

Making Demands

Consumers want a richer experience —and retailers better be ready to deliver

By Bill Wehl

In online retail speak, gone is the 8-second wait-time rule—the length of time Internet shoppers of three years ago were willing to wait for web page downloads before abandoning a site. Today's online buyers expect sub-second response time, and they're getting it.

With online consumer sales expected to grow to \$155.6 billion by 2005, as estimated by research firm eMarketer Inc., retailers are increasingly looking for ways to bolster their web infrastructure by taking advantage of solutions that go beyond just improving site speed to also include optimized delivery of their content and applications to customers, especially during periods of peak demand. This includes utilizing cost-effective methods to bring more business processes online, to ultimately grow revenue and market share, compete more effectively and reduce business costs.

Do more with less

While the notion of enriching their online business is appealing, IT decision makers face a choice between incurring the costs of building out, and often over-provisioning, their own web infrastructure, or forgoing the deployment of new business processes altogether. Furthermore, capacity planning for retailers involves enormous uncertainty, posing large risks. On the one hand, too much capacity represents wasted money as infrastructure sits idle, while on the other hand too little capacity represents lost opportunity and potential brand damage when a site is unable to handle the

load. Economic conditions and people's reactions to them are hard to predict, yet have a great impact on the volume of holiday shopping. Similarly, responses to marketing campaigns can vary enormously.

In today's challenged IT spending environment, where the mandate is usually to do more with less, retailers do have options that will infuse their web infrastructure with improvements to their site's overall shopability. An on-demand network allows retailers to tap into infrastructure as needed, paying only for what is used and eliminating the risks of capacity planning.

With an on-demand network extending their central infrastructure, retailers have the opportunity to enrich their content and move into logical extensions of their product assortment. This benefits the retailer because if users can get a better view of the product, they are more likely to buy, and if the retailer can do a better job of recommending products that the user will find compelling, the user is more likely to increase her basket size.

An on-demand network can support more description, higher-quality images, and rich media, giving online shoppers in-store experiences. A case in

point: retailers can incorporate dynamic image generation, such as changing colors, zoom/pan, rotate, and 3-D views, to provide shoppers with a new level of detail in viewing and selecting items.

VictoriasSecret.com, for instance, has increased sales with the ability to visualize all product options, while saving over \$1 million in infrastructure investments. These investments would have been required for dedicated infrastructure to support the delivery of heavier content and to scale to meet increased traffic levels, particularly during busy periods.

Retailers might also consider incorporating intelligent search-and-browse functionalities, which can help customers quickly find the products they seek, and bring relevant, featured products to the customer's attention, further encouraging sales. While search-and-browse functionality can generate revenue by employing the type of suggestions and merchandising tactics that store personnel use, it also can create significant load on a retailer's back-end computing capacity, resulting in costly infrastructure provisioning investments.



Bill Wehl is chief technology officer for Akamai Technologies Inc., an on demand distributed computing platform for e-business. He can be reached at media@akamai.com

By the drink

A leading online provider of apparel, gifts, accessories and home furnishings offloaded delivery of its search-and-browse functions and reduced the amount of load on its centralized application servers, databases and other associated back-end hardware. In the process, performance and uptime improved dramatically, and costs decreased significantly because the retailer was able to pay by the drink rather than having to provision dedicated capacity to handle peak loads.

Retailers can grow revenue, compete more effectively, and reduce business costs by enabling web applications that improve promotion and sales and customer service. These include store and dealer locators, product and pricing configurators, and virtual waiting rooms, among others.

Tickets.com, a business-to-consumer ticketing site, faced unprecedented demand to its transaction system from high-profile events that overloaded the system and left virtually all users dissatisfied with their buying experience. Introducing a virtual waiting room application distributed across an on-demand network protected the origin transaction processing systems from being overloaded by massive demand for high-profile events, providing a high-quality experience for all users.

Offloading applications

In another example, Sony Ericsson Mobile Communications was seeking increased revenues while guaranteeing a strong user experience. The company leveraged an on-demand application delivery network for the delivery of its dealer locator application to drive glob-

al, online visitors into dealers. Relying on this platform for not only its dealer locator, but many of its Internet applications, the company offloaded nearly 100% of application server processing, reducing its server infrastructure by 65%, and increasing the performance of its global dealer locator by over 400%.

Online promotional offers can drive revenue, but they can also drive massive loads on web infrastructure. Retailers can use an on-demand network as a platform to launch new web-based application initiatives such as contests, promotions, and e-mail campaigns.

For example, Logitech Inc. celebrated a company milestone by running a one-day holiday promotion online. It promoted the contest heavily, which included 20,000 cordless mouse and keyboard combination giveaways. But it was unable to accurately forecast for the demand that the contest was sure to generate. The use of an on-demand network took the guesswork out of the equation. On the day of the event, the company received considerable interest in the contest, which drove more than 72 million page views in five hours. By distributing the contest application across an on-demand network, the company was able to support the large spikes in traffic and save significant costs that would have been necessary in essentially upgrading its entire infrastructure to handle the unexpected amounts of traffic on a single day.

Engage across channels

An on-demand network can support all channels, enabling retailers to drive online users to the store and direct store shoppers to the web. In some areas of retail, consumers do significant research

online before buying, but still want to kick the tires before making the purchase. By providing better product information online, coupled with promotions, links to store inventory, and the ability to direct the user to a nearby store that has the item in stock, retailers can make a big difference in converting an Internet shopper from a browser to a buyer.

Retailers might also consider providing web access in-store to allow shoppers to find out more information on products. This approach requires that store kiosks operate with the same stellar performance as the retailer's optimized e-commerce site. This can be achieved with a simple PC, a web browser and an Internet connection, which can utilize the same on-demand network as the retail site. This approach can also be used to upsell the user by providing extensive data about the benefits of a more expensive product.

Retailers can make the most of the above initiatives by use of an on-demand distributed content and application delivery infrastructure—one in which content and applications are distributed and delivered via an in-place system of globally dispersed computers, and processed at the most efficient places within the network—close to end users to provide subsecond interactive response times. An on-demand distributed infrastructure enables businesses to maximize e-business efforts quickly, without adding equipment, cost, or complexity to existing IT infrastructure—eliminating deployment bottlenecks and the risks of capacity planning while providing a better online shopping experience that results in higher sales. ●

