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 – just today – we're starting the first three (IEPTO1, IE0, IEBI – all sold out!) of eight classes we'll be delivering over the next four weeks. We had a fantastic Spring SQLintersection show last week in Orlando and our Wednesday night quiz bowl – SQLafterDark – went off without a hitch! All of the speakers were there so attendees mingled, got their questions answered, relaxed / had a drink, and won phenomenal prizes including seats in Immersion Events (we raffled off TWO).

With a few courses (both of the IEPTO1 classes, IE0, and IEBI) sold out and others filling fast, be sure to book soon so that you're not disappointed. The next IEPTO1 in the U.S. will be in Bellevue, WA in September, plus London in June, Dublin in October, and **we've just added another IEPTO1 and IE0 delivery in Chicago in November**, plus we've **added an IEBI to our September line-up in Bellevue, WA**. These coupled with our IEPDS (on **data mining** and R) plus our two **SSIS** classes give you tremendous opportunities to improve at your current job as well as increase your skills for the future! All the schedule details are here.

The latest book I've read is Eric Weiner's *The Geography of Genius*. It's a clever and interesting book, with Weiner travelling to various places around the world that have produced many geniuses (like Greece, Florence, Silicon Valley) to try to figure out why those places were hotbeds of creativity. I was particularly pleased to see a big section on Edinburgh and luminaries from its University (where I got my degree and lived for 8 years), and one on Vienna – a city of incredible history and architecture that I've spent many months in over the years. It's part travelogue, part history, and part social study, and is pretty funny sometimes too. Highly recommended, and I already have his first book, *The Geography of Bliss*, in my reading list.

Note: you can get all the prior Insider newsletters here.

Paul's Ponderings

At SQLintersection last week, one of the sessions I presented was another iteration of my popular DBA Mythbusters talk, where I debunk a bunch of myths about SQL Server while explaining some of the internals and behaviors underpinning the myths.

One misconception I covered is around how automatic page repair works. This is a feature that was added to database mirroring, and is also available with availability groups. The idea is that if

the principal/primary comes across a corrupt page, it can ask the mirror/secondary to send it a non-corrupt version of the page so that processing can continue (and the same works in reverse if the mirror/secondary discovers a corrupt page).

The misconception is that the non-corrupt page can always be sent from the mirror/secondary to the principal/primary very quickly.

In reality, the speed of the automatic page repair depends on how behind the principal/primary the mirror/secondary is with replaying log records. Let me explain…

When the principal/primary requests a non-corrupt page from the mirror/secondary, it also specifies the current Log Sequence Number (LSN) in the principal/primary database. The mirror/secondary can't just immediately give back the non-corrupt page; it first has to continue replaying log records until it reaches the LSN in the mirror/secondary log that matches the LSN that was specified by the principal/primary. Then it knows that the version of the non-corrupt page that it sends back is the correct version.

So if the mirror/secondary redo process is quite far behind the LSN of the principal/primary, the page may not be repaired for many seconds or minutes. In the meantime, subsequent accesses of the corrupt page will result in an 829 error, meaning the page is in the process of being restored.

You might be thinking, what about a synchronous mirror/secondary? Shouldn't that always be up-to-date with the principal/primary? No. Synchronous just means that when a transaction commits, the log records for the transaction are written to the log drive on the mirror/secondary. The replay of the log records is a continual process and does NOT happen as part of the synchronicity – that's another myth.

Call to action: No call to action this time, just another example of how understanding some of the internals can help you understand the behavior of SQL Server!

<u>Video Demo</u>

In this demo, Jonathan looks at a recent change in SQL Server 2014 that was added in Cumulative Update 6 for Service Pack 1 that allows concurrent execution of UPDATE STATISTICS on multiple column statistics in the same table through the use of a new trace flag.

The video is just under 5 minutes long and you can get it:

- In WMV format <u>here</u>.
- In MOV format <u>here</u>.

The demo code is available <u>here</u>.

Enjoy!

<u>**SQLskills Offerings**</u>

We've released all of our 2016 classes for registration, listed below, including two new classes in Chicago in November that we just added. We hope to see you at a class or a conference this year!

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](#)

<u>**Upcoming Immersion Events**</u>

Chicago, IL

- **IE0**: Immersion Event for Junior/Accidental DBAs
    - April 25-27 **SOLD OUT!**
- **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1
    - April 25-29 **SOLD OUT!**
- **IEBI**: Immersion Event on Business Intelligence
    - April 25-29 **SOLD OUT!**
- **IEPTO2**: Immersion Event on Performance Tuning and Optimization – Part 2
    - May 2-6
- **IESSIS1**: Immersion Event on Learning SQL Server Integration Services
    - May 2-6 **New course!!**
- **IEPDS**: Immersion Event on Practical Data Science
    - May 9-13 **Hot course!!**
- **IEHADR**: Immersion Event on High Availability and Disaster Recovery
    - May 9-13
- **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1
    - May 16-20 **SOLD OUT!**

London, UK

- **IEPTO1:** Immersion Event on Performance Tuning and Optimization – Part 1
    - June 13-17
- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
    - June 20-24

Bellevue, WA

- **IEPTO1:** Immersion Event on Performance Tuning and Optimization – Part 1

- o September 12-16
- **IEBI:** Immersion Event on Business Intelligence
  - o September 19-22 **Just added!!**
- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
  - o September 19-23
- **IESSIS2:** Immersion Event on Advanced SQL Server Integration Services
  - o September 19-22 **New course!!**

Dublin, Ireland

- **IEPTO1:** Immersion Event on Performance Tuning and Optimization – Part 1
  - o October 3-7 **Just added!!**

Chicago, IL

- **IE0**: Immersion Event for Junior/Accidental DBAs
  - o November 7-9 **Just added!!**
- **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1
  - o November 7-11 **Just added!!**

See 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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