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If you know someone who you think would benefit from being an Insider, feel free to forward this PDF to them so they can sign up here.

Quick Tips for our Insider friends!

Hey Insiders!

This bi-weekly Quick Tips is coming to you from Belize where we're on our first dive trip for over a year and taking a long-needed vacation. Watch my blog for a photos blog post sometime in December. Once we get back we'll be heading almost straight own to Atlanta for our final Immersion Events of 2011 – and what a year it's been for classes with 12 altogether!

The most recent book I've read is Orhan Pamuk's *My Name Is Red*. This is an excellent book set in Istanbul in the 1500s and is a murder-mystery involving a set of miniaturists and illustrators commissioned to illustrate a new book for the sultan. The city and society are richly described in this book which gets more complex as it goes on. Definitely a story to concentrate on and not light reading at all, but strongly recommended because of it.

Check out the final part of the newsletter for details of our **new remote DBA service**, plus our projected class schedule through August 2012. Our winter classes are now open for registration and our spring classes are coming soon! If you're planning your budget – our prices for US classes will remain the same for all of 2012.

Please let us know if you liked what you read/saw here and/or have any suggestions for future Quick Tips.

Note: you can get all the prior Insider newsletters here.

Paul's Ponderings

An interesting trend that I've noticed over the last few years is that company managers are more willing to sign-off on buying a newer, larger server to try to solve performance issues than they are to give their staff time (or consulting budget) to investigate and solve the underlying problem.

Why is this?

I think many companies don't realize that poor performance is often the symptom of a fundamental problem with the way SQL Server is being used (or should that be abused?). As a result, they assume that they must have reached the capability limit of their current hardware. It's similar to the 'knee-jerk' performance tuning methodology I railed against in the second Insider newsletter.

In all the consulting engagements we've done this year where hardware upgrades were being suggested, we showed how it would be far cheaper and more beneficial to solve the underlying performance problems. In fact a couple of times we've seen new clients post-upgrade where performance has actually *decreased* because the extra CPUs (and hence possibility of a higher number of concurrent queries) have caused much higher contention because of poor T-SQL programming.

Some simple things to look for:

- Look in `sys.dm_os_waiting_tasks` to see where time is being spent waiting for resources. If all the time is spent waiting for client apps to process data, beefing up the server hardware isn't going to make an iota of difference.
- Examine I/O subsystem latencies using `sys.dm_io_virtual_file_stats` to see if the I/O subsystem is being driven too hard, or maybe tempdb is a bottleneck.
- Look at Page Life Expectancy to see if the buffer pool is constantly under memory pressure. Remember that momentary dips are ok, and 300 is NOT a good threshold!
- Look at the missing index DMVs to see whether very-high impact indexes are missing.
- Look at `sys.dm_db_index_usage_stats` to see whether you've got a ton of indexes being maintained but not used.

Many times simple changes can have a large effect on SQL Server's performance. Sometimes the data volume has simply grown and some more server memory is needed to take the pressure off the buffer pool. Sometimes the I/O subsystem really is in need of a boost. But it's not very often that we see a bigger, faster server is required.

Call to action: If you're considering purchasing a bigger server to try to alleviate performance issues, think again. Consider where the performance problems are and other ways to solve them before going to the expense of buying new hardware which may just postpone the inevitable re-architecture or performance work. Spend your time and money more wisely.

I'm really interested to know your thoughts on solving performance issues (or not!) with hardware—feel free to drop me a line, confidentially as always.

Video Demo

We're on vacation this week so instead of recording a demo video I'd like to point you at a pre-recorded one. As many of you may know, SQLskills recorded 40 hours of MCM-level videos for Microsoft in December 2010 and they're all freely available online (see here). The one I'd like to recommend to you is Kimberly's excellent 50-minute lecture/demo video on partial database availability and online piecemeal restore, which complements the newsletter from October where I discussed partitioning.
You can get to the video in a variety of formats here. Enjoy!

SQLskills Offerings

We've just launched a new "remote DBA" service where we provide repeated mini-health checks on regular intervals (once a server has been initially health-checked) plus automated monitoring of SQL Server for problems – and what to do when a problem inevitably *does* arise. This is an excellent way to gain access to our team's incomparable expertise and experience – especially if you don't have a full-time DBA on staff. However, even if you do, this gives you an additional set of expert eyes to watch over your critical data.

See here for more details.

Registrations are continuing for our two remaining Immersion Events left this year in Atlanta, GA the week of December 5. During that week, we are running both our Internals and Performance (IE1) plus a *new* BI Immersion Event (IEBI).

For everyone that's been asking – YES – we will be offering all four of our Immersion Events in 2012 with these classes being added throughout the remainder of the year. Here's a list of some of the classes and cities we're targeting:

- Available for registration **NOW**:
    - February 27 – March 2, 2012: Internals and Performance (IE1) in Tampa, FL
    - March 5-9, 2012: Performance Tuning (IE2) in Tampa, FL
    - March 12-16, 2012: High Availability/Disaster Recovery (IE3) in Tampa, FL
- Available for registration December/January
    - April 2012: IE1 & IE2 in Chicago, IL
    - May 2012: IE1 & IE2 in London, UK
    - August 2012: IE1-IE2-IE3-IE4 in Redmond/Bellevue (WA) again!

See here for all the details.

<u>Summary</u>

We hope you've enjoyed this issue - we really enjoy putting these together.

If there is anything else you're interested in, we'd love to hear from you - drop us a line.

Thanks - Paul and Kimberly