

Re: "Deprecated" Parameters In SPFILE

Source:

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- *From:* Charles Hooper <hooperc2000@xxxxxxxxxx>
 - *Date:* Fri, 17 Aug 2007 07:54:15 -0700
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On Aug 16, 10:35 pm, hjr.pyth...@xxxxxxxxxx wrote:

On Aug 17, 12:28 pm, hjr.pyth...@xxxxxxxxxx wrote:

On Aug 15, 11:17 pm, Charles Hooper <hooperc2...@xxxxxxxxxx> wrote:

On Aug 14, 11:26 pm, hjr.pyth...@xxxxxxxxxx wrote:

The old `_AREA_SIZE` parameters are silently ignored if the new parameter is present.

You may want to leave them in the spfile at their non-zero values, however, in case you switch to shared server mode (or, remembering that an instance can do both shared- and dedicated-server mode at the same time, in case one or two of your users need to connect in shared mode).

If you really want to get rid of the old parameters, don't just zero them out, though. Delete them from the spfile entirely:

```
alter system reset sort_area_size
```

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```
scope=spfile sid='*';
```

...that way, the parameter still has a non-zero default value for those rare occasions when it might be needed.

Helpful advice, I wasn't aware of how to remove a parameter from a SPFILE.

But, the `_AREA_SIZE` parameters are not silently ignored. In my testing, the `_AREA_SIZE` parameters set the minimum values for those memory areas, and Oracle is able to adjust the value of the parameter upward as needed. If I recall correctly, `SORT_AREA_SIZE` may be automatically adjusted up to 5% of the `PGA_AGGREGATE_TARGET` and `HASH_AREA_SIZE` up to 10% of the `PGA_AGGREGATE_TARGET`. Prior to implementing Oracle 10.2.0.2, I found one query that was sorting to the temp tablespace under Oracle 10.2.0.2 (`PGA_AGGREGATE_TARGET` set at 4000MB, 5% = 200MB) that was not sorting to the temp tablespace under Oracle 8.1.7.3 with a `SORT_AREA_SIZE` of 10MB. Oracle 10.2.0.2 was apparently adjusting the `SORT_AREA_SIZE` to be just large enough for the session to perform a one pass sort to disk. I bumped the `SORT_AREA_SIZE` to 20MB, resulting in the elimination of the sort to the temp tablespace.

Metalink Notes:223299.1, 223730.1 both agree with you that the `_AREA_SIZE` parameters ARE silently ignored. But, those articles are apparently wrong. A write-up by Burleson quoted contents

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of those
Metalink articles, which lead to the development of this
article that
provides a test case that shows that the parameters are not
ignored:<http://www.jlcomp.demon.co.uk/untested.html>

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Charles, I may be getting confused as to the point you're making.

Jonathan's article says 'So the sort_area_size does have some
relevance – even when all the new pga mechanisms are correctly
enabled... ****IF***** ...you (like me) are running with shared
servers (formerly multi-threaded servers) and know that for Oracle 9i,
the older parameters are still used to limit the memory that gets
allocated in the SGA (which is where the UGA is going to be held when
using shared servers)."

Jonathan is using Shared Servers. In 9i and early 10g, shared servers
absolutely relied on SORT_AREA_SIZE. That's why my earlier advice was
to leave them in the spfile so that they "still ha[ve] a non-zero
default value for those rare occasions when [they] might be needed" –
namely, when you connect with shared servers to an otherwise mostly-
dedicated server environment.

I have not seen anything in Jonathan's article that indicates that the
old parameters are anything other than silently ignored **if** you are
using dedicated server processes. I could be wrong: I find that
article quite hard to read because of its incremental addenda.

Certainly, in 11g, if you set MEMORY_TARGET and *also* set
PGA_AGGREGATE_TARGET, then the P_A_T is regarded as a minimum
memory
demand that must be satisfied from the memory_target. So it's possible
that sort of behaviour did take place in 10g, despite all the
documentation saying otherwise. I haven't tested it rigorously myself,
I will admit.

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Regards
HJR

I meant to add that in that article, Jonathan ****does**** go on to use a dedicated server for testing... but he does so only to disprove an assertion made by the World's Greatest Oracle Database Expert that PGA_AGGREGATE_TARGET cannot be set above 200MB: "So let's see if there is any difference between running the same query (through a ****dedicated server**** this time) with a pga_aggregate_target of 200MB, as opposed to a pga_aggregate_target of 500 MB, or 1000 MB."

I don't see him saying that _AREA_SIZE parameters are having an effect on his results at that particular point.

Regards
HJR

Howard,

Thanks for the response.

I re-read the article that I referenced (for a third time) and now see that it does not state that the _AREA_SIZE parameters have an effect – thanks for bringing this to my attention.

I am working on a test case to demonstrate the behavior that I noticed under the base patch of Oracle 10.2.0.2, where changing the value of the SORT_AREA_SIZE did affect the number of sorts to disk, as Oracle switched from a one pass sort to an optimal sort. Looking over my notes from the read through of "Cost-Based Oracle Fundamentals", the book indicates that the switch from a one pass sort to an optimal sort can (or will likely) increase CPU usage – this may or may not affect the ability of reproducing the behavior as the increase in forecasted CPU usage affects a plan's cost. So far, my test case on Oracle 10.2.0.3 is agreeing with your statement of "The old _AREA_SIZE parameters are silently ignored if the new [PGA_AGGREGATE_TARGET] parameter is present." I may need to back off the position that the parameters still have an effect when PGA_AGGREGATE_TARGET is set. The testing will continue.

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