(May 13th, 2013)

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 we're half way through 4 weeks of packed immersion training – tiring, but fun!

Last week we announced that we will not be returning to London in 2015 (and maybe not 2016 either) but will instead be looking at other international destinations like Australia. It's really nothing about London, we truly enjoy being there. But to maintain very high quality events, we have to be careful how many we deliver and how often our team travels. So, in general, we are only planning one international delivery each year. For 2014, that location will be Australia.

We've also decided to create some new training classes:

- IE0: Immersion Event for Involuntary DBAs (3 days, Erin and Joe)
- IE5: Immersion Event on Relational Data Warehousing (5 days, Kimberly and Jon)
- IESP: Immersion Event on SQL for SharePoint Administrators (3 days, Jon)
- IEHW: Immersion Event on Hardware (2 days, Glenn)
- IEAT: Immersion Event on Advanced T-SQL (4 days, Bob)

We're very excited about these upcoming courses and we'll be offering some of these classes later this year – watch my blog and this newsletter for details over the next few weeks.

As for online training, we published a new Pluralsight course last week: Joe Sack's SQL Server 2012: Nonclustered Columnstore Indexes – be sure to check it out!

The most recent book I've read is Philip K. Dick's *Do Androids Dream of Electric Sheep?* This is the book that inspired the classic movie Blade Runner, and I've wanted to read it for a long, long time. The post-apocalyptic world portrayed is bleak, with a constant coating of fallout dust over everything – you can just imagine the grayness. Overall, the book is excellent, but I was surprised how much more there is in the movie. Strongly recommended, and a must read for sci-fi fans.

Please let us know if you liked what you read/saw here and/or have any suggestions for future Quick Tips.

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

Paul's Ponderings

In the previous Insider newsletter I talked about the *CONTINUE_AFTER_ERROR* option for *BACKUP* and *RESTORE* to help out when dealing with corrupt databases and backups.

In this newsletter I want to point out a case where this functionality is effectively broken.

The first log backup after a minimally-logged operation has to back up all the log generated since the last log backup, plus all the data extents changed by the minimally-logged operation, otherwise the log backup does not contain enough information to fully reconstitute the effects of the minimally-logged operation. You'd end up with a set of allocated pages for the index with no contents. In fact it's worse – you'd end up with a set of allocated pages for the index that haven't even been formatted – massive corruption.

Now consider the case where you've switched into the *BULK_LOGGED* recovery model and performed a minimally-logged operation, such as an index rebuild. Before the next log backup can be taken, a disaster occurs and the data files are destroyed.

One of the first things you're likely to attempt is a tail-of-the-log backup. Through SQL Server 2008 this will fail, as the log backup needs to access to the inaccessible data files. From 2008 R2 onwards, the log backup succeeds, telling you that under the covers it used *CONTINUE_AFTER_ERROR*, even though you didn't ask it to. Remember this is only in the special case of a tail-of-the-log backup after a minimally-logged operation and with the data files inaccessible.

This is broken.

It's broken because the resulting log backup is useless. If you restore it as part of your restore sequence while recovering from the disaster, it will corrupt your database, as I described above. In my opinion the behavior should have been left as it was with SQL Server 2008, as I can't see the rationale for automatically creating a useless, corruption-causing log backup.

I discussed this with friends at Microsoft and they're going to look into putting back the 'correct' behavior.

Call to action: If you're ever in the situation where you need to perform a tail-of-the-log backup, pay close attention to the output of the *BACKUP LOG* command. If it mentions having to use *CONTINUE_AFTER_ERROR* then that backup you just took will result in database corruption if you restore it.

I'm curious to hear whether you've ever been bitten by the situation I describe above, so please feel free to drop me a line, treated confidentially of course.

<u>Video Demo</u>

This week I'd like to highlight a demo from Jon's recently published Pluralsight course SQL Server: Advanced Extended Events. This demo shows the use of the tsql_stack action, which

contains the T-SQL call frames from the start of execution, including the sql_handle and offset for each level of the call stack. It's really useful for identifying usage of and troubleshooting problems with shared objects in a database.

The video is about 7 minutes long and you can get it only in WMV format here.

You can get the demo code here.

Enjoy!

SQLskills Offerings

All of our 2013 public classes are selling out fast! Based on requests from people, attendee ratings of the hotels we used last year, and the ease of using hotels we know, we're using the same locations again. This means we cover both sides of the US, central US, and Europe.

Please know that these classes are final as the hotel contracts are signed, and the classes will not be cancelled or moved for any reason, nor will the dates change.

- June 3-7, 2013: Internals and Performance (**IE1**) in London – UK
- June 10-14, 2013: Performance Tuning (**IE2**) in London – UK
- June 17-21, 2013: High Availability & Disaster Recovery (**IE3**) in London – UK
- September 16-20, 2013: Internals and Performance (**IE1**) in Bellevue, WA – USA
- September 23-27, 2013: Performance Tuning (**IE2**) in Bellevue, WA – USA

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

So, that's it for now. We hope to see you soon!

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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