



## Case Study

# How Website Monitoring Saved an Online Auto Parts Retailer

**PROBLEM:** Customers complaining about site outages and slow site response times. Hosting company claiming that the problems had been resolved. Customers remaining dissatisfied.

**METHODOLOGY:** External website monitoring on a page-by-page basis at one-minute intervals pinpointed the problems.

**SOLUTIONS:** Realigning shared hosting, fixing database indexing, DNS server upgrade, altering the web host's BGP configuration and regular website monitoring.

**THE STORY:** Once seen as an alternative marketing channel, online shopping has carved its own niche in the marketplace. The online shopping sector has grown rapidly, outstripping other sectors and opening new business prospects. The factors contributing to the continuous growth of online shopping include wider product ranges, convenience, lower prices, and availability of clear product information. Recent large investments in e-commerce by companies large and small have further energized the sector and strengthened its roots.

This growth has not come easy. Although most shopping sites feel that they have rid themselves of persistent growing pains, some remain. A recent **Andersen Consulting Services survey** reveals that more than 25 percent of online shopping experiences fail during holiday seasons due to site outages.

**Another survey by the NDP Group** reveals that up to 23 percent of online shoppers still experience temporary website outages, late shipments, and customer service issues.

**Dotcom-Monitor website and network monitoring** specializes in ensuring performance and uptime in online transaction processes, including shopping carts, sign-ins, and form submission. By simulating end-use actions, Dotcom-Monitor.com verifies each step within a transaction, not only for proper content, but also for requested performance. If any test parameters fall outside of the specified range, responsible personnel are immediately notified.

One of Dotcom-Monitor's recent customers, a large online auto parts retailer, approached Dotcom-Monitor with concern about website performance issues. Even after aggressive marketing campaigns, this retailer of name brand parts was still noticing a decline in their online business. Customers persistently complained about site outages and slow site response times. Despite repeated complaints by the IT



## Case Study

department to the ASP provider and reassurances from the hosting company that the problems had been resolved, customers remained dissatisfied.

Realizing a potential disaster for their online business, the IT department sought a third-party external monitoring service provider to monitor their e-commerce site 24/7 and identify the issues and dependencies that were causing website outages.

After one-minute monitoring each day for 7 days, the following issues were identified:

**1. Slow Website Response** Dotcom-Monitor's "report by hour" feature discovered quickly the issues causing poor performance. The collected one-minute performance data was aggregated on an hourly basis into a single weekly report. This report provided summary statistics about transaction by hour. Information such as average response time (in seconds), required time to access the website, and the number of successes and failures, provided a clear picture about site performance during different daily intervals. Using Dotcom Monitor's proprietary algorithm, it was possible to calculate the site's slow response periods. Dotcom-Monitor found that, although the e-commerce site was hosted on a dedicated shared server, during certain times in a day, other applications on the server consumed most of its resources. This led to slow site response. This happened only during certain hours, as the conflicting application was run only a few times a day.

**2. Slow Web Page Response** The retailer's IT department also discovered that several pages within a transaction, such as shipping history and "Invoice printout" were extremely slow. They took a long time to load, causing shoppers to abandon the site and instead call customer service. Unfortunately, the other pages within the same transaction were extremely fast to load. Due to this discrepancy within the network, Dotcom-Monitor was able to identify the specific online pages that were slow and traced the problem to the database table that those pages were accessing. Once proper indexing was performed, the issue was resolved.

**3. Problem in Accessing the Website** During certain intervals in a day, the retailer's site became unaccessible altogether. A number of services, such as mail servers, websites, and proxy servers, would become unavailable to the online world. To make matters worse, the ISP could not find any issues, but customers were still complaining. After a "ping pong game" to determine the problems between the ISP and customers, Dotcom Monitor enables its "DNS Monitoring." Dotcom-Monitor tested the retailer's DNS servers by querying specified servers performing "IP resolution". Every minute, website monitoring showed that one DNS server was occasionally unable to resolve the address. This implied that the DNS server supporting the organization was not working consistently. The retailer upgraded the DNS server and the problem was resolved.



## Case Study

**4. Varying Website Response from Different Geographical Locations** Persistent monitoring showed that this retailer's shopping cart website responded at varying speeds from different locations. Some customers complained that the site took too long to open, while others had no issues. Using Dotcom-Monitor's "Report by Location" feature, which gathers data from multiple remote agents at different locations, a traceroute snapshot was recorded. This report was accompanied by the error message from every location where slowdown was detected. After analyzing the data, it was found that the ISP hosting the site used several providers that did not peer properly with certain networks. This network peering problem was identified and brought to the ISP. They took the necessary actions to resolve the problem by altering their BGP configuration.

**5. Website Downtime required frequent monitoring** The retailer's website occasionally suffered downtime, which led to customer dissatisfaction. The outages were mostly related to software glitches that the customer was unable to fix in a short period of time. These glitches usually required manual intervention. Enter Dotcom-Monitor. The goal to reduce downtime was to alert key personnel of any issue immediately. Once website monitoring detected any problems with the web server, immediate alert by phone and SMS would be sent to on-call personnel. This decreased downtime periods from an average of 25 minutes to less than 5 minutes.

In today's highly competitive environment, customer expectations about website availability and performance grow daily. What was once acceptable a few years back is no longer the case today. Website monitoring features, such as immediate alerts, detailed reports, and aggregated statistics, help clients find and address issues, and thus enhance the customer experience.

**External website monitoring services offered** by companies like Dotcom-Monitor have helped customers explore issues and discover otherwise elusive data required to take corrective actions well before receiving customer complaints. Dotcom-Monitor.com services extend into all industries. It is important to note that website monitoring services are a must for all mission-critical services, and are not just limited to the current example of shopping cart customers. In industries such as finance, insurance, medical, and manufacturing, or any industry that requires high website uptimes and excellent website response, it is becoming essential to employ external website monitoring services.



## Case Study

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### Dotcom-Monitor

**[www.dotcom-monitor.com](http://www.dotcom-monitor.com)**

From North America, Call Toll-Free: 1-888-479-0741

Fax: 1-888-794-3554

Outside North America: +1-952-513-4392

Australia: +61280147537

Israel +97237219351

Italy: +390699268221

Netherlands: +31202629651

United Kingdom: +448081203956

Dotcom-Monitor, 1001 Twelve Oaks Center Drive, Suite 1022, Minneapolis, MN 55391, USA

Dotcom-Monitor is a global leader and innovator in advanced website monitoring services. Founded in 1998, Dotcom-Monitor has helped more than 2,000 companies save money by ensuring maximum website uptime—at a cost up to 50 percent less than other services. Dotcom-Monitor watches businesses from the outside by simulating real-world, end-user actions. With monitoring stations located in major markets worldwide, Dotcom-Monitor ensures that clients are open for business around the world, 24 hours a day. No additional or no hardware is required to use Dotcom-Monitor's services. For more about Dotcom-Monitor, go to [www.dotcom-monitor.com](http://www.dotcom-monitor.com).

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