

# WEB ACCELERATION SOLUTIONS ARCHITECTURE OVERVIEWS

## OVERVIEW

Today's breed of enterprise Web applications requires more than just Web page browsing. These applications are truly today's mission critical applications, and require instant access to information, as well as the ability to upload and download large amounts of data.

As these applications are deployed, they do not come without their challenges. Installations are typically facing:

- Security Issues
- Response Time Issues
- Server Performance Issues
- Bandwidth Utilization Issues

As a result, technology providers have introduced products to address these application issues, and improve performance, while increasing end-user productivity.

The primary purpose of most of this technology has been to accelerate the delivery of Web pages to the browser.

The functionality typically provided includes:

- Data compression to the browser via industry standard Gzip
- Image optimization to the browser
- Secure Socket Layer (SSL) offloading of Web Servers
- Content aware caching to reduce access to the Web Servers

## VALUE OF ACCELERATION

Acceleration solutions deliver more than just technical benefits. Making an application run faster is one thing, but there must be direct value to the enterprise in the form of measurable improvements to operations, productivity and the infamous "bottom line".

The proper solution will deliver measurable improvements in transaction response times and bandwidth utilization. As a result of these improvements, end-user productivity is increased, leading to a direct reduction in costs or increase in revenue.

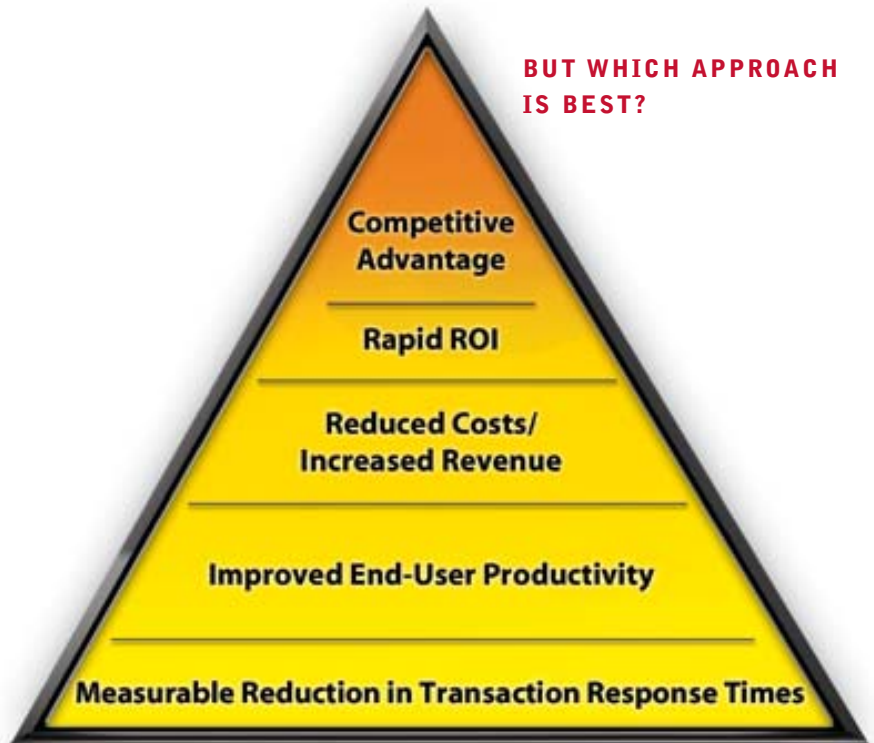
Costs are avoided because additional Web servers are not needed or expensive network upgrades are not required. Potential revenue



increases can be attributed to the overall productivity of end-users and increased customer satisfaction.

There are two basic architectural approaches to accelerating enterprise Web applications; one-sided implementations and two-sided implementations.

## BUT WHICH APPROACH IS BEST?



**ONE-SIDED APPROACH** ★ *Good*

One-sided solutions are good, but by their nature, the one-sided approach is limited. These solutions consist of a hardware appliance that front-ends the enterprise Web servers (Figure 1); a good solution for

servicing Web pages to end-users. However, with today's applications, these solutions are now "hitting the wall" in terms of performance.

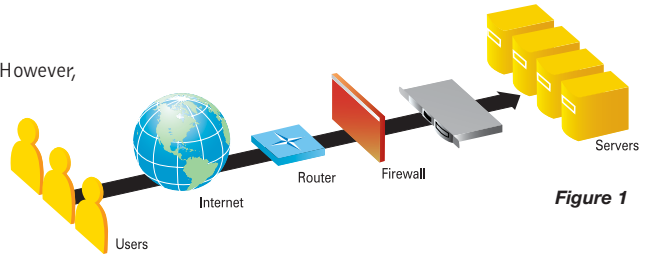


Figure 1

**TWO-SIDED APPROACH**

Acceleration for enterprise applications is more than just delivering Web pages to a browser. Today's enterprise applications not only deliver Web pages via HTTP or HTTPS, but also require delivery or downloading of data to the end-user, as well as the need to upload (or publish) data to the server.

Typically this added functionality may require non-HTTP support as well (i.e. basic email and client-server applications).

Without the ability to have a cooperative solution on both ends, these solutions cannot meet the needs of the enterprise.

In order to fully maximize the delivery of enterprise applications, you must have a two-sided solution. Two-sided solutions solve the acceleration problems from both sides of the network.

**HARDWARE/ HARDWARE** ★★★ *Better*

The traditional two-sided solution is a hardware/hardware implementation (Figure 2). As a result, a hardware appliance is required everywhere you need acceleration. This approach is a better solution because it can now provide acceleration and compression in both directions, while expanding support to

more than just HTTP & HTTPS applications. However, a two-sided hardware approach can be expensive and difficult to deploy and manage, since hardware is required everywhere.

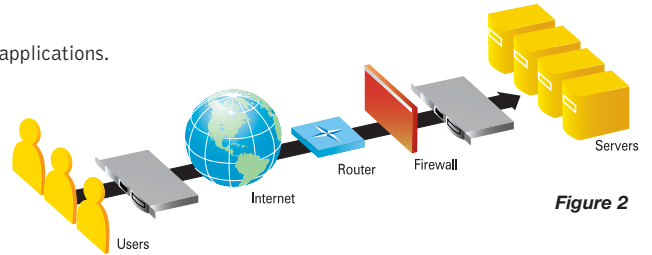


Figure 2

**HARDWARE/SOFTWARE** ★★★★★ *Best*

The best solution for acceleration of enterprise Web applications is a two-sided solution that utilizes a hardware and software approach (Figure 3). This type of implementation takes acceleration to the next level, and provides the flexibility and economics of deploying a solution that meets both technical and business needs. With a combined hardware and software solution,

all of the benefits of a one-sided solution are realized, with the added benefit of:

- Two-way data compression
- Cache differencing
- Support for non-HTTP/HTTPS
- Two-way multiplexing of large data objects

These added benefits deliver superior value in terms of performance, response time and ROI.

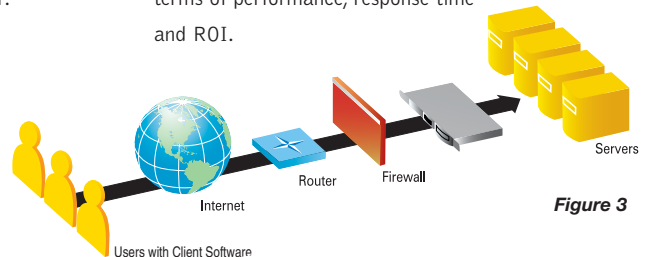


Figure 3

**HARDWARE AND SOFTWARE – PROVIDING THE COMPETITIVE EDGE**

The two-sided hardware/software approach with client software technology provides superior performance, through a more economical solution, with faster ROI. This architectural approach provides the

flexibility to easily deploy client software technology where it is needed, when it is needed. Expensive hardware is not required when you may only have one user or device that needs improvement.

Solving business and technical problems at the same time delivers the most value to the enterprise. A hardware/software approach to acceleration provides the best performance possible, while addressing the economic needs of the enterprise.



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