

Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/performance/2005-01/0040.html>

From: stheg olloydson (*stheg_olloydson_at_yahoo.com*)

Date: 01/23/05

Date: Sat, 22 Jan 2005 18:42:26 -0800 (PST)

To: linicks@gmail.com

it was said:

>All,
> This post is not about BSD VS. Linux and should not be taken that
>way. I think that "Flame Wars/Engineer Wars" are waste of time and
>energy. I was surprised by my test results and didn't want to take
>FBSD out of the loop just yet. There may be flaws in my testing that
>have led me to inaccurate results. I didn't share the testing details
>in the original mail because of time constraints, and the notes are
>fairly lengthy. I will add my notes to this mail so that there is a
>better understanding of what tests I performed, and their results.
>It's important to note that I did not tweak any of the default
>settings of the OS or DB. The notes should be generally self
>explanatory, but will be more that happy to clarify any questions that
>you have. As a side note, I chose the email address linicks because
>by name is Nick, and thought it was a fun play on words. I appreciate
>all of your feedback, so that I can better understand the differences
>in these great operating systems and communities.
>
>Thanks Again!
>--Nick Pavlica

Hello,

I'm glad you weren't trolling. I, too, think the OS wars are a load of
cark. Each OS has it strengths and weaknesses. Time is better spent
increasing the strengths and fixing the weaknesses than arguing about
whose are *_better_*.

I can say right off that FBSD's out-of-the-box state is intended for
stability rather than performance. The real question is what they do
after tuning. Here I would expect FBSD to do somewhat better,
especially on the uni-processor machine. Running the tests on the SC400
hardware won't be a problem for me, but I have no spare SMP or SCSI
equipment to do the PE2400 tests – which I think would be the more
interesting. Perhaps someone else on the list can do this? Not to

provide a head-to-head showdown but to see if something is actually wrong that isn't already being looked at. (Everyone knows threading has problems that are being dealt with. That's why I'm not so sure FBSD will out-perform Fedora at this time on an SMP box.)

To be on the safe side, I'll cc this to the performance list, as well.

Maybe someone has already done something similar and has quick answers.

Thus, I'm including unquoted the rest of your email below.

Finally, the addy thing was just me getting in a shot at you if you had turned out to be trolling.

Regards,

stheg

The tests and results below here. I don't know how the formatting is going to turn out. If its too mangled, see the original post on questions@

"OK, The testing notes already" :)

Hardware Configs:

Dell PE 2400

- Dual PIII 500Mhz
- 512Mb Ram
- Perc 2si controller
- (2) 10k ultra160 drives in a raid 1 configuration.

Dell SC400

- P4 2.4 Ghz (not hyperthreaded)
- 512Mb Ram
- Stock 40Gb IDE 7200RPM

Postgresql Test Scripts:

```
CREATE TABLE test1 (  
  thedate TIMESTAMP,  
  astring VARCHAR(200),  
  anumber INTEGER  
);
```

```
CREATE FUNCTION build_data() RETURNS integer AS '  
  DECLARE  
    i INTEGER DEFAULT 0;  
    curtime TIMESTAMP;  
  BEGIN  
    FOR i IN 1..1000000 LOOP  
      curtime := "now";  
      INSERT INTO test1 VALUES (curtime, "test string", i);  
    END LOOP;  
    RETURN 1;  
  END;  
' LANGUAGE 'plpgsql';
```

```
SELECT build_data();
```

Then the following script is run under the time program to ascertain how long it takes to run:

```
CREATE TABLE test2 (
  thedate TIMESTAMP,
  astring VARCHAR(200),
  anumber INTEGER
);
CREATE TABLE test3 AS SELECT * FROM test1;
INSERT INTO test2 SELECT * FROM test1 WHERE ((anumber % 2) = 0);
DELETE FROM test3 WHERE ((anumber % 2) = 0);
DELETE FROM test3 WHERE ((anumber % 13) = 0);
CREATE TABLE test4 AS
SELECT test1.thedate AS t1date,
       test2.thedate AS t2date,
       test1.astring AS t1string,
       test2.astring AS t2string,
       test1.anumber AS t1number,
       test2.anumber AS t2number
FROM test1 JOIN test2 ON test1.anumber=test2.anumber;
UPDATE test3 SET thedate='now' WHERE ((anumber % 5) = 0);
DROP TABLE test4;
CREATE TABLE test4 AS SELECT * FROM test1;
DELETE FROM test4 WHERE ((anumber % 27) = 0);
VACUUM ANALYZE;
VACUUM FULL;
DROP TABLE test4;
DROP TABLE test3;
DROP TABLE test2;
VACUUM FULL;
```

sc400 freeBSD5:

```
$ time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
1073741824 bytes transferred in 71.807645 secs (14953029 bytes/sec)
71.82real 0.68 user 8.83 sys
71.82 / 60 = 1.197
```

```
--
517 nick.pavlica -16    0  1212K   588K wdrain   0:02 12.35%  5.91% dd
517 nick.pavlica -16    0  1212K   588K wdrain   0:13 12.48% 12.35% dd
$ time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
2147483648 bytes transferred in 136.815925 secs (15696153 bytes/sec)
   136.85 real        1.29 user          17.49 sys
136.85 / 60 = 2.280833333
--
542 nick.pavlica -16    0  1212K   588K wdrain   0:19 13.35% 13.33% dd
```

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```

542 nick.pavlica -16    0 1212K   588K wdtrain   0:24 12.99% 12.99% dd
$ time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
3221225472 bytes transferred in 205.722425 secs (15658115 bytes/sec)
      205.72 real          1.82 user          27.39 sys
205.72 / 60 = 3.428666667
copy test:
558 nick.pavlica  -4    0 1272K   680K getblk    0:01  2.30%  1.32% cp
558 nick.pavlica  -4    0 1272K   680K getblk    0:02  1.80%  1.71% cp
558 nick.pavlica  -4    0 1272K   680K getblk    0:03  1.87%  1.86% cp
$ time cp tstfile tstfile2
      579.31 real          0.03 user          14.61 sys
579.31 / 60 = 9.655166667
(FreeBSD 5.3+ on SC400)
b test 1:
535 nick.pavlica  -4    0 2380K  1216K getblk    0:17  2.84%  2.83%
bonnie++
568 nick.pavlica 105    0 2380K  1196K RUN        0:09 92.99% 36.62%
bonnie++
568 nick.pavlica -16    0 2380K  1192K wdtrain   0:14 12.35% 11.23%
bonnie++
$ bonnie++ -s 1024 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency  1      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
sc400.e--station 1G   257  99 15135  5 10033  3  508  99 45572 10
124.3  5
Latency          33802us    161ms    467ms    32560us    17190us
537ms
Version 1.93c      -----Sequential Create----- -----Random
Create-----
sc400.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
          files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
          5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
Latency          14891us    149us    226us    2671us    133us
1270us
1.93c,1.93c,sc400.e--station.com,1,1106248340,1G,,257,99,15135,5,10033,3,508,99,
45572,10,124.3,5,5,,,,,+++++,+++,,,,,+++++,+++,,,,,+++++,+++,,,,,+++++,+++,,,,,+++++,
+,33802us,161ms,467ms,32560us,17190us,537ms,14891us,149us,226us,2671us,133us,12
70us
B Test 2:
712 nick.pavlica -16    0 2380K  1212K wdtrain   0:12 53.78% 33.01%
bonnie++

```

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712 nick.pavlica -16    0 2380K 1208K wdrain  0:17  4.90%  4.88%
bonnie++
$ bonnie++ -s 2048 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency  1      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
sc400.e--station 2G   260  99 14394   5  9512   3   505  99 42976   9
94.7   4
Latency      32809us      284ms      470ms      30153us      15074us
3564ms
Version 1.93c      -----Sequential Create----- -----Random
Create-----
sc400.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
          5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
Latency      6772us      1452us      175us      3964us      114us
46821us
1.93c,1.93c,sc400.e-station.com,1,1106252670,2G,,260,99,14394,5,9512,3,505,99,42976,9,94.7,4,5,,
Test 3:
754 nick.pavlica -16    0 2380K 1208K wdrain  0:13  26.89%  20.90%
bonnie++
$ bonnie++ -s 3072 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency  1      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
sc400.e--station 3G   259  99 14484   5  9671   3   507  99 40714   9
77.7   3
Latency      33254us      569ms      591ms      36025us      22245us
936ms

```

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Version 1.93c      -----Sequential Create----- -----Random
Create-----
sc400.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
      files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
      5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
Latency          13993us      154us      120us      20243us      555us
72us
1.93c,1.93c,sc400.e-station.com,1,1106253537,3G,,259,99,14484,5,9671,3,507,99,40714,9,77.7,3,5,,
(PG Performance Test)
2039 pgsq1      -4      0 16328K 11984K getblk      0:04 19.92% 12.60%
postgres
2039 pgsq1      -8      0 16344K 12024K biord      0:11 18.51% 17.14%
postgres
$ time psql -d perftst -f ptst.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
      304.00 real          0.00 user          0.00 sys
304.00/60 = 5.066666667
2077 pgsq1      -8      0 28168K 15640K biord      0:38 12.01% 12.01%
postgres
2077 pgsq1      -4      0 28168K 15812K semwai      0:40 10.16% 10.16%
postgres
$ time psql -d perftst -f ptst.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
      307.97 real          0.00 user          0.00 sys
307.97/60=5.132833333
2113 pgsq1      -4      0 19960K 15296K ufs          0:30 15.97% 15.97%
postgres
2113 pgsq1      -16     0 28168K 19280K wdtrain      0:37 12.70% 12.70%
postgres

```

```
$ time psql -d perftst -f ptst.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
          304.89 real          0.00 user          0.00 sys
304.89/60=5.0815
```

```
-----
Fedora C3 EXT3
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real    0m24.270s
user    0m0.736s
sys     0m5.528s
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
real    0m53.607s
user    0m1.432s
sys     0m11.306s
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
real    1m16.598s
user    0m2.133s
sys     0m16.794s
Copy Test:
[root@localhost ~]# time cp tstfile tstfile2
real    2m32.022s
user    0m0.528s
sys     0m12.417s
Bonnie Tests:
bonnie++ -u root -s 1024 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
                -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
```

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```

--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 1G 24983 72 49013 14 21798 5 21618 58 52864 6
137.5 0
-----Sequential Create----- -----Random
Create-----
-Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
localhost.localdomain,1G,24983,72,49013,14,21798,5,21618,58,52864,6,137.5,0,5,+++++,++++,+++++,+++
bonnie++ -u root -s 2048 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03 -----Sequential Output----- --Sequential Input-
--Random-
-Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 2G 30392 88 35467 10 16794 4 21350 57 40749 4
92.0 0
-----Sequential Create----- -----Random
Create-----
-Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
localhost.localdomain,2G,30392,88,35467,10,16794,4,21350,57,40749,4,92.0,0,5,+++++,++++,+++++,+++
[root@localhost ~]# bonnie++ -u root -s 3072 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03 -----Sequential Output----- --Sequential Input-
--Random-
-Per Chr- --Block-- -Rewrite- -Per Chr- --Block--

```

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```

--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 3G 30940  90 36972  10 18177   4 22040  60 44367   4
85.7  0
          -----Sequential Create----- -----Random
Create-----
          -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
          files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
          5 +++++ +++ +++++ +++ +++++ +++ +++++ +++ +++++ +++
+++++ +++
localhost.localdomain,3G,30940,90,36972,10,18177,4,22040,60,44367,4,85.7,0,5,+++++,+++,+++++,+++
5513 postgres 18  0 20448 11m 10m D 13.0  4.6  0:01.37 postmaster
5513 postgres 19  0 20448 11m 10m D 13.3  4.6  0:02.97 postmaster
5513 postgres 18  0 20448 11m 10m D 35.6  4.7  0:08.26 postmaster
5513 postgres 18  0 21900 13m 11m D 39.0  5.3  0:20.90 postmaster
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    4m20.061s
user    0m0.007s
sys     0m0.003s
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m59.877s
user    0m0.004s
sys     0m0.007s
26307 postgres 18  0 21684 14m 11m R  8.0  5.7  0:39.30 postmaster
26307 postgres 18  0 21684 14m 11m R 20.3  5.7  0:43.37 postmaster
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE

```

```

SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m29.036s
user    0m0.002s
sys     0m0.012s
26317 postgres 18    0 20472 10m 9.8m D 45.3 4.3 0:10.53 postmaster
26317 postgres 18    0 22500 12m 9.9m D 28.3 5.1 0:24.92 postmaster
26317 postgres 18    0 25580 16m 11m R 28.3 6.6 0:42.54 postmaster
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m30.825s
user    0m0.001s
sys     0m0.009s
26323 postgres 18    0 20448 10m 10m R 46.9 4.4 0:36.98 postmaster
26323 postgres 16    0 31100 21m 10m R 48.9 8.6 3:41.24 postmaster
26323 postgres 16    0 29088 19m 10m R 26.6 7.9 5:19.27 postmaster
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 3000000
DELETE 3000000
DELETE 230772
SELECT
UPDATE 553848
DROP TABLE
SELECT
DELETE 222222
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    24m55.547s

```

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```

user      0m0.008s
sys       0m0.005s
bash-3.00$ time psql -d perftst -f tst.sql
-----+-----+-----
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 894455
2005-01-20 22:44:37.486004 | test string      | 894455
2005-01-20 22:45:12.67617  | test string      | 894455
2005-01-20 22:47:07.218733 | test string      | 894455
2005-01-20 22:48:31.5945   | test string      | 894455
2005-01-20 22:50:42.391373 | test string      | 894455
(6 rows)
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 75455
2005-01-20 22:44:37.486004 | test string      | 75455
2005-01-20 22:45:12.67617  | test string      | 75455
2005-01-20 22:47:07.218733 | test string      | 75455
2005-01-20 22:48:31.5945   | test string      | 75455
2005-01-20 22:50:42.391373 | test string      | 75455
(6 rows)
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 444455
2005-01-20 22:44:37.486004 | test string      | 444455
2005-01-20 22:45:12.67617  | test string      | 444455
2005-01-20 22:47:07.218733 | test string      | 444455
2005-01-20 22:48:31.5945   | test string      | 444455
2005-01-20 22:50:42.391373 | test string      | 444455
(6 rows)
thedata | astring | anumber
-----+-----+-----
(0 rows)
thedata | astring | anumber
-----+-----+-----
(0 rows)
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 7555
2005-01-20 22:44:37.486004 | test string      | 7555
2005-01-20 22:45:12.67617  | test string      | 7555
2005-01-20 22:47:07.218733 | test string      | 7555
2005-01-20 22:48:31.5945   | test string      | 7555
2005-01-20 22:50:42.391373 | test string      | 7555
(6 rows)
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 5
2005-01-20 22:44:37.486004 | test string      | 5
2005-01-20 22:45:12.67617  | test string      | 5
2005-01-20 22:47:07.218733 | test string      | 5
2005-01-20 22:48:31.5945   | test string      | 5
2005-01-20 22:50:42.391373 | test string      | 5
(6 rows)
 thedate          | astring          | anumber
-----+-----+-----
2005-01-20 22:26:39.057576 | test string      | 4455
2005-01-20 22:44:37.486004 | test string      | 4455
2005-01-20 22:45:12.67617  | test string      | 4455
2005-01-20 22:47:07.218733 | test string      | 4455
2005-01-20 22:48:31.5945   | test string      | 4455
2005-01-20 22:50:42.391373 | test string      | 4455

```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

(6 rows)

thedata	astring	anumber
2005-01-20 22:26:39.057576	test string	111155
2005-01-20 22:44:37.486004	test string	111155
2005-01-20 22:45:12.67617	test string	111155
2005-01-20 22:47:07.218733	test string	111155
2005-01-20 22:48:31.5945	test string	111155
2005-01-20 22:50:42.391373	test string	111155

(6 rows)

thedata	astring	anumber
2005-01-20 22:26:39.057576	test string	33355
2005-01-20 22:44:37.486004	test string	33355
2005-01-20 22:45:12.67617	test string	33355
2005-01-20 22:47:07.218733	test string	33355
2005-01-20 22:48:31.5945	test string	33355
2005-01-20 22:50:42.391373	test string	33355

(6 rows)

thedata	astring	anumber
2005-01-20 22:26:39.057576	test string	998455
2005-01-20 22:44:37.486004	test string	998455
2005-01-20 22:45:12.67617	test string	998455
2005-01-20 22:47:07.218733	test string	998455
2005-01-20 22:48:31.5945	test string	998455
2005-01-20 22:50:42.391373	test string	998455

(6 rows)

thedata	astring	anumber
2005-01-20 22:26:39.057576	test string	8455
2005-01-20 22:44:37.486004	test string	8455
2005-01-20 22:45:12.67617	test string	8455
2005-01-20 22:47:07.218733	test string	8455
2005-01-20 22:48:31.5945	test string	8455
2005-01-20 22:50:42.391373	test string	8455

(6 rows)
thedata | astring | anumber
-----+-----+-----

(0 rows)
real 3m13.732s
user 0m0.005s
sys 0m0.004s

SC400 FC3 With XFS:
4665 root 18 0 4380 468 404 D 21.6 0.2 0:02.43 dd
[root@localhost tmp]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real 0m22.676s
user 0m0.663s
sys 0m3.494s
4667 root 19 0 3672 468 404 R 8.7 0.2 0:00.26 dd
[root@localhost tmp]# time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
real 0m46.277s
user 0m1.214s
sys 0m7.141s
4674 root 25 0 4532 468 404 R 13.6 0.2 0:02.34 dd
4674 root 18 0 4532 468 404 D 17.6 0.2 0:05.52 dd
[root@localhost tmp]# time dd bs=1024 if=/dev/zero of=tstfile count=3M

```

3145728+0 records in
3145728+0 records out
real    1m12.727s
user    0m1.884s
sys     0m10.573s
copy tests:
4744 root    18   0 3940 620 540 D 9.3 0.2 0:00.73 cp
4744 root    18   0 3940 620 540 R 9.3 0.2 0:01.78 cp
4744 root    18   0 3940 620 540 R 4.0 0.2 0:06.62 cp
[root@localhost tmp]# time cp tstfile tstfile2
real    2m22.101s
user    0m0.500s
sys     0m8.178s
bonnie tests:
[root@localhost tmp]# bonnie++ -u root -s 1024 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
                -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 1G 33376 97 48548 7 20451 4 25233 69 47488 5
154.7 0
                -----Sequential Create----- -----Random
Create-----
                -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
                files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
                5 3724 17 +++++ +++ 3828 17 2957 14 +++++ +++
2290 10
localhost.localdomain,1G,33376,97,48548,7,20451,4,25233,69,47488,5,154.7,0,5,3724,17,+++++,+++,38
4747 root    23   0 3004 976 840 R 88.9 0.4 1:56.32 bonnie++
4747 root    18   0 2996 968 840 R 7.0 0.4 2:09.53 bonnie++
4751 root    17   0 2996 980 844 D 0.3 0.4 0:00.02 bonnie++
[root@localhost tmp]# bonnie++ -u root -s 2048 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.

```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

```

Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
                -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 2G 32988  97 47779   6 21777   5 26410  74 49463   6
130.0   0
                -----Sequential Create----- -----Random
Create-----
                -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
                files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
                5  3145  15 +++++ +++ 3641  15  3299  17 +++++ +++
2037   9
localhost.localdomain,2G,32988,97,47779,6,21777,5,26410,74,49463,6,130.0,0,5,3145,15,+++++,+++,36
4788 root         25   0 3120  968  840 R 97.9  0.4  0:19.11 bonnie++
4788 root         25   0 3124  972  840 R 97.6  0.4  0:42.54 bonnie++
4788 root         25   0 3116  968  840 D  6.7  0.4  1:37.18 bonnie++
[root@localhost tmp]# bonnie++ -u root -s 3072 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
                -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 3G 32331  97 47200   6 21836   5 26740  75 49292   6
125.9   0
                -----Sequential Create----- -----Random
Create-----
                -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
                files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
                5  3215  14 +++++ +++ 3360  14  3036  15 +++++ +++
1856   8
localhost.localdomain,3G,32331,97,47200,6,21836,5,26740,75,49292,6,125.9,0,5,3215,14,+++++,+++,33
5024 postgres    18   0 20116  11m  10m R 68.6  4.6  0:05.75 postmaster
5024 postgres    18   0 21288  12m  10m D 45.3  5.1  0:13.88 postmaster
4950 postgres    15   0 19572  10m 9828 D  1.0  4.0  0:00.13 postmaster
024 postgres     18   0 21568  12m  10m R 60.9  5.1  0:21.99 postmaster
5024 postgres    19   0 20176  11m  10m R 51.9  4.7  0:34.02 postmaster
-bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462

```

```

SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m9.088s
user    0m0.007s
sys     0m0.005s
5026 postgres 18 0 21392 13m 11m D 45.9 5.3 0:23.92 postmaster
5026 postgres 18 0 21392 13m 11m D 44.3 5.3 0:28.45 postmaster
5026 postgres 18 0 37780 17m 11m R 10.7 7.1 0:34.22 postmaster
5026 postgres 18 0 21392 14m 11m D 13.0 5.7 0:37.30 postmaster
-bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    3m22.001s
user    0m0.007s
sys     0m0.009s
-bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m17.877s
user    0m0.003s
sys     0m0.006s
26432 postgres 18 0 20140 10m 9764 R 46.6 4.2 0:03.92 postmaster
bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT

```

```

INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m17.666s
user    0m0.003s
sys     0m0.006s
26440 postgres 18  0 22160 13m 10m D 50.3 5.2  0:23.60 postmaster
26440 postgres 18  0 37820 17m 11m R  9.3 6.9  0:34.46 postmaster
-bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 500000
DELETE 500000
DELETE 38462
SELECT
UPDATE 92308
DROP TABLE
SELECT
DELETE 37037
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    2m19.578s
user    0m0.005s
sys     0m0.010s
(6 Million Rows)
26445 postgres 19  0 20116 10m 10m R 58.9 4.3  0:03.32 postmaster
26445 postgres 19  0 20116 10m 10m R 51.6 4.4  0:18.37 postmaster
26445 postgres 18  0 31764 22m 10m D  9.3 8.9  1:33.57 postmaster
26445 postgres 18  0 45076 36m 11m R  8.3 14.7 5:21.49 postmaster
-bash-3.00$ time psql -d perftst -f tst1.sql
CREATE TABLE
SELECT
INSERT 0 3000000
DELETE 3000000
DELETE 230772
SELECT
UPDATE 553848
DROP TABLE
SELECT
DELETE 222222
VACUUM
VACUUM
DROP TABLE
DROP TABLE
DROP TABLE
VACUUM
real    21m15.074s

```

```
user    0m0.003s
sys     0m0.007s
```

```
(tst.sql)
select * from test1 where anumber=894455;
select * from test1 where anumber=75455;
select * from test1 where anumber=444455;
select * from test1 where anumber=7594455;
select * from test1 where anumber=7511455;
select * from test1 where anumber=7555;
select * from test1 where anumber=5;
select * from test1 where anumber=4455;
select * from test1 where anumber=111155;
select * from test1 where anumber=33355;
select * from test1 where anumber=998455;
select * from test1 where anumber=8455;
select * from test1 where anumber=22754455;
```

```
-----
-bash-3.00$ time psql -d perftst -f tst.sql
```

thedata	astring	anumber
2005-01-20 18:45:25.058853	test string	894455
2005-01-20 19:10:26.609873	test string	894455
2005-01-20 19:12:06.125588	test string	894455
2005-01-20 19:12:47.447711	test string	894455
2005-01-20 19:15:21.224914	test string	894455
2005-01-20 19:16:12.809133	test string	894455

(6 rows)

thedata	astring	anumber
2005-01-20 18:45:25.058853	test string	75455
2005-01-20 19:10:26.609873	test string	75455
2005-01-20 19:12:06.125588	test string	75455
2005-01-20 19:12:47.447711	test string	75455
2005-01-20 19:15:21.224914	test string	75455
2005-01-20 19:16:12.809133	test string	75455

(6 rows)

thedata	astring	anumber
2005-01-20 18:45:25.058853	test string	444455
2005-01-20 19:10:26.609873	test string	444455
2005-01-20 19:12:06.125588	test string	444455
2005-01-20 19:12:47.447711	test string	444455
2005-01-20 19:15:21.224914	test string	444455
2005-01-20 19:16:12.809133	test string	444455

```
(6 rows)
thedata | astring | anumber
-----+-----+-----
(0 rows)
```

```
thedata | astring | anumber
-----+-----+-----
(0 rows)
```

thedata	astring	anumber
2005-01-20 18:45:25.058853	test string	7555
2005-01-20 19:10:26.609873	test string	7555
2005-01-20 19:12:06.125588	test string	7555
2005-01-20 19:12:47.447711	test string	7555
2005-01-20 19:15:21.224914	test string	7555
2005-01-20 19:16:12.809133	test string	7555

```
(6 rows)
thedata | astring | anumber
-----+-----+-----
```

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```

2005-01-20 18:45:25.058853 | test string |      5
2005-01-20 19:10:26.609873 | test string |      5
2005-01-20 19:12:06.125588 | test string |      5
2005-01-20 19:12:47.447711 | test string |      5
2005-01-20 19:15:21.224914 | test string |      5
2005-01-20 19:16:12.809133 | test string |      5
(6 rows)

```

```

      thedate          |    astring    | anumber
-----+-----+-----
2005-01-20 18:45:25.058853 | test string |    4455
2005-01-20 19:10:26.609873 | test string |    4455
2005-01-20 19:12:06.125588 | test string |    4455
2005-01-20 19:12:47.447711 | test string |    4455
2005-01-20 19:15:21.224914 | test string |    4455
2005-01-20 19:16:12.809133 | test string |    4455
(6 rows)

```

```

      thedate          |    astring    | anumber
-----+-----+-----
2005-01-20 18:45:25.058853 | test string |   111155
2005-01-20 19:10:26.609873 | test string |   111155
2005-01-20 19:12:06.125588 | test string |   111155
2005-01-20 19:12:47.447711 | test string |   111155
2005-01-20 19:15:21.224914 | test string |   111155
2005-01-20 19:16:12.809133 | test string |   111155
(6 rows)

```

```

      thedate          |    astring    | anumber
-----+-----+-----
2005-01-20 18:45:25.058853 | test string |   333355
2005-01-20 19:10:26.609873 | test string |   333355
2005-01-20 19:12:06.125588 | test string |   333355
2005-01-20 19:12:47.447711 | test string |   333355
2005-01-20 19:15:21.224914 | test string |   333355
2005-01-20 19:16:12.809133 | test string |   333355
(6 rows)

```

```

      thedate          |    astring    | anumber
-----+-----+-----
2005-01-20 18:45:25.058853 | test string |   998455
2005-01-20 19:10:26.609873 | test string |   998455
2005-01-20 19:12:06.125588 | test string |   998455
2005-01-20 19:12:47.447711 | test string |   998455
2005-01-20 19:15:21.224914 | test string |   998455
2005-01-20 19:16:12.809133 | test string |   998455
(6 rows)

```

```

      thedate          |    astring    | anumber
-----+-----+-----
2005-01-20 18:45:25.058853 | test string |    8455
2005-01-20 19:10:26.609873 | test string |    8455
2005-01-20 19:12:06.125588 | test string |    8455
2005-01-20 19:12:47.447711 | test string |    8455
2005-01-20 19:15:21.224914 | test string |    8455
2005-01-20 19:16:12.809133 | test string |    8455
(6 rows)

```

```

thedata | astring | anumber
-----+-----+-----
(0 rows)

```

```

real    2m31.883s
user    0m0.002s
sys     0m0.005s

```

Various Notes:

1/18/05 PE 2400 bonnie++ Test with ext3:

Top Output:

```
3911 root      25   0 3072 964 840 R 98.4 0.2 1:21.21 bonnie++
```

Bonnie++ Test1:

```
[root@es1 npavlica]# bonnie++ -u root -s 1024 -r 512 -n 5 -d /tmp
```

Using uid:0, gid:0.

Writing with putc()...done

Writing intelligently...done

Rewriting...done

Reading with getc()...done

Reading intelligently...done

start 'em...done...done...done...

Create files in sequential order...done.

Stat files in sequential order...done.

Delete files in sequential order...done.

Create files in random order...done.

Stat files in random order...done.

Delete files in random order...done.

```
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
```

```
          -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
```

```
--Seeks--
```

```
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
```

```
es1.estation.com 1G 7469 91 9881 15 4846 6 9073 90 21034 15
362.4 2
```

```
-----Sequential Create----- -----Random
```

```
Create-----
```

```
-Create-- --Read--- -Delete-- -Create-- --Read---
```

```
-Delete--
```

```
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
```

```
/sec %CP
```

```
5 7962 90 +++++ +++ +++++ +++ 8874 99 +++++ +++
```

```
8803 69
```

```
es1.estation.com,1G,7469,91,9881,15,4846,6,9073,90,21034,15,362.4,2,5,7962,90,+++++,+++,+++++,+++
```

Bonnie++ Test 2:

```
[root@es1 npavlica]# bonnie++ -u root -s 2048 -r 512 -n 5 -d /tmp
```

Using uid:0, gid:0.

Writing with putc()...done

Writing intelligently...done

Rewriting...done

Reading with getc()...done

Reading intelligently...done

start 'em...done...done...done...

Create files in sequential order...done.

Stat files in sequential order...done.

Delete files in sequential order...done.

Create files in random order...done.

Stat files in random order...done.

Delete files in random order...done.

```
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
```

```
          -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
```

```
--Seeks--
```

```
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
```

```
es1.estation.com 2G 7208 88 8042 12 4652 6 8916 96 19611 14
252.9 2
```

```
-----Sequential Create----- -----Random
```

```
Create-----
```

```
-Create-- --Read--- -Delete-- -Create-- --Read---
```

```
-Delete--
```

```
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
```

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```

/sec %CP
          5 8075 92 +++++ +++ +++++ +++ 6731 75 +++++ +++
+++++ +++
es1.estation.com,2G,7208,88,8042,12,4652,6,8916,96,19611,14,252.9,2,5,8075,92,+++++,+++,+++++,+++
Bonnie++ Test 3:
[root@es1 npavlica]# bonnie++ -u root -s 3072 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03          -----Sequential Output----- --Sequential Input-
--Random-
          -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
es1.estation.com 3G 6995 85 7921 12 4723 6 9728 96 20919 15
218.5 1
          -----Sequential Create----- -----Random
Create-----
          -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
          files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
          5 7840 90 +++++ +++ +++++ +++ 8852 100 +++++ +++
9220 72
es1.estation.com,3G,6995,85,7921,12,4723,6,9728,96,20919,15,218.5,1,5,7840,90,+++++,+++,+++++,+++
DD Test 1:
[root@es1 npavlica]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real    2m14.152s
user    0m1.649s
sys     0m29.622s
DD Test 2:
[root@es1 npavlica]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real    2m14.152s
user    0m1.649s
sys     0m29.622s
[root@es1 npavlica]# rm tstfile
rm: remove regular file `tstfile'? y
[root@es1 npavlica]# time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
real    4m7.145s
user    0m3.152s
sys     1m0.303s
DD Test 3:
[root@es1 npavlica]# time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out

```

```

real    6m40.592s
user    0m4.751s
sys     1m31.968s
FreeBSD5.3 I/O Tests:
Partition Layout / Utilization:
$ df -h
Files ystem      Size    Used    Avail Capacity  Mounted on
/dev/aacd0sla    248M    35M    193M    15%    /
devfs            1.0K    1.0K    0B     100%   /dev
/dev/aacd0sle    248M    6.0K    228M    0%    /tmp
/dev/aacd0s1f    31G     1.8G    27G     6%    /usr
/dev/aacd0s1d    248M    2.6M    225M    1%    /var
Bonnie++ Test 1:
 715 nick.pavlica 97     0  2380K  1324K RUN      0:53 21.12% 20.85%
bonnie++
$ bonnie++ -s 1024 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.535 nick.pavlica -4    0
2380K 1216K getblk 0:17 2.84% 2.83% bonnie++
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency 1     -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
vader.e--station 1G     60 99 6351 7 4169 5 170 99 20904 13
200.7 19
Latency          190ms 6458ms 10221ms 57902us 33802us
423ms
Version 1.93c      -----Sequential Create----- -----Random
Create-----
vader.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
5 5647 59 +++++ +++ 9412 74 5757 56 +++++ +++
5291 45
Latency          9741us 917us 315us 225ms 875us
11165us
1.93c,1.93c,vader.e-station.com,1,1106164339,1G,,60,99,6351,7,4169,5,170,99,20904,13,200.7,19,5,,
Bonnie++ Test 2:
 745 nick.pavlica -16     0  2380K  1200K wdrain  0:58 7.03% 7.03%
bonnie++
 745 nick.pavlica -4      0  2380K  1200K getblk  1:21 5.57% 5.57%
bonnie++
$ bonnie++ -s 2048 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...

```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

```

Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency  1      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
vader.e--station 2G   60 99 5483  6 4448  5  170 99 19045 12
129.8 13
Latency      152ms   9726ms  7113ms  55161us  42746us
3598ms
Version 1.93c      -----Sequential Create----- -----Random
Create-----
vader.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
      files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
      5 7036 72 +++++ +++ 9521 75 4877 50 +++++ +++
9029 76
Latency      5716us   955us   3648us  10997us   400us
320us
1.93c,1.93c,vader.e--station.com,1,1106164107,2G,,60,99,5483,6,4448,5,170,99,19045,12,129.8,13,5,,
Bonnie++ Test 3:
789 nick.pavlica -4  0 2380K 1208K getblk  1:52 4.64% 4.64%
bonnie++
789 nick.pavlica -4  0 2380K 1208K getblk  1:52 2.49% 2.49%
bonnie++
$ bonnie++ -s 3072 -r 512 -n 5
Writing a byte at a time...done
Writing intelligently...done
Rewriting...done
Reading a byte at a time...done
Reading intelligently...done
start 'em...done...done...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.93c      -----Sequential Output----- --Sequential Input-
--Random-
Concurrency  1      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine      Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
vader.e--station 3G   60 99 6184  7 3907  4  167 98 20993 14
99.3 11
Latency      177ms   9312ms  15369ms  72183us  70690us
608ms
Version 1.93c      -----Sequential Create----- -----Random
Create-----
vader.e--station.co -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
      files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
      5 7032 72 +++++ +++ 9667 77 7445 74 +++++ +++

```

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```

4197 36
Latency          5855us    1682us    359us    8565us    11109us
11436us
1.93c,1.93c,vader.e--station.com,1,1106166552,3G,,60,99,6184,7,3907,4,167,98,20993,14,99.3,11,5,,
DD Test1:
$ time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
1073741824 bytes transferred in 168.394218 secs (6376358 bytes/sec)
    168.41 real        1.34 user        33.60 sys
168.41 / 60 = 2.806833333
DD Test 2:
Top was:
- 575 nick.pavlica -16    0 1212K   588K wdrain   0:13 17.30% 17.04%
dd
- 575 nick.pavlica -16    0 1212K   588K wdrain   0:32 20.85% 20.85%
dd
$ time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
2147483648 bytes transferred in 359.389723 secs (5975362 bytes/sec)
    359.59 real        2.57 user        68.14 sys
359.59 / 60 = 5.993166667
DD Test 3:
661 nick.pavlica -16    0 1212K   588K wdrain   0:06 20.86% 15.19% dd
$ time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
3221225472 bytes transferred in 520.399250 secs (6189912 bytes/sec)
    520.60 real        4.06 user        102.48 sys
520.6 / 60 = 8.676666667
Fedora C3 With XFS:
(minimal install)
[root@localhost ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda3       34G   737M   33G   3% /
/dev/sda1       92M    6.0M   86M   7% /boot
none            252M     0 252M   0% /dev/shm
Bonnie++ Test 1:
[root@localhost tmp]# bonnie++ -u root -s 1024 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
                -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 1G  8206  96 11876  13  5982  10  9375  95 24909  21
538.8    4
                -----Sequential Create----- -----Random

```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

```

Create-----
      -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
      files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
      5 652 13 +++++ +++ 600 14 622 14 +++++ +++
365 7
localhost.localdomain,1G,8206,96,11876,13,5982,10,9375,95,24909,21,538.8,4,5,652,13,+++++,+++ ,600
Bonnie++ Test 2:
[root@localhost tmp]# bonnie++ -u root -s 2048 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP
localhost.locald 2G 7981 94 8794 9 6026 10 9535 97 25025 21
392.1 3
      -----Sequential Create----- -----Random
Create-----
      -Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
      files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
      5 635 13 +++++ +++ 587 14 574 13 +++++ +++
388 8
localhost.localdomain,2G,7981,94,8794,9,6026,10,9535,97,25025,21,392.1,3,5,635,13,+++++,+++ ,587,1
Bonnie++ Test 3:
2745 root 25 0 4176 976 2300 R 99.9 0.2 3:34.49 bonnie++
[root@localhost tmp]# bonnie++ -u root -s 3072 -r 512 -n 5 -d /tmp
Using uid:0, gid:0.
Writing with putc()...done
Writing intelligently...done
Rewriting...done
Reading with getc()...done
Reading intelligently...done
start 'em...done...done...done...
Create files in sequential order...done.
Stat files in sequential order...done.
Delete files in sequential order...done.
Create files in random order...done.
Stat files in random order...done.
Delete files in random order...done.
Version 1.03      -----Sequential Output----- --Sequential Input-
--Random-
      -Per Chr- --Block-- -Rewrite- -Per Chr- --Block--
--Seeks--
Machine          Size K/sec %CP K/sec %CP K/sec %CP K/sec %CP K/sec %CP
/sec %CP

```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

```
localhost.locald 3G 7909 93 8053 8 3498 5 9328 95 24895 21
351.9 3
```

```
-----Sequential Create----- -----Random
Create-----
-Create-- --Read--- -Delete-- -Create-- --Read---
-Delete--
files /sec %CP /sec %CP /sec %CP /sec %CP /sec %CP
/sec %CP
5 559 12 +++++ +++ 528 13 594 13 +++++ +++
```

```
414 9
localhost.localdomain,3G,7909,93,8053,8,3498,5,9328,95,24895,21,351.9,3,5,559,12,+++++,+++,528,13
```

```
DD Test 1:
2629 root 18 0 4632 472 3344 D 24.5 0.1 0:20.46 dd
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real 1m39.842s
user 0m4.404s
sys 0m22.647s
```

```
DD Test 2:
2669 root 18 0 4596 472 3344 D 20.5 0.1 0:07.93 dd
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
real 4m11.713s
user 0m9.131s
sys 0m46.951s
```

```
DD Test 3:
2707 root 18 0 3832 472 3344 R 23.2 0.1 0:30.84 dd
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
real 6m52.182s
user 0m13.450s
sys 1m10.167s
```

SC 400 Tests

```
fc3 with xfs:
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=1M
1048576+0 records in
1048576+0 records out
real 0m27.491s
user 0m1.436s
sys 0m6.888s
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=2M
2097152+0 records in
2097152+0 records out
real 1m3.194s
user 0m2.847s
sys 0m13.766s
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
real 1m59.668s
user 0m4.304s
sys 0m20.673s
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=7M
7340032+0 records in
7340032+0 records out
real 4m6.371s
user 0m9.877s
sys 0m49.454s
```

freebsd-performance: Re: FreeBSD 5.3 I/O Performance / Linux 2.6.10 | More Info

```
[root@localhost ~]# time dd bs=1024 if=/dev/zero of=tstfile count=3M
3145728+0 records in
3145728+0 records out
real    1m35.411s
user    0m4.495s
sys     0m21.006s
[root@localhost ~]# ls
anaconda-ks.cfg  install.log  install.log.syslog  tstfile
copy test:
(sc400)
[root@localhost ~]# time cp tstfile tstfile2
real    3m22.202s
user    0m1.320s
sys     0m12.605s
(pe2400)
[root@localhost ~]# time cp tstfile tstfile2
real    11m6.046s
user    0m1.091s
sys     0m39.096s
```

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