Subject: Re: IDL and sqlite
Posted by Anonymous on Tue, 11 Nov 2008 16:55:12 GMT
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Originally posted by: Demitri

Brian,

You will get a good boost in performance if you batch all of the
inserts into a single transaction - you're paying a big penalty
otherwise. That's just the sqlite3 side - there's also the penalty of
spawn creating a new process for every row of data you have, and that's
adding up. But fixing these things is simple.

One option would be:

* create a new temporary file
* extract the values from your data file
* write each INSERT statement to the temporary file
* perform a single SPAWN passing the temp file to sqlite3, e.g.

spawn, 'sqlite3 ' + database_name + ' < ' + temp_filename

In the case that you don't need anything IDL specific to extract the
data (or one is better with Perl/Python/etc. coding), a second option
would be to write a small external script that will parse the given
data file, create the database, and insert the values (again, best in a
batch). Then IDL can simply spawn that. That's up to the user.

Cheers,

Demitri

On 2008-11-10 07:49:41 -0500, Brian Larsen <balarsen@gmail.com> said:

> I have played with this some but I found it a little awkward and not
> that fast. However some more thought may fix these issues.   I
> attached the code that I used and then decided not to go any further,
> more for lack of time than technical reasons. This was all done on
> this idl:
> IDL> print, !version
> { i386 darwin unix Mac OS X 6.4.1 Sep 25 2007   32   64}
>
>
> The files I used all looked like this:
>   L   Phi

```
>      4.66432     1.65347
>      4.76471     1.68353
>      4.76471     1.71359
>      4.76471     1.74366
>      4.76471     1.77372
>      4.66432     1.80378
> and on for a long way in lots of files.
>
>
>
>
> ;;   .run create_ppb_sqlite
>
>
> database_fname = 'ppb_database.sql'
>
>
> ;; create the table, error will throw if it already exists and thats
> ;; probably ok
> spawn, 'sqlite3 ' + database_fname + " ' CREATE TABLE file(" + $
>       "file_id INTEGER PRIMARY KEY, " + $
>       "filename TEXT," + $
>       "euv_date_arr integer[5]," + $
>       "jd real" + $
>       ");'"
>
> ;; create a table for the data in the file
> spawn, 'sqlite3 ' + database_fname + " ' CREATE TABLE data(" + $
>       "id INTEGER PRIMARY KEY, " + $
>       "file_id INTEGER," + $
>       "l REAL," + $
>       "phi REAL," + $
>       "mlt REAL" + $
>       ");'"
>
>
> ;; read in the ppb files and feed their names into the database
> progressBar = Obj_New("PROGRESSBAR")
> progressBar->Start
> progressBar2 = Obj_New("PROGRESSBAR")
> progressBar2->Start
>
> files = file_search('*.ppb.*')
> FOR i = 0L, n_elements(files)-1  DO BEGIN
>    spawn, 'sqlite3 ' + database_fname + " ' INSERT into file values("
> + $
>       "NULL," + $
>       "'"+files[i]+"'" + "," + $
```

```
>          trim((euv_date2arr(files[i]))[0]) + ","  + $
>          trim(euv_date2jd(files[i]), '(d14.6)')+  $
>          ")';"
>
>    dat = read_ppa(files[i], /compress, /mlt)
>    ind = where(finite(dat.l) EQ 1, n_ind)
>    FOR j = 0L, n_ind-1 DO BEGIN
>       spawn, 'sqlite3 ' + database_fname + " ' INSERT into data
> values(" + $
>          "NULL," + $
>          "NULL," + $
>          trim(dat.l[ind[j]]) + ","  + $
>          trim(dat.phi[ind[j]]) + "," + $
>          trim(dat.mlt[ind[j]]) +  $
>          ")';"
>      IF j MOD 5 EQ 0 AND j NE 0 OR j EQ n_ind-1 THEN BEGIN
>         IF i MOD 2 EQ 0 THEN progressBar2 -> SetProperty,
> Color='red'  ELSE progressBar2 -> SetProperty, Color='black'
>         progressBar2->Update, float(j+1)/n_ind*100.
>         cancelled = progressBar2->CheckCancel()
>         IF cancelled THEN BREAK
>      ENDIF
>    ENDFOR
>
>    IF cancelled THEN break
>    progressBar->Update, float(i+1)/n_elements(files)*100.
>    cancelled = progressBar->CheckCancel()
>    IF cancelled THEN break
>
>
>
> ENDFOR
>
>
> progressBar->Destroy
> Obj_Destroy, progressBar
>
> progressBar2->Destroy
> Obj_Destroy, progressBar2
>
>
> END
>
>
>
> Cheers,
>
> Brian
```

>
> -- --------------
> Brian Larsen
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