



VIRTUAL-DBA: SQL SERVER PERFORMANCE AIRLINE CUSTOMER

CHALLENGE

An airline data center client was migrating from stand-alone SQL Server database servers to a Virtual Machine (VM) environment on their own, and creating one “right-sized” VM for each database serving an application. Client staff decided to add a second application to a clustered service. After going live, users reported timeouts and dropped connections. The company asked XTIVIA to investigate and recommend a solution.

SOLUTION

Because the company was an existing Virtual-DBA remote database administration services client, XTIVIA had existing connections into the environment and could get engaged quickly. The clustered server had just 2 GB of RAM, which made memory the chief suspect for the server’s failing performance. XTIVIA conducted a two-hour trace using performance monitor to track memory utilization. As expected, the server was starved for available memory, which dropped frequently during the monitoring period to 20 MB. Other evidence that memory was the primary problem included excessive paging, a low number of free pages, high disk queue lengths and a buffer cache hit ratio averaging about 70%.

XTIVIA also examined SQL Server’s dynamic views for missing indexes and index fragmentation. Large indexes were heavily fragmented, and a number of indexes were available that could significantly improve performance.

Finally, XTIVIA noted that the four-CPU server had a single tempdb file, which resided on the same drive as the other data files.

RESULTS

XTIVIA recommended adding memory, creating six new indexes, implementing index maintenance, creating three additional tempdb files, and upgrading SQL Server® 2008 R2 to SP1. The client implemented all recommendations except for the SQL Server upgrade. These measures fixed the dropped connections and timeouts. XTIVIA used its documentation practices and expertise on server configuration and SQL Server troubleshooting to quickly diagnose and solve the problem.

XTIVIA OVERVIEW

Since 1992, XTIVIA has established a proven, global reputation as a company delivering cutting-edge professional solutions to our clients’ specific requirements, regardless of the complexity of the projects. XTIVIA’s success has stemmed from a proven ability to deliver quality professional services, allowing the client to leverage technology successfully, competitively, and profitably. XTIVIA has received additional awards this year from Liferay, CIO Review and Inc. 5000. XTIVIA has offices in Colorado, New York, New Jersey, Missouri and Texas.

DATABASE OVERVIEW

XTIVIA is at the forefront of a new generation of information technology services companies focused on value, speed of delivery and high-performance technology solutions. We combine people, business process and advanced technology in a comprehensive set of IT services.

Our database management team is comprised of seasoned professionals who possess the business background, project management experience and technology expertise to deliver business-critical technology solutions. These solutions include a variety of platforms, devices and networks, including integration with legacy systems, development of business applications and web-based functionality.

XTIVIA’s database services can be customized to meet the unique needs of your business. Our knowledgeable staff of database experts is available for long-term or short-term assignments to meet your database needs.

KEY COMPONENTS

DATABASE

Microsoft® SQL Server®

SERVICES

SQL Server DBA

Diagnostics and Monitoring

Performance Tuning

