The Top 5 Challenges in Upgrading to SQL Server 2016

And How to Overcome Them

EXECUTIVE SUMMARY

The race to upgrade to Modern SQL – Microsoft SQL Server 2012, 2014, and 2016 – has begun. Organizations are well versed on the benefits waiting at the finish line: the ever-reliable AlwaysOn failover, having multiple, current copies of data at the ready and scaling out like never before. Using more resources on fewer servers means a competitive edge and maybe even a rare pat on the back from the C-Suite. Here are the five most common challenges to leverage SQL Server 2016's best new features.

1. Load balancing and read/write split

With AlwaysOn, those secondary servers waiting in the wings are never idle. Instead, they're handling read traffic allowing your infrastructure to cover more ground by responding faster and handling a bigger load. But getting that benefit requires developers to modify applications and even then, Modern SQL rolls over to any extra server – not necessarily the closest or the least crowded one. With so many caveats, are the benefits worth the pain and risk of rewriting the whole application?

2. Replication-aware load balancing

AlwaysOn constantly replicates data from primary to secondary servers, giving users easy access to consume information from another source. But how quickly is that information changing? With the inherent replication lag, organizations must determine how big a lag is acceptable for their business and mitigate potential consequences of consuming stale data.

3. Core-based licensing costs

Licensing costs only go in one direction: Up. The new licensing models for Modern SQL are no exception. They're core-based (not socket) and every active server (even secondary ones) requires its own license. Now you're stuck: purchase fewer cores and reduce your power? Suck it up and pay more, reducing your ROI?

4. Lack of visibility and control at a cluster level

A common complaint with SQL servers is 'You can't fix what you can't see.' The Modern SQL multi-server environment exacerbates the problem of zero visibility into system performance when you need it most. Even the tools built for 2008 aren't a good fit since they run on a single server.

5. Scalability

Modern SQL can scale past a single data center, but for failover purposes, all the servers have to be in the same location. Even VNN (Virtual Network Name, aka Availability Group Listener) can only failover within a single data center.

Big rewards come with big risks. Upgrades are costly in terms of licensing and storage not to mention the hours your app dev resources will need to support those new features. It's not easy. Nothing worthwhile ever is. But don't assume you're going to need to modify application level code or database layers. Database load balancing software allows your team to use AlwaysOn and other beneficial features of Modern SQL with no code changes.

To get more in-depth information about these five most common challenges and their exceptionally practical solutions, click here to download the whitepaper in its entirety. »

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