

**\*run 6\* spawn\_updates** **100000000** **1000000** **10000000** **30000000** **8000** **60000**

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MyMacbookAir:cpp hkl120$ ./driver test/spawn1.jitd
Now using policy: Cracker[ pushdown balance inline ]
Start[test/scan_for_1_min.jitd]
Start Updates [Scanning for 10000000--30000000] by 1000000; every 8000 ms for 60000ms
2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 198680 scans over 2 s
Rate: 99339.8 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 214686 scans over 2 s
Rate: 107343 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 214050 scans over 2.00001 s
Rate: 107025 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 218407 scans over 2 s
Rate: 109203 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 66087 scans over 2 s
Rate: 33043.4 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 2000000 elements]
  BTree[49971061]
    SortedArray[1000000 elements]
    BTree[78798936]
      SortedArray[578351 elements]
      SortedArray[421649 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 151767 scans over 2.00001 s
Rate: 75883 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 147372 scans over 2 s
Rate: 73685.8 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 151791 scans over 2.00001 s
Rate: 75895.2 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 35830 scans over 2 s
Rate: 17915 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 118352 scans over 2 s
Rate: 59175.9 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 3000000 elements]
  BTree[49971061]
    BTree[33294016]
      SortedArray[1000000 elements]
      SortedArray[500109 elements]
    BTree[78798936]
      SortedArray[866570 elements]
      SortedArray[633321 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 120557 scans over 2 s
Rate: 60278.4 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 113734 scans over 2 s
Rate: 56866.9 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 6829 scans over 2.14333 s
Rate: 3186.16 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 97988 scans over 2.00001 s
Rate: 48993.8 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 96427 scans over 2.00002 s
Rate: 48213 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 4000000 elements]
  BTree[49971061]
    BTree[24976755]
      SortedArray[1000000 elements]
      SortedArray[999904 elements]
    BTree[74922319]
      SortedArray[1000000 elements]
      BTree[78798936]
        SortedArray[155684 elements]
        SortedArray[844412 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 100307 scans over 2.00001 s
Rate: 50153.3 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 3405 scans over 2.03442 s
Rate: 1673.7 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 58219 scans over 2 s
Rate: 29109.5 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 58069 scans over 2.00003 s
Rate: 29034.1 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 50013 scans over 2.00001 s
Rate: 25006.4 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 5000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[19980868]
        SortedArray[1000000 elements]
        SortedArray[250230 elements]
      BTree[44994070]
        SortedArray[1000000 elements]
        SortedArray[248858 elements]
      BTree[74922319]
        BTree[69917787]
          SortedArray[1000000 elements]
          SortedArray[250287 elements]
        BTree[78798936]
          SortedArray[194784 elements]
          BTree[98859970]
            SortedArray[1000000 elements]
            SortedArray[55841 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 490 scans over 2.35778 s
Rate: 207.823 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 27518 scans over 2 s
Rate: 13759 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 64775 scans over 2.00001 s
Rate: 32387.3 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
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Random Scan: 52805 scans over 2.10196 s
Rate: 25121.8 scans/sec
Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
Random Scan: 18 scans over 2.12944 s
Rate: 8.45293 scans/sec
gROOT [[Cracker[ pushdown balance inline ]; 7000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[16644448]
        BTree[14278690]
          SortedArray[1000000 elements]
          SortedArray[166700 elements]
        Concat
          SortedArray[500756 elements]
          Array[83294 elements]
      BTree[39243297]
        SortedArray[1000000 elements]
        SortedArray[749509 elements]
    BTree[74922319]
      BTree[64230126]
        SortedArray[1000000 elements]
        SortedArray[749325 elements]
      BTree[95456544]
        BTree[78798936]
          Concat
            SortedArray[233468 elements]
            Array[38427 elements]
          BTree[93058398]
            SortedArray[1000000 elements]
            SortedArray[166973 elements]
          Concat
            SortedArray[267063 elements]
            SortedArray[44485 elements]
  Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
  Random Scan: 48082 scans over 2.00002 s
  Rate: 24040.8 scans/sec
  Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
  Random Scan: 59178 scans over 2.00001 s
  Rate: 29588.9 scans/sec
  Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
  Random Scan: 42858 scans over 2.01576 s
  Rate: 21261.5 scans/sec
  Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
  Random Scan: 22 scans over 2.01816 s
  Rate: 10.901 scans/sec
  Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
  Random Scan: 49382 scans over 2.00003 s
  Rate: 24690.7 scans/sec
  gROOT [[Cracker[ pushdown balance inline ]; 8000000 elements]
    BTree[49971061]
      BTree[24976755]
        BTree[12486703]
          SortedArray[1000000 elements]
          BTree[14278690]
            SortedArray[142984 elements]
            SortedArray[857478 elements]
        BTree[37456405]
          SortedArray[1000000 elements]
          BTree[39243297]
            SortedArray[143286 elements]
            SortedArray[857057 elements]
      BTree[74922319]
        BTree[62447586]
          SortedArray[1000000 elements]
          SortedArray[999153 elements]
        BTree[91277035]
          BTree[78798936]
            SortedArray[310593 elements]
            SortedArray[1000000 elements]
            SortedArray[689449 elements]
    Time[test/scan_for_1_min.jitd]: 60 s
    Start[test/scan_for_1_min.jitd]
    Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
    Random Scan: 56360 scans over 2.00004 s
    Rate: 28179.5 scans/sec
    Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
    Random Scan: 39254 scans over 2.00509 s
    Rate: 19577.2 scans/sec
    Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
    Random Scan: 18 scans over 2.0285 s
    Rate: 8.87355 scans/sec
    Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
    Random Scan: 37519 scans over 2.00004 s
    Rate: 18759.2 scans/sec
    Scanning for 2000 s in [0,1000000000] -> 1000 keys/read
    Random Scan: 40904 scans over 2.00004 s
    Rate: 20451.6 scans/sec
    gROOT [[Cracker[ pushdown balance inline ]; 9000000 elements]
      BTree[49971061]
        BTree[24976755]
          BTree[12486703]
            BTree[11098788]
              SortedArray[1000000 elements]
              SortedArray[125303 elements]
            BTree[14278690]
              SortedArray[161276 elements]
              SortedArray[964233 elements]
          BTree[37456405]
            BTree[36078870]
              SortedArray[1000000 elements]
              SortedArray[125060 elements]
            BTree[39243297]
              SortedArray[161262 elements]
              SortedArray[964901 elements]
        BTree[74922319]
          BTree[62447586]
            BTree[61063743]
              SortedArray[1000000 elements]
              SortedArray[124920 elements]
            BTree[73546821]
              SortedArray[1000000 elements]
              SortedArray[123916 elements]
          BTree[91277035]
            BTree[78798936]
              SortedArray[349010 elements]
              BTree[89891865]
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        SortedArray[1000000 elements]
        SortedArray[124827 elements]
        SortedArray[775292 elements]
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
End Updates
Random Scan: 41106 scans over 2.00003 s
Rate: 20552.7 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40691 scans over 2.00001 s
Rate: 20345.4 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40972 scans over 2.00001 s
Rate: 20485.9 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40637 scans over 2.00001 s
Rate: 20318.4 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41298 scans over 2.00001 s
Rate: 20648.9 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 9000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[12486703]
        BTree[11098788]
          SortedArray[1000000 elements]
          SortedArray[125303 elements]
        BTree[14278690]
          SortedArray[161276 elements]
          SortedArray[964233 elements]
      BTree[37456405]
        BTree[36078870]
          SortedArray[1000000 elements]
          SortedArray[125060 elements]
        BTree[39243297]
          SortedArray[161262 elements]
          SortedArray[964901 elements]
    BTree[74922319]
      BTree[62447586]
        BTree[61063743]
          SortedArray[1000000 elements]
          SortedArray[124920 elements]
        BTree[73546821]
          SortedArray[1000000 elements]
          SortedArray[123916 elements]
      BTree[91277035]
        BTree[78798936]
          SortedArray[349010 elements]
          BTree[89891865]
            SortedArray[1000000 elements]
            SortedArray[124827 elements]
            SortedArray[775292 elements]
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41058 scans over 2.00004 s
Rate: 20528.6 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40573 scans over 2.00001 s
Rate: 20286.4 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41222 scans over 2.00002 s
Rate: 20610.8 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41046 scans over 2.00004 s
Rate: 20522.6 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41144 scans over 2.00002 s
Rate: 20571.8 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 9000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[12486703]
        BTree[11098788]
          SortedArray[1000000 elements]
          SortedArray[125303 elements]
        BTree[14278690]
          SortedArray[161276 elements]
          SortedArray[964233 elements]
      BTree[37456405]
        BTree[36078870]
          SortedArray[1000000 elements]
          SortedArray[125060 elements]
        BTree[39243297]
          SortedArray[161262 elements]
          SortedArray[964901 elements]
    BTree[74922319]
      BTree[62447586]
        BTree[61063743]
          SortedArray[1000000 elements]
          SortedArray[124920 elements]
        BTree[73546821]
          SortedArray[1000000 elements]
          SortedArray[123916 elements]
      BTree[91277035]
        BTree[78798936]
          SortedArray[349010 elements]
          BTree[89891865]
            SortedArray[1000000 elements]
            SortedArray[124827 elements]
            SortedArray[775292 elements]
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40922 scans over 2.00001 s
Rate: 20460.9 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 40991 scans over 2 s
Rate: 20495.5 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41088 scans over 2.00002 s
Rate: 20543.8 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41224 scans over 2.00001 s
Rate: 20611.9 scans/sec
Scanning for 2000 s in [0,1000000000) -> 1000 keys/read
Random Scan: 41253 scans over 2.00004 s
Rate: 20626.1 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 9000000 elements]
  BTree[49971061]
    BTree[24976755]
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BTree[12486703]
  BTree[11098788]
    SortedArray[1000000 elements]
    SortedArray[125303 elements]
  BTree[14278690]
    SortedArray[161276 elements]
    SortedArray[964233 elements]
BTree[37456405]
  BTree[36078870]
    SortedArray[1000000 elements]
    SortedArray[125060 elements]
  BTree[39243297]
    SortedArray[161262 elements]
    SortedArray[964901 elements]
BTree[74922319]
  BTree[62447586]
    BTree[61063743]
      SortedArray[1000000 elements]
      SortedArray[124920 elements]
    BTree[73546821]
      SortedArray[1000000 elements]
      SortedArray[123916 elements]
  BTree[91277035]
    BTree[78798936]
      SortedArray[349010 elements]
      BTree[89891865]
        SortedArray[1000000 elements]
        SortedArray[124827 elements]
    SortedArray[775292 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 40799 scans over 2.00003 s
Rate: 20399.2 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41019 scans over 2 s
Rate: 20509.5 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41030 scans over 2.00001 s
Rate: 20514.8 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 40665 scans over 2.00004 s
Rate: 20332.1 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41292 scans over 2.00002 s
Rate: 20645.8 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 9000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[12486703]
        BTree[11098788]
          SortedArray[1000000 elements]
          SortedArray[125303 elements]
        BTree[14278690]
          SortedArray[161276 elements]
          SortedArray[964233 elements]
      BTree[37456405]
        BTree[36078870]
          SortedArray[1000000 elements]
          SortedArray[125060 elements]
        BTree[39243297]
          SortedArray[161262 elements]
          SortedArray[964901 elements]
    BTree[74922319]
      BTree[62447586]
        BTree[61063743]
          SortedArray[1000000 elements]
          SortedArray[124920 elements]
        BTree[73546821]
          SortedArray[1000000 elements]
          SortedArray[123916 elements]
      BTree[91277035]
        BTree[78798936]
          SortedArray[349010 elements]
          BTree[89891865]
            SortedArray[1000000 elements]
            SortedArray[124827 elements]
        SortedArray[775292 elements]
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41117 scans over 2.00004 s
Rate: 20558.1 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41094 scans over 2.00001 s
Rate: 20546.9 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 40914 scans over 2.00002 s
Rate: 20456.8 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 40776 scans over 2.00004 s
Rate: 20387.6 scans/sec
Scanning for 2000 s in [0,100000000] -> 1000 keys/read
Random Scan: 41042 scans over 2.00002 s
Rate: 20520.7 scans/sec
gROOT [Cracker[ pushdown balance inline ]; 9000000 elements]
  BTree[49971061]
    BTree[24976755]
      BTree[12486703]
        BTree[11098788]
          SortedArray[1000000 elements]
          SortedArray[125303 elements]
        BTree[14278690]
          SortedArray[161276 elements]
          SortedArray[964233 elements]
      BTree[37456405]
        BTree[36078870]
          SortedArray[1000000 elements]
          SortedArray[125060 elements]
        BTree[39243297]
          SortedArray[161262 elements]
          SortedArray[964901 elements]
    BTree[74922319]
      BTree[62447586]
        BTree[61063743]
          SortedArray[1000000 elements]
          SortedArray[124920 elements]
        BTree[73546821]
          SortedArray[1000000 elements]
          SortedArray[123916 elements]

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BTree[91277035]
  BTree[78798936]
    SortedArray[349010 elements]
      BTree[89891865]
        SortedArray[1000000 elements]
          SortedArray[124827 elements]
            SortedArray[775292 elements]
Time[test/scan_for_i_min.jitd]: 60 s
Time[test/spawn1.jitd]: 120 s
MyMacbookAir:cpp hkl120$
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