

Company

AutoTrader.com

Industry

Online Automotive Marketplace

Location

Global – United States

Application EnvironmentJ2EE - JBoss/Solaris/Oracle DB
Load Runner Test Suite**Challenge**

Accelerate isolation of root-cause to reduce mean-time-to-repair for performance or reliability issues

Solution

dynaTrace Diagnostics agents deployed in J2EE development and test environments

Results

dynaTrace Diagnostics enables AutoTrader.com to:

- Isolate performance issues earlier in the production lifecycle where cost of resolution isn't prohibitive
- Reduce time for root-cause isolation in code issues and inefficiencies from weeks to minutes
- Switch diagnostic profiles on-the-fly to drill deeper into application diagnostics without restart

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AutoTrader.com, created in 1997 and headquartered in Atlanta, Ga., is the Internet's leading auto classifieds marketplace and consumer information website. AutoTrader.com aggregates in a single location more than 3 million vehicle listings from 40,000 dealers and 250,000 private owners, which provide the largest selection of vehicles attracting about 14 million qualified buyers each month. Through innovative merchandising products such as multiple photos and comprehensive search functionality, AutoTrader.com unites buyer and seller online - dramatically improving the way people research, locate and advertise vehicles.

<http://www.autotrader.com/>

Challenge: AutoTrader.com aggregates an inventory of 3 million vehicles in an online marketplace viewed by about 14 million buyers every month – inventory that is constantly changing. Needless to say, application scalability is not an insignificant challenge.

The problem AutoTrader.com faced is that while they were able to generate load tests that approximate the types of stress that their portals face on a daily basis, they had little visibility into their applications under load to isolate performance issues. Such visibility is vital to the type of proactive application performance management that a highly-trafficked marketplace like AutoTrader.com needs to keep its customers – consumers and auto dealers – happy.

AutoTrader.com is well-known for its two flagship portals: the consumer-facing AutoTrader.com, and the dealer-only "Autotrader.com For Dealers" that manages inventory and promotions, as well as reporting to its 40,000 dealers on site traffic, hits, prospects, etc. The "Autotrader.com For Dealers" is architected using J2EE/JBoss running on Solaris, with Oracle on the database, and employing HP LoadRunner as a load test suite.

Leonard Fingerman, AutoTrader.com's Performance Engineer, discovered that a lack of visibility into performance-related bottlenecks could be avoided with an availability of a deep diagnostics tool, and sought out solutions from a number of vendors (Quest, Compuware and HP/Mercury) before choosing dynaTrace Diagnostics. "We depend on the reliability of our applications – increasing mean-time-between-failure is key to our business," Fingerman said. "The best way we've found to do this is by reducing mean-time-to-isolation earlier in the lifecycle. That way we can isolate failures where cost isn't prohibitive."

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"With other solutions we considered, you'd have to jump between different applications to see everything we see in the dynaTrace interface. Having all these different views in one dynamic interface was really attractive."

"I can isolate issues by any category I desire – web requests, database, memory, remoting – with any depth of detail needed. It's a total solution."

"When I notice something, I can switch diagnostic profiles on the fly and go deeper into the application without any restart."

"It works across the lifecycle. Developers can drill down into the heap dump to see what's in the heap, while QA and production can compare execution or response times for specific transactions."

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Solution: Employing lightweight dynaTrace Diagnostics agents in its J2EE development and test environments with HP/Mercury LoadRunner for load testing, Autotrader.com uses dynaTrace's PurePath Technology® to proactively seek out performance issues early in the lifecycle so as to minimize costs and ensure the highest level of performance in their dealer site or the Autotrader.com consumer-facing portal.

Results: According to industry research, software defects found in production can be anywhere from 80 to 1000 times more expensive than those isolated earlier in the application lifecycle.¹ "ROI plays a big role with the dynaTrace value proposition," AutoTrader.com's Fingerman said. "It gives developers and other pre-production technicians the ability to resolve issues earlier before they become crises."

"Figuring out the root cause is the most time-consuming issue; once you know the root cause the solution may not be easy, but at least you know it's feasible," said Fingerman. "dynaTrace's PurePath is really powerful technology - with dynaTrace, we found the most inefficient SQL queries as well as code redundancy in our application in minutes versus what used to take days or weeks. We can take guesswork out of the lifecycle and use dynaTrace as an analytical way of discovering inefficiencies before they become issues."

According to Fingerman, another benefit of the PurePath is its flexibility: "It gives you very deep diagnostics, as well as high-level views of the data," Fingerman said. "With dynaTrace you have the ability to go from a 10,000-foot view to a very granular view – down to code level – in a rapid, dynamic way in a single interface."

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dynaTrace Diagnostics is a total solution that enables users not only to monitor and diagnose production or other applications under load with low overhead, but also allows users to drill down far deeper on the fly. "When I notice something, I can switch diagnostic profiles on the fly," Fingerman said, "and go deeper into the application without any restart."

dynaTrace's lifecycle-spanning design also enables cross-functional teams to share PurePath data across departments and view that data in each's individual context, so AutoTrader.com's engineers all stay on the same page. "It's great across the lifecycle," Fingerman said. "Developers can drill down into the heap dump to see what's in the heap, while QA and production can compare execution or response times for specific transactions."

dynaTrace's PurePath provides users tasked with optimizing application performance across the lifecycle the full transaction path across all physical and logical server tiers, whether Java or .NET-based, as well as the full context information – down to the method call including arguments, logs, exceptions and user data – correlated to each individual transaction. "With multi-tier complexity growing in J2EE applications and architectures, such a solution is a must-have," said Fingerman. "dynaTrace is a necessity for a complex environment like ours."

"When you go to a doctor, you may have no idea where a symptom's coming from or why, and without something like an MRI, they often can't find the cause," Fingerman concluded. "dynaTrace is like an MRI – a full-body scan for mission-critical applications."

Please contact takeaction@dynatrace.com or visit www.dynatrace.com for further information

¹"Software Inspection," Tom Gilb and Dorothy Parker (Addison Wesley, 1993)