

Re: Slow on heavy I/O operations.

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Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/performance/2007-03/msg00061.html>

- *From:* Oliver Fromme <olli@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 21 Mar 2007 14:54:20 +0100 (CET)
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Roman Gorohov. <roma.a.g@xxxxxxxxxx> wrote:

Hello list.

There is a server with FreeBSD FreeBSD 4.11-STABLE(can't upgrade fornow) on HP ProLiant DL140.

Disk system: <SEAGATE ST373207LC 0005> at scbus0 target 0 lun0(pass0,da0) on a ASC-29320A.

If I do:

```
[idle@hst ~]#dd if=/dev/zero of=bigfile bs=64k count=5000
5000+0 records in
5000+0 records out
327680000 bytes transferred in 37.515699 secs (8734477 bytes/sec)
All is hung while dd working.
```

Its look like that:

```
[idle@hst ~]#systat -v
skip...
Disks da0 pass0 pass1 md0
KB/t 20.33 0.00 0.00 0.00
tps 812 0 0 0
MB/s 16.11 0.00 0.00 0.00
% busy 100 0 0 0
skip...
```

```
[idle@hst ~]#vmstat -w 5
procs memory page disks faults cpu
r b w avm fre flt re pi po fr sr da0 md0 in sy cs us sy id
1 0 0 1996756 54208 42 23 25 7 39 336 0 0 531 638 404 21 5 74
1 6 0 2011488 13272 571 0 0 1 2506 8 129 0 1356 2125 159 3 4 93
4 27 0 2022852 4228 267 0 0 1 1657 4 272 0 1450 784 96 1 3 96
1 10 0 2027492 40220 449 5 0 12 3257 9384 574 0 1773 4366 189 8 7 85
1 10 0 2035064 25604 746 2 1 7 2965 4466 157 0 1380 4486 184 8 7 85
0 11 0 2030860 4228 515 2 1 3 2098 31 214 0 1412 3077 149 16 5 79
3 14 0 2042792 10004 1014 4 1 5 2787 4432 267 0 1440 1735 118 2 4 94
2 16 0 2062664 4228 301 0 1 2 2843 27 564 0 1759 1250 107 5 4 91
```

```
[idle@hst ~]#iostat -w 5
tty da0 pass0 pass1 cpu
tin tout KB/t tps MB/s KB/t tps MB/s KB/t tps MB/s us ni sy in id
```

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```
0 25 0.00 0 0.00 0.00 0 0.00 0.00 0 0.00 21 0 4 0 74
1 109 62.56 242 14.81 0.00 0 0.00 0.00 0 0.00 7 0 9 0 83
0 101 18.29 433 7.73 0.00 0 0.00 0.00 0 0.00 2 0 2 0 95
0 76 26.45 281 7.25 0.00 0 0.00 0.00 0 0.00 3 0 4 0 93
0 94 15.99 357 5.57 0.00 0 0.00 0.00 0 0.00 2 0 2 0 96
0 15 16.04 667 10.45 0.00 0 0.00 0.00 0 0.00 0 0 3 1 96
0 93 15.99 558 8.71 0.00 0 0.00 0.00 0 0.00 0 0 2 1 97
0 80 16.16 252 3.98 0.00 0 0.00 0.00 0 0.00 0 0 1 0 98
0 117 23.44 240 5.49 0.00 0 0.00 0.00 0 0.00 9 0 6 0 85
```

Why this happen?

The numbers from your vmstat output indicate that your machine is paging ("swapping"), i.e. it's running out of RAM.

Of course, such paging activity competes with other I/O operations in the system, which explains the symptoms that you're seeing.

What should I do?

Either add more RAM, or reduce the memory requirements of your applications, if possible.

Another work-around would be to add a second disk and use it exclusively for swap. That way it won't compete with I/O operations on your data disk. The paging will still slow down your machine, though, therefore you should really try to add more RAM.

Best regards
Oliver

—

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"What is this talk of 'release'? We do not make software 'releases'.
Our software 'escapes', leaving a bloody trail of designers and quality
assurance people in its wake."

freebsd-performance@xxxxxxxxxxxxx mailing list
<http://lists.freebsd.org/mailman/listinfo/freebsd-performance>

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