

SQL intersection

Session SQL205

Dr. DMV's Troubleshooting Toolkit

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- Regular presenter at worldwide conferences on hardware, scalability, and DMV queries
- Author of SQL Server Hardware
- Chapter author of Pro SQL Server Practices
- Chapter author of Professional SQL Server 2012 Internals and Troubleshooting
- Chapter author of MVP Deep Dives Volumes 1 and 2



- **Instructor-led training: Immersion Events**

- **Online training:** <http://pluralsight.com/>

- **Consulting: health checks, hardware, performance, upgrades**

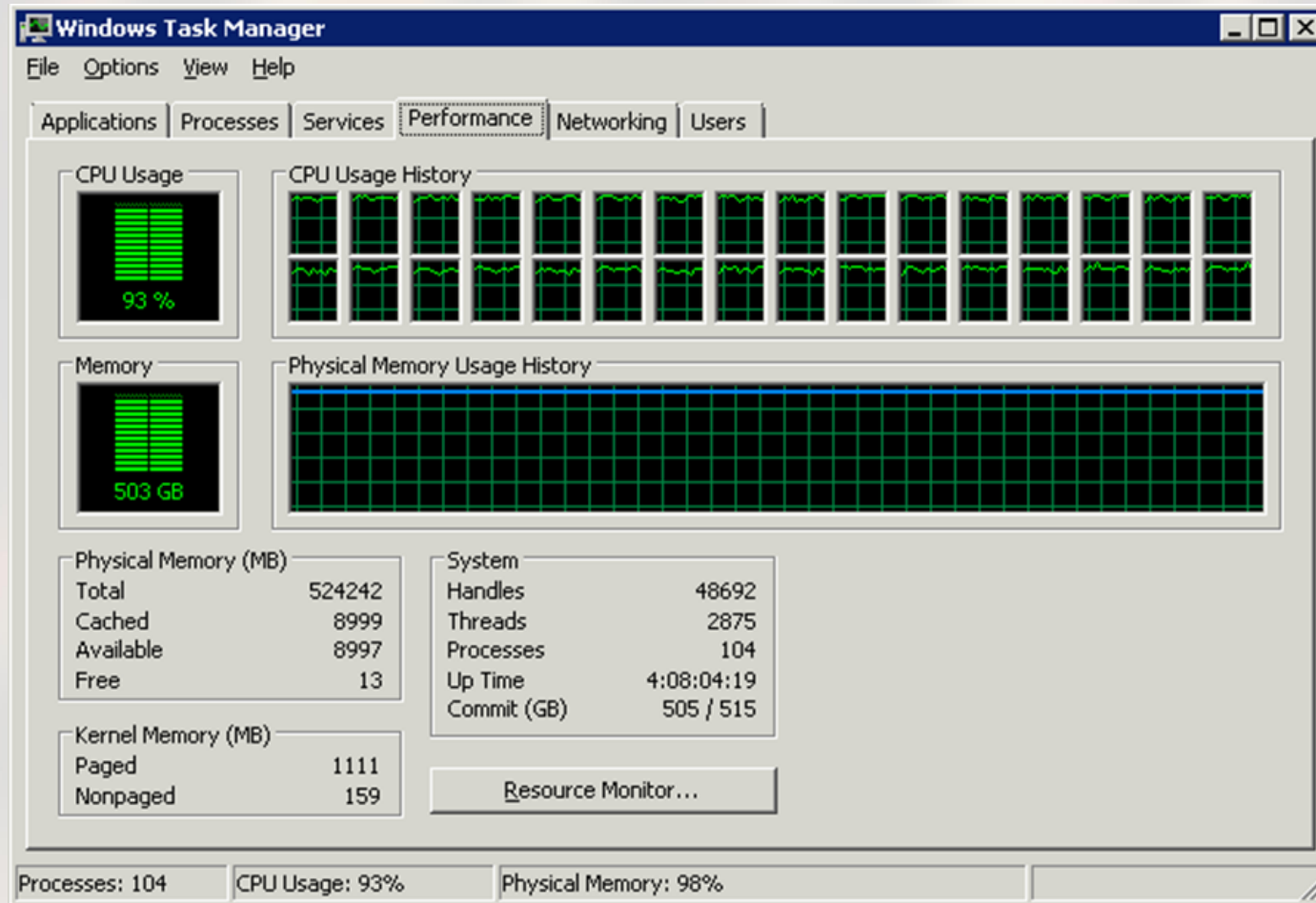
- **Become a SQLskills Insider: <http://www.sqlskills.com/Insider>**



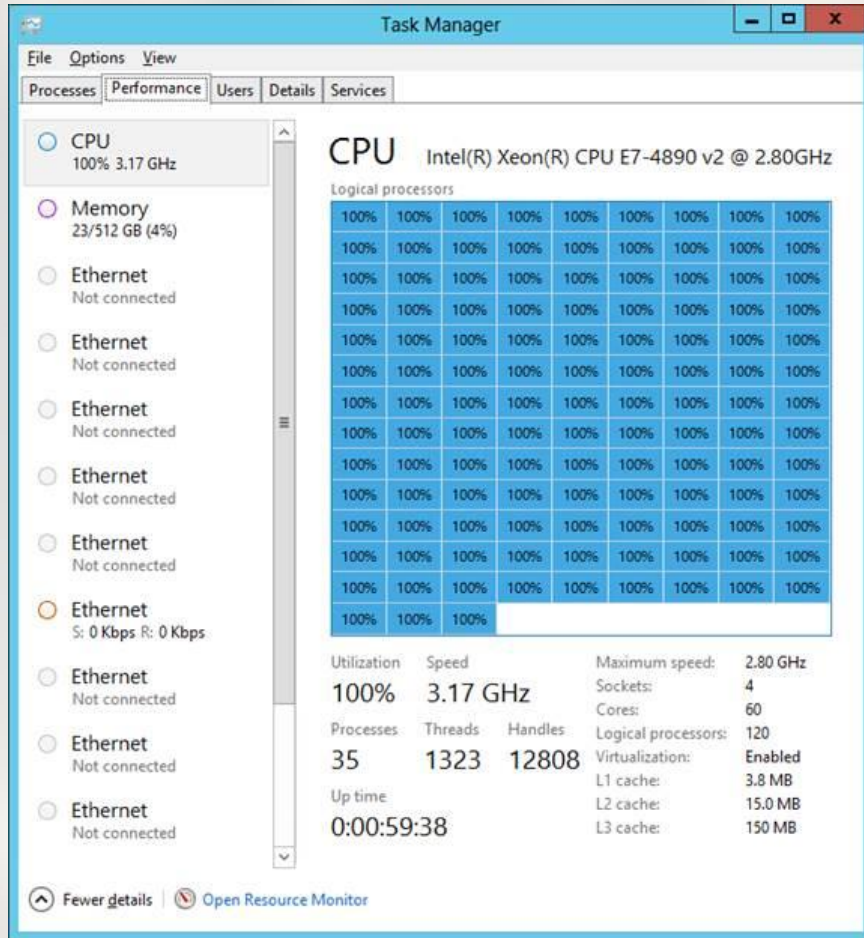
Introduction

- **Database performance issues are immediately noticeable**
 - Can quickly affect multiple applications or your entire organization
 - You can't just reboot the database server and hope that fixes the problem
- **DBA = “Default Blame Acceptor”**
 - “What’s wrong with the database?”
- **The database/database server is guilty until proven innocent!**
 - You need tools and knowledge to help quickly determine the actual problem
 - Maybe there is nothing wrong with the database or database server...

This is Your Nightmare on 32 cores...



This is Your Nightmare on 120 cores...



DMV Queries to the Rescue!

- **New in SQL Server 2005**
 - Improvements and additions in each new version of SQL Server
- **DMV/DMO expose a wealth of useful information**
 - Hardware, missing indexes, top waits, most expensive queries, etc.
- **Most DMV/DMO queries are very lightweight and easy to use**
 - Most require VIEW SERVER STATE permission
- **Information not persisted between restarts**
 - You can write useful metrics to a user database if desired for history and trending information
 - You can use my ServerMonitor database as a starting point
 - <http://bit.ly/1dpMmAq>

DMV Diagnostic Query History

- **First public version available in April 2009**
- **Separate versions for each major SQL Server version**
 - SQL Server 2005
 - SQL Server 2008
 - SQL Server 2008 R2
 - SQL Server 2012
 - SQL Server 2014
- **Make sure to use the appropriate version of the queries**
 - It should match your version of SQL Server
- **Monthly updates and improvements for each version**
 - <http://bit.ly/Q5GAJU>
 - <http://bit.ly/1cVqGKU>

Demo

DMV Diagnostic Queries



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Summary

- **DMV/DMO queries can help you detect many configuration and performance issues**
 - They can help you get to the root issue or cause more quickly
- **They are easy to use compared to other diagnostic methods**
 - No special configuration is required
 - Just VIEW SERVER STATE permission
- **DMV/DMO information is not persisted between restarts**
 - Unless you capture and write to a user database

References

- **Recap of April 2010 DMV a Day Series**
 - <http://bit.ly/1ErBvgB>
- **My Pluralsight courses**
 - <http://pluralsight.com/training/Authors/Details/glenn-berry>

Questions?

Please use EventBoard to fill out a session evaluation for this session.

We want to improve, and your feedback helps us do that.

Thank you!