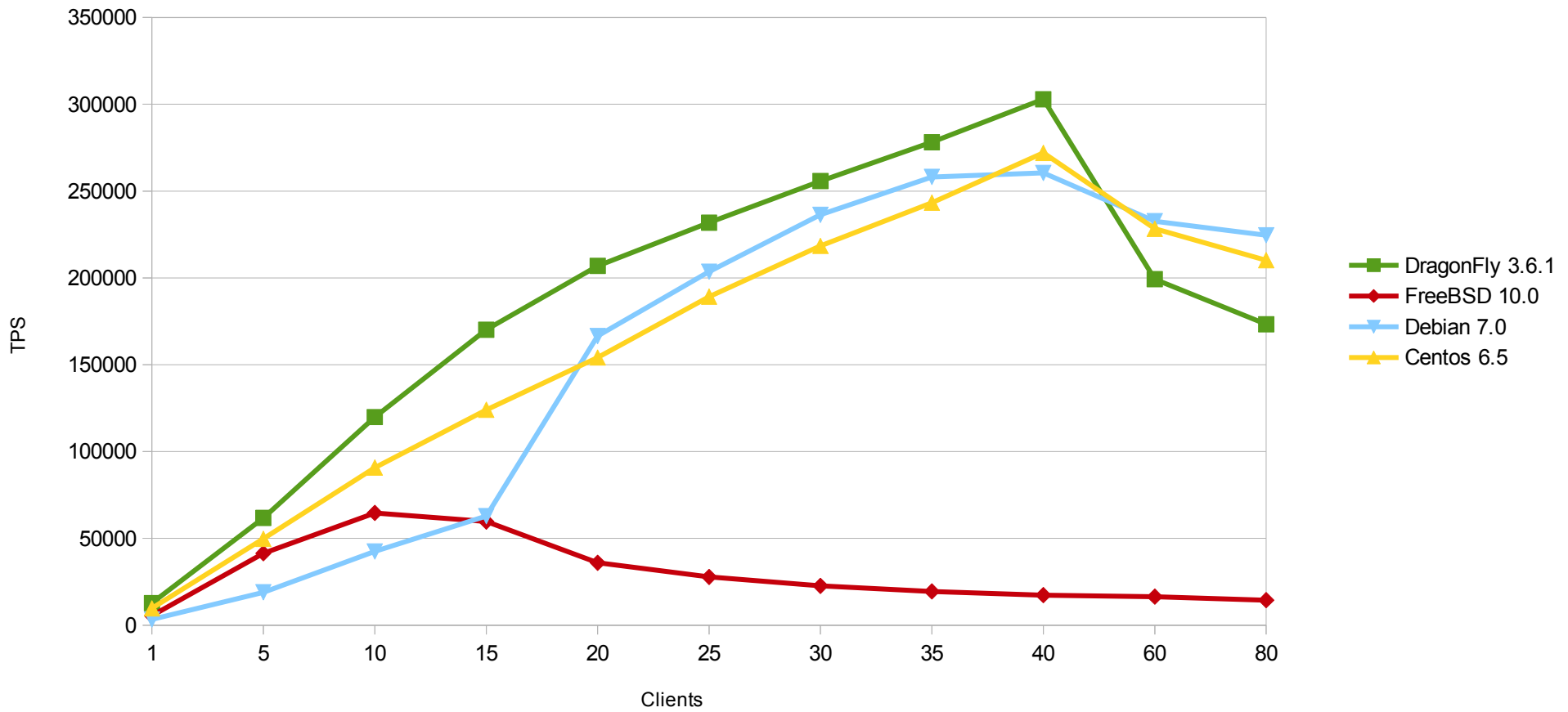


Results

PostgreSQL 9.3 Pgbench Transactions Per Second, 2x Xeon E5-2690v2 (40 threads), 128GB, Unix socket											
Clients	1	5	10	15	20	25	30	35	40	60	80
DragonFly 3.6.1	12684	61725	119845	170176	206936	231818	255771	278178	302886	199249	173304
FreeBSD 10.0	5492	41398	64663	59654	35935	27789	22621	19410	17329	16414	14419
Debian 7.0	3283	18908	42489	62811	166513	203650	236381	258158	260464	232670	224588
Centos 6.5	9709	49762	90726	124066	154112	189233	218421	243321	271991	228326	210201

PostgreSQL 9.3 performance



Raw data

Detailed TPS results excluding connections establishing

All tests were done with Postgres 9.3.3

Clients (and threads)	1	5	10	15	20	25	30	35	40	60	80
DragonFly 3.6.1	12,904	60,365	118,147	170,264	207,179	232,055	255,553	279,714	302,546	199,836	173,203
DragonFly 3.6.1	12,629	61,765	118,138	170,027	206,832	231,387	255,666	277,042	303,200	199,402	173,374
DragonFly 3.6.1	12,518	63,046	123,249	170,236	206,798	232,012	256,093	277,778	302,912	198,508	173,333
FreeBSD 10.0	5,355	41,582	65,254	60,102	36,281	27,770	22,656	19,388	17,250	16,380	14,334
FreeBSD 10.0	5,530	42,058	65,836	59,518	35,186	27,940	22,563	19,458	17,430	16,451	14,404
FreeBSD 10.0	5,591	40,555	62,899	59,341	36,338	27,657	22,644	19,382	17,307	16,409	14,518
Debian 7.0	3,103	18,378	42,132	63,306	167,334	203,560	236,384	258,696	260,659	233,321	224,871
Debian 7.0	3,349	19,229	41,720	61,661	166,458	204,048	236,592	258,191	260,413	232,140	224,676
Debian 7.0	3,395	19,118	43,615	63,465	165,747	203,343	236,166	257,586	260,320	232,549	224,219
Centos 6.5	9,932	51,161	92,625	125,322	154,322	187,880	218,760	243,540	272,250	228,513	210,378
Centos 6.5	9,228	48,135	88,991	123,158	154,099	189,964	218,491	243,582	272,526	227,557	210,618
Centos 6.5	9,968	49,989	90,563	123,718	153,916	189,856	218,012	242,840	271,198	228,907	209,609

Debian 7.0 uses a kernel based on Linux 3.2

Centos 6.5 uses a kernel based on Linux 2.6.32

## Setup

### Hardware:

- 2x Xeon E5-2690v2 (40 threads total)
- 128 GB RAM

### Software

- PostgreSQL 9.3.3
- Various operating systems

### Goal:

Test DragonFly scalability with pgbench, compare with other operating systems

### postgresql.conf :

```
max_connections = 100
update_process_title = off
autovacuum = off
shared_buffers = 32GB
effective_cache_size = 100GB
```

### Initialize database cluster :

```
/usr/local/postgres-9.3/bin/initdb -D /usr/local/pgdata
```

### Run Postgres :

```
/usr/local/postgres-9.3/bin/postgres -D /usr/local/pgdata
```

### Create test database

```
psql template1
create database bench;
pgbench -i -s 5000 bench
```

Scaling factor 5000 => ~ = 73GB database

### Running tests :

```
tar cvf - /usr/local/pgdata > /dev/null
pgbench -j 6 -c 6 -T 1800 -S bench
```

# Fill up filesystem caches

# Dummy run to warm up postgres caches for 30 mn

```
#!/bin/sh
```

```
for clients in 1 5 10 15 20 25 30 35 40 60 80
do
    THREADS=${clients}
    ./pgbench -j ${THREADS} -c ${clients} -T 150 -S bench > result_${clients}.txt
done
```

Repeat three times and average the individual results

### Special setup

```
DragonFly : sysctl machdep.pmap_mmu_optimize=1 set on boot
Debian : Postgres-9.3.3 not available as a package, compiled manually
Centos : Postgres-9.3.3 not available as a package, compiled manually
```