

microsoft.public.sqlserver.server: Re: We quadrupled hardware power and reduced performance

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Hi Randolph,

As for all the components work as a whole, we could not be sure that one part's improvement could bring a overall improvement. Though performance is always a big issue of SQL Server, we do have some general rules to troubleshoot it. Here I just want to add some information on that.

When we face a performance issue, we should have a baseline of it (for your case it would be a hardware improvement should bring a overall improvement of the whole system) and we should narrow down the problem to the bottleneck from Application/Query/Database Design -> Operating Environment-> Hardware. In your case, the later 2 changed, and the whole system does not meet you expectation. So, we should make the expectation clear: Query slow? CPU high? In you case, it seems that the high CPU utilization is your concern, and I am not sure if this has bring a impact to your application performace. Then, some tools are needed to check why it is so high. I would say that in some sense, the CPU is driven by the other subsystems. In other words, bottlenecks in memory or I/O will often first appear as a CPU bottleneck. Because of this ver issue, the best process for evaluation system performace is to first analyze memory, thant the I/O subsystem and finally the processor. This is an important concept in that a shortage of memory will tend to drive a significant percentage of kernel time. This is not to say that you should completely ignore the processor when first evaluation system performance. This is especially true in a "hang" situation.

There is some counters that you might use to monitor:

%Processor time

%Privileged time

%User time

%DPC time

%interrupt time

DPCs Queued/sec

Interrupts/sec

Processor queue length, ect.

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and then, you'd better determine SQL Server's contribution to the CPU bottleneck.

As for more detailed information and method to troubleshooting performance issue, I would recommend the following articles for your reference.

HOW TO: Troubleshoot Application Performance Issues

<http://support.microsoft.com/default.aspx?scid=kb:en-us:298475>

Support WebCast: How to Collect and Analyze Performance Data in Microsoft SQL Server

<http://support.microsoft.com/?id=324692>

How To Gather Information for Effective Troubleshooting of Performance Issues

<http://support.microsoft.com/default.aspx?scid=http://support.microsoft.com:80/support/kb/articles/Q175/6/58.ASP&NoWebContent=1>

Hope this helps.

Sincerely Yours

Baisong Wei

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