

(March 30th, 2021)

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!

This newsletter is coming to you from Redmond; big surprise! Kimberly and I had a great time teaching our IEPTO1 class over the last two weeks, and now we're looking ahead to IEPTO2 that starts on April 12 – still time to register!

I want to thank everyone who wrote to me about my February blog posts and Ponderings – I believe I've successfully lifted myself out of the situational depression I was in after January's terrible start to my 2021. I've already read 6 books since then – 50% more than in all of 2020! If you're still suffering, remember you're not alone and there's no shame in it.

Take care and stay safe out there!

SQLskills News

Live, ONLINE classes in 2021: our classes this year will be live-streamed online, as it's not feasible to run in-person classes for the foreseeable future. Just like our last deliveries, we'll be running them as a series of half-day sessions. Students loved the split training days, from the comfort of watching in sweatpants to the ability to still get some of their regular duties accomplished. We had rave reviews for the format. And, all attendees of a live class receive lifetime streaming access to the recording of the entire class – something we'd never done before this year!

Our remaining live, online classes for spring 2021 are as follows:

- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
 - Ten half-days: April 12-13-14-15-16 and April 19-20-21-22-23, 2021
- **IEQS:** Immersion Event on Solving Common Performance Problems with Query Store
 - Three half-days: May 4-5-6, 2021
- **IEVLT:** Immersion Event on Very Large Tables: Optimizing Performance and Availability through Partitioning
 - Four half-days: May 17-18-19-20, 2021

These classes are available for registration individually or as part of a discounted bundle. You can get all the details on our [training options page](#) or just go directly to our [new shop](#). However,

before you buy, be sure to review all of the new options and discounts; we're very excited to offer our new Blackbelt Badge and Bundles!

Streaming recordings of all classes: we've built a new system that allows you to buy streaming access to all our class recordings. All classes are available for a complete year of access and a few heavily discounted courses for 90 days of access, plus you can purchase them individually or as part of a discounted bundle. You can get all the details in our [training options page](#) or just go directly to our [new shop](#).

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](#).

Book Review

The latest book I've read is Roland Ennos' [The Age of Wood: Our Most Useful Material and the Construction of Civilization](#). From Amazon: "Brilliantly synthesizing recent research with existing knowledge in fields as wide-ranging as primatology, anthropology, archaeology, history, architecture, engineering, and carpentry, Ennos reinterprets human history and shows how our ability to exploit wood's unique properties has profoundly shaped our bodies and minds, societies, and lives. He takes us on a sweeping ten-million-year journey from Southeast Asia and West Africa where great apes swing among the trees, build nests, and fashion tools; to East Africa where hunter gatherers collected their food; to the structural design of wooden temples in China and Japan; and to Northern England, where archaeologists trace how coal enabled humans to build an industrial world. Addressing the effects of industrialization—including the use of fossil fuels and other energy-intensive materials to replace timber—The Age of Wood not only shows the essential role that trees play in the history and evolution of human existence, but also argues that for the benefit of our planet we must return to more traditional ways of growing, using, and understanding trees." It's a fascinating book - 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 I was answering a question on the #sqlhelp tag on Twitter and I mentioned using object ID 99 as a value, because SQL Server will never set a table to be object ID 99. Why not? You can read about the answer in my blog post [here](#)...

Ponderings...

(From me this time – enjoy!)

Over the last few days I've followed the events in the Suez Canal very closely. If you don't know what's been happening, last week a huge (400-meter long, 60-meter wide, 220,000 tons) container ship ran aground on one side of the canal, and then its stern swung out and grounded on the other side of the canal, completely blocking it for six days.

About 450 giant container ships were in the queue to go through the canal today (Monday) when the ship was finally refloated, causing a huge problem for global supply chains as almost \$10 billion of goods has been stranded (about 12% of global trade passes through the canal each day), and at least one country, Syria, had to introduce fuel rationing. Shipping giant Maersk estimated that it would take six days to clear the backlog, but then there may be further problems as destination ports suddenly have too many ships arriving at the same time. It was definitely a major crisis that will have knock-on effects for weeks or months. (Data sourced from [this BBC article](#).)

More importantly in my mind, it exposed a serious weakness of the canal: one vessel can block it indefinitely and there aren't facilities in Egypt for coping with the problem. A specialist salvage team had to fly in from the Netherlands, and two of their super-strong salvage tugs had to steam to the canal (a total of 14 tugs were involved). Had their efforts been unsuccessful, a special crane was en route in case some of the 18,300 containers had to be removed to allow the ship to refloat – that process might have taken weeks if needed.

I'm sure that Egyptian authorities will learn from this problem and take steps to avoid it in future and be able to cope with it more quickly if it were ever to happen again. It's absolutely in their best interest to do so, as before the pandemic, 2% of Egypt's GDP came from canal revenue.

How does this relate to SQL Server?

I've seen many similar problems with clients. In one case, an overnight ETL process into a banking system hadn't finished and was blocking all access to people's bank accounts and this lasted until the afternoon. In another case, a double SAN failure in two data centers knocked out operations at a large insurance provider. And in what might seem like an innocuous problem, queries that used to take a few milliseconds suddenly jumped to hundreds, causing a trading system to grind to a halt (Erin's demo video this week shows a similar problem).

My point is that sometimes crises do crop up in SQL Server environments and nobody wants to have to call in a SQL Server salvage team (e.g., SQLskills!). Consider performing a risk analysis of your workloads, and not just in terms of HA/DR. Think about what problems could cause the business a serious issue, and think beyond just excessive duration for a query or set of queries, or blocking. Then, develop mitigation/prevention plans, which might be something as simple as increasing the amount of automated monitoring so you get as early a warning as possible of the signs of a problem happening.

Reactive is never as good as *proactive*.

#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.

Wait stats are the theme for #TBT this time. Here are some wait statistics resources for you:

- My Pluralsight: [SQL Server: Performance Troubleshooting Using Wait Statistics](#), that has 4.5 hours covering waits, latches, and spinlocks
- My main post about [wait statistics](#)
- My [wait stats library](#) with info on more than 360 wait types
- The [introductory whitepaper](#) Jonathan and Erin wrote
- Microsoft advanced whitepapers I helped to produce:
 - [Diagnosing and Resolving Latch Contention on SQL Server](#)
 - [Diagnosing and Resolving Spinlock Contention on SQL Server](#)
- My three blog post series on [waits](#), [latches](#), and [spinlocks](#)
- Our articles on SentryOne's [sqlperformance.com](#) about wait statistics

I hope you find these useful and interesting!

Video Demo

From Erin: When working with a customer last week I learned something new about the Query Wait Statistics report in Query Store, and I thought it worth sharing! Check out this week's video to see how to leverage this report to help you troubleshoot based on query wait information captured in Query Store.

The video is 12 minutes long and you can get it in MP4 format [here](#).

The demo code is [here](#).

Enjoy!

Upcoming SQLskills Events

Our 2021 classes are entirely online in the spring and they're open for registration!

With our new streaming system, you can now choose to attend a live, online event or purchase a recording to watch at your leisure, either individually or as part of a bundle. And all attendees of live events get lifetime access to the class recordings too!

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](#)
- [Community blog posts about our classes](#)
- [Immersion Event FAQ](#)

LIVE, Online Immersion Events:

Spring 2021

- **IEAzure:** Immersion Event on Azure SQL Database, Azure VMs, and Azure Managed Instance
 - Completed
- **IEPTO1:** Immersion Event on Performance Tuning and Optimization – Part 1
 - Completed
- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
 - Ten half-days: April 12-13-14-15-16 and April 19-20-21-22-23, 2021
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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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