

Are your servers QUIC?

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The Challenge

What makes your servers QUICker?

Reducing Server Load? If so, then how?

Reducing Response Time? If so, then how?

Both are possible.



Cache

The number one way to reduce server load

Caching

How does it reduce server load?

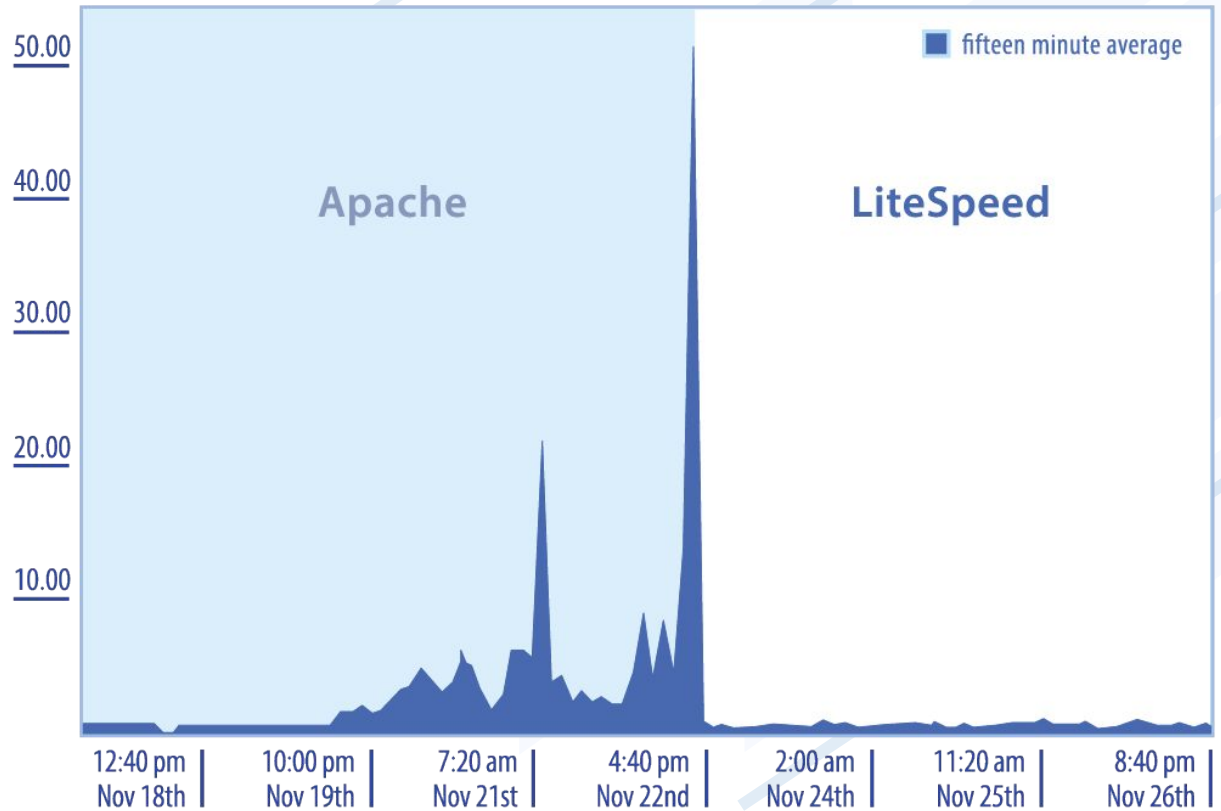
The number one cause of *High Server Load* is the need for multiple scripting engine processes.

So what does a Caching Engine do to these scripting engine processes?

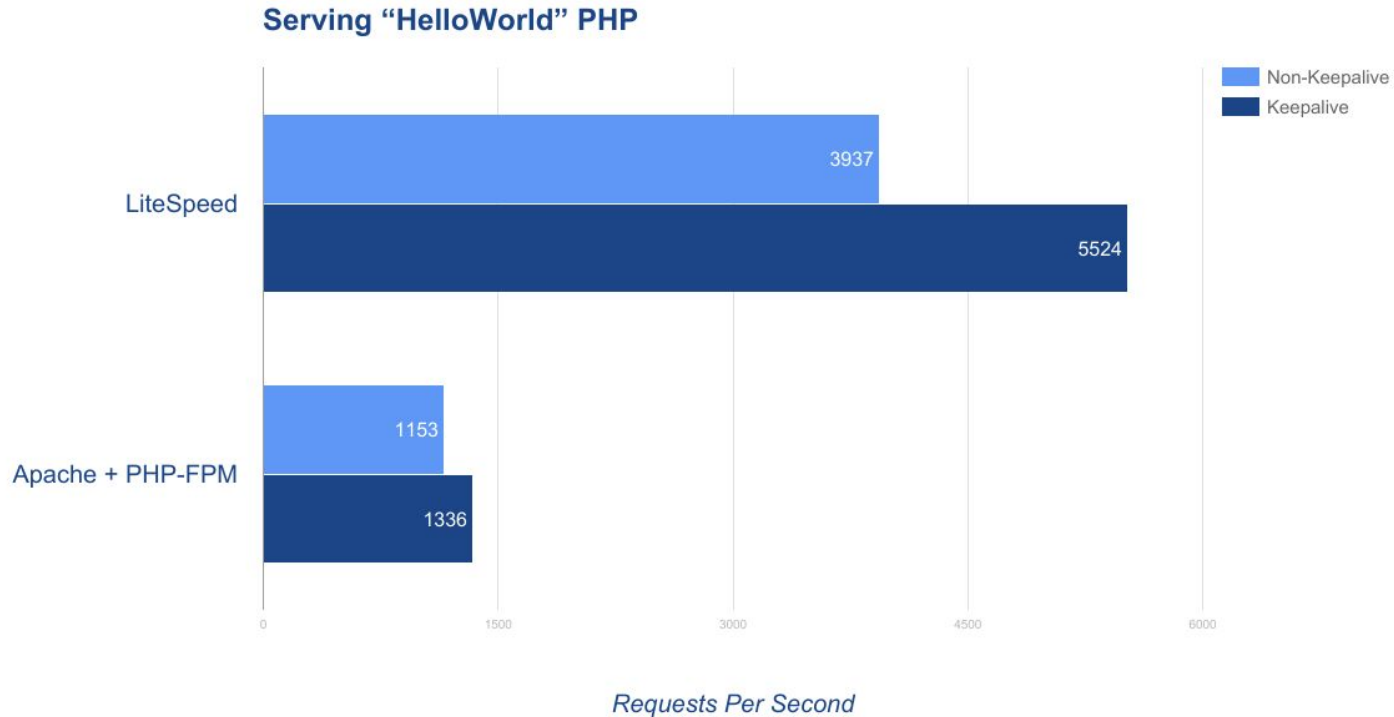
- ❑ PHP using 100% CPU? Bye-Bye
- ❑ Python using 100% CPU? Adios
- ❑ Ruby using 100% CPU? Sayonara

Cache Engine

In Action

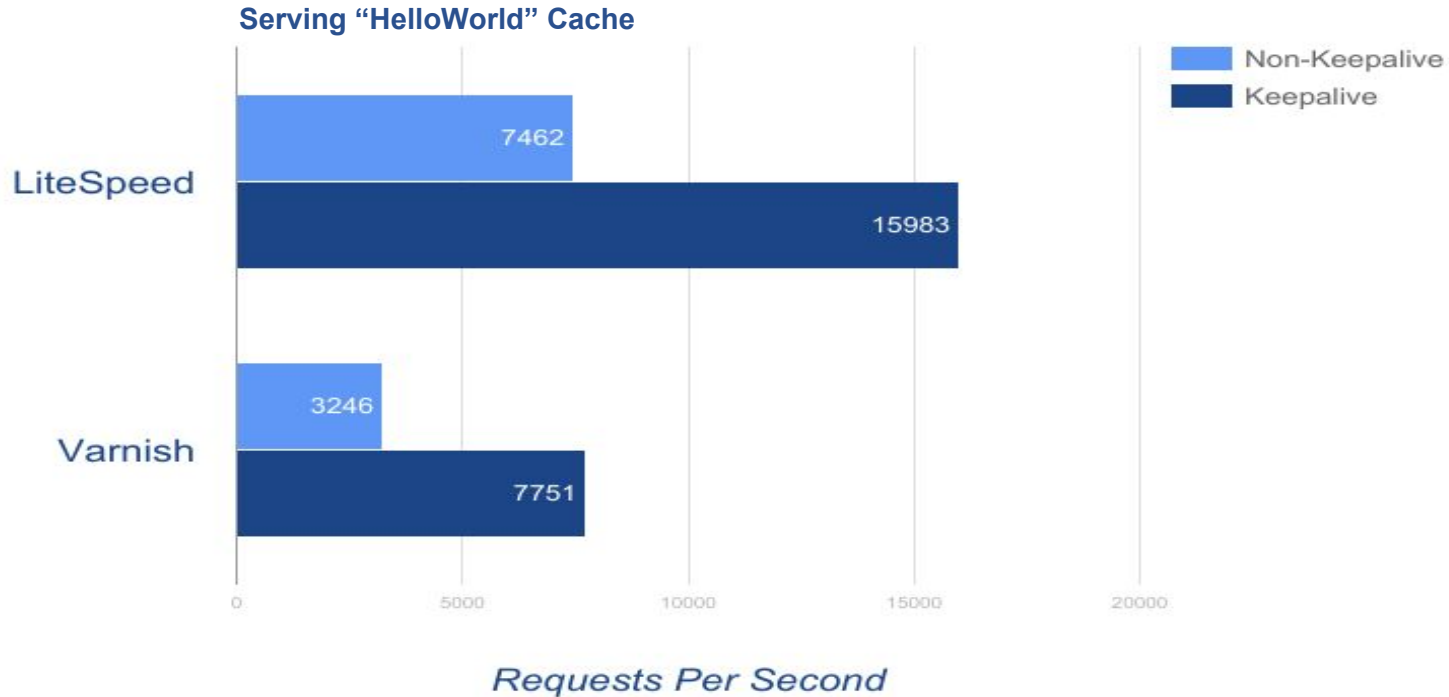


Web Server PHP Performance



cPanel 62, EA4, Apache 2.4.25 prefork, PHP 7.1.2 + opcache

Cache Engine Performance



cPanel 62, EA4, Apache 2.4.25 prefork, Varnish, LiteSpeed Cache

Caching

Are all Cache Engines the same?

Simple answer? No.

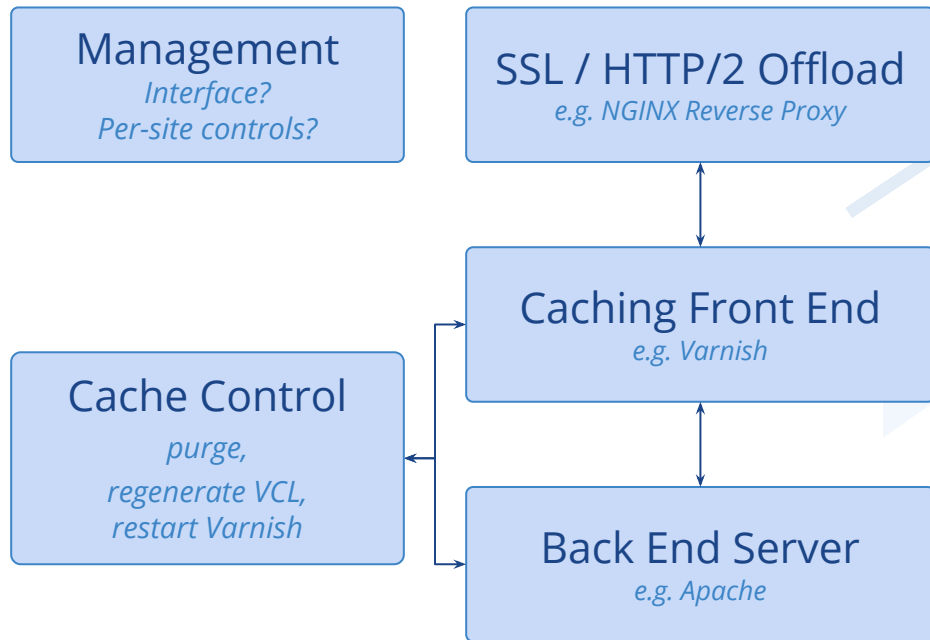
There are a variety of different ways to cache things and some work better than others. The main factor that comes into play when deciding which Cache Engine is best is the way they cache the pages they serve.

Here are some of the ways:

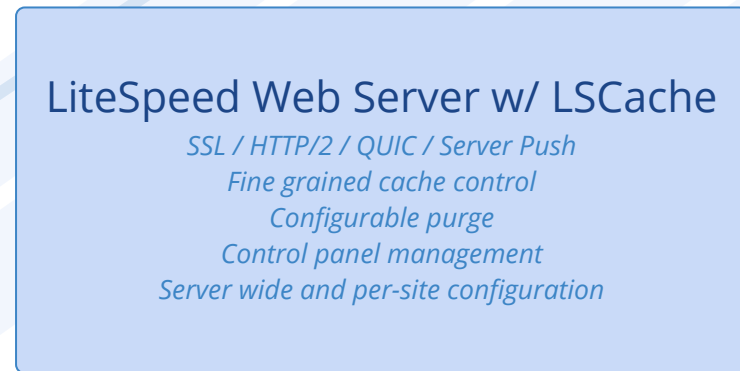
LiteSpeed Cache Varnish Nginx FastCGI Cache PHP Based Cache

Cache Engine

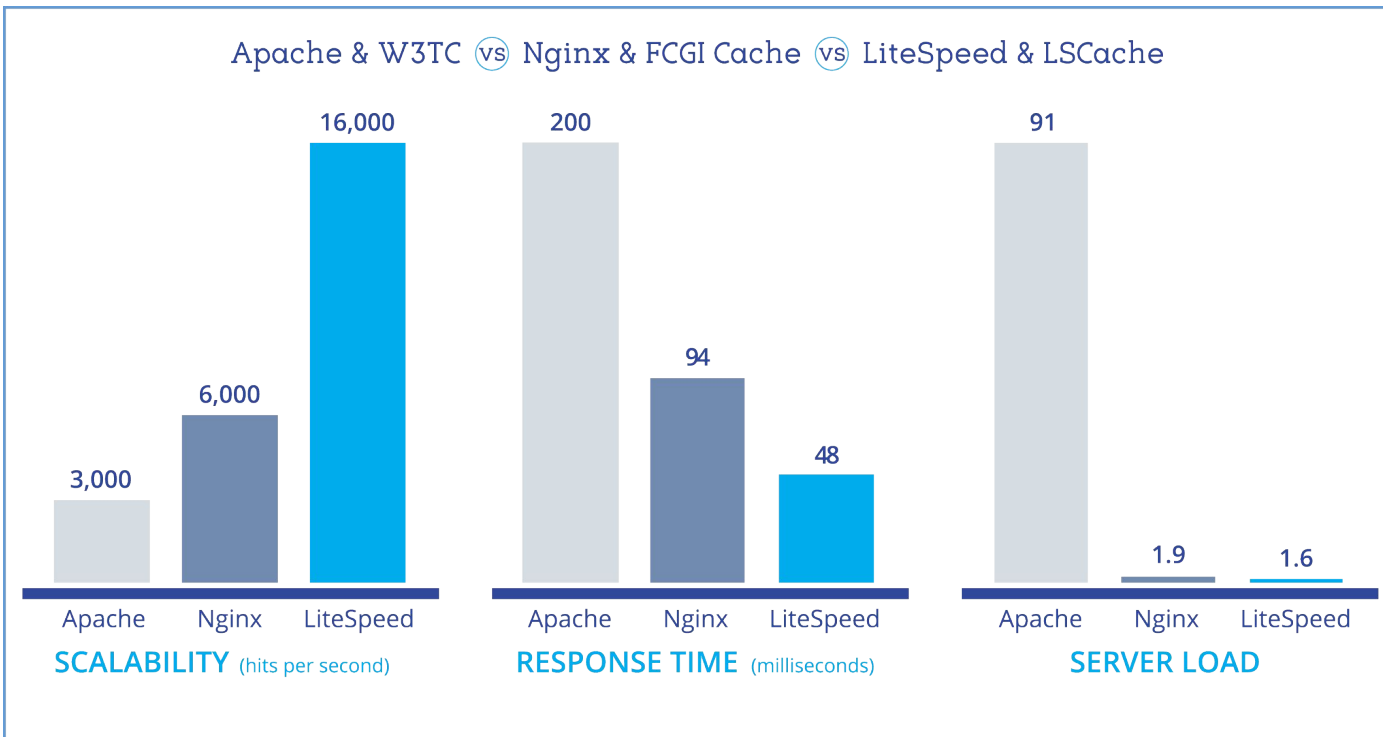
Apache / Varnish / ...



LiteSpeed



WordPress Acceleration





Cache

It is that simple.



Ever wondered why Google Apps are so fast?



QUIC

The number one way to reduce response time



QUIC

What is QUIC?

- ❑ A new protocol developed by Google, currently undergoing standardization with the IETF's QUIC working group.
- ❑ Enabled by default in Chrome since August 2013 and recently made available in Opera, Vivaldi, and any browser based off of Chromium.
- ❑ The next generation internet protocol, designed to make up for the shortcomings of HTTP/2.
- ❑ Constructed with security in mind.
- ❑ Engineered to reduce latency due to handshake and packet loss.

QUIC

How does QUIC do things differently?

- ❑ Reduces connection-establishment time for a speedier page load.
- ❑ Uses multiplexing to avoid head-of-line blocking.
- ❑ Improves congestion control and network efficiency for a better user experience.
- ❑ Effectively handles connection migration in a highly-variable network environment.

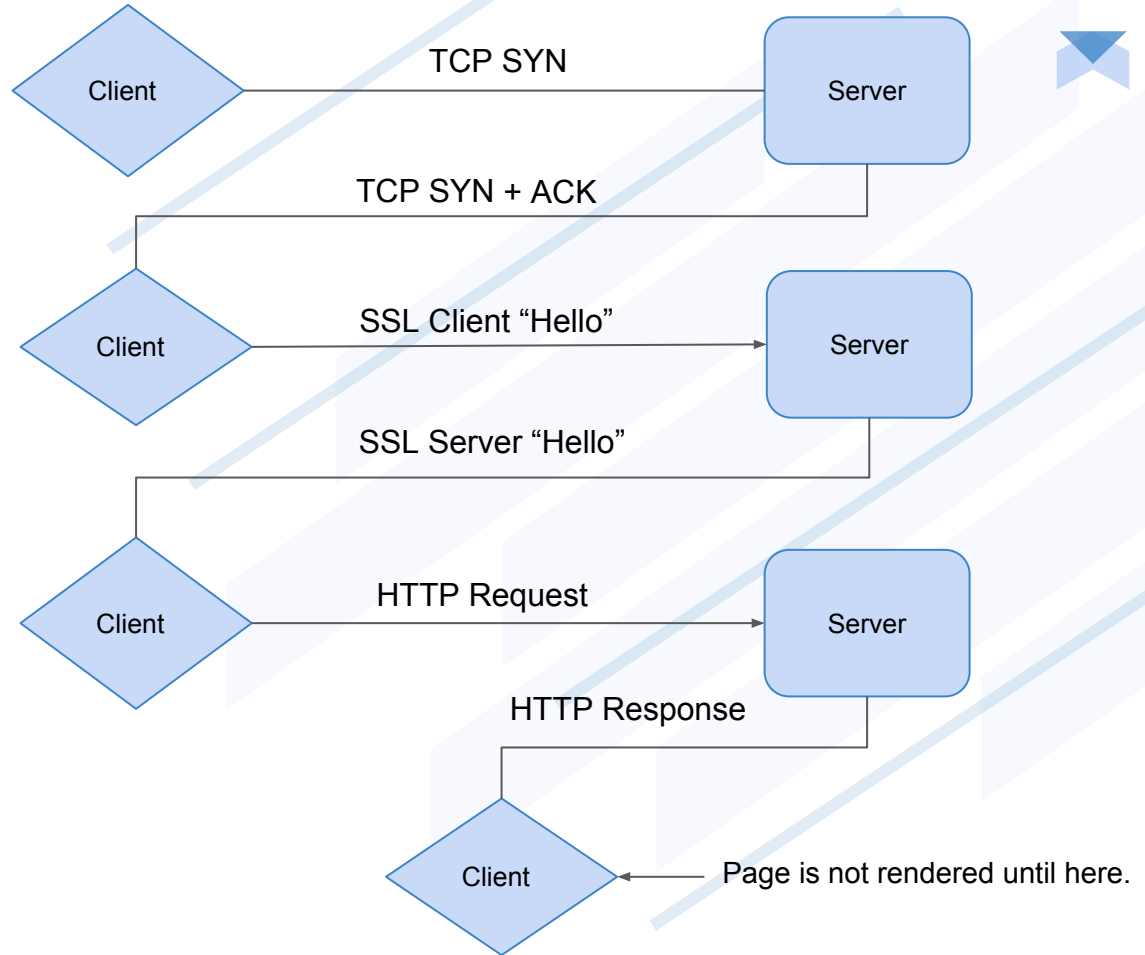
QUIC

What does all this actually mean?

Traditionally, HTTP connections have relied on TCP to deliver packets, but TCP brings with it a time-consuming handshake and a tendency toward head-of-line blocking due to lost packets. QUIC addresses these inadequacies by replacing TCP with UDP. This allows QUIC to define its own, more efficient handshake protocol, and employ multiplexing streams to avoid blockages caused by individual lost packets.

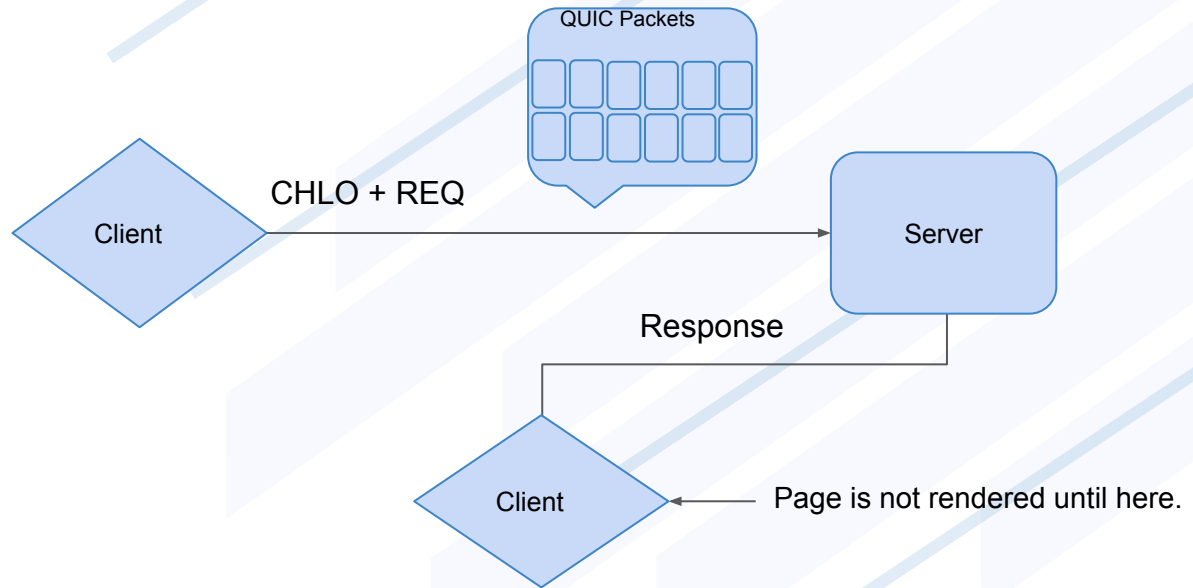
HTTP/2

Handshake



QUIC

Handshake





QUIC

The future is here





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