

Re: Some additional tests run on my performance testing

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/performance/2003-08/0047.html>

From: David Schultz (*das_at_FreeBSD.ORG*)

Date: 08/28/03

Date: Thu, 28 Aug 2003 01:59:47 -0700
To: Robert Watson <rwatson@FreeBSD.ORG>

On Wed, Aug 27, 2003, Robert Watson wrote:

> *On Wed, 27 Aug 2003, Bill Moran wrote:*

>

> > *Unfortunately (as you'll see) the results were _worse_ than with FreeBSD*

> > 5.1.

> ..

> > *ad0s1a: UDMA ICRC error writing fsbn 1458368 of 729184-729215 (ad0s1 bn 1458368; cn 241 tn 12 sn 44) retrying*

> > *ad0s1a: UDMA ICRC error writing fsbn 1458368 of 729184-729215 (ad0s1 bn 1458368; cn 241 tn 12 sn 44) retrying*

> > *ad0s1a: UDMA ICRC error writing fsbn 1458368 of 729184-729215 (ad0s1 bn 1458368; cn 241 tn 12 sn 44) retrying*

> > *ad0s1a: UDMA ICRC error writing fsbn 1458368 of 729184-729215 (ad0s1 bn 1458368; cn 241 tn 12 sn 44) falling back to PIO mode*

If your drives are using PIO in FreeBSD and DMA under other operating systems, that would certainly explain the problem. Are the drives also in PIO mode under Linux? Does this message pop up with 4.8, 5.1, or both? I understand that the usual cause is bad cabling.

> *Did you look at any of the blocksize-related patches that have been floating around?*

I tried his tests on a stock postgresql 7.3.4, twice with an 8K block filesystem and twice with a 16K block UFS2 filesystem and measured an improvement of about 4% for the 8K filesystem. (Take this cum grano salis though, since this was an informal test and I don't have enough data to draw a statistically significant conclusion.)

It turns out that the tables in Bill's tests have no indices, so postgresql winds up doing practically nothing but sequential reads and sequential writes of entire tables. A more typical database load would probably be characterized by mostly random access patterns and possibly more synchronous writes to the WAL log.

freebsd-performance: Re: Some additional tests run on my performance testing

freebsd-performance@freebsd.org mailing list

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