

(March 28th, 2016)

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 Redmond where we're steadily working on new Pluralsight courses and gearing up for Spring SQLIntersection and our Chicago classes.

With a few courses (both of the IEPTO1 classes, IE0, and IEBI) sold out and others filling fast, be sure to book early 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**. And, NEW just this week, 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](#).

In less than a month, we hope you're going to join us for our Spring SQLIntersection conference; we have a phenomenal line-up – one of our best for sure! We have keynotes from Buck Woody and Bob Ward from Microsoft, and another on tools and productivity from SQL Sentry. And with 9 workshops over 4 pre-conference and post-conference days, deeper dives are possible. Best practices, troubleshooting, tips and tricks are our mainstay yet this show also adds a lot of new features for SQL Server 2014 and 2016. The show is in Orlando, FL over April 16-22, 2016; we hope to see you there! Be sure to use the discount code 'SQLskills' when registering to receive \$50 off. See [here](#) for more details.

The latest book I've read is Rebecca Litchfield's excellent photography book [*Soviet Ghosts: The Soviet Union Abandoned: A Communist Empire in Decay*](#). I picked this up after seeing it mentioned in a magazine article about urban exploring, and I'm really glad I did. The book is full of beautiful photos of old, decaying buildings and infrastructure across the former Soviet bloc, many of which Litchfield had to sneak into past security. Particularly interesting are the photos of the deserted Ukrainian city of Pripyat (near Chernobyl), where nature is already starting to overrun the buildings and roads. She also introduces each section with some history of the Soviet Union. If you like this sort of things, also check out Edward Burtinsky's [*China*](#) that I read back in 2011. Highly recommended!

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

Paul's Ponderings

Well, I'm thinking about corruption... again. Why? Sadly, I'm seeing a trend that's really worrying me: more and more SQL Server installations are using a de-duplicating I/O subsystem for storing backups (and sometimes databases).

I completely understand why companies want to use a de-duping system as it can vastly reduce the amount of storage space required for backups, which can be a huge cost saving. I have heard that it can be slower to do a restore, because of the need to "rehydrate" the backup files, but that's not what worries me.

Think about a common backup strategy, where SundayF is a weekly full backup, D is a daily differential backup, and L...L are log backups every few minutes between the data backups. It will look something like this:

SundayF L...L D L...L D L...L D L...L D L...L D L...L DSaturday

SundayF L...L D L...L D L...L D L...L D L...L D L...L DSaturday

SundayF L...L D L...L D L...L D L...L D L...L D L...L DSaturday

There's likely little duplication between log backups, so I'm going to ignore those. However, there's likely to be lots of duplication between the SundayF full backups, and increasing amount of duplication between the daily D (differential) backups, as they'll get larger and larger as the week goes on, picking up the same extents that have changed.

So successive SundayF backups will all be based off a single 'initial' backup, and a week's worth of D backups will de-dupe off of previous D backups.

It's all very cool.

But what happens if the initial SundayF backup gets corrupted somehow (remember that I/O subsystems cause almost 100% of all corruptions)? That means you've lost EVERY full backup.

How do you restore from that if you need to? You can't.

And if the initial D backup for the week gets corrupted, you're looking at having to use all the log backups in case of a restore – which will usually take a lot longer than using a differential backup to short-circuit having to restore a large number of log backups.

If you don't have any other copies of your backups, and you don't have a synchronous copy of the database (that's actually in sync), then you're looking at a world of hurt if your database gets corrupted and something's happened to the de-duplicated backups.

Call to action: If you're using a de-duplicating I/O subsystem for your backups, make sure you have some other way to recover without unacceptable data loss if the base file for the de-duplication of your backups is damaged in some way.

Video Demo

From Erin: As we get closer to the release of 2016, I keep finding some little gems that will be useful when troubleshooting. The most recent one I've explored is the new information related to tempdb spills for Hash and Sort warnings. In this video, we'll check out what to look for when you're looking at plans in 2016, and show how you can capture more information to help when troubleshooting this potentially painful operation.

The video is just under 12 minutes long and you can get it:

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

The demo code is available [here](#).

Enjoy!

SQLskills Offerings

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](#)

Upcoming Immersion Events

Chicago, IL

- **IE0:** Immersion Event for Junior/Accidental DBAs
 - April 25-27 **SOLD OUT!**
- **IEPT01:** 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!**
- **IEPT02:** 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!!**
- **IEPDS:** Immersion Event on Practical Data Science

- May 9-13 **HOT!!**
- **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
 - September 12-16
- **IEBI:** Immersion Event on Business Intelligence
 - September 19-22 **NEW!!**
- **IEPTO2:** Immersion Event on Performance Tuning and Optimization – Part 2
 - September 19-23
- **IESSIS2:** Immersion Event on Advanced SQL Server Integration Services
 - September 19-22 **NEW!!**

Dublin, Ireland

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

Chicago, IL

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

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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