Top 5 Ways to Scale SQL without New Hardware

EXECUTIVE SUMMARY

As your business grows, the demands on your business-critical applications grow, too. Problems like spotty application performance and slow page load time mean customers are hammering your SQL infrastructure. And while life for your competitors is moving along at a slow, steady pace, you're busting at the seams as customer traffic maxes out your existing framework. Congratulations. Now what?

If you take the traditional route to solve the problem, you'll scale up, scale out or maybe just rely on caching. Have you checked the cost of server hardware lately? Get ready; you'll need it to scale up. And additional licensing, too. Scaling out lets you take baby steps in the right direction but it requires major code changes to your precious applications, and if any of them are off-the-shelf, you won't have access to do that, anyway. Caching can add performance, but again, expect to touch every application to add new logic.

You need a cost effective, seamless method of solving your database scalability problem that doesn't require your team to get elbow-deep to implement it.

Enter database load balancing software. It sits transparently between applications and your SQL databases, lets you scale out for read/write splits, offers load balancing and real-time visibility so when customers come calling in record numbers, you'll see exactly how they're knocking down the door and can respond immediately. Here's how:

Smart splitting
ScaleArc's database load balancing software detects the difference between read and write queries (or stored procedures) without additional application changes. Reads go to secondary servers and writes to the primary. Don't worry about the lag between the two. You'll dictate the threshold, the software monitors it and sends queries only to servers with current data.

Balance the loads
Load balancing can boost application performance and increase uptime. Database load balancing software monitors the replication lag between primary and secondary servers and uses that information to intelligently distribute SQL queries across secondary servers, sending reads only to servers with current data. Because consistency requirements vary between applications – for example, a real-time massively multiplayer online game (MMOG) versus a content management system (CMS) – database load balancing software allows you to set up the appropriate replication lag threshold for each application's data consistency needs.

Manage the connections
In the old model, keeping database servers from overloading or crashing meant DBAs kept the maximum number of connections low. Database load balancing software offers a newer, improved solution. Connection offload, pooling and surge queues let organizations maintain more concurrent client connections with fewer available server connections.

Know your numbers
To properly measure the success of any new addition to your infrastructure, you need hard numbers. ScaleArc's real-time analytics gives you instant visibility into your SQL traffic. You'll see potential bottlenecks before they arrive and be able to troubleshoot proactively. With real data on everything from connections to caching to queries, you can now use solid numbers to back up future business decisions and make auditing faster and easier.

Accelerate performance with caching
To increase the number of transactions an existing server can handle, ScaleArc's in-memory cache serves up responses to frequently executed SQL queries, accelerating application performance and reducing the load on database servers. ScaleArc lets you add or remove caching rules on the fly in seconds, as traffic dictates, with no application changes.

To get more in-depth information on Scaling SQL without new hardware, click here to download the full whitepaper. »