

QGIS Application - Feature request #11148

Supporting arm architectures in Debian - FTBFS on armel and armhf due to Qreal issue

2014-09-05 09:21 AM - Ross Gammon

Status: Open	
Priority: Normal	
Assignee:	
Category: Unknown	
Pull Request or Patch Supplied:	Resolution:
Easy fix?: No	Copied to github as #: 19475

Description

The Debian GIS team are working to support the various ARM architectures in Debian. Earlier in the year, a pull request was merged for issue: #9917.

Unfortunately, with the newer QGIS v2.4.0 a similar problem is occurring that causes QGIS to fail to build on armel & armhf machines: <https://bugs.debian.org/cgi-bin/bugreport.cgi?bug=760535>.

Extract of build log (see Debian Bug for more):

```
/usr/include/qt4/QtCore/qglobal.h:1219:34: note: template<class T> const
T& qMax(const T&, const T&)
Q_DECL_CONSTEXPR inline const T &qMax(const T &a, const T &b) { return
(a < b) ? b : a; }
^
/usr/include/qt4/QtCore/qglobal.h:1219:34: note: template argument
deduction/substitution failed:
/«PKGBUILDDIR»/src/gui/qgscomposerview.cpp:872:189: note: deduced
conflicting types for parameter 'const T' ('float' and 'double')
newTable->setSceneRect( QRectF(
mRubberBandItem->transform().dx(), mRubberBandItem->transform().dy(),
mRubberBandItem->rect().width(), qMax( mRubberBandItem->rect().height(),
15.0 ) ) );
```

Peter Green investigated this and found (please read his detailed analysis in the Debian Bug):

In this case qMax is a template. The result is it will work with arguments of any numeric type but the two arguments must be the same type. The literal 12.0 is type double. So on a platform where qreal is float qMax gets passed one float and one double and the compiler can't decide which to use for the template parameter and errors out. Easy enough to fix by casting the literal to qreal.

Unfortunately, the next problem Peter found was with the .sip file. After changing this file in a few places the build went further and then failed with:

```
/qgis-2.4.0/obj-arm-linux-gnueabi/python/core/sip_corepart2.cpp:12735:67:
error: no matching function for call to 'QVector<float>::QVector(const
QVector<double>&)'
sipRaiseUnknownException();
```

To try and fix, Peter decided to try outright changing the type to qreal. It looks like the API in question is totally new in 2.4 so this shouldn't break too much third party stuff. But there were some knockon impacts within

the qgis source.

Peter's patch is attached, but because he is not sure if there are further matching changes required in the QGIS code, or whether there is a better way to fix it, we will not apply the patch in Debian without checking here first.

History

#1 - 2014-09-05 09:55 AM - Paolo Cavallini

Could you please rework this as a pull req? This will make it much more visible, and easier to merge.
Thanks a lot.

#2 - 2014-09-05 12:02 PM - Ross Gammon

No problems!
<https://github.com/qgis/QGIS/pull/1577>

#3 - 2014-09-08 04:48 AM - Matthias Kuhn

Hi Ross,

ARM fixes are highly welcome as they are required for android as well. The pull request looks fine for me, I can not think of any bad side-effects it could have (in realistic scenarios). I would not hesitate to merge it in Debian and I think it will be merged soon back to QGIS.

Thank you very much for providing this.

#4 - 2017-05-01 12:47 AM - Giovanni Manghi

- *Easy fix? set to No*

#5 - 2017-09-22 10:07 AM - Jürgen Fischer

- *Category set to Unknown*

Files

qgis.debdiff	5.94 KB	2014-09-05	Ross Gammon
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