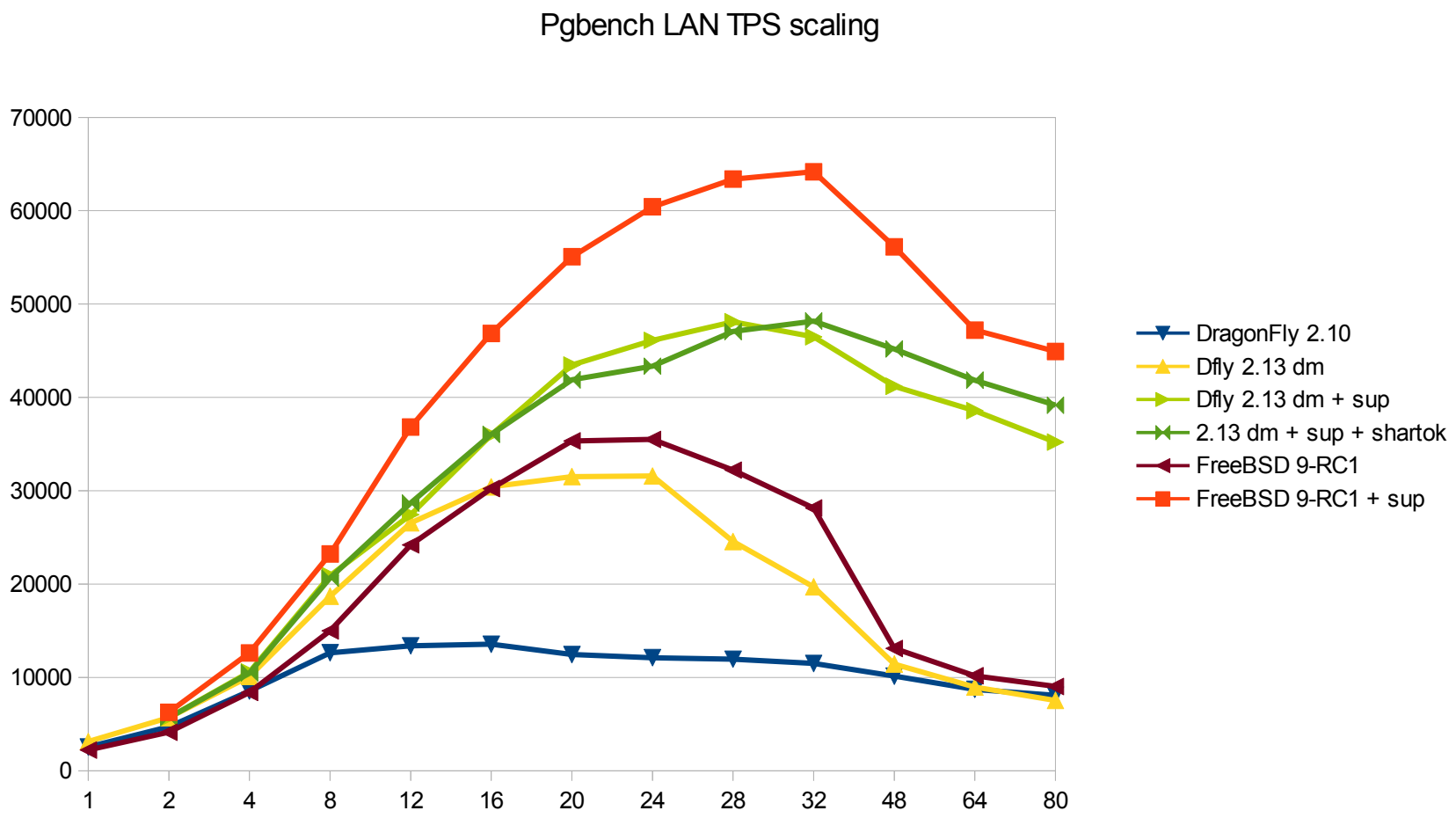
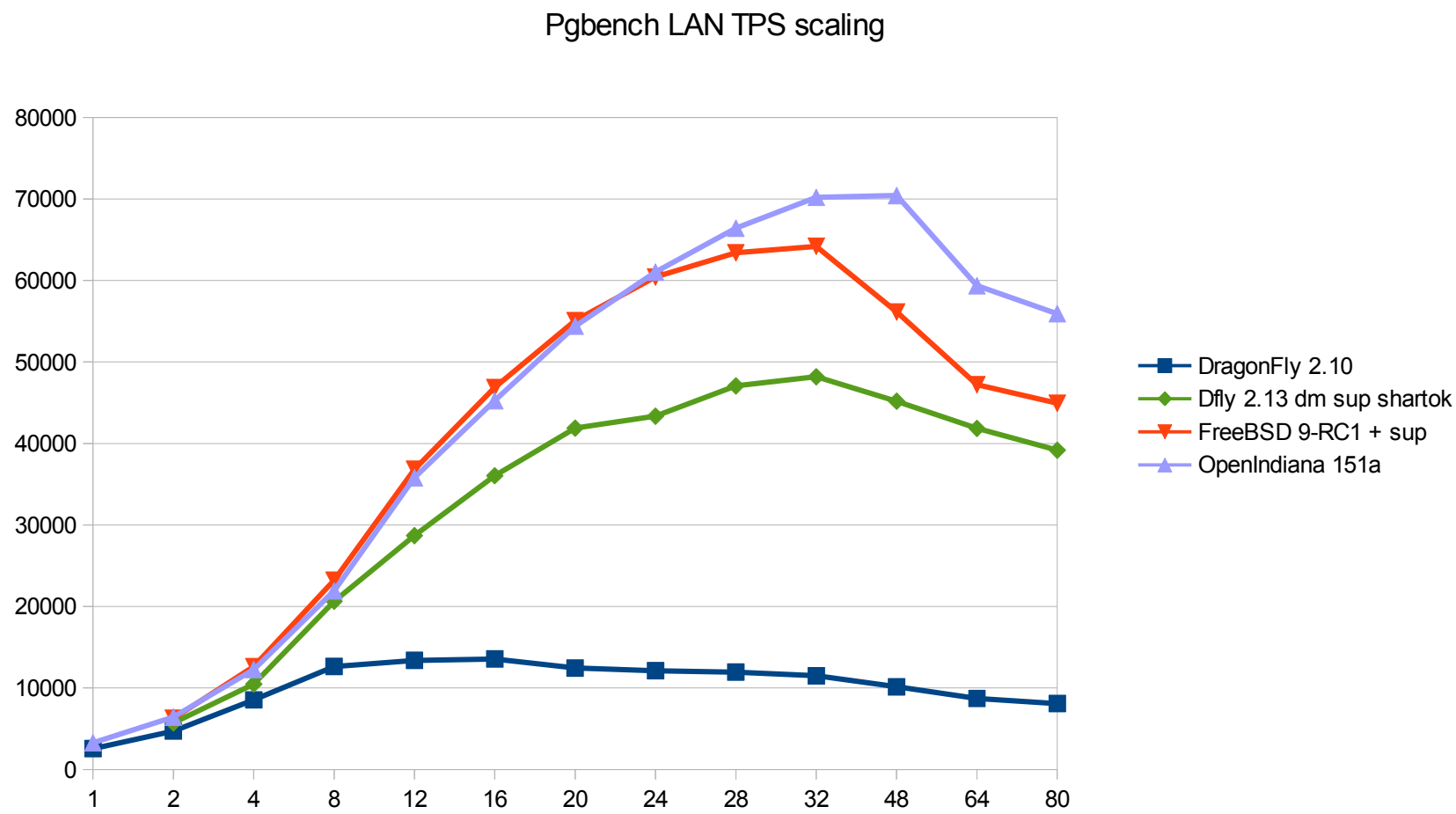
Pgbench Postgres 9.1 averaged Transactions Per Second, 2x Xeon X5650 / 96GB, LAN													
Clients	1	2	4	8	12	16	20	24	28	32	48	64	80
DragonFly 2.10	2548	4708	8533	12635	13382	13556	12441	12106	11949	11491	10134	8707	8082
Dfly 2.13 dm	3125	5686	10101	18701	26559	30419	31509	31580	24565	19695	11421	8962	7534
Dfly 2.13 dm + sup		5703	10577	20909	27435	35973	43456	46104	48105	46487	41186	38575	35205
2.13 dm + sup + shartok		5702	10478	20638	28690	36033	41877	43344	47055	48181	45179	41844	39169
FreeBSD 9-RC1	2210	4131	8392	14978	24190	30233	35338	35500	32210	28138	13099	10174	9028
FreeBSD 9-RC1 + sup		6267	12624	23219	36830	46852	55066	60423	63386	64178	56133	47205	44924



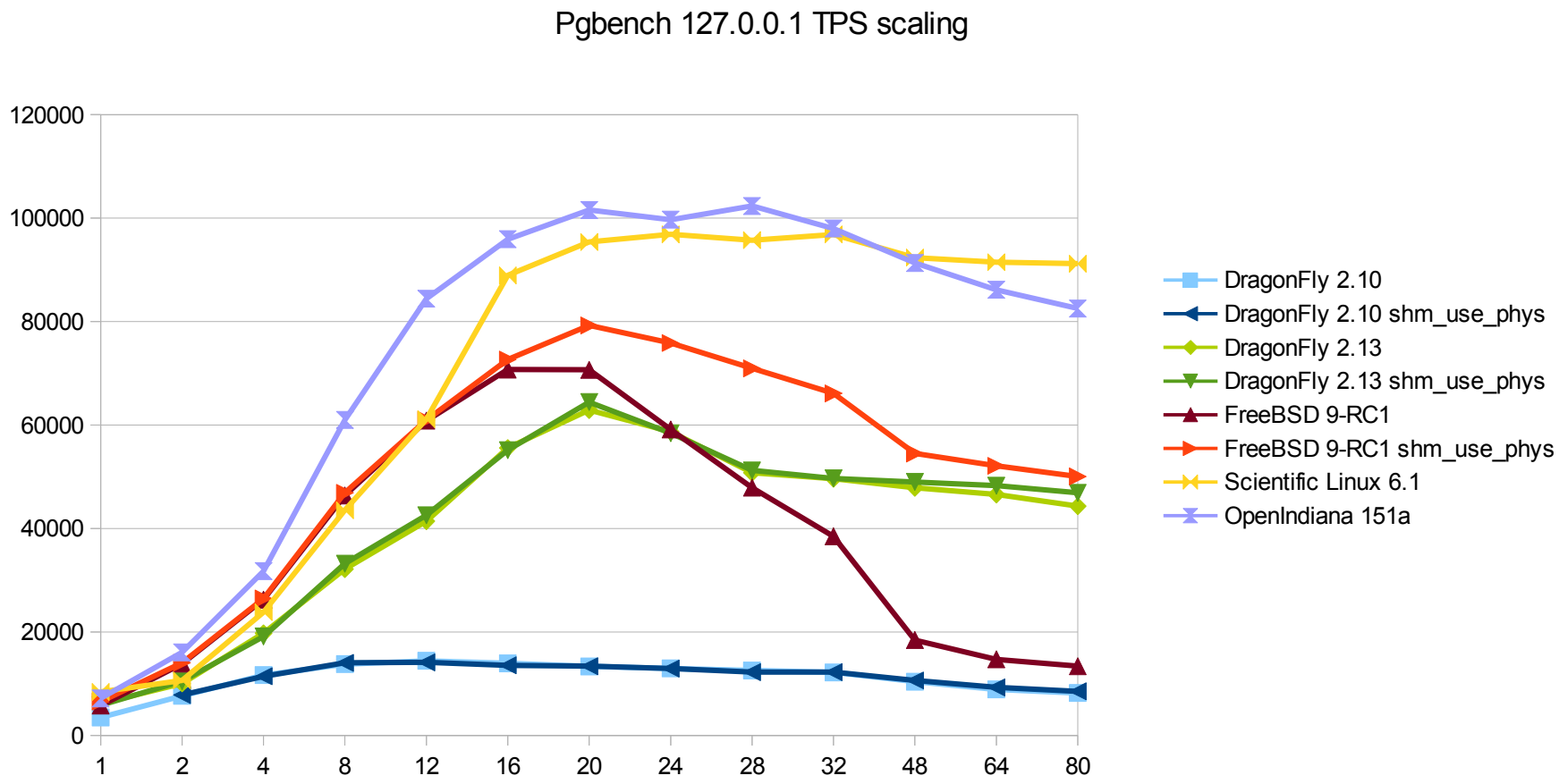
dmalloc is enabled by default on x86_64 sup : kern.ipc.shm_use_phys=1 shartok means shared tokens

Pgbench Postgres 9.1 averaged Transactions Per Second, 2x Xeon X5650 / 96GB, LAN													
Clients	1	2	4	8	12	16	20	24	28	32	48	64	80
DragonFly 2.10	2548	4708	8533	12635	13382	13556	12441	12106	11949	11491	10134	8707	8082
Dfly 2.13 dm sup shartok		5702	10478	20638	28690	36033	41877	43344	47055	48181	45179	41844	39169
FreeBSD 9-RC1 + sup		6267	12624	23219	36830	46852	55066	60423	63386	64178	56133	47205	44924
OpenIndiana 151a	3279	6426	12254	21916	35802	45242	54399	61024	66414	70195	70412	59359	55924



dm : dmalloc sup: kern.ipc.shm_use_phys=1 shartok : shared tokens

Pgbench Postgres 9.1 Transactions Per Second, 2x Xeon X5650 / 96GB, localhost													
Clients	1	2	4	8	12	16	20	24	28	32	48	64	80
DragonFly 2.10	3471	7637	11668	13777	14425	13940	13332	12961	12555	12180	10389	8892	8203
DragonFly 2.10 shm_use_phys		7809	11423	14033	14120	13542	13368	12930	12242	12242	10630	9274	8520
DragonFly 2.13	6155	10038	19750	32137	41412	55547	62876	58707	50762	49621	47853	46566	44318
DragonFly 2.13 shm_use_phys	5817	10471	19121	33201	42565	55141	64441	58428	51226	49679	48989	48271	46899
FreeBSD 9-RC1	5758	13866	26243	46382	60839	70732	70683	59148	47888	38485	18431	14699	13377
FreeBSD 9-RC1 shm_use_phys	6529	14036	26449	46907	60975	72658	79259	75850	70960	66120	54502	52118	50056
Scientific Linux 6.1	8397	10626	23808	43530	61131	88918	95371	96868	95735	96845	92368	91481	91200
OpenIndiana 151a	7158	16052	31762	60981	84432	95916	101570	99690	102335	97991	91324	86146	82515



Detailled TPS results, including connection establishing time, 2x Xeon X5650 (6 cores, 12 threads, 2.66 GHz), LAN													
Clients	1	2	4	8	12	16	20	24	28	32	48	64	80
DragonFly 2.10, run #1	2572	4647	8626	12720	13493	13610	12640	12198	11992	11533	10193	8891	8171
DragonFly 2.10, run #2	2532	4792	8422	12625	13389	13540	12318	12124	11903	11500	10128	8618	8094
DragonFly 2.10, run #3	2539	4686	8551	12560	13264	13516	12367	11997	11952	11440	10081	8611	7981
Dfly 2.13 dmalloc, run #1	3122	5620	9197	18568	25689	30151	31836	32003	24952	19250	11494	9139	7510
Dfly 2.13 dmalloc, run #2	3126	5763	10517	19251	26848	31150	31137	30992	23952	20313	11532	9161	7517
Dfly 2.13 dmalloc, run #3	3128	5675	10589	18284	27138	29956	31552	31744	24790	19522	11238	8587	7575
FreeBSD 9, run #1	3065	6552	12659	22209	36058	45199	52888	53062	49470	42193	19628	15394	13551
FreeBSD 9, run #2	3565	5841	12517	22724	36514	45501	53124	53439	47159	42221	19669	15129	13532
FreeBSD 9, run #3	3069	6422	12967	23895	36300	46394	53042	53050	47691	42155	19665	15090	13550
FreeBSD + shm_use_phys		6267	12624	23219	36830	46852	55066	60423	63386	64178	56133	47205	44924
dfly 2.13 + shm_use_phys		5703	10577	20909	27435	35973	43456	46104	48105	46487	41186	38575	35205
Dfly 2.13 shared tokens #1		5680	10236	20877	28349	35674	40598	47211	47425	48951	44350	41649	39853
Dfly 2.13 shared tokens #2		5768	10687	20142	29120	36133	42144	36995	46727	48359	45481	42790	38378
Dfly 2.13 shared tokens #3		5658	10511	20894	28600	36292	42890	45824	47012	47231	45705	41093	39275
OpenIndiana 151a #1	3278	6395	12283	21736	35361	44559	53296	59867	65122	67699	71564	59137	56061
OpenIndiana 151a #2	3286	6433	12055	21183	36026	45510	55122	61679	66889	71435	70150	59497	56318
OpenIndiana 151a #3	3272	6452	12426	22830	36019	45658	54779	61525	67229	71451	69523	59442	55393

Detailled TPS results, including connection establishing time, 2x Xeon X5650 (6 cores, 12 threads, 2.66 GHz), 127.0.0.1													
Clients	1	2	4	8	12	16	20	24	28	32	48	64	80
OpenIndiana 151a #1	7169	16175	32288	61733	85974	98956	104683	105205	103575	94394	89522	90274	92660
OpenIndiana 151a #2	7192	16070	31563	61543	83162	94811	99940	93233	103245	102777	92027	79079	72533
OpenIndiana 151a #3	7114	15909	31435	59668	84159	93981	100087	100631	100186	96801	92422	89085	82352

System description :

PostgreSQL server

- 2x Xeon X5650 (6 cores, 12 threads, 2.66 GHz)
- 12 cores, 24 hardware threads total
- 96 GB RAM
- Intel 82576 NIC

Client machine

- Core 2 Duo 3GHz
- 1 Gb/s ethernet link
- running DragonFly 2.13
- identical configuration used for all tests

Benchmark

- performs select-only transactions
- the storage subsystem is not used, all operations are run from memory
- the goal is to test CPU scaling
- the LAN tests allow to see if network cpu scaling performance is a drag
- PostgreSQL 9.1.1
- pgbench scale factor = 1600
- shared_buffers = 8GB (dfly 2.10: 1GB)
- effective_cache_size = 48GB
- update_process_title = off

Methodology

- one 30-minute run to warm up the base at startup
- 3x 10 minutes runs per data point, averaged
- time was short to run 3 tests for some data points, they appear only once in the results page

Database initialization

```
SERVER=192.168.2.34
./pgbench -h ${SERVER} -i -s 1600 bench
```

Running the tests

```
SERVER=127.0.0.1
THREADS=1
CLIENTS=1

# 1st run, 30m to warm caches
./pgbench -h ${SERVER} -j ${THREADS} -c ${CLIENTS} -T 1800 -S bench

# 2nd runs, 10m each
# they must then be averaged

./pgbench -h ${SERVER} -j ${THREADS} -c ${CLIENTS} -T 600 -S bench > result_1.1.txt
./pgbench -h ${SERVER} -j ${THREADS} -c ${CLIENTS} -T 600 -S bench > result_1.2.txt
./pgbench -h ${SERVER} -j ${THREADS} -c ${CLIENTS} -T 600 -S bench > result_1.3.txt

# next runs, 10m each
# we use 2 threads for these ones
# Client number must be divisible by NUM_THREADS.

THREADS=2
for c in 2 4 8 12 16 20 24 28 32 48 64 80
do
./pgbench -h ${SERVER} -j ${THREADS} -c ${c} -T 600 -S bench > result_${c}.1.txt
./pgbench -h ${SERVER} -j ${THREADS} -c ${c} -T 600 -S bench > result_${c}.2.txt
./pgbench -h ${SERVER} -j ${THREADS} -c ${c} -T 600 -S bench > result_${c}.3.txt
done
```

Dragonfly 2.13 tests were run with sources from 2011-11-10 to 2011-11-13

- dfly 2.13 + dmalloc: commit c17a6852f80ce59ea0641ae01d0b3c52f0584101
- dfly 2.13 + dmalloc + select fix: commit 945dadfd0a47b082487e1c3f5dee78ee86df4451