

Benchmark Test of DBM Brothers

This benchmark test is to calculate processing time (real time) and file size of database.

Writing test is to store 1,000,000 records. Reading test is to fetch all of its records.

Both of the key and the value of each record are such 8-byte strings as '00000001', '00000002', '00000003'...

Tuning parameters of each DBM are set to display its best performance.

Platform: Linux 2.4.31 kernel, EXT2 file system, Pentium4 1.7GHz CPU, 1024MB RAM, ThinkPad T42

Compilation: gcc 3.3.2 (using -O3), glibc 2.3.3

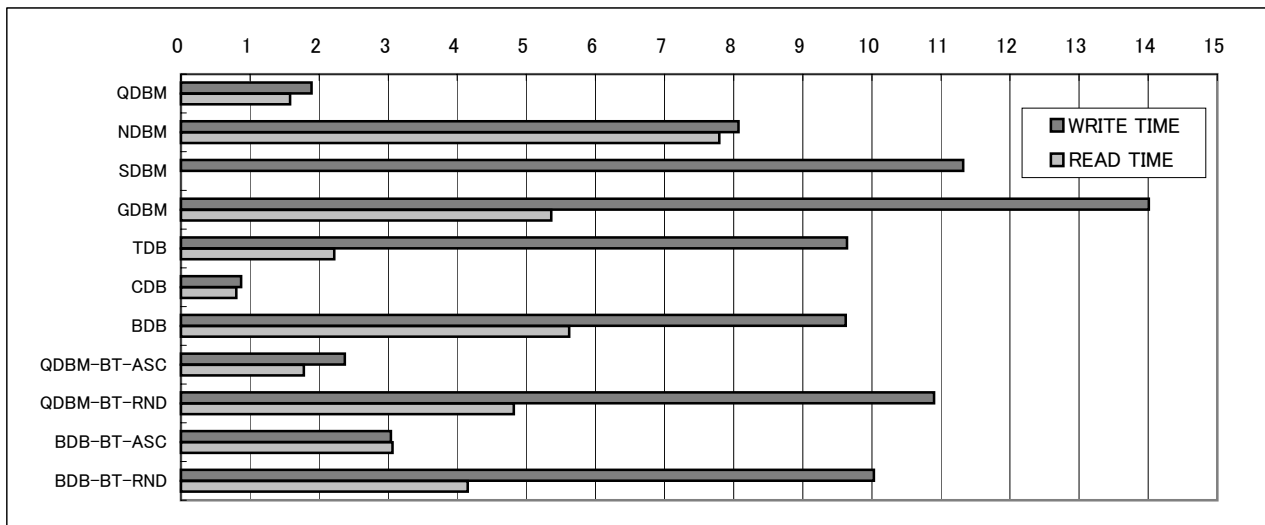
Result

NAME	DESCRIPTION	WRITE TIME	READ TIME	FILE SIZE
QDBM	Quick Database Manager 1.8.74	1.89	1.58	55257
NDBM	New Database Manager 5.1	8.07	7.79	814457
SDBM	Substitute Database Manager 1.0.2	11.32	0.00	606720
GDBM	GNU Database Manager 1.8.3	14.01	5.36	82788
TDB	Trivial Database 1.0.6	9.64	2.22	51056
CDB	Tiny Constant Database 0.75	0.87	0.80	39065
BDB	Berkeley DB 4.4.20	9.62	5.62	40956
QDBM-BT-ASC	B+ tree API of QDBM (ascending order)	2.37	1.78	24304
QDBM-BT-RND	B+ tree API of QDBM (at random)	10.90	4.82	15362
BDB-BT-ASC	B+ tree API of BDB (ascending order)	3.04	3.06	27520
BDB-BT-RND	B+ tree API of BDB (at random)	10.03	4.15	29120

Unit of time is seconds. Unit of size is kilo bytes.

Read time of SDBM can not be calculated because its database is broken when more than 100000 records.

Graph of Processing Time



Graph of File Size

