

The “All of the Above” Approach to Improving Application Performance



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#ado #fasterapp #stirling Carnegie Mellon testing of ADO solutions answers age old question: less filling or tastes great?



You probably recall years ago the old “Tastes Great vs Less Filling” advertisements. The ones that always concluded in the end that the beer in question was not one or the other, but both.

Whenever there are two ostensibly competing technologies attempting to solve the same problem, we run into the same old style argument. This time, in the SPDY versus Web Acceleration debate, we’re inevitably going to arrive at the conclusion it’s both less filling and tastes great.

SPDY versus Web Acceleration

In general, what may appear on the surface to be competing technologies are actually complementary. Testing by Carnegie Mellon supports this conclusion, showing marked improvements in web application performance when both SPDY and Web Acceleration techniques are used together.

That’s primarily because web application traffic shows a similar pattern across modern, interactive Web 2.0 sites: big, fat initial pages with a subsequent steady stream of small requests and a variety of response sizes, typically small to medium in content length. We know from experience and testing that web acceleration techniques like compression provide the greatest improvements in performance when acting upon medium-large sized responses though actual improvement rates depend highly on the network over which data is being exchanged. We know that compression can actually be detrimental to performance when responses are small (in the 1K range) and being transferred over a LAN. That’s because the processing time incurred to compress that data is greater than the time to traverse the network. But when used to compress larger responses traversing congested or bandwidth constrained connections, compression is a boon to performance.

It’s less filling.

SPDY, though relatively new on the scene, is the rising star of web acceleration. Its primary purposes is to optimize the application layer exchanges that typically occur via HTTP (requests and responses) by streamlining connection management (SPDY only uses one connection per client-host), dramatically reducing header sizes, and introducing asynchronicity along with prioritization.

It tastes great.

What Carnegie Mellon testing shows is that when you combine the two, you get the best results because each improves performance of specific data exchanges that occur over the life of a user interaction.

HERE COMES the DATA

The testing was specifically designed to measure the impact of each of the technologies separately and then together. For the web acceleration functionality they chose to employ BoostEdge (a software ADC) though one can reasonably expect similar results from other ADCs provided they offer the same web acceleration and optimization capabilities, which is generally a good bet in today’s market.

The testing specifically looked at two approaches:



What the testing concluded was that an “all of the above” approach would appear to net the biggest benefits in terms of application performance. Using SPDY along with complimentary ADO technologies provides the best mitigation of latency-inducing issues that ultimately degrade the end-user experience. Ultimately, SPDY is one of a plethora of ADO technologies designed to streamline and improve web application performance.

Like most ADO technologies, it is not universally beneficial to every exchange. That’s why a comprehensive, inclusive ADO strategy is necessary. Only an approach that leverages “all of the above” at the right time and on the right data will net optimal performance across the board.

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