(June 4th, 2019)

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

Note: As an Insider, you can read all prior Insider newsletters here.

Quick Tips for our Insider friends!

Hey Insiders,

This newsletter is coming to you from Redmond, where we're gearing up to head to Orlando on Friday for our SQLintersection conference – see below – you've still got time to register!

Last Friday, we had the great honor to be presented with a Patriot Award, for supporting the Army Reserve activities of Sergeant First Class Jonathan Kehayias. Jon flew out to Redmond for the ceremony and you can read about it and see photos in my blog post here.

SQLskills News

SQLintersection is coming up next week: If you're looking for a great place to learn new features in 2017, upcoming cool stuff in 2019 and best practices in troubleshooting and performance, then join us in Orlando next week for our 12th SQLintersection conference! SQLintersection will help you leverage the most important new features in 2016 and higher as well as show you performance strategies to get more out of your servers!

And for this show, we've got an absolutely incredible line-up! Check out the website to view our pre-conference (6 workshops over 2 pre-conference days) and two post-conference workshops as well as our spectacular line-up including Bob Ward, Pedro Lopes, Buck Woody, Brent Ozar, and most of our SQLskills team! We hope to see you there. You can also check out my blog post about the event here.

Live, IN-PERSON classes: we have two more in-person classes this year, in Chicago in October:

- IEPTO1: Performance Tuning and Optimization – October 7-11
- IEAzure: Azure SQL Database, Azure VMs, Azure Managed Instance – October 7-10

These will be our only, in-person Immersion Events running this Fall and you can get all the details and registration information through the class schedule page here.

Live, ONLINE classes: we're planning to announce our Fall line-up of online courses at the start of the summer.

Finally, even if you can't join us in person, I've put out a call for **2019 remote user group sessions** and we've got 43 scheduled this year already! If you'd like one of us to present for your user group, check out my blog post here.

Book Review

I haven't finished any books since the last newsletter, so here's a review of a book I read a few years ago; Amy Tan's *The Hundred Secret Senses*. This is another excellent novel by Tan and was a real page turner. As with many of Tan's novels, it's a twin story based in the present and in the Chinese past, with someone recounting the past story. The twist in this case is that the storyteller is someone who lived the previous life she's recounting, and can also see Yin ghosts. It's expertly told, especially the trip to the Chinese village and the events there. Highly recommended.

The Curious Case of…

This section of the newsletter explains recent problems we've helped with on client systems; they might be something you're experiencing too.

How can Query Store lead to really long failover/startup times?

Read about the answer in my blog post here.

Ponderings…

(This time from Paul… I was going to write an editorial about why it's so important to support people in your life – loved ones, friends, and co-workers, and then I remembered a newsletter from 2012 on why DBAs are grumpy – because they're the Default Blame Acceptors and often don't get support from others in their organization. Here it is for you, with comments. Enjoy!)

Last week I was teaching the "SQL Server Day" of the SharePoint MCM certification class on the Microsoft campus in Redmond. I always like to start the day with an open Q&A session and this one lasted for a few hours! My typical plan is that I write a list of everything the SharePoint gurus want to know about SQL Server that I don't cover in my slide deck (which is logging/recovery, backup/restore, and HA/DR) and then I open the floor.

Edit: Sadly the whole MCM program was canceled by Microsoft in October 2012, but I know many people in the SQL Server world who qualified and still wear the MCM as a badge of pride!

This time, there was a new and interesting topic of discussion. The question was 'why are DBAs so grumpy all the time?' This really took me by surprise, and then a few other people in the room (of 27) agreed. So I wrote it down and eventually got to it as I worked down the list of topics.

Edit: sometimes it's not just grumpy… Grant Fritchey, the current PASS President is known jokingly as The Scary DBA. ☺

My explanation started by writing the old "DBA = Default Blame Acceptor" on the whiteboard, which got a round of laughs, and then explaining how performance issues with applications involving a database are often attributed to something being wrong with the database server first. SQL Server is guilty until proven innocent, which makes DBAs grumpy.

I can imagine SharePoint admins complaining about SQL Server being the cause of poor SharePoint performance, when really the cause is that SharePoint makes poor use of SQL Server: from the use of random GUIDs as cluster keys to having MAXDOP=1 hints on many of their sprocs, and finally through the weird database maintenance practices it has.

Edit: SharePoint's much better today…wait, no it isn't. ☹

I touched somewhat on poor vendor guidance back in the first February [newsletter](), and poor use of SQL Server really goes hand-in-hand with that. People not understanding the best way to perform a task using SQL Server leads to poor T-SQL programming practices, RBAR (row-by-agonizing-row) application data processing, useless nonclustered indexes, and many other causes of poor performance. I'm not saying that SharePoint has all of these things but I do think that its things like these that cause SQL Server to get blamed (and subsequently make the DBAs be grumpy).

Is the root cause of the problem really SQL Server? Many times the answer is no – it's the *use* of SQL Server that is incorrect in some way that causes things to run slowly. Having said that though, how SQL Server does things is NOT always obvious (far from it) and so more testing is required. Unfortunately, it's not always done.

Often code is just 'thrown over the wall' from development and the DBA has to get it to run, get it to run reliably, and get it to run quickly – which should be responsibility of the developers/testers.

No wonder DBAs are often seen as grumpy!

But consider this if you're a DBA – have you ever tried to educate the developers on the best practices to use? Have you put together a set of test primitives that can be used to measure response times through portions of the end-to-end application so people can tell where the bottleneck is? Have you figured out how to show the SAN admin that SQL Server is seeing long I/O latencies but isn't issuing huge amounts of I/O? Have you shown them what you know? Have you cross-trained them? Have you sat down and really chatted with them about what does

work and what doesn't – and why? A little education can go a long way to warding off people blaming the database server.

Edit: and now we're at the crux of the matter. Mutual support between developers and DBAs and storage admins and architects is the key to getting it all right. Remember – you're all working for the same company with the same business goals, so it makes sense to cooperate and give each other support!

At some clients I've seen monitors in the middle of the office displaying real-time metrics about the database server and other parts of the infrastructure. This brings all the performance metrics out in the open so everyone can see where a bottleneck is if one develops and because the information is out there, it allows collaborative discussions rather than getting into the blame game.

Edit: unfortunately, this is still a rare thing to see.

Call to action for non-DBAs: Next time you're going to blame the database server for a problem, think long and hard about *why* you think it's the database server and not some other part of the environment, and be prepared to explain what you've done that shows it's the database server. "Innocent until proven guilty", not the other way around: the DBA shouldn't always have to prove why it *isn't* the database server.

Call to action for DBAs: Next time you have to defend SQL Server from groundless accusations of guilt, think about how you can prevent the accusations next time (using some of the ideas above), and try to put the burden of proof on the accuser. Weekly informal education sessions where you explain a topic to the developers (and vice-versa) can work wonders for cross-team collaboration and make discussions about bottlenecks much less stressful and more productive.

Glenn's Tech Insights

Recent news and views from the hardware and Windows worlds that we think will be interesting to SQL Server community members.

In Glenn's regular roundup of tech news this time he talks about the following:

- Announcements from AMD at Computex 2019
- Corsair's new Force Series MP600 PCIe 4.0 SSD

Check it all out on his blog here.

#TBT

(Turn Back Time…) Blog posts we've published since the previous newsletter plus some older resources we've referred to recently that you may find useful.

The #TBT this time is deadlocks so here are some resources for you:

- Jonathan's Pluralsight courses: *SQL Server: Deadlock Analysis and Prevention*
- The deadlock entry from our Accidental DBA blog-post series
- Jonathan's very long SimpleTalk article on *Handling Deadlocks in SQL Server*, which is an excerpt from his popular (and free) ebook *Troubleshooting SQL Server: A Guide for the Accidental DBA*

Here are a few of the blog posts we've published since the last newsletter:

- Paul: *Honored to receive a Patriot Award*
- Erin: *Query Store in SQL Server 2019 (CTP 3.0)*
- Erin: *SQL Server Plan Cache Limits*
- Glenn: *SQL Server Diagnostic Information Queries for May 2019*
- Tim: *SQLintersection Spring 2019 Conference*

I hope you find these useful and interesting!

Video Demo

In this Insider video, Glenn goes into details of AMD's newest processors that were announced at Computex in Taipei last week. It's important to know about these as the architecture is the same as in their upcoming server processors and for the first time AMD is releasing a processor that has faster single-threaded and multi-threaded performance than Intel, a crucial metric for general SQL Server workload performance.

The video is about 5 minutes long and you can get it here.

The slide deck PDF is here.

Enjoy!

Upcoming SQLskills Events

Our next in-person event is our twice-yearly SQLintersection conference NEXT WEEK and in Orlando, FL (see here for details of the June show). Conferences are a great way to learn "nuggets" about a large variety of features and best practices so that you can get amazing ROI out of one week! You should try and "sample" as many new topics / features as possible and get your lower level / junior DBAs to sit through all of the core / foundational topics. This is an

amazing way to bond with your team members as well as "divide and conquer" the plethora of topics and materials presented!

And, of course, another big benefit from in-person events is networking! Between our evening event: SQLafterDark and the fact that SQLintersection is a smaller show with more question-friendly sessions, this is the place where you can really get your questions answered! Kimberly and I even spend our entire day (incl. lunch!) in the session rooms chatting with attendees and discussing their environment/concerns and if we can't help you get your issues solved – we'll introduce you to the speaker that can!

We always have great fun at SQLintersection; we hope to meet/see you there some day! Check out our "closing Q&A sessions" recorded as podcasts for RunAs Radio and hosted by the incredible Richard Campbell (also of DotNetRocks):

- Fall 2013 SQLintersection here: http://www.runasradio.com/Shows/Show/341
- Spring 2014 SQLintersection here: http://www.runasradio.com/Shows/Show/369
- Fall 2014 SQLintersection here: http://www.runasradio.com/Shows/Show/397
- Spring 2015 SQLintersection here: http://www.runasradio.com/Shows/Show/423
- Fall 2015 SQLintersection here: http://www.runasradio.com/Shows/Show/447
- Spring 2016 SQLintersection here: http://www.runasradio.com/Shows/Show/474
- Fall 2016 SQLintersection here: http://runasradio.com/Shows/Show/506
- Spring 2017 SQLintersection here: http://runasradio.com/Shows/Show/536
- Fall 2017 SQLintersection here: http://www.runasradio.com/Shows/Show/558
- Spring 2018 SQLintersection here: http://www.runasradio.com/Shows/Show/582
- Fall 2018 SQLintersection here: http://www.runasradio.com/Shows/Show/619

To help your boss understand the importance of focused, technical training, we've also added a few items to help you justify spending your training dollars with us:

- Letter to your boss explaining why SQLskills training is worthwhile
- So why do you want to come to our training? And the winners are…
- Community blog posts about our classes
- Immersion Event FAQ

LIVE, IN-PERSON Immersion Events:

Chicago, IL, October 2019

- **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1
  - o October 7-11
- **IEAzure**: Immersion Event on Azure SQL Database, Azure VMs, and Azure Managed Instance
  - o October 7-10

LIVE, ONLINE Immersion Events:

- The Fall class lineup will be announced at the start of the summer.

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

<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

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