

Advance7 bulletin 22

ADVANCE KNOWLEDGE

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MAKING HEAVILY LOADED MICROSOFT SQL DATABASES PERFORM

Databases are a key component of today's multi-tier systems and Microsoft SQL Server is an increasingly popular choice for strategic applications. advance7 has consistently noticed that performance issues reported by clients in these systems are down to poor tuning of these databases.

Tuning can have a dramatic impact on the performance of heavily loaded SQL Server databases. For example, optimal index design can lead to massive improvement in overall application transaction times.

A key advantage of database tuning is that it's transparent to the application, so no code changes are needed. What's needed is an understanding of the overall workload to ensure improvements in one area don't have an adverse impact elsewhere.

Here is an example where we recently helped a major investment institution upgrade a business-critical call centre application. The business had an 8-fold increase in the number of clients that were serviced and as a result some queries were taking over five seconds while the agent was on the phone, keeping the customer waiting.

Using our unique problem resolution methodology meant we quickly identified the fault to a SQL Server database which was not performing well.

advance7 has developed an approach to database tuning that goes beyond traditional textbook solutions by allowing us to see the whole picture including a view of how queries are optimised by the database.

This allowed us to identify which specific queries were not optimised. By tuning the database indexes, we were able to reduce the query response times from 5 seconds to under 0.5 seconds. This problem would not have been picked up with standard database tuning procedures.

If you have any database performance issues that you would like to discuss please email Neil Hatton at: Neil.Hatton@advance7.com

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RECENT PROJECTS

Planning For New Applications

A leading UK utility company asked us to assess the impact of three new business applications prior to deployment. Our work ensured that the new applications did not impact existing systems and that they performed from Day One.

Document Management Stress Test

Our customer, one of the UK's leading legal companies, was

Optimising Benefit From Traffic Shaper

The customer is a brand-name food manufacturer. IT staff suspected that there were problems with the configuration of their Packeteer traffic shaping equipment. We studied operation of the equipment and recommended changes to optimise IT performance in the customer's environment.

Citrix Problems

A High Street store chain had struggled for eight weeks with two

about to upgrade to a multi-tiered document management system. They had two questions; would the system support the expected number of users and did the failover mechanism work correctly? advance7 used stress test and performance analysis techniques to provide the answers the customer needed.

Erratic Website Performance

A global insurance company had an intermittent intranet problem that was believed to be a bandwidth issue. advance7 consultants determined that the problem was actually due to a programming bug.

Citrix issues that were having significant impact on the business. Using our problem resolution method, RPR, we were able to solve both problems in a single day.

Latin America Data Replication

Our customer, an oil exploration and production company, needed to replicate business-critical data from London to Bogota to provide users with global access. advance7 consultants planned, implemented and tested the solution.

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