IMPROVE THE USER EXPERIENCE WITH APPLICATION DELIVERY CONTROLLERS (ADCs)

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Few things irritate users and web visitors more than a slow response from a web-enabled application. This white paper highlights how today's new generation of application delivery controllers (ADCs) can eliminate these delays and deliver a better user experience. It provides a brief case study showing how ADCs have benefitted one fast-growing business.

Finally, it describes the fastest and most cost-effective way your enterprise can gain similar benefits: by choosing a knowledgeable hosting provider that already understands and uses this technology.

FOR USERS, RESPONSE TIME IS CRITICAL

Users want access to their data and business apps any time, anywhere, on any device. Many customers, too, want to interact with companies 24/7 by consuming rich media or using e-commerce from their websites. To meet this need, most IT departments have poured a lot of effort into making apps available via the web.

But as you know, response time is critical. If performance lags on a web-enabled application, users quickly get frustrated.

A recent study from the Aberdeen Group showed that customer satisfaction and conversions both start to slide measurably after only a 1-second delay in response time from a web application.[2]

Frustrated users can mean lost revenues, wasted resources, and a tarnished image for your enterprise and your IT team. All your efforts to deliver applications outside the firewall can be diminished by performance slowdowns that take away from the user experience.

LOAD-BALANCING IS NOT ENOUGH

Enterprises facing high network traffic traditionally relied on load-balancers.

Over the years, load balancers used a number of different technologies: round-robin DNS, proprietary application-based and OS-based measures, and network appliances. Each approach worked well, for a time.

But each has been overwhelmed by increasing network traffic and a growing need for ever-better scalability, availability, and security. By now, load balancers are simply too limited and old-fashioned to support the intense networking demands of today.

WHAT IS "USER EXPERIENCE?"

An ISO standard defines "user experience" as "a person's perceptions and responses that result from the use or anticipated use of a product, system or service."[1]

In more everyday terms, we could express this as "how a person feels about using a system."

This includes how easy it is to learn and use, how quickly it responds to commands, and how well it delivers results. All of this is subjective, though; there are no objective standards for a "great user experience."

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INTRODUCING ADCs

In fact, load balancers have now evolved into much more powerful systems commonly called Application Delivery Controllers (ADCs).

ADCs are network devices physically located in the data center; in the network, they typically sit between the firewall and the web farm. ADCs offer advanced functions like caching, compression, connection multiplexing, SSL offload, and other technologies to significantly speed up applications delivered via the web.

"ADCs are... a distinctly new breed providing not just availability, but performance and security. As their name suggests, they are concerned with all aspects of delivering an application in the best way possible," says a white paper from F5, a leading vendor in this space.[3]

And that's not just the vendor view. Industry analysts are equally positive that IT teams should be looking into ADCs today.

"Networking organizations are missing significant opportunities to increase application performance and user experience by ignoring this fundamental market shift," says Gartner. The analyst firm concludes that "properly deployed ADCs can improve application performance."[4]

WHY AREN'T ADCs STANDARD IN EVERY ENTERPRISE?

Gartner says that ADCs will boost the performance for internal applications for in-house and remote employees, and for external-facing applications for supply chain partners and customers. In short, everyone wins from better performance.

With all these benefits, why haven't ADCs become standard gear in every enterprise? Analysts point to several reasons:

- Too many IT managers still seem to be focused on load balancing, and haven't yet recognized the new capabilities of ADCs.
- Too many IT departments are still organized as silos, so that networking and application teams rarely get a chance to discuss how to improve the user experience.
- Implementing ADCs requires expertise and experience beyond traditional networking skills.

Despite these factors, the overwhelming benefits of ADCs should ensure that every enterprise soon stops refreshing its load-balancing footprint and moves on to the next generation of technology.

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THE COST OF MOVING TO ADCs

What about the cost adopting ADCs? Is it prohibitive?

"In most cases, the incremental investment in advanced ADC platforms is easily compensated by reduced requirements for servers and bandwidth, and the clear improvements in end-user experience and productivity," notes Gartner.[5]

But as you know, buying hardware is only the beginning. Next comes the learning curve and the disruption to your other priorities. Then you can either hire IT staff who know how to use ADCs or else send existing staff out for training. Finally there is the process of tweaking for weeks to achieve optimal results.

Or you can take a different path. You can turn to a knowledgeable hosting provider that has a complete familiarity with ADC technology and can provide it as part of any hosted solution.

For example, Rackspace can discuss your business needs and provide a cost-effective ADC solution to get your web-based applications running without delays to deliver a much better user experience.

MOVING TO ADCs: A CASE STUDY

AppRiver is a fast-growing Florida-based company that provides e-mail security to businesses around the world. To block malware and spam, the company's systems routinely scan more than 1 billion e-mails a day.

Since the company was founded in 2002, Rackspace has provided managed hosting for its servers; that way AppRiver could focus on building the business, instead of running data centers. The company now has more than 500 servers strategically located in Dallas, Virginia, London and Hong Kong.

To ensure that AppRiver's rapid growth would not hurt its success, Rackspace suggested using advanced ADCs from F5 to keep the mail moving.

Today AppRiver uses several F5 BIG-IP® Local Traffic Managers to help secure, optimize, and deliver its mail-scanning applications... quickly and reliably. The results have been very positive.

"Before we began researching application delivery solutions, end-user application performance and availability were key concerns," said David Liberatore, Director of Network Infrastructure, AppRiver.

"Since we've implemented a F5 BIG-IP solution, end-user application performance has increased 40%, support tickets for our teams have decreased, and we can now focus our resources on feature improvement and product development."

CONCLUSIONS: ADCs ARE HERE TO STAY

Since ADCs are proven to speed up the delivery of web-enabled applications and deliver a better user experience, every IT manager should be looking into these now. ADCs are a new generation in technology that's clearly here to stay.

The fastest and most cost-effective way for your enterprise to gain the benefit of this technology is to choose a knowledgeable hosting provider that already understands and uses it every day... and is standing ready to match your business needs with the perfectly-sized system.

ABOUT RACKSPACE

Rackspace® Hosting is the world's leading specialist in the hosting and cloud computing industry. The San Antonio-based company provides Fanatical Support® to its customers, across portfolio of hosted IT services, including Managed Hosting, Cloud Computing and Email and Apps. For more information, visit www.rackspace.com.

1: ISO 9241-210:2009, "Ergonomics of human system interaction—Part 210: Human-centred design for interactive systems," International Organization for Standardization (ISO), Geneva, Switzerland, 2009
2: Bijan Simic, "The Performance of Web Applications: Customers Are Lost or Won in One Second," Aberdeen Group, Nov 2008, p4
3: Ken Salchow, Jr., "Load Balancing 101: The Evolution to Application Delivery Controllers," F5 Networks, 2007, p7
4: Mark Fabbi, "Load Balancers Are Dead: Time to Focus on Application Delivery," Gartner, 2009, p1
5: Gartner, p4

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