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Quick Tips for our Insider friends!

Hey Insiders!

This bi-weekly Quick Tips is coming to you from Las Vegas where we're here (with Jonathan too) for the bi-annual SQL Connections conference. We'd like to tell you more but what happens in Vegas… ☺

We're continuing our recording activities and another Pluralsight course went live last week – Glenn's *Understanding Server Hardware* – and two more are in final production - Joe's *SQL Server: Common Performance Issue Patterns* and my *SQL Server: Understanding Logging, Recovery, and the Transaction Log* – making eleven courses altogether, with 6 more coming by the end of the year.

The most recent book I've read is Gore Vidal's *Empire* – the fourth in his celebrated Narratives of Empire series, which I followed on from the book I told you about last time, his *1876*. This book covers the politics around the end of the 19th Century, including the aftermath of the war with Spain and the annexation of the Philippines. It's based around a female descendant of Aaron Burr who buys a Washington newspaper and turns it around, to the chagrin of magnate William Randolph Hearst. Vidal's books are an excellent way to learn history while being entertained and I strongly recommend this one, as I do all of Vidal's books.

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

If you haven't started using Extended Events, it's high time that you did.

Now that SQL Trace has been deprecated officially in SQL Server 2012, Extended Events are the way forward for serious troubleshooting. They started off from humble beginnings in SQL Server 2008 (I helped design them when I was responsible for the Storage Engine back then) and now in SQL Server 2012 you can find out nearly anything about what's happening in SQL Server using them.

As with any new technology, there's a learning curve, and it's a lot less steep in SQL Server 2012 than in previous versions, with the addition of the GUI built in to SSMS and all the pre-defined templates you can use. You can even look at the events being captured without having to mess around with XQuery and XML.

But this is starting to sound like marketing…

Here are some of the real-world things we've used Extended Events for on client systems recently:

- Figuring out the exact statement that causes lock escalation on a particular table that was causing a queuing system to be blocked
- Figuring out the statements causing query execution timeouts (this is a common one we use) using a pair_matching target
- Figuring out the statements causing index page splits by filtering on the transaction_log event (fires each time a log record is generated) for the LOP_DELETE_SPLIT log record
- Figuring out what is causing tempdb allocation bitmap contention
- Figuring out what waits are being generated by a particular SQL Agent job each time it runs
- Figuring out which queries are spiking the CPU
- Figuring out the usage statistics of particular databases on multi-tenant systems

And don't get me started on the value of Extended Events as a tool to explore the workings and behaviors of SQL Server (oh, how I wish I still had source-code access!). We use them extensively on client systems and during our research. And, there's really no limit to their functionality and capabilities.

Where do you start?

There is a plethora of information available online to help you get started using them. I've blogged and written about them a bit (see my Extended Events blog category, including the TechNet Magazine article I wrote back in 2008), but the world master is Jonathan. He wrote the whitepaper on Extended Events and his blog category has more than 50 in-depth posts with copious examples and useful scripts. He also has a Pluralsight course – *SQL Server: Introduction to Extended Events* – and another one in the works for later this year – *SQL Server: Advanced Extended Events*. So much information to help you!

Call to action: The next time you're wondering how to figure out what's going on when a problem occurs, consider using Extended Events to find out. You'll need a bit of time to get up to speed with the capabilities of them, but you'll be amazed at how quickly you can put together a really powerful troubleshooting mechanism once you get the hang of it. And make sure to check out all Jonathan's posts – there are a bunch of scripts in there that you can use without any changes at all that will save you time and hassle.

I'm curious to hear your thoughts about Extended Events, how you've used them, why you haven't used them yet, or anything else, so please feel free to drop me a line, treated confidentially of course.

Video Demo

From Erin Stellato:

"With great power comes great responsibility." - Uncle Ben in *Spiderman* (2002)

Database Administrators know this well, and therefore limit what logins are granted the sysadmin role for a SQL Server instance. It's possible, however, that when trying to protect an instance, a DBA goes too far and accidentally removes the sysadmin role for *all* logins. In fact, a DBA may find that they have locked down the system so much that no one has the ability to create a new login or change permissions. As a DBA, what do you do? You may think you're resigned to moving all the databases to a new instance and recreating everything else such as jobs and logins. But that is *not* the only option. It is possible to regain the access that's needed, and in this video I will show you how.

The video is just over 5 minutes log and I produced the video in WMV and MOV formats so everyone can watch. You can get the videos:

- For WMV: [here](#)
- For MOV: [here](#)

And you can get the demo code [here](#).

Enjoy!

SQLskills Offerings

All of our 2013 public classes are now open for registration! Based on requests from people, attendee ratings of the hotels we used this 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.

- February 4-8, 2013: Internals and Performance (**IE1**) in Tampa, FL – USA
- February 11-15, 2013: Performance Tuning (**IE2**) in Tampa, FL – USA
- April 29-May 3, 2013: Internals and Performance (**IE1**) in Chicago, IL – USA
- April 29-May 3, 2013: Immersion Event for Business Intelligence (**IEBI**) in Chicago, IL – USA (co-located but in a different training room. Attendance is for one event or the other; these cannot be combined for one attendee where they move back/forth.)
- May 6-10, 2013: Performance Tuning (**IE2**) in Chicago, IL – USA
- May 13-17, 2013: High Availability & Disaster Recovery (**IE3**) in Chicago, IL – USA

- May 13-17, 2013: Immersion Event for Developers (**IEDev**) in Chicago, IL – USA (co-located but in a different training room. Attendance is for one event or the other; these cannot be combined for one attendee where they move back/forth.)
- May 20-24, 2013: Development Support (**IE4**) in Chicago, IL – USA
- 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
- June 24-28, 2013: Development Support (**IE4**) 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

One thing to note is that the course prices have increased slightly for 2013, reflecting increasing food, logistics, travel, and accommodation costs. We kept our prices the same for the last three years but now we have to raise them a little.

For US classes, the new early-bird price is US$3,295 and the full-price is US$3,795. However, for all registrations received before January 1, 2013, and for all past attendees in the 12 months prior to registration, we will only charge the 2012 early bird price of US$2,995 – super-early-bird! – **get your registrations in early!**

For UK classes, the new early-bird price is US$3,795 and the full-price is US$4,295. There is a similar super-early-bird and past-attendee price equal to the 2012 UK early bird price of US$3,495 – **again, get your registrations in early!**

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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