

This file shows the overhead involved when using DBFNTX and opening multiple NTXs for a single DBF. I thought this would have been fixed under 5.20 but it was not. For every additional index the primary index seems to be repositioned. Is this due to legacy code? Is DBFNTX intended to work this way for some reason?

These are the network frames captured (using Network General's Sniffer) while monitoring the activity between a workstation and a server in a Token-Ring network using NetBIOS. I have confirmed this behavior also in a stand alone configuration using the WatchDos utility.

In this example the primary index is TESTDATA.NTX opened as file handle 15 (F=0015). As you will notice, for every additional index, DBFNTX repositions file handle 15, causing not only overhead on the network but I also assume, contention, due to the lock and read, when other workstations need access to this index.

The Clipper program pseudo code is the following

```

Connect to DBF device
Connect to Index device
Open TESTDATA DBF
Open TESTDATA Index
Open TESTFROM Index
Open TESTDATE Index

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The results were the same under Clipper 5.01 and Clipper 5.20. The only other RDD tested was COMIX which did not reposition the primary index for each additional index.

DeltaT	Destinat.	Source	Summary
	TEST	crs	SMB C Connect A:\\TEST\\MTS-DB
0.002	crs	TEST	NETB D=0A S=FD Data ACK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=87
0.002	crs	TEST	SMB R T=801 Connected
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=88
0.001	TEST	crs	NETB D=FD S=0A Data ACK
0.007	TEST	crs	1 loop on a request
			SMB C Connect A:\\TEST\\MTS-IX
0.003	crs	TEST	NETB D=0A S=FD Data ACK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=89
0.004	crs	TEST	SMB R T=1003 Connected
0.003	TEST	crs	LLC R D=F0 S=F0 RR NR=90
0.000	TEST	crs	NETB D=FD S=0A Data ACK
0.009	TEST	crs	SMB C Open \\TESTDATA.DBF <-- Open DBF
0.002	crs	TEST	NETB D=0A S=FD Data ACK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=91
0.037	crs	TEST	SMB R F=0004 Opened Open as File Handle 4
0.000	TEST	crs	LLC R D=F0 S=F0 RR NR=92
0.001	TEST	crs	NETB D=FD S=0A Data ACK
0.001	TEST	crs	SMB C F=0004 Read 32 at 0
0.002	crs	TEST	NETB D=0A S=FD Data ACK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=93
0.034	crs	TEST	SMB R OK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=94
0.000	TEST	crs	NETB D=FD S=0A Data ACK
0.002	TEST	crs	SMB C F=0004 Read 480 at 32
0.003	crs	TEST	NETB D=0A S=FD Data ACK
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=95

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0.006   crs      TEST      SMB R OK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=96
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.011   TEST     crs      SMB C Open \TESTDATA.NTX      <--- Open Primary Index
0.003   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=97
0.014   crs      TEST     SMB R F=0015 Opened          as File Handle 15
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=98
0.000   TEST     crs      NETB D=FD S=0A Data ACK
0.002   TEST     crs      SMB C F=0015 Read 1024 at 0
0.005   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=99
0.008   crs      TEST     SMB R OK
0.004   TEST     crs      LLC R D=F0 S=F0 RR NR=100
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Seek to end
0.002   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=101
0.001   crs      TEST     SMB R Seek to 83968
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=102
0.000   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Lock & Read 1 at 1000000000
0.003   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=103
0.003   crs      TEST     SMB R Locked & Read
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=104
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Read 12 at 0
0.003   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=105
0.003   crs      TEST     SMB R OK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=106
0.000   TEST     crs      NETB D=FD S=0A Data ACK
0.002   TEST     crs      SMB C F=0015 Read 1024 at 82944
0.002   crs      TEST     NETB D=0A S=FD Data ACK
0.003   TEST     crs      LLC R D=F0 S=F0 RR NR=107
0.006   crs      TEST     SMB R OK
0.004   TEST     crs      LLC R D=F0 S=F0 RR NR=108
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Read 1024 at 40960
0.002   crs      TEST     NETB D=0A S=FD Data ACK
0.000   TEST     crs      LLC R D=F0 S=F0 RR NR=109
0.008   crs      TEST     SMB R OK
0.002   TEST     crs      LLC R D=F0 S=F0 RR NR=110
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Read 1024 at 1024
0.001   crs      TEST     NETB D=0A S=FD Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=111
0.009   crs      TEST     SMB R OK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=112
0.000   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      SMB C F=0015 Unlock 1 at 1000000000
0.010   crs      TEST     NETB D=0A S=FD Data ACK
0.000   crs      TEST     SMB R Unlocked
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=113
0.001   TEST     crs      NETB D=FD S=0A Data ACK
0.001   TEST     crs      LLC R D=F0 S=F0 RR NR=114
0.006   TEST     crs      SMB C Open \TESTFROM.NTX    <-- Open other Index
0.004   crs      TEST     NETB D=0A S=FD Data ACK
0.000   TEST     crs      LLC R D=F0 S=F0 RR NR=115

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0.013 crs TEST SMB R F=000F Opened as File Handle 0Fh
0.001 TEST crs LLC R D=F0 S=F0 RR NR=116
0.000 TEST crs NETB D=FD S=0A Data ACK
0.002 TEST crs SMB C F=000F Read 1024 at 0
0.002 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=117
0.009 crs TEST SMB R OK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=118
0.000 TEST crs NETB D=FD S=0A Data ACK
0.003 TEST crs SMB C F=000F Seek to end
0.002 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=119
0.002 crs TEST SMB R Seek to 103424
0.001 TEST crs LLC R D=F0 S=F0 RR NR=120
0.002 TEST crs NETB D=FD S=0A Data ACK

(Handle 15 - primary index - is read again)

0.001 TEST crs SMB C F=0015 Lock & Read 1 at 1000000000
0.003 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=121
0.002 crs TEST SMB R Locked & Read
0.004 TEST crs LLC R D=F0 S=F0 RR NR=122
0.000 TEST crs NETB D=FD S=0A Data ACK
0.001 TEST crs SMB C F=0015 Read 12 at 0
0.002 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=123
0.001 crs TEST SMB R OK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=124
0.001 TEST crs NETB D=FD S=0A Data ACK
0.001 TEST crs SMB C F=0015 Unlock 1 at 1000000000
0.002 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=125
0.004 crs TEST SMB R Unlocked
0.000 TEST crs LLC R D=F0 S=F0 RR NR=126
0.000 TEST crs NETB D=FD S=0A Data ACK
0.010 TEST crs SMB C Open \TESTDATE.NTX <-- Open other Index
0.004 crs TEST NETB D=0A S=FD Data ACK
0.002 TEST crs LLC R D=F0 S=F0 RR NR=127
0.022 crs TEST SMB R F=0008 Opened as File Handle 08h
0.003 TEST crs LLC R D=F0 S=F0 RR NR=0
0.001 TEST crs NETB D=FD S=0A Data ACK
0.001 TEST crs SMB C F=0008 Read 1024 at 0
0.001 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=1
0.006 crs TEST SMB R OK
0.002 TEST crs LLC R D=F0 S=F0 RR NR=2
0.001 TEST crs NETB D=FD S=0A Data ACK
0.001 TEST crs SMB C F=0008 Seek to end
0.003 crs TEST NETB D=0A S=FD Data ACK
0.003 TEST crs LLC R D=F0 S=F0 RR NR=3
0.000 crs TEST SMB R Seek to 83968
0.001 TEST crs LLC R D=F0 S=F0 RR NR=4
0.001 TEST crs NETB D=FD S=0A Data ACK

(Handle 15 - primary index - is read again)

0.000 TEST crs SMB C F=0015 Lock & Read 1 at 1000000000
0.002 crs TEST NETB D=0A S=FD Data ACK
0.001 TEST crs LLC R D=F0 S=F0 RR NR=5

0.003	crs	TEST	SMB R Locked & Read	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=6	
0.003	TEST	crs	NETB D=FD S=0A Data ACK	
0.000	TEST	crs	SMB C F=0015 Read 12 at 0	
0.017	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	crs	TEST	SMB R OK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=7	
0.003	TEST	crs	LLC R D=F0 S=F0 RR NR=8	
0.000	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C F=0015 Unlock 1 at 1000000000	
0.003	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=9	
0.000	crs	TEST	SMB R Unlocked	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=10	
0.000	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C F=0008 Close	
0.001	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=11	
0.003	crs	TEST	SMB R Closed	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=12	
0.001	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C F=000F Close	
0.003	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=13	
0.005	crs	TEST	SMB R Closed	
0.000	TEST	crs	LLC R D=F0 S=F0 RR NR=14	
0.001	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C F=0015 Close	
0.001	crs	TEST	NETB D=0A S=FD Data ACK	
0.000	TEST	crs	LLC R D=F0 S=F0 RR NR=15	
0.002	crs	TEST	SMB R Closed	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=16	
0.001	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C F=0004 Close	
0.003	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=17	
0.018	crs	TEST	SMB R Closed	
0.002	TEST	crs	LLC R D=F0 S=F0 RR NR=18	
0.000	TEST	crs	NETB D=FD S=0A Data ACK	
0.001	TEST	crs	SMB C T=801 Disconnect	
0.001	crs	TEST	NETB D=0A S=FD Data ACK	
0.000	TEST	crs	LLC R D=F0 S=F0 RR NR=19	
0.001	crs	TEST	SMB R OK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=20	
0.000	TEST	crs	NETB D=FD S=0A Data ACK	
0.002	TEST	crs	SMB C T=1003 Disconnect	
0.002	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=21	
0.001	crs	TEST	SMB R OK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=22	
0.001	TEST	crs	NETB D=FD S=0A Data ACK	
0.006	TEST	crs	SMB C End of Process	
0.001	crs	TEST	NETB D=0A S=FD Data ACK	
0.001	TEST	crs	LLC R D=F0 S=F0 RR NR=23	
0.001	crs	TEST	SMB R OK	
0.000	TEST	crs	LLC R D=F0 S=F0 RR NR=24	
0.000	TEST	crs	NETB D=FD S=0A Data ACK	
0.189	crs	TEST	LLC R D=F0 S=F0 RR NR=43	