

Re: Oracle connections and memory usage

Source: <http://unix.derkeiler.com/Mailing-Lists/AIX-L/2005-11/0072.html>

From: Vincent D'Antonio (*dantoniov_at_GMAIL.COM*)

Date: 11/10/05

Date: Thu, 10 Nov 2005 11:22:27 -0500
To: aix-l@Princeton.EDU

Mark,

We are using JFS2. and right now there is no load and no connections.
Here is the vmstat 5 5 output:

System configuration: lcpu=16 mem=31744MB

kthr memory page faults cpu

```
r b avm fire re pi po fr sr cy in sy cs us sy id wa
0 0 4646776 2721286 0 0 0 0 0 0 48 9853 388 1 0 93 6
1 0 4645713 2722347 0 0 0 0 0 0 158 99367 2190 7 4 83 6
0 0 4645713 2722369 0 0 0 0 0 0 47 499 351 0 0 93 6
0 0 4645716 2722365 0 0 0 0 0 0 45 2809 529 1 0 93 6
0 0 4645716 2722363 0 0 0 0 0 0 49 347 351 0 0 93 6
and topas:
Topas Monitor for host: sdp1 EVENTS/QUEUES FILE/TTY
Thu Nov 10 11:21:49 2005 Interval: 2 Cswitch 333 Readch 5431
Syscall 743 Writch 19161
Kernel 0.2 |#| Reads 12 Rawin 0
User 0.1 |#| Writes 6 Ttyout 269
Wait 6.0 |##| Forks 0 Igets 0
Idle 93.7 |#####| Execs 0 Namei 22
Runqueue 0.0 Dirblk 0
Network KBPS I-Pack O-Pack KB-In KB-Out Waitqueue 0.0
en7 2.5 24.5 2.5 1.4 1.1
en6 0.3 1.5 1.0 0.2 0.1 PAGING MEMORY
lo0 0.1 1.0 1.0 0.0 0.0 Faults 257 Real,MB 31743
en8 0.0 0.0 0.0 0.0 0.0 Steals 0 % Comp 57.5
PgspIn 0 % Noncomp 9.8
Disk Busy% KBPS TPS KB-Read KB-Writ PgspOut 0 % Client 10.0
hdisk4 0.0 0.0 0.0 0.0 0.0 PageIn 2
hdisk7 0.0 0.0 0.0 0.0 0.0 PageOut 4 PAGING SPACE
hdisk28 0.0 0.0 0.0 0.0 0.0 Sios 6 Size,MB 32768
hdisk30 0.0 0.0 0.0 0.0 0.0 % Used 1.0
hdisk29 0.0 0.0 0.0 0.0 0.0 NFS (calls/sec) % Free 98.9
hdisk6 0.0 0.0 0.0 0.0 0.0 ServerV2 0
hdisk11 0.0 0.0 0.0 0.0 0.0 ClientV2 0 Press:
```

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```
hdisk13 0.0 8.0 0.5 0.0 8.0 ServerV3 0 "h" for help
ClientV3 0 "q" to quit
Name PID CPU% PgSp Owner
topas 1110202 0.1 1.1 root
hats_nim 135766 0.0 1.7 root
oracle 237782 0.0 7.7 oracle8
oracle 123506 0.0 7.7 oracle8
oracle 180690 0.0 7.6 oracle8
hatsd 119642 0.0 8.2 root
gil 25154 0.0 0.1 root
oracle 193420 0.0 10.0 oracle8
hats_nim 140212 0.0 1.7 root
```

On 11/10/05, Hunter, Mark <Mark.Hunter@anheuser-busch.com> wrote:

```
>
> Hmmm...
> Looks like you have minperm%=5, maxperm%=10, and maxclient%=10. Probably
> should be ok.
> Are you using jfs or jfs2? jfs2 hard limits by default but jfs does not.
> (strict_maxclient).
> Oracle is using 22.5GB approx. How many connections is this? I doubt you
> can get it, but what is the svmon for oracle just after the database comes
> up before any connections (minimum usage)? Can you get an svmon during the
> 800 connections?
> Try
> svmon -U | awk '$1~"User"{print;getline;print}'
> also
> vmstat 5 5
> Also, if you can grab a screenprint of a topas session, that might help.
> -----
> *From:* IBM AIX Discussion List [mailto:aix-l@Princeton.EDU] *On Behalf Of
> *Vincent D'Antonio
> *Sent:* Thursday, November 10, 2005 9:08 AM
> *To:* aix-l@Princeton.EDU
> *Subject:* Re: Oracle connections and memory usage
>
> Here is the requested info:
> minperm = 388872
> maxperm = 777747
> maxclient% = 10
> SGA is set to 16GB, there are no other appl. running on this system just
> oracle.
> out put of svmon -U is hugh but here is the beginning of the output:
>
>
>
> -----
> User Inuse Pin Pgsp Virtual LPageCap
> oracle8 5695786 89342 68764 5751820 -
>
>
> .....
```

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> *SYSTEM segments Inuse Pin Pgsp Virtual*
> 65554 65541 1 65555
>
> *Vsid Esid Type Description LPage Inuse Pin Pgsp Virtual*
> 0 0 work kernel segment (lgpg_vsid=0) Y 65536 65536 0 65536
> 12b8a4 – work – 11 3 1 12
> 2739cf – work – 7 2 0 7
>
>
>
> *EXCLUSIVE segments Inuse Pin Pgsp Virtual*
> 5621614 22340 68628 5677608
>
> *Numbers don't lie and I agree with you that I should be able to get my*
> *1500 connections no problem but the system seems to disagree with me on*
> *this, maybe I am missing a process that is using more memory than being*
> *reported but I couldn't find anything.*
>
> *Thanks again for you suggestions,*
>
> *Vince*
>
>
> *On 11/10/05, Hunter, Mark <Mark.Hunter@anheuser-busch.com> wrote:*
> >
> > *More information please.*
> > *What are your vmo minperm%, maxperm%, and maxclient%? Hopefully you have*
> > *tuned these already.*
> > *How big is the oracle SGA? Most oracle DBA like to set these really*
> > *large.*
> > *What other application run on the box?*
> > *What does svmon -U using your RAM?*
> > *Based upon your numbers, 7MB * 1500 connection = 10.5GB of RAM, so you*
> > *should have plenty.*
> >
> >
> > **Mark Hunter**
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> >
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> > *delete the material from any computer.*

> >

> >

> > -----

> > **From:* IBM AIX Discussion List [mailto:aix-l@Princeton.EDU] *On Behalf
> > Of *Vincent D'Antonio*

> > **Sent:* Thursday, November 10, 2005 8:13 AM*

> > **To:* aix-l@Princeton.EDU*

> > **Subject:* Oracle connections and memory usage*

> >

> > *AIXer's,*

> > *I have a P570 8way with 32GB of memory running oracle 10G. Per my DBA*

> > *each connection to the database is sucking up 7MB of memory which after a*

> > *while we start to swap, this is about 800 connections and need we to support*

> > *a lot more than this (1500).*

> > *Is there anything that I can tune to improve memory usage or is there*

> > *anything within oracle that can be tuned? I have AIX 5.3 ML2 no lpars*

> > *just a full system.*

> > *Any info to help this would be great.*

> > *Thanks in advance for your comments and suggestions,*

> > *Vince*

> >

>

>