

(June 16th, 2020)

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 still social distancing and welcoming two new kittens to our household, making a total of six cats! I've also started a large veggie garden using woven containers – see [here](#).

Tim and I are still helping people out using our six 3D printers to make mask straps that take pressure off of ears (see [here](#)) we've printed and shipped/donated more than 20,000 between us so far. We figure we'll be printing these through the end of the year.

Many thanks to random community members who've PayPal-donated towards costs, as well as the \$500 each that RedGate donated. If you know anyone who could use some free straps, hit me or Tim up in email – don't be shy – I ship in units of 10s and 100s and I'm taking requests for shipments towards the end of June.

And we also created a SQL Server 3D Printing Facebook group – check it out [here](#).

I hope you all stay safe and healthy!

SQLskills News

Kandio job candidate assessments: we've teamed up with Kandio to produce technical assessments to help companies screen candidates for job recruitment. If you want to make sure someone really knows what they say they know, check out the assessments [here](#).

Online class recordings: you can buy recordings of all our online classes, for as little as US\$299 each. See [here](#) for all the details.

Live, ONLINE classes: our classes this year will all be online in the September-November timeframe. All the details will be worked out soon.

- IEPTO1: Performance Tuning and Optimization, Part 1 – dates TBD
- IE0: Accidental/Junior DBA – dates TBD
- IECAG: Clustering and Availability Groups – dates TBD
- IEReporting: Using and Administering SSRS/PowerBI – dates TBD

- IEPTO2: Performance Tuning and Optimization, Part 2 – dates TBD
- IEAzure: Azure SQL DB, Azure VMs, Azure Managed Instance – dates TBD

You can get all the details and registration information through the class schedule page [here](#).

EIGHTKB: Erin is presenting as part of a free, online conference on SQL Server internals on June 17th – check out the details [here](#).

SQLBits: Kimberly, Erin, and I will all hopefully be presenting at [SQLBits](#) in London in September. Our precons are:

- Paul: [Performance Troubleshooting using Waits and Latches](#) SOLD OUT!!
- Erin: [Performance Tuning with Query Store in SQL Server and Azure](#)
- Kimberly: [Statistics4Performance: Internals, Analysis, Problem Solving](#)

SQLintersection: The Spring show has been canceled and everything has moved to the Fall show in Las Vegas in December. More details here nearer the time.

Finally, even if you can't join us in person, I've put out a call for **remote user group sessions for 2020!** If you'd like one of us to present for your user group, check out my blog post [here](#).

Book Review

From the archives: Back in 2017 I read Ed Yong's [I Contain Multitudes: The Microbes Within Us and a Grander View of Life](#). What an excellent book! Thanks to Buck Woody for the recommendation. The book explains all kinds of fascinating things about bacteria and our microbiomes, the history of their understanding by science, and how the quest to rid ourselves of them is futile, and in quite a few cases, actually harming people that live in developed nations. More interestingly, it also introduces many scientists who have identified beneficial bacteria and used them to help solve medical or environmental problems – e.g. preventing the dreaded Bd fungus killing a group of frogs, inoculating a group of mosquitoes with a bacteria that prevents them carrying dengue fever, and fecal-matter transplants to help sufferers of persistent C-diff infections – poo pill anyone? Hugely interesting, and written in an entertaining manner, this book is for anyone. 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.

Last week someone asked what they can do if they run out of bigints in a table. You can read through my explanation [here](#)...

Ponderings...

(From Erin this time. Enjoy!)

A couple weeks ago I made a lemon layer cake, and the frosting was marshmallow-like, made by dissolving sugar into egg whites over a water bath, and then mixing at high speed until cooled. I've made this type of frosting a few times, and had challenges in the past because I didn't heat it long enough to fully dissolve the sugar. Previously recipes said to heat until "hot to touch" or "until sugar is dissolved". I must interpret "hot to touch" differently than the author of the recipe, and I'll admit that I had a hard time figuring out when all the sugar was dissolved – after 10 minutes it had be dissolved, right? (It's hard to see when it's bubbling!) But most recent recipes called for a specific temperature: 175° F. As a result of this piece of information, I made the most delicious frosting ever.

The process reminded me of something I've been helping a customer with as of late: figuring out the best way to manage statistics for their most critical database. When someone asks me how often they should update statistics, the answer is a lot like the instructions in the initial frosting recipes I tried: not very precise. For many topics in SQL Server there is no "best" answer. No precise temperature. Rather, there are multiple factors to take into account. In the case of updating statistics, I start with basic questions such as:

- What is your maintenance window?
- What are you currently doing to manage statistics?
- Do you know how long it takes to update all statistics in your database?

Depending on these answers, I then diverge down different paths to understand what tables are volatile, what tables are involved in the most crucial queries, and whether there is skew in the data.

You may not always be able ask someone else *how* to do something in SQL Server. Some days you have to figure it out on your own. There are a lot of blog posts that give advice, but sometimes it conflicts, or it doesn't relate to *your* scenario. Then what do you do? This is why understanding the internals of SQL Server and "how things work" is not just important, but essential for anyone who is a data professional.

You don't have to know it all; you can't know it all – none of us do! But you can invest time learning about the features and functionality you use the most from the ground up. It can be overwhelming, but it's a process; it takes time. Nothing replaces experience, and sometimes you break a few eggs...in production. But every time you read something, and try it, and fail...or succeed, you get closer to truly understanding how to answer those more complex questions.

To that end, I invite you to sign up for the [EightKB conference](#), which is scheduled for tomorrow, Wednesday, June 17th. From the website:

“If you are interested in expanding your SQL Server knowledge and learning more about the nuts and bolts that make SQL Server work, EIGHTKB is for you!”

Full disclaimer: I am speaking at the event. But if statistics isn't your thing, that's ok! There are four other **fantastic** sessions covering SQL Server internals topics, presented by four amazing individuals. Whatever your interests, whatever your responsibilities, I hope you find that understanding from the ground up makes your days easier.

#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 theme for the TBT this time is log shipping. It's been around forever, is simple to configure, and has a bunch of uses. Here are some useful links:

- Glenn's Pluralsight course: [SQL Server: Understanding, Configuring and Troubleshooting Log Shipping](#)
- Whitepapers:
 - [Database Mirroring and Log Shipping Part I – Prescriptive Guidance](#)
 - [Proven SQL Server Architectures for High Availability and Disaster Recovery](#) (written by me)
 - [Database Mirroring and Log Shipping Working Together](#)
- Blog posts:
 - Paul: [SQLskills SQL101: Log shipping performance problems](#)
 - Glenn: [Upgrading SQL Server – Migrating with Log Shipping](#)

I hope you find these useful and interesting!

Video Demo

Continuing on the topic of statistics, Erin discovered a great feature of Ola Hallengren's index and stats maintenance script related to NORECOMPUTE. In this video you'll see how to enable that option, and maintain it even through subsequent statistics updates.

The video is around 8 minutes long and you can get it in WMV format [here](#).

And the demo code is [here](#).

Enjoy!

Upcoming SQLskills Events

Our 2020 classes have moved to Fall and are all open for registration!

You have multiple learning opportunities as every event has a different focus as well as different benefits – from deep-technical training in our Immersion Events to a more broad set of topics at SQLBits / SQLIntersection! And, of course, one benefit you'll always get from in-person events is networking; we hope to meet/see you at an event soon!

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, Online Immersion Events:

Fall 2020

- **IEPTO1:** Immersion Event on Performance Tuning and Optimization – Part 1
 - Dates TBD
- **IEReporting:** Immersion Event on Using and Administering SSRS and Power BI
 - Dates TBD
- **IE0:** Immersion Event for the Junior/Accidental DBA
 - Dates TBD
- **IECAG:** Immersion Event on Clustering and Availability Groups
 - Dates TBD
- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
 - Dates TBD
- **IEAzure:** Immersion Event on Azure SQL Database, Azure VMs, and Azure Managed Instance
 - Dates TBD

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

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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