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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 bi-weekly Quick Tips is a few days early as we're gearing up to head to SQL Connections on Friday - it'll be a nice change from the dreary weather here in Redmond, WA. We have a jam-packed conference with a pre-con, post-con, and 7 sessions between us!

After that we're heading down to Tampa, where some of Kimberly's family lives, so we can chill out on the beach for a bit with the kids. They're planning to take in the rides at Harry Potter World in Orlando too - I think I'll catch up with some reading by the pool :-)

Then we're off to Munich, Germany for a week to present at an internal Microsoft conference. As some of you may know, I'm a huge history buff and Kimberly's into architecture, so we're really looking forward to visiting some of the old castles around Munich. Watch the blogs for photos in late April!

Paul's Ponderings

One of the things that annoys me sometimes is when I see people giving performance tuning advice on forums, newsgroups, or Twitter along the lines of 'Oh, you're seeing XXX - that must mean you have this exact problem', where XXX could be a perfmon counter value/trend, or a particular wait statistic. It's basically a knee-jerk reaction to performance tuning that is rarely appropriate.

A prime example of this kind of reaction is with wait statistics analysis. (You can read my long introduction post about wait statistics here.) No matter what you do, you will *always* see waits being reported by SQL Server, because that's how cooperative scheduling and asynchronous resource waiting works. The trick is in seeing what kinds of waits are the most common, how long the average waits are, how the pattern of waits differs from normal, and what other symptoms can be observed.

For instance, if you're seeing the prevalent wait type of ASYNC_NETWORK_IO, does that mean you have a network problem? No. That wait means that SQL Server is waiting for a client to finish processing some data that has been sent to it. It *could* be a network latency issue, but it is far more likely to mean the client is processing the data inefficiently (maybe RBAR - Row By Agonizing Row :-) If you create a tight loop with a query that selects 1000 rows, running through SSMS on the same machine as SQL Server and look at wait stats you'll see ASYNC_NETWORK_IO waits because SSMS isn't processing the result sets efficiently. Network issue? No.

There's also the problem of out-dated information. The buffer pool performance counter Page Life Expectancy (commonly abbreviated to PLE) is often advised to be near 300. But what is the counter? It is a measure, in seconds, of how long a page will remain in memory before having to be removed because of memory pressure. So a PLE of 300 means the entire buffer pool is being replaced every 5 minutes. Aiming for that value when Microsoft released the 300 guidance 5-6 years ago wasn't too bad. But nowadays when buffer pool memory is commonly tens of GBs, a value of 300 for PLE is pretty bad.

Bottom line: successful performance tuning means understanding what the metrics are telling you, not considering any one performance indicator in a vacuum without looking at the rest of the system, and not jumping to conclusions.

Video Demo

There has been some discussion on the #sqlhelp Twitter hash-tag recently about the amount of transaction log that is generated for some operations in the different recovery models. I thought I'd dive in a bit deeper for you and investigate the difference between the BULK_LOGGED and FULL recovery models for a SELECT-INTO statement so I put together a demo and recorded a short (10 minutes) video for you.

As requested by some of you, I produced the video in WMV and MOV. You can get the videos:

- For WMV: here
- For MOV: here

I recommend downloading before watching. And you can get the demo code here.

SQLskills Offerings

To round up, we wanted to remind you about our class in Chicago in May and that we have extra capacity for promotional server health/performance audits now we have well-known performance tuning expert Jonathan Kehayias on board as a full time Senior Consultant. Drop me a line if you're interested.

Summary

Please let us know if you liked what you read/saw here.

If there is anything else you're interested in, we'd love to hear from you - drop us a line.

Thanks - Paul and Kimberly

(Please let us know if you'd like to be removed from this low-volume list.)