

(April 27th, 2015)

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 Chicago, where Kimberly and I are in the middle of day 1 of our 5-day IEPTO1 class, and Jon and Erin are starting their 3-day IE0 class. With three weeks of classes and SQLIntersection immediately afterwards, we've got a busy month ahead!

Our Chicago classes are almost all sold out, with a few seats remaining only in our IEHADR and IEBI classes. The Bellevue and London classes are filling up fast so don't delay registering to avoid disappointment.

If you need a warm getaway and an infusion of great technical content, consider joining us for our popular SQLIntersection and DEVIntersection conferences, in Scottsdale, AZ in May – see [here](#) for details. We've just added two additional Microsoft speakers to our roster and we'll have an "Ask Microsoft Q&A" session in addition to our RunAs Radio closing Q&A session. We're also working on our trivia questions for our second SQLafterDark event and we're really looking forward to a fantastic week – interacting with SQL professionals and getting your questions answered! As for the content, SQLIntersection focuses on the troubleshooting and performance problems that we know you're facing today but we also highlight best practices in architecture, design, and SQL Server 2014. For a total of 6 full days – you can immerse yourself into great content with speakers that you know will deliver! Also, use the discount code "SQLskills" and you can save \$50 off registration. **NOTE: Monday, April 27 is the last day for lower-priced conference registrations and on April 28 you'll be paying full price.** We hope to see you there!

The most recent book I've read (apart from plowing through the [Horatio Hornblower series](#) by C. S. Forester) is [The New Health Rules: Simple Changes to Achieve Whole-Body Wellness](#) by Frank Lipman and Danielle Claro. Don't be put off by the long and flowery title – this is a little gem of a book that I bought as inspiration to go on a health kick (I made great progress last year but gained back a bunch of the weight I'd lost). It has one simple suggestion per page, with beautiful photos, covering how to eat better, how to change body movement, and how to have a health mental state. It's the kind of book you can pick up and open randomly and read something useful, and I'm going to keep it with me on my travels this year. Highly recommended!

Note: you can get all the prior Insider newsletters [here](#).

Paul's Ponderings

I'm sure you've all read or heard me preaching about not running regular shrink operations, and definitely not having the *AUTO_SHRINK* option enabled. I actually tried to remove this option from the product several times when I was at Microsoft (once when I was responsible for DBCC and once when I was responsible for the whole Storage Engine), and both times I was refused permission to remove it because it had to stay for backwards compatibility. I thought that was ridiculous but my hands were tied.

Not so with the old *DBCC PINTABLE* command. That command used to cause so many problems (with people pinning giant tables in the buffer pool and causing SQL Server to essentially stop working) that I simply removed it from the product in SQL Server 2005 and left an empty shell around the command so it works but does nothing (I [blogged](#) about doing this back in 2009).

There are several more options that I think are dangerous and I'd love to see removed from the product because they can cause huge problems.

I'd like to see the *sp_configure* option 'priority boost' removed. This tempting option can essentially bring your Windows server to its knees as SQL Server will take all the CPU resources, leaving little or none for Windows. If all you're doing is running SQL Server, this option is pointless, and if you have more than SQL Server running on a box, this option will starve everything else. At least this option has been deprecated, I'm looking forward to when it's officially removed.

I'd like to see the *sp_configure* option 'lightweight pooling' removed. This is more commonly known as fiber mode and was originally put into the product as a 'benchmark special' to help with TPC-C scores with the old UMS (User-Mode Scheduler) from the days before SQLOS. There are lots of problems that can happen if you turn this on, so that prevents features of SQL Server from working correctly. The late Ken Henderson wrote a good MSDN article called [The Perils of Fiber Mode](#) that's worth reading.

I'd like to see the *AUTO_CLOSE* (sometimes referred to as AutoClose or Auto Close) option removed. I rank this option up there with *AUTO_SHRINK* – it's nasty. *AUTO_CLOSE* is essentially 'last one out, turn off the lights' – when the last connection to a database closes, all resources for that database are released (synchronously in SQL Server 2000 and before, asynchronously in SQL Server 2005).

At first glance it might seem like you'd want the resources used by a database to be released when nobody is using it, but there's an enormous cost of doing so when the next connection to the database is made. All the query plans for the database are gone from the plan cache and all the table and index data has gone from buffer pool memory, so there's a plan compile cost and data reading cost.

Now, if there's a long time between connections to the database, old plans will age out of the plan cache and unused data pages will age out of the buffer pool anyway, so *AUTO_CLOSE* is overkill. But if there's a short time between connections, each connection is going to pay the cost of compiling query plans and having to wait for data to be read into cache. Jonathan demonstrates this in the demo below. Even with many thousands of databases on an instance, I'd still prefer to let SQLOS age out the data and plans naturally.

Call to action: Very simple – don't enable options or change settings in SQL Server unless you have both researched and tested it. You need to fully understand the impact it will have on SQL Server, your workload, and the Windows server on which it's running. Too many times I've heard of people getting help from Product Support or a consultant where the resolution is 'enable this' with no explanation of what it's going to do and why it will help. Always press for an explanation in such circumstances – and "it's a best practice" isn't good enough – you need to be comfortable that the suggestion is coming from someone who understands why they're making the suggestion.

Video Demo

In this video, Jonathan shows the effects of the AutoClose database option and explains how SQLOS is designed to remove unused cache entries and database pages when necessary instead of forcibly removing everything with AutoClose.

The video is just over 9 minutes long and you can get it:

- In WMV format [here](#).
- In MOV format [here](#).

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

Enjoy!

SQLskills Offerings

We've released most of our classes for 2015. We are going to add one more domestic delivery of IE0 and IEPTO1 in the 2nd half of the year and they will be in Chicago in November; we will publish more details shortly.

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

- [Letter to your boss explaining why SQLskills training is worthwhile](#)
- [Community blog posts about our classes](#)
- [Immersion Event FAQ](#)

Upcoming Immersion Events

Chicago, IL

- April 27-29, 2015: **IE0**: Immersion Event for the Accidental/Junior DBA **SOLD OUT!**
- April 27-May 1, 2015: **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1 (formerly IE1) **SOLD OUT!**
- May 4-8, 2015: **IEPTO2**: Immersion Event on Performance Tuning and Optimization – Part 2 (formerly IE2) **SOLD OUT!**
- May 4-8, 2015: **IEBI**: Immersion Event on Business Intelligence **3 seats remaining!**
- May 11-15, 2015: **IEHADR**: Immersion Event on High Availability and Disaster Recovery (formerly IE3) **2 seats remaining!**

Bellevue, WA

- June 8-12, 2015: **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1 (formerly IE1)
- June 15-19, 2015: **IEPTO2**: Immersion Event on Performance Tuning and Optimization – Part 2 (formerly IE2)

London, UK

- August 24-28, 2015: **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1 (formerly IE1)

Dublin, Ireland

- October 12-16, 2015: **IEPTO2**: Immersion Event on Performance Tuning and Optimization – Part 2 (formerly IE2)

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

Spring SQLintersection

This year our Spring SQLintersection conference will be the week of May 17th in Scottsdale, AZ. See [here](#) for details. Don't forget to use the discount code "SQLskills" (without the quotes and it isn't case-sensitive) and you can save \$50 off registration. We hope to see you there!

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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