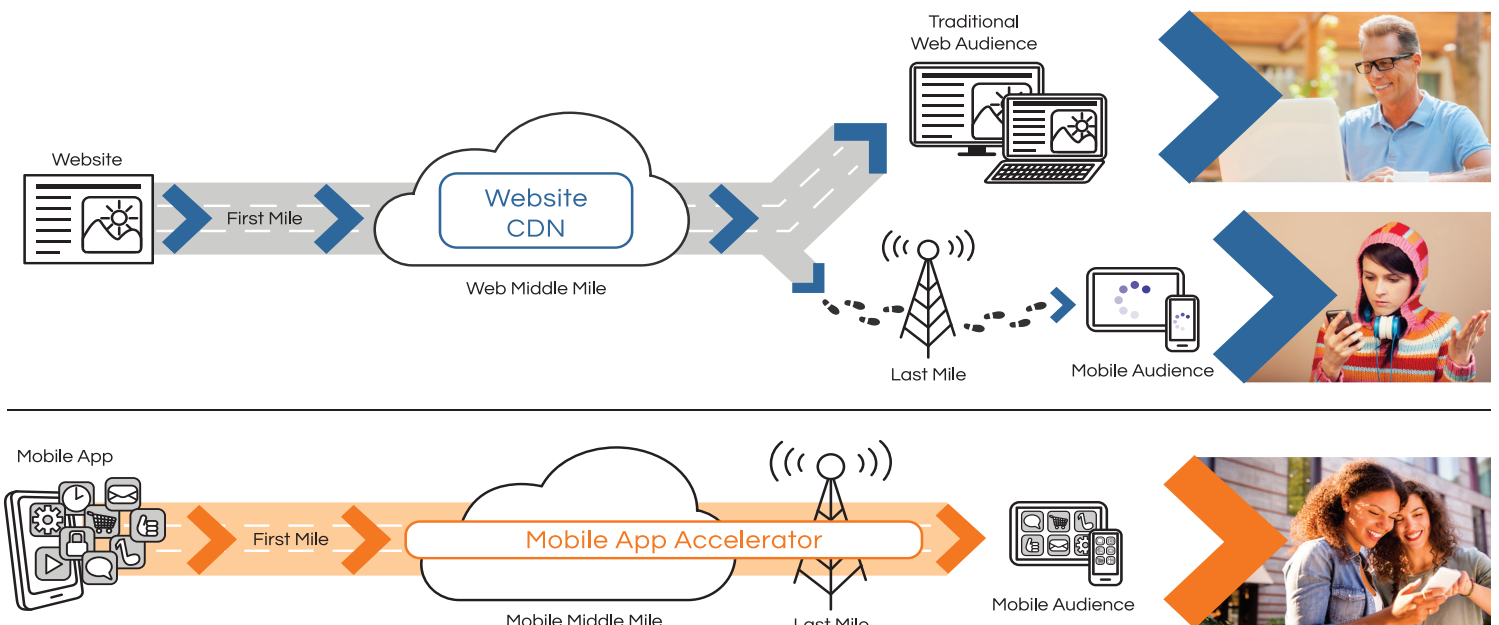
How It Works

Neumob purpose-built our acceleration technology specifically for *mobile apps*, not websites. The Neumob Accelerator addresses HTTP/TCP inefficiencies to enable the application server to process information faster and optimize the way the server interacts with the network. The Neumob Accelerator uses a high-performance transport protocol across the entire mobile delivery chain to transparently reduce response time and increase app availability. This high-performance protocol is designed to address high-latency networks and the request/response nature of mobile-based applications, while maintaining all the beneficial features of standard transfer protocols.

By increasing TCP throughput and maintaining a pool of open connections, the Neumob Accelerator significantly reduces the number of round-trips between the end user and application server, thereby speeding mobile app response times to provide a LAN-like experience.

The table below describes the key acceleration features and benefits of the Neumob Accelerator throughout the mobile app delivery chain. These features demonstrate how Neumob stands alone in our focus, subject matter expertise and ability to speed mobile apps, all the way from their point of origin to end users' mobile devices.

Feature	Description	Benefit
Application Layer Acceleration	Optimizations include caching, compression, load balancing, and the complete suite of HTTP(S) acceleration technologies.	Improves performance at application layer.
Connection Management	Proactive management of the connections between the Neumob Dynamic Mobile Acceleration solution and a customer's web application servers.	Ensures a more efficient use of server resources and greater end-user performance.
Neumob Protocol	Neumob's next-gen proprietary transport protocol that combines the throughput of UDP with the reliability of TCP while minimizing Round-Trip-Times.	Provides optimal performance over the long-haul segments of mobile networks & the Internet.
Network Loss Protection	Advanced loss and congestion recovery techniques that reduce the impact of packet loss and congestion problems.	Enables predictable application performance for end users.
Origin Connection Load Reduction	Aggregates connections through Neumob's Origin Connection POPs.	Decreases the load of customers' expensive application server database assets.
Transparent Turn Reduction	Reduces the unnecessary number of back-and-forth transfers between the end user and the web server.	Eliminates protocol overhead caused by the properties of TCP and HTTP.
Transport Layer Acceleration	Optimizes transport layer performance to address TCP's three-way handshake, slow-start pauses, and excessive retransmission intervals due to packet loss and congestion. Also uses packet coalescing and compression for control/data packets.	Eliminates latency and improves performance.

For a fast website, talk to a Website CDN. For fast mobile apps, talk to Neumob.

App acceleration for a mobile-first world

Neumob