

Monitoring Online Transactions

*Capture the end-user experience to
optimize transaction performance*



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The proliferation of online transactions

For many organizations, the Web is now a central component of sales, marketing, communications, and product support strategies. Businesses use the Web to reinforce their brand, attract clients, communicate with customers and partners, provide assistance, and bring in revenue.

To achieve those goals, organizations often build numerous “transactions” into their Web sites. What constitutes a transaction varies widely according to a company’s market and industry. For an online bookstore, a transaction might be defined as a customer buying a book. But transactions do not need to involve the exchange of goods or money. For a government agency, a constituent downloading or submitting a form can constitute a transaction. Transactions can also be defined as the process of searching for flight or hotel information, checking a bank account balance, or selecting a healthcare provider from an insurer’s Web site.

Although most transactions include actions initiated by users—such as making a purchase, logging into an account, or searching for information—transactions can also be transparent to the user. For example, when a user reads the news from a Web site, there could be several transactions at work behind the scenes. The Web site could be generating customized news based on the user’s preferences or geography, dynamically assembling a front page with content from a variety of news agencies, or displaying advertisements geared toward the user.

The number of online transactions has multiplied significantly over the past decade with the increasing use of dynamic pages, secure Web sites, integrated search capabilities, and multimedia content. At the same time, transactions have become more complex. A single transaction, such as buying a book, often involves a number of intricate sub-transactions. The customer loads a dynamically generated Web page that is customized for his or her buying preferences, then searches the inventory, chooses from results, adds a book to an electronic shopping cart, provides shipping and payment information, confirms the purchase, and receives a shipping tracking number.

The increasing use of online transactions can deliver important benefits to both users and businesses if those transactions perform as they should. But in the real world, problems arise. Those problems are easily compounded by the growing complexity of transactions.

No transaction is flawless

For a business to be successful, online transactions must go smoothly for the end user. No matter where and when users perform online transactions, they should have a consistent experience. Consistency is at the heart of loyalty and branding for many businesses. Transactions should have the same look and feel and functionality from any browser on any platform, and the time it takes to go from one step to another should not vary from user to user. Transactions should also be easy to navigate and should not have roadblocks.

Unfortunately, no transaction is flawless. Transactions can break down at multiple points throughout the process. Search engines can fail to find what the user is looking for, items can be out of stock, credit card numbers can fail to be validated, and account pages can fail to load.

Transactions can also break down in less obvious ways. A failed transaction can be caused by sluggish performance or difficult navigation: users will not wait to view a news page if the login takes too long. Nor will they make a hotel reservation if a travel Web site makes it too difficult for them to find what they want.

The costs of failed transactions are great—competitors are only a click away. Users are quick to turn to other sites when transactions fail them in any way.

Successful transactions depend on active monitoring

The only thing worse than a failed transaction is the failure of the business to recognize the problem.

Because companies rely more heavily on the Web than ever before and customer expectations have risen with respect to online performance, every minute of downtime is more painful than it was even a few years ago. Waiting for an internet service provider—or worse yet, a customer—to notify you of a problem can be deadly for your company.

What are the risks? At the very least, loss of customer confidence and the degradation of your brand. As customers and clients gain Internet savvy, they will have less and less patience for problems on your site, and they will be less likely to do business with you.

As a result, transaction problems can lead to lost revenue. Your customers will notice the time it takes to load a page or process an order, and they will not hesitate to try your competitor's site if yours is down for even a moment.

Organizations must take an active role in monitoring the performance of all sorts of online transactions—from making purchases to downloading forms. Yet the task of pinpointing problems has become more challenging as transactions have increased in complexity. The performance of Web sites and the success of online transactions depend on a wide range of interconnected technologies. Monitoring the performance of all of those technologies can be overwhelming for many organizations. For many organizations, the best monitoring solution is one that can capture the complexity of online transactions while making it easy to identify problems.

The essential components of successful monitoring

A well-designed online transaction monitoring solution should be based on four principles:

1. Adopt the user's perspective

Monitoring the performance of your Web site solely from within your enterprise will never provide a true picture of how your users experience the site. A user's experience depends on a complex system of interconnecting Internet communications providers, third-party advertising and content providers, content distribution networks, and much more—and all of those elements lie beyond your company's firewall. To monitor a user's experience, you must include all of those elements—they all affect the user's experience.

For a truly accurate picture of how a user experiences your site, you need to monitor performance wherever users are across the globe. Differences in access speeds and networking technologies can result in significant differences in user experiences. The only way to capture how users experience a transaction is to monitor transaction performance from where they live. To capture the widest range of user experiences, you need a broad-based measurement service with a comprehensive selection of well-chosen, representative, and stable locations across the globe.

2. Monitor the entire transaction

Few online transactions are completed on a single Web page. Even simple transactions, such as submitting a request for product support, can involve clicking through two or three pages. More complex transactions, such as buying merchandise, can require a user to click through a much larger number of pages. And each page might perform a number of transactions, such as dynamically loading content or images or building the page based on stored personal preferences.

Knowing that a transaction failed somewhere in the process is not good enough. You need end-to-end details so you can pinpoint problems and repair them quickly. Transaction monitoring must include every step of the process.

3. Reduce complexity

A transaction monitoring solution must be easy to deploy and use. Managing a Web site with multiple transactions is difficult enough. The solution that monitors those transactions should simplify IT tasks, not make them more complex. You need to be able to get up and running fast and have intuitive, straight-forward ways to monitor transactions on an ongoing basis. Ease of use is especially crucial in pressure situations. If the monitoring solution is too difficult to use, it will not be used at all.

4. Instill credibility

A transaction monitoring solution must be accurate and credible. You have to be able to rely on the monitoring solution to help you determine whether a problem exists, where it exists, and whether you should spend valuable time and money to fix it. You need to know that measurements are due to real problems, not due to a fault or variability in the monitoring solution itself.

Keynote transaction monitoring services—credible, easy-to-use, end-to-end services that capture the user's experience

Keynote Systems offers Transaction Perspective® and Application Perspective transaction monitoring services for both daily site management and long-term strategic performance evaluation of complex, modern Web sites. These services adopt the user's perspective and provide broad-based measurements from representative, stable locations outside of organizations. They offer an end-to-end view of online transactions to identify potential problems anywhere in the process. These services are also easy to use so that administrators can concentrate on fixing problems. And they are accurate, credible services that organizations can count on.

Monitor from the end-user perspective

Keynote services monitor transactions as end-users experience them, from where they experience them.

Because geographic locations can translate into different user experiences, Keynote monitors transactions across all major Internet backbones from key geographic locations across the globe. Keynote has an unsurpassed global infrastructure of more than 1,600 measurement computers in 50 cities worldwide. These computers take more than 40 million Internet performance measurements every day.

Good coverage is often incorrectly defined as the number of locations where measurements are taken rather than the statistically accurate placement of measurement agents. Keynote has measurement agents in strategic backbone locations to provide accurate representations of user experiences. With Keynote services, you can avoid undetected outages from locations that are critical to your business.

The Keynote Transaction Perspective service monitors transactions using actual Microsoft Internet Explorer browsers to capture accurate views of your users' experiences. Transaction Perspective supports Internet Explorer 6.0, the predominant browser in use today. Keynote will continue to update the browser version used based on market adoption.

Transaction Perspective also monitors transactions in serial fashion. In other words, it captures only one measurement at a time to eliminate any "noise" from the measurement and ensure the most accurate representation of the transaction monitored. Using both Internet Explorer and serial performance measurements, Keynote delivers the highest fidelity possible for your Web transaction measurements.

Capture the end-to-end view

With Keynote services, you have an end-to-end view of online transactions. This approach gives you the most comprehensive view of how users experience transactions and where processes can break down.

Transaction Perspective realistically measures multi-protocol transactions that incorporate the most sophisticated Web transaction programming in use today, including Web services, WebDAV, ActiveX, dynamic date/time support, file upload, XML, Flash 6.0 plug-ins, and digital certificates.

Keynote services can also monitor single pages, such as home pages, to gather performance data for high-speed business connections (T1 lines) and consumer connections (DSL, cable) across major backbones.

Access an easy-to-use interface

Establishing Keynote service is effortless. Keynote consults with organizations to determine which transactions will be monitored and how. You do not need to devote valuable IT resources to deploying Keynote services.

For fast access to transaction performance information, Keynote offers MyKeynote™, an intuitive, customizable Web interface that provides access to a broad array of measurements in a single view.

Diagnose problems fast

Until you pinpoint the source of a problem, you cannot resolve it. In the time it takes you to identify problem spots in a transaction process, you can lose valuable time and money. Keynote transaction monitoring services help organizations identify problems quickly by providing detailed, end-to-end transaction information.

Keynote services also produce e-mail alarms with a direct link to the MyKeynote interface. Organizations are directed to a diagnostic view of the performance problem just by clicking a link in the alarm e-mail. You can discover what is causing the problem fast and spend more time fixing it.

One size does not fit all

Keynote offers transaction monitoring services to meet every need and every budget, including:

Transaction Perspective

- *Monitors critical “money-path” transactions from the end-user perspective*
- *Provides the most accurate, representative Web transaction measurement service available*
- *Uses the Internet Explorer browser to deliver the highest fidelity possible*
- *Offers advanced reporting, trending, and competitive analysis capabilities through our self-service portal*

Application Perspective

- *Offers high-frequency monitoring for the lowest price per data point*
- *Provides near-real-time tracking of performance and availability*
- *Uses over 50 measurement locations to give broad coverage at a cost-effective price*

Keynote helps optimize online transactions

By adopting the end-user perspective and capturing end-to-end details from key points around the globe, Keynote transaction monitoring services offer the credibility that businesses need. Keynote solutions also make transaction monitoring effortless with easy deployment and a straight-forward interface for ongoing monitoring.

As online transactions continue to proliferate and increase in complexity, Keynote is an ideal partner for optimizing e-business performance.



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