

## Re: Faster backups – possibly Solaris pipe buffer size

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*Source:* <http://unix.derkeiler.com/Newsgroups/comp.unix.solaris/2006-06/msg00066.html>

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  - *Date:* Thu, 01 Jun 2006 08:01:44 -0700
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Yonah Russ wrote:

Atro Tossavainen wrote:

"Yonah Russ" <[yonah.russ@xxxxxxxx](mailto:yonah.russ@xxxxxxxx)> writes:

I want to speed up the backup– right now backing up  
670GB+/- takes  
close to 6.5 hours.

Averaging 30 MB/s doesn't sound half bad to me.

LTO3 is rated at 80MB/s– I don't know how realistic that is but I'd like to get as close as possible– there is certainly room for improvement.

Is there a reason you're using compression on the CPU instead of letting the tape drive do its own?

The compression was in a backup script I inherited (one that was used for a previous tape drive)

I also thought about getting rid of it but the daily backup of this machine is critical so I can't take the chance that taking out the compression will cause the backup to not fit on one tape.

As it is, dd only reports partial blocks on the side writing to the tape so I have no clue how much it is actually writing.

The tape compression is also enabled so I imagine that trying to see how much space is taken on the tape is not going to be helpful in determining whether or not the lzo compression is worth anything.

Re: Faster backups – possibly Solaris pipe buffer size

Any ideas on how to speed up the process? believe the pipe buffer size is hurting performance but I don't know of any way to change the size of the buffer.

I have a hunch that your bottlenecks, if there are any, might be the OpenSSL RC4 encryption and possibly the LZO compression on the Sun CPU.

Encryption is a must and RC4 seems to be one of the fastest algorithms from what I see.

The LZO compression can change or even go away if I know that there is something better or that it isn't necessary.

Thanks,

Yonah

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+358-9-19158939 UNIX Dinosaur / employs me, but my opinions are my  
own.

< URL : http://www.helsinki.fi/%7E atossava / > NO FILE  
ATTACHMENTS

Regarding whether to do encryption on the cpu or the drive; My guess is that once the data have been encrypted, there remain few "patterns" in data for the drive to compress. To achieve any compression, it would have to precede encryption. You can confirm as seen below.

So if the drive itself doesn't offer acceptable encryption, your best bet may be to send Joerg Schilling an RFE for "star". :-).

```
% wc -c genunix 3313904
% bzip2 -c < genunix | wc -c 1145071
% openssl rc4 -e < genunix | wc -c 3313920
% openssl rc4 -e < genunix | bzip2 -c | wc -c 3328981
% bzip2 -c < genunix | openssl rc4 -e | wc -c 1145087
```

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