



Retail: Serving Customers an Outstanding Online Experience

Orienting retailers around the online end-user experience: the key to improving brand affinity and capitalizing on shoppers driven by marketing programs

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1. Executive Summary

As today's online retailers battle for market share and brand affinity, many are striving to attract shoppers through sophisticated new functionality and services on the Web. For such offerings to be successful, these companies must structure new Web applications to provide optimal performance and service—while closely managing total cost of ownership (TCO).

To do so, many online retailers are turning to the practice of service-level management (SLM), a set of management activities that helps ensure online shoppers receive the best possible experience through online services that perform consistently and outstandingly every time—while helping companies manage critical cost structures.

Keynote Systems—The Internet Performance Authority—focuses its SLM philosophy strictly on the end-user experience, taking into account all factors that affect end-user perception of a given Web application. Leveraging a neutral, trusted third party like Keynote, online retailers can address intra-organizational tensions related to service-level issues. Consequently, online retailers can:

- Build and protect brand equity through consistent and exceptional performance of Web channels
- Capitalize on investments in marketing campaigns—and the online storefront itself—by ensuring that Web infrastructures are ready to handle expected user loads
- Grow revenue and market share by attracting shoppers with rich, sophisticated value-added online services
- Gain greater insight into customer buying behavior and cater to high-value clients
- Take advantage of an outsourced service-delivery model to prioritize and resolve issues based on end-user impact, resulting in effective management of operational costs

2. Contributing to significant top-line growth through online retail channels

For retailers in recent years, an online presence has grown from “nice to have” into a mission-critical revenue channel and competitive business necessity. No longer are retail Web sites focused solely on the distribution of content and information about offline stores and merchandise. Now, retailers rely heavily on their online storefronts as major contributors to top-line revenue. In fact, in the 2004 holiday season alone, online shoppers rang up holiday retail sales of US\$23.2 billion—25 percent more than the same season in 2003.ⁱ

Why did shoppers flock to online stores in such numbers? According to the report, almost one-third of all survey respondents reported a better online holiday shopping experience in 2004 over 2003. Moreover, the opportunity to avoid crowded stores, the availability of lower prices, and the accessibility of a wide selection of goods drew buyers onto the Web. The message for retailers is clear: in addition to price, a customer's online

shopping experience is perhaps one of the most important contributing factors in his or her decision to buy.

In addition, major marketing campaigns by brick-and-mortar retailers such as Wal-Mart Stores Inc., Target Corp., The Home Depot Inc., and Best Buy Co. resulted in significant traffic increases to their Web sites. In the midst of a recovering economy, retailers are taking advantage of growing advertising and marketing budgets to conduct cross-channel marketing between their online and offline stores—aggressively driving buyers to their sites. Retailers today rely heavily on their online presence to help maintain the strength, consistency, and quality of the brands they have worked so hard to build in offline stores.

Regardless of whether they are driven to an online store as a result of an ad campaign or simply a desire to avoid crowded offline stores, once a potential buyer arrives at a Web store, that retailer's sole mission is to convert them into a customer. To improve conversion rates and reduce abandonment rates, retailers must ensure a high-quality, rich, and exceptional user experience every single time. In this manner, they can improve overall top-line revenue and capitalize not only on the advertising investment, but also on their significant investments in the Web channel itself.

To do so, many mature retailers today are implementing sophisticated Web functionality such as 3-D models to help customers virtually "try on" clothing, behavior-based shopping assistance to suggest additional purchases, personalized buying guides, and more. They are implementing speedy "one-click" express-checkout options, rapid transaction times, and other conveniences to improve the online shopping experience. And for companies that sell high-value products such as jewelry, whose buyers often conduct research online but actually make purchases at brick-and-mortar locations, providing rich and speedy search and information-oriented functionality is key.

3. Aligning retail sites with end-user performance expectations

While such initiatives represent significant revenue opportunities, they also entail an entirely new set of performance management issues, which if not managed effectively, can severely compromise customer satisfaction and brand affinity. To ensure that sophisticated Web functionality and expensive

marketing campaigns produce the desired effects of converting browsers to buyers, attracting customers from the competition, and converting offline shoppers to online ones, retailers must ensure that their Web sites perform exceptionally—every time.

If a retailer fails to do so, the consequences can be disastrous. Highly unpredictable traffic can emerge on a site, leading to long checkout times, stalled searches, and ultimately abandoned shopping carts. All of these problems can create confusion and frustration among shoppers and severely dilute hard-earned brand equity. Worst of all, customers who face Web performance issues may turn to the competition—a consequence every online retailer wants to avoid.

4. Forming a foundation for customer satisfaction

To avoid these pitfalls, many online retailers today are implementing the practice of service-level management. From a business perspective, SLM is defined as a set of management activities designed to help ensure that e-business applications and underlying infrastructures consistently meet or exceed desired levels of customer service. From an IT perspective, SLM includes creating, tracking, and modifying applications; optimizing delivery environments; and supporting operational processes to meet predefined service-level objectives. And from all perspectives, SLM emphasizes the optimal management of cost structures.

In short, SLM can provide retailers with a means to ensure that online customers receive the best possible experience through e-business applications that perform consistently and outstandingly—all while helping retailers manage and maintain critical cost structures. An effective SLM strategy can help retailers ensure that they are capitalizing completely on the user traffic driven to their Web sites by creative marketing and advertising campaigns, and that they are enhancing their revenue margins and brand affinity along the way. Furthermore, it can help balance cost with customer satisfaction, helping them navigate the fine line between aggressively managing cost structures and introducing new value and customer satisfaction.

5. Building a three-tiered approach to successful SLM

IT and e-business groups alike know that successfully launching extensive retail sites with upgraded functionality every season is no mean feat. Once the application is designed, not only must it be tested and proven, but it also must be constantly monitored for performance and customer impact. For this reason, effective SLM strategies encompass three critical stages: service-level planning, readiness assessment, and delivery.

Setting competitive and reasonable service-level expectations

Once a retailer decides to offer a new tool or enhanced service online, it must set performance expectations and standards to define how the application's success or failure will be judged. For example, the retailer might conclude during this phase that an acceptable transaction time for online checkout is two seconds or less, or that ad download times must be sub-second.

It is extremely important that both e-business and IT teams work closely together at this stage to define competitive—yet reasonable—performance standards and problem resolution clauses in the form of concrete service-level agreements (SLAs) for new applications. In the past, SLAs have been defined somewhat differently by IT and e-business groups, often resulting in unrealistic or unmet expectations. For example, IT groups have traditionally defined SLAs in relation to the performance of network components, servers, and CPUs as well as network usage, while e-business groups have set them without completely understanding actual infrastructure capabilities. Ideally, SLAs should be defined competitively within the context of industry benchmarks while also taking into account historical data and the capabilities of an organization's IT infrastructure. In

this manner, retailers can set competitive SLAs that can be used as effective tools to further enhance their offline brands.

Assessing readiness and planning required capacity

For new applications, this stage goes hand-in-hand with the service-level planning stage; for enhanced applications with available historical performance data, this stage should follow the planning stage. When the service-level expectations for an upgraded retail site or new value-added module have been determined and the application is ready for launch, application deployment teams must ensure that the underlying technology infrastructure is capable of delivering upon the desired service-level expectations given the expected user load. To do so, application support teams must test and assess the application's readiness and plan for the required capacity. If testing reveals any issues or problems that prevent the application from being launched, further determination activities must be used to pinpoint exactly where failures are occurring so that issues can be quickly resolved and the application can be brought to market by the expected timeline.

This phase is also extremely vital for retailers planning large marketing and advertising campaigns. Before attempting to drive additional traffic to its site for a spring sale or free shipping offer, a retailer must carefully examine its anticipated user mix and load, and carefully assess whether its Web infrastructure is ready to support that traffic at acceptable standards. If not, and customers are unable to reach the site or receive acceptable service levels, precious advertising dollars could go to waste as disappointed customers abandon their shopping carts and turn to competitive sites.

Delivering on service levels in the midst of constant change

To capitalize on users driven by marketing campaigns to an online store, operations teams at retail organizations need to deliver consistently upon the service-level expectations set in the planning stage while keeping exceptions to a minimum. When the application is launched, actual traffic patterns often deviate from the expected load used for the readiness assessment. Moreover, unplanned server and application outages can occur, leading to constant changes in the application infrastructure, which can in turn affect the end-user experience. For example, if a competitor's Web site goes down, a retailer might find itself deluged by customers seeking an alternate shopping venue.

To manage service levels in the midst of constant change, application support teams and e-business application owners need to constantly monitor and manage performance from the end-user perspective. To do so, application support and operations groups must build processes to detect service-level violations from an end-user perspective, work effectively to triage problems, determine associated root causes, and resolve issues. In addition, it is also critical that operations groups validate all fixes to ensure that they have actually resolved issues with the end goal of improving user experience. In this manner, the delivery phase of SLM can ensure that service-level expectations are met and customer experience remains consistently up to or above par—thereby minimizing potential revenue loss and maintaining brand affinity.

6. Keynote Systems: Orienting SLM around the customer

Most operations centers today use a multitude of tools to monitor the infrastructure resources—servers, networks, and applications—that deliver end-user services. Application support teams may use their favorite tools to profile application performance and diagnose problems as they occur, while business analysts may use trending tools to track user activity and experience. This non-uniform process of monitoring the various components that constitute the end-user experience results in inconsistent mechanisms to track user performance problems and frequently causes intra-organizational tensions concerning service-level issues.

Keynote Systems—The Internet Performance Authority—is a neutral third party that helps intra-organizational teams collaborate on the service-level management process and leverage existing tools and processes along the way. By focusing its SLM philosophy primarily on the end-user experience, Keynote drives operational resolution activity based on end-user impact to deliver consistent, high-quality end-user service levels.

No two users access a Web site or e-business application the same way. Users employ different backbones, different geographies, and different access speeds. To take all of these variables into account, Keynote has built a global monitoring infrastructure to provide companies with the most accurate Internet perspective on Web performance available.

Keynote bases all of its services on an unsurpassed global infrastructure comprised of over 1,600 measurement computers in 50 cities worldwide that take more than 40 million Internet performance measurements every day. Keynote can measure, monitor, diagnose, test, and improve the performance of Web applications in real time and from inside and outside the firewall, including applications built using Web services, and can deliver easy-to-interpret performance metrics through a Web portal or daily e-mail reports.

Through an outsourced service-delivery model that helps customers manage cost and lower TCO, Keynote offers an SLM solution that encompasses all phases of effective SLM.

Service-level Planning with Process Consulting and Competitive Research

To be successful, enterprises need to define service levels that reflect both IT capabilities and customer expectations. Keynote offers a complete service-level planning engagement that leverages SLM process consulting and competitive research to help customers develop realistic yet competitive SLAs and devise a methodology to monitor ongoing compliance. This engagement uses Keynote products such as Performance Scoreboard to help customers define service-level standards within the context of historical system usage, application infrastructure, end-user impact, and competitive benchmarks. Keynote effectively bridges the gap between IT and e-business groups by enabling them to create service levels that reflect application performance under varying traffic conditions as well as industry averages.

By combining these two perspectives, enterprises can set more realistic service levels and ensure that performance targets are in line with business goals. In fact, online retailers can use service-level definitions to position themselves to attract customers away from the competition and build brand affinity. Taking advantage of Keynote's in-depth Competitive Research engagement, retailers can understand key aspects of the end-user experience with their online stores, relative to specific competitors, to tune their online sites accordingly and acquire new customers.

E-business Readiness and Capacity Planning

Once retailers plan service levels for their key online stores, Keynote offers a comprehensive capacity-planning tool to help ensure that these retailers' underlying infrastructures are prepared for expected user loads and mixes. Keynote's approach blends performance testing and tuning expertise with realistic traffic simulation and intelligent root-cause detection technology so retailers can:

- Pinpoint which parts of a system require tuning
- Eliminate application slowdowns and crashes
- Allocate IT dollars where they are truly needed

While Keynote's capacity-planning tool is used primarily before a new application launch, the Keynote PerformanceTune tool enables organizations to periodically diagnose critical issues and tune them for superior ongoing service quality. With innovative arrival-rate methodologies and real-world traffic simulation, both tools use products such as Keynote LoadPro® and Test Perspective to allow customers to simulate the complexity of the Internet and the behavior of actual end users. Using these tools, organizations can pinpoint performance bottlenecks before they affect end users and the organization's bottom line.

Keynote Service Level Delivery

Keynote Service Level Delivery allows IT and e-business to collaborate and manage application performance from the end-user perspective while leveraging existing IT investments. Keynote's Service Level Delivery solutions are based on products such as Application Perspective® and Transaction Perspective that precisely emulate end-user transactions from global locations and from within the firewall to provide end-to-end visibility into user experience.

For applications focused on a known set of high-net-worth users, Keynote products like Traffic Perspective can provide invaluable insight into actual end-user interactions with the application and the associated user experience. In addition, performance insight from any of the Keynote Web monitoring products is seamlessly integrated into a highly visual Performance Scoreboard console that empowers the application support and operations teams to monitor compliance with end-user SLAs.

To help accelerate the trouble-ticket allocation process and associated mean time to response when an application performance issue arises, Keynote can automatically notify the appropriate operations or application support personnel via alerts triggered by component metrics such as Domain Name System (DNS), network latency, first-byte time, and more. The appropriate contact can then utilize the diagnostic information

provided in Keynote's operational consoles to instantly triage and diagnose issues that affect end users and swiftly bring them to resolution. Moreover, Keynote integrates outside- and inside-the-firewall performance diagnostics directly into existing systems management frameworks to help prioritize events based on customer impact, maximizing returns on existing IT investments.

7. Overcoming business challenges through effective SLM

Managed effectively, a comprehensive SLM approach can help online retailers successfully address some of the most pressing challenges they face today.

Protect and build brand equity

Buyers today expect consistent and exceptional levels of service from online shopping applications. If slow performance and service outages force them to "wait in line," online customers will take their business elsewhere. To hold onto the precious revenue from existing customers, online retailers must ensure not only good quality of service from critical Web applications, but also consistency in that performance. Customers will not remember the ten times an application worked perfectly—they will remember the one time that it failed. For this reason, online retailers must constantly monitor customer experience from an end-user perspective to ensure that shoppers' needs are consistently met and exceeded.

Only Keynote has a global network of 1,600 agents worldwide to monitor application performance from an end-user perspective—anywhere in the world. Keynote can identify when the end-user experience is being compromised so that retailers can take action to immediately correct the issues and minimize the number of affected users. Moreover, monitoring from the end-user perspective and using private agents to monitor within data centers allows operations teams to easily separate external Internet service provider (ISP) network issues from application issues behind the firewall. Performance exceptions provided by an independent third-party authority such as Keynote enable organizations to collaborate with ISPs, helping them better manage their ISP service-level contracts. Ultimately, managing service levels across the end-to-end network empowers online retailers to deliver consistently good performance to their customers and, in doing so, protect their brands and build upon their existing customer bases.

Capitalize on investments in marketing campaigns and online infrastructure

Most online retailers have made considerable investments in their online infrastructures—and continue to do so every day. Because of the cost-effective nature of managing an online store, Web sales are often a retailer's highest-margin operation, making the online channel a highly desirable one. Retailers want to ensure that marketing and advertising investments designed to drive users to their Web sites result in revenue dollars—whether they come from new customers, those attracted away from the competition, or even those who shop at lower-margin offline stores.

For advertising campaigns to result in increased sales, online retail

infrastructures must be ready to handle the increased traffic and to serve customers exceptionally well on a consistent basis. Keynote capacity-planning solutions can help online retailers carefully assess their underlying IT infrastructures to ensure that their sites can handle expected user volumes and mixes—and advertising budgets are not wasted. In short, capacity planning from Keynote helps retailers align online resources to capitalize on marketing campaigns and drive maximum revenue—all while maintaining and constantly enhancing brands.

Attract shoppers through value-added online functionality

As retailers battle for online shoppers' dollars, sophisticated Web functionality—such as virtual “dressing rooms,” research guides, and more—forms the foundation of their competitive arsenals. While these tools bring new revenue-growth opportunities, they also present potential online performance pitfalls and raise the Web performance stakes. To grow revenue, new content and applications must perform at the same level of performance as existing applications or better. For this reason, retailers must undergo two important steps when launching a new online feature: First, prior to launch, they must carefully plan infrastructure capacity to make sure applications can handle expected user loads and mixes. Keynote capacity-planning solutions can help online retailers ensure shoppers will experience the full benefits of advanced Web functionality—increasing the retailer's brand affinity and the customer's likelihood of returning for future purchases.

Second, because new applications and advanced functionality are more prone to problems than those that have been operating for months, companies must be ready to respond quickly to performance issues arising in recently introduced products and services. For example, an electronics retailer offering a new online buyers' guide can use Keynote's service-level delivery solution not only to rapidly detect performance issues arising with the new service, but also to prioritize those issues amidst a shared pool of operational alerts. Handling new application issues with relative priority can help ensure that customer perception of the new feature is not damaged by poor service quality during the important initial stage of a new business initiative.

Understand customer buying behavior and cater to high-value clients

To effectively tailor product offerings and marketing approaches, retailers are often interested in obtaining more details on the quality of the end-user experience for a certain subset of customers, whether they be from a particular geography or demographic group. Alternately, a retailer might be interested in prioritizing the needs of repeat or other high-value online customers.

Using Keynote Service Level Delivery solution with Traffic Perspective technology, a retailer can monitor a specific subset of its customer base and gain a much deeper level of granular insight into the experience of certain customers. In this manner, Keynote can help retailers guarantee that they are delivering on their advertised promises, giving high-priority and repeat customers the very best care and service possible, and learning more about the behavior of online buyers—so retailers can more effectively tailor their wares, Web sites, and advertising campaigns.

Boost the bottom line through an outsourced service-delivery model

Keynote's approach to SLM encompasses all of the activities required to ensure that e-business applications meet and exceed customer expectations. Key to this approach is effective application management, which also includes cost structure management. Keynote's SLM approach fosters effective cost management in two ways:

Keynote prioritizes all issues surrounding the most important factor—end-user experience. In short, Keynote monitors what matters. Rather than spending precious time analyzing low-level resource data that may not be relevant to the end-user experience, Keynote's philosophy advocates prioritizing issues that affect the end user, so retailers can optimize operational resource utilization.

Furthermore, Keynote's outsourced service-delivery model provides retailers with all the data, support, insights, and alerts they need to meet customer expectations—with none of the headaches and investment requirements of purchasing and managing the hardware, software, and tools involved. Thanks to the outsourced delivery model, Keynote customers can focus on providing the best possible online experience to their own customers—the ultimate goal of e-business management—and not on the ongoing hassle of managing and maintaining the necessary underlying monitoring tools.

In addition, while diagnosing issues with Keynote end-user experience intelligence, operations teams can leverage the expertise and processes they have built over the years around systems management tools—their existing IT investments. Using Keynote adapters to EMS frameworks such as HP OpenView, BMC Software, IBM Tivoli, and Computer Associates Unicenter, companies can analyze customer-experience alerts side by side with resource and network metrics. In this manner, they can make better use of the rich metrics provided by their EMS systems, achieve better returns on EMS investments, and streamline operational resolution processes even further.

8. Setting business sights on the customer to build brand affinity and gain market share

By striving to understand, protect, and enhance the online shopping experience of their customers, today's retailers can make the most of their investments in Web store infrastructures and marketing campaigns to realize what recent figures demonstrate to be truly impressive revenue potential. Taking advantage of Keynote's comprehensive SLM approach and dedication to end-user experience, these online retailers can effectively position themselves at the forefront of the online shopping boom, building their brands online and offline—now and into the future.

To learn more about SLM solutions from Keynote, visit <http://www.keynote.com/>.

ⁱ Goldman Sachs & Co., Harris Interactive Inc., and Nielsen/NetRatings, eSpending Report 2004.