

Web Acceleration: Web Server versus ADC



Lori MacVittie, 2008-17-04

This is an interesting, albeit very short, [post on web acceleration](#) options.

The author, Todd, gives a pretty quick "hit list" of reasons to use hardware (such as an [application delivery controller](#)) over the built-in capabilities of your web server:

1. Compression
2. Caching
3. TCP enhancements (optimizations)

There are additional benefits to using a hardware solution with specific features/functionality that address [web acceleration](#) that Todd doesn't mention, perhaps because these options are not necessarily available for web servers and operating systems.

1. Better browser control.

Many web application acceleration products are capable of manipulating the browser's cache and behavior to improve performance. Because many, many, many applications are coding without consideration for caching, web application acceleration offerings often include features that take advantage of the browser's cache and thus improve the overall response time of applications as well as decreasing bandwidth utilization.

2. Protocol optimizations

While OS and web servers can indeed be tweaked to improve the efficiency of TCP, it is often not recommended because while such configuration changes may improve the performance of one application they may actually degrade the performance of another hosted on the same machine. This is true of the differences between AJAX-based applications and traditional web applications. Tweaks to improve the performance of the former aren't necessarily good for the latter, and there's no way to tweak a single web server to optimize both types of applications.

3. TCP optimizations

While web servers and operating systems are capable of being tweaked to more efficiently deal with TCP, they can't affect the number of TCP connections being managed. In high volume scenarios, whether due to programmatic mechanisms (AJAX) or simply a high number of users, TCP management can dramatically impact the performance of applications due to the overhead required to manage those connections. An application acceleration solution provides additional benefits to servers and applications by virtualizing requests and reducing the number of physical connections required. This decreases the overhead and burden on servers and can result in an increase in total capacity.

Imbibing: Mountain Dew

Technorati tags: [MacVittie](#), [F5](#), [BIG-IP](#), [application delivery](#), [application acceleration](#), [optimization](#), [acceleration](#)

F5 Networks, Inc. | 401 Elliot Avenue West, Seattle, WA 98119 | 888-882-4447 | [f5.com](#)

F5 Networks, Inc.
Corporate Headquarters
info@f5.com

F5 Networks
Asia-Pacific
apacinfo@f5.com

F5 Networks Ltd.
Europe/Middle-East/Africa
emeainfo@f5.com

F5 Networks
Japan K.K.
f5j-info@f5.com

©2016 F5 Networks, Inc. All rights reserved. F5, F5 Networks, and the F5 logo are trademarks of F5 Networks, Inc. in the U.S. and in certain other countries. Other F5 trademarks are identified at [f5.com](#). Any other products, services, or company names referenced herein may be trademarks of their respective owners with no endorsement or affiliation, express or implied, claimed by F5. CS04-00015 0113