

## QGIS Application - Feature request #4805

### remove internal spatialite

2012-01-13 07:41 AM - Brian Freed

<b>Status:</b>	Closed	<b>Resolution:</b> <b>Copied to github as #:</b> 14657
<b>Priority:</b>	Normal	
<b>Assignee:</b>	Jürgen Fischer	
<b>Category:</b>	Data Provider	
<b>Pull Request or Patch supplied:</b>	No	
<b>Easy fix?:</b>	No	
<b>Description</b>		
<p>Now that Sandro has officially released 3.0 stable, I was wondering when QGIS (specifically, the Windows pre-compiled executable) might include 3.0 instead of 2.4?</p> <p>In 3.0, MakeLine() and MakePoint() are easier to use than LineFromText()/GeomFromText, and the RecoverSpatialIndex() function solves some issues I've noticed with QGIS and Spatialite tables with Spatial Indexes.</p> <p>Actually, come to think of it, I think those issues themselves might go away - the function to make the Spatial Index update on object creation seems a little different than it was in 2.4, and I think that's the cause of objects created in QGIS not showing up visually in QGIS (despite showing up in the attribute editor) until I run RecoverSpatialIndex() on the table in Spatialite.</p>		

#### Associated revisions

**Revision c56491b1 - 2012-04-23 08:51 PM - Jürgen Fischer**

fix #4805:

- drop internal spatialite and internal spatialindex
- drop support for debian lenny (no system spatialindex/spatialite there)

#### History

**#1 - 2012-01-13 08:14 AM - Jürgen Fischer**

- Category changed from Build/Install to Data Provider
- Assignee set to Sandro Furieri

**#2 - 2012-01-13 08:30 AM - Sandro Furieri**

Hi Brian,

you can consult the expected roadmap for Spatialite 3.0x (this including any update for the QGIS data provider) on the Spatialite's own ML. please see:  
[http://groups.google.com/group/spatialite-users/browse\\_thread/thread/4f206ceb6d934dc2#](http://groups.google.com/group/spatialite-users/browse_thread/thread/4f206ceb6d934dc2#)  
(my answer to Volker Froelich on Tue, 10 Jan 2012 17:45:43)

very shortly said:

- 1) we need to definitively fix 3.0x before
- 2) updating the QGIS data provider will then follow immediately afterwards

bye Sandro

### #3 - 2012-01-13 01:37 PM - Brian Freed

wonderful, thanks!

### #4 - 2012-04-15 10:09 AM - Giovanni Manghi

- Target version changed from Version 1.7.4 to Version 2.0.0

### #5 - 2012-04-16 12:04 AM - Sandro Furieri

Short recall:

- QGIS has its own Spatialite data provider: this is intended to be safely operable using any version of libspatialite
- and in turns libspatialite depends on few other libraries: libsqlite, libproj, libgeos\_c, libgeos, libiconv [libfreeexl]

mainly for historical reasons QGIS includes a "private internal copy" of libspatialite-amalgamation (which in turn supports a private internal copy of libsqlite).

few years ago this one seemed a reasonable solution to be adopted, simply because libspatialite wasn't supported at all on many platforms, and libsqlite too was inconsistently supported: using private internal copies obviously resolved this issue.

anyway such solution isn't neither elegant nor safe (as confirmed by direct field experience): QGIS is a very complex package with ramified dependencies (this including Python). so a real risk to deploy many different (and conflicting) libsqlite and libspatialite versions exists, thus causing troubles and stability issues.

the obvious solution is to never use the internal copies of libsqlite and libspatialite internally shipped by QGIS. using the "system-wide" versions of both libraries is a much better design choice, always ensuring consistent usage of the same dynamic library version for any possible package/component.

nowadays both libspatialite/libsqlite are decently supported on many Linux distros; and have recently been supported by OsGeo4W too. so there is absolutely no good reason suggesting to still continue using the doomed "internal copies": their usage should be considered as highly deprecated and intrinsically unsafe.

accordingly to all the above considerations, I suppose that completely removing any "internal copy" from QGIS (so effectively imposing to always use system-wide dynamic libraries) should be a really good idea.

### #6 - 2012-04-17 12:25 PM - Jürgen Fischer

- Assignee changed from Sandro Furieri to Jürgen Fischer
- Operating System deleted (Windows)

Ok, but pyspatialite (dependency of dbmanager) is not that common. It's in OSGeo4W, but not in debian and ubuntu yet. For debian unstable it's close. So

we should keep that for now.

The attached patch removes internal spatialite and internal spatialindex (which doesn't build on windows anyway) and also fixes the dbmanager build issue. As libspatialindex is used on Debian lenny, it also drops support for that.

But should we apply that to current master?

**#7 - 2012-04-17 12:27 PM - Jürgen Fischer**

- File 0001-drop-internal-spatialite-and-internal-spatialindex.patch.gz added

**#8 - 2012-04-17 02:09 PM - Jürgen Fischer**

- File 0001-drop-internal-spatialite-and-internal-spatialindex.patch.gz added

**#9 - 2012-04-17 02:09 PM - Jürgen Fischer**

- File deleted (0001-drop-internal-spatialite-and-internal-spatialindex.patch.gz)

**#10 - 2012-04-18 12:00 AM - Jürgen Fischer**

Linux and Windows are fine with this. What's the situation on OS X?

**#11 - 2012-04-18 12:32 AM - Sandro Furieri**

Hi Jürgen,

I fully agree with your considerations: pyspatialite seems to be a key component, because QGIS strongly relies on Python modules.

Please note: I'm **not** the developer of pyspatialite: he's Lokkju

Brennr <[lokkju@gmail.com](mailto:lokkju@gmail.com)>

It's really a pity that Debian-GIS doesn't support pyspatialite:

I'll try to ask Francesco P. Lovergine <[frankie@debian.org](mailto:frankie@debian.org)> about

this; may well be this could resolve (hope well ...)

I've not yet tested the most recent version of pyspatialite; anyway,

if I correctly remember, the pyspatialite own build script was rather

problematic, and surely requiring substantial adjustments:

- it pretended to download libspatialite-amalgamation sources from the download site before attempting to build

- it required the amalgamation (no attempt to locate external libsqlite3)

I imagine that only Lokkju could fix such issues.

**#12 - 2012-04-18 12:38 AM - Jürgen Fischer**

Sandro Furieri wrote:

*It's really a pity that Debian-GIS doesn't support pyspatialite:*

*I'll try to ask Francesco P. Lovergine <[frankie@debian.org](mailto:frankie@debian.org)> about*

*this; may well be this could resolve (hope well ...)*

David Paleino <[dapal@debian.org](mailto:dapal@debian.org)> is already working on a package (in Debian-GIS)

| *I imagine that only Lokku could fix such issues.*

I didn't check the latest version either, but we have an internal pyspatialite too - that was what I meant to "keep for now".

#### #13 - 2012-04-18 01:32 AM - Jürgen Fischer

Jürgen Fischer wrote:

| *David Paleino <[dapal@debian.org](mailto:dapal@debian.org)> is already working on a package (in Debian-GIS)*

See also [pyspatialite 3.0.1-2 i386.changes ACCEPTED into unstable](#)

#### #14 - 2012-04-18 07:40 AM - Jürgen Fischer

- *Subject changed from Update QGIS' Spatialite to 3.0 to remove internal spatialite*

#### #15 - 2012-04-18 08:25 AM - William Kyngesburye

Jürgen Fischer wrote:

| *Linux and Windows are fine with this. What's the situation on OS X?*

At least for my builds (and from source based on the INSTALL instructions), I don't use the internal spatialite. My SQLite framework includes spatialite. It also includes pyspatialite simply as a symlink to pysqlite.

Others who build from source with the package managers (fink, macports) probably have spatialite, maybe pyspatialite (at least pysqlite).

#### #16 - 2012-04-20 06:08 AM - Sandro Furieri

following Williams's suggestions, I've just performed few tests about the pysqlite connector; here are my findings.

```
from pysqlite2 import dbapi2 as db
con = db.connect(':memory:')
con.enable_load_extension(True)
con.load_extension('libspatialite.so')
con.execute('select InitSpatialMetadata()')
for row in con.execute('select * from spatial_ref_sys'):
    print row
```

the above code snippet nicely works on both Debian and Mint (and I easily imagine on Ubuntu as well); accordingly to William, the same seems to be for Mac OS X. so it looks like there is absolutely no real reason suggesting to use the specialized pyspatialite connector on these systems.

anyway I've got an unexpected failure on Fedora 16:  
"enable\_load\_extension is not supported"  
and I've got a second failure on Windows, using the Python  
console shipped within the OsGeo4W supplied most recent QGIS  
nightly build: "unknown package: pysqlite2"

support for the pysqlite2 connector apparently seems to be  
rather whimsical and erratic, and not at all consistent  
between different platforms ... a really unpleasant condition.

and a real pity too, because simply using pysqlite2 thus  
completely avoiding to use pyspatialite will surely be  
a real progress IMHO

**#17 - 2012-04-23 01:38 AM - Volker Fröhlich**

As far as Fedora is concerned:

[http://groups.google.com/group/spatialite-users/browse\\_thread/thread/51450b1a61d8cc33/0a733537cbabbad0?show\\_docid=0a733537cbabbad0](http://groups.google.com/group/spatialite-users/browse_thread/thread/51450b1a61d8cc33/0a733537cbabbad0?show_docid=0a733537cbabbad0)

**#18 - 2012-04-23 01:17 PM - Jürgen Fischer**

- Status changed from Open to Closed

Fixed in changeset commit:"c56491b11124f9ceefa9b6b3d501374755aac84c".

**#19 - 2012-04-23 11:55 PM - Jürgen Fischer**

- Status changed from Closed to In Progress

Jürgen Fischer wrote:

| Fixed in changeset commit:"c56491b11124f9ceefa9b6b3d501374755aac84c".

argl, how could I miss that system spatialite is too old on Debian squeeze, Ubuntu maverick, natty and oneiric (all 2.4.0~rc2; complains about missing spatial\_ref\_sys\_init) and Ubuntu lucid (2.3.0; also complains about various macros beginning with GAIA\_POINTZM).

So I probably need to re-add internal spatialite - unless anyone has a better idea.

**#20 - 2012-04-24 12:00 AM - Paolo Cavallini**

I assume you mean reenabling it just for the distro who ship old SL, right?

**#21 - 2012-04-24 12:10 AM - Jürgen Fischer**

Paolo Cavallini wrote:

|

| I assume you mean reenabling it just for the distro who ship old SL, right?

right.

**#22 - 2012-10-06 02:16 AM - Pirmin Kalberer**

- Target version changed from Version 2.0.0 to Future Release - Nice to have

**#23 - 2013-10-01 07:18 AM - Jürgen Fischer**

- Status changed from In Progress to Closed

Fixed in changeset commit:"c56491b11124f9ceefa9b6b3d501374755aac84c".

**Files**

0001-drop-internal-spatialite-and-internal-spatialindex.patch.gz	1.78 MB	2012-04-17	Jürgen Fischer
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