(April 15th, 2013)

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 newsletter is coming to you from Redmond where we've just returned from Las Vegas last week where we had a very successful time with our brand new SQLintersection Conference! Save the date for the Fall Show – the week of October 28th in Las Vegas again.

It's only two weeks until we're off to Chicago for four weeks of back-to-back sold out classes. Our London classes in June are all more than half full so make sure you don't delay registering and end up being disappointed!

The most recent book I've read is Robert Hutchinson's *Elizabeth's Spymaster*. The book is an excellent biography of Sir Francis Walsingham, who was the "Secretary of State" of Queen Elizabeth I during the second half of the 1500s. What he actually did was run a very extensive network of spies, both in England and abroad, to help protect Elizabeth's throne and the new Protestant state in England. He was instrumental in bringing about the execution of Mary, Queen of Scots and thwarting the attempted invasion of England using the Spanish Armada. Chock full of quotes from actual people at the time, this book was really interesting so I strongly recommend it.

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

At the end of every conference Kimberly and I organize, we have a kind of 'follow-the-rabbit' session where attendees can ask anything. We did one last week at SQLintersection and one of the questions that came up was "what are some of the lesser known features in SQL Server Enterprise Edition?"

I talked about three features with the session attendees and I thought they would make a good editorial for today's newsletter.

The first feature I mentioned was merry-go-round scans. This is a nifty thing that the Storage Engine does to avoid buffer pool thrashing. If a query is doing a large, allocation-order scan of a table and another query starts doing the same thing, both queries share work being done in the Storage Engine. This means there isn't one query reading data into the buffer pool from the start

of the table while another query is reading data into the buffer pool from another portion of the table – and both competing to free pages in the buffer pool to read data into. You can read more about this on MSDN here.

The second feature I discussed was a "benchmark special" that was put into the Storage Engine to support the TPCH benchmark, called linear interpolation. This allows the Storage Engine to skip doing binary searches on index and data pages to find a particular row. It works with same-size records with monotonically increasing keys. Linear interpolation coefficients are calculated to allow the recording-finding code to immediately jump to the desired key value on a page, without having to search. You can read about this a little more in this blog post from Paul White.

The last feature I touched on was large page support. This is enabled using trace flag 834 and is described in KB 920093. It increases the size of each chunk of memory that SQL Server gets from Windows so reducing the number of "pointers" to these chunks of memory. Each "pointer" is called a translation look-aside entry and these are cached in the CPU in a translation look-aside buffer (TLB). Having fewer TLB entries helps reduce TLB misses in the CPU, which can lead to a performance gain, especially on 64-bit systems. There's a potential downside to this though which can slow down SQL Server startup – see this blog post by CSS Escalation Engineer Bob Ward for much more detail.

You can read more about Enterprise Edition features in a blog post series by our friend Nacho Portillo from Product Support in Europe – see here.

Call to action: If you're running on Enterprise Edition, I bet there are some features that you could make good use of that you don't know exist. Check out the features listed in Nacho's post and also on MSDN here to make sure that you're getting the most out of your license investment. And if you're considering buying Enterprise Edition but don't think it's worth it, I bet there are some features that could tip the balance and make investing in Enterprise Edition worthwhile.

I'm curious to hear your thoughts about Enterprise Edition and which features drove you to buy it, so please feel free to drop me a line, treated confidentially of course.

<u>Video Demo</u>

From Glenn:

In this video, I demonstrate some features of SQL Server Management Studio, including how to use Registered Server Groups and connection color coding to help you avoid making the common mistake of accidentally running a command on the wrong server.

The video is about 4 minutes long and you can get it:

- In WMV format here
- In MOV format here

Enjoy!

SQLskills Offerings

All of our 2013 public classes are selling out fast! Based on requests from people, attendee ratings of the hotels we used last year, and the ease of using hotels we know, we're using the same locations again. This means we cover both sides of the US, central US, and Europe.

Please know that these classes are final as the hotel contracts are signed, and the classes will not be cancelled or moved for any reason, nor will the dates change. We are not planning any other locations for 2013 at this time.

- April 29-May 3, 2013: Internals and Performance (**IE1**) in Chicago, IL *SOLD OUT!*
- April 29-May 3, 2013: Immersion Event for BI (**IEBI**) in Chicago, IL *SOLD OUT!*
- May 6-10, 2013: Performance Tuning (**IE2**) in Chicago, IL – USA *SOLD OUT!*
- May 6-10, 2013: Immersion Event for BI (**IEBI**) in Chicago, IL *SOLD OUT!*
- May 13-17, 2013: High Availability/Disaster Recovery (**IE3**), Chicago *1 SEAT LEFT!*
- May 13-17, 2013: Immersion Event for Developers (**IEDev**) in Chicago, IL *SOLD OUT!*
- May 20-24, 2013: Internals and Performance (**IE1**), Chicago, IL *1 SEAT LEFT!*
- May 20-24, 2013: Development Support (**IE4**) in Chicago, IL *SOLD OUT!*
- June 3-7, 2013: Internals and Performance (**IE1**) in London – UK
- June 10-14, 2013: Performance Tuning (**IE2**) in London – UK
- June 17-21, 2013: High Availability & Disaster Recovery (**IE3**) in London – UK
- September 16-20, 2013: Internals and Performance (**IE1**) in Bellevue, WA – USA
- September 23-27, 2013: Performance Tuning (**IE2**) in Bellevue, WA – USA

See here for the main Immersion Event Calendar page that allows you to drill through to each class for more details and registration links.

So, that's it for now. We hope to see you soon!

Summary

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

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