



## Performance Tuning

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1 post

Hi,

I'm having some trouble tracking down a performance issue in my code. I'm pretty certain that it's related to H2, but not 100%... What I find is as follows:

1. When using Derby insert time remains constant for inserting ~1million rows
2. When using H2 insert time starts out much lower than Derby, but once you get past a certain # of rows maybe 150k H2 insert time rapidly rises.
3. I've tried playing with a couple config options in H2 - notably CACHE\_SIZE and MAX\_MEMORY\_UNDO - increasing these values doesn't seem to change the performance characteristics very much...

Another quirk is that I'm unable to create a standalone app that mirrors this problem. If I build a sample program the insert time stays constant.

I stuck a profiler on my app to see what the differences were in the beginning when things look good and later on when performance had degraded. In the "good" scenario in 1875 ms I'm able to execute 3142 inserts (1.67 inserts/ms). There's nothing in the profile stack that jumps out as being particularly "hot" or taking a long time.

Int the "bad" scenario I'm only able to execute 709 inserts in 2246 ms. .31 inserts/ms. I find that 1206 ms is spent in the method org.h2.store.FileObjectDisk.sync() (34.3% of time). There is only 1 thread accessing the DB. this method does not show up at all on the "good" profile and it's only invoked 2 times out of the 709 on the "bad" profile. Take those two out and you end up with 707 inserts in 1040ms - .67 inserts/ms. Still not as good as the original but accounting for a lot of the overhead.

Any ideas on what this could be, things to look for/settings to tweak?

Chris

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## **[Thomas Mueller Graf](#)**

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Nov 18, 2010; 1:22am **Re: Performance Tuning**



4281 posts

Hi,

It sounds like the problem is FileDescriptor.sync(). I will check if I can replace this call with a different mechanism, without risking corrupt databases. But this will take some time.

If you don't care too much about the database getting corrupt during the import, see

[http://h2database.com/html/performance.html#fast\\_import](http://h2database.com/html/performance.html#fast_import)

Regards,  
Thomas

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