

QGIS Application - Bug report #16149

project loading a "feature count"-enabled layer can mess project CRS

2017-02-06 12:10 AM - Mathieu Pellerin - nIRV

Status:	Closed	
Priority:	Severe/Regression	
Assignee:		
Category:	Project Loading/Saving	
Affected QGIS version:	master	Regression?: No
Operating System:		Easy fix?: No
Pull Request or Patch supplied:		Resolution:
Crashes QGIS or corrupts data:		Copied to github as #: 24061

Description

Here's an obscure (and extremely serious) issue I've been able to narrow down (gdb + breakpoint + 3 hours).

The long story short here is that loading a project containing a layer with "feature count" activated leads to a chain reaction that ends up triggering the `QgsLayerTreeMapCanvasBridge::setCanvasLayers()` function during project load, which under a number of circumstances will call `QgsProject::instance()->setCrs( layerNode->layer()->crs() )`.

I'm not an expert in the inner workings of Qt, but what seems to be happening here is that the `QgsVectorLayer::countSymbolFeatures()` function (called during the project load via `QgsLayerTreeModel::addLegendToLayer`) calls `QCoreApplication::processEvents()`, which I **think** ends up emitting a bunch of signals before due time. If I disable the `QCoreApplication::processEvents()` line, project load is fine and the project CRS value isn't changed by a undue `setCanvasLayers()` call.

Steps to reproduce

1. Open QGIS, and load the test2.qgs project file (attached to this bug)
2. Open the Python console, and type the following: `QgsProject.instance().crs().authid()`
3. It'll properly return EPSG:3148
4. Right click on the khm_admbnda_adm3_gov_reg vector layer, and check the "Show feature count" menu item
5. Save the project, leave QGIS
6. Re-open QGIS, and load the test2.qgs project file you've just saved
7. Open the Python console, and type the following: `QgsProject.instance().crs().authid()`
8. It'll **wrongly** return EPSG:4326

To help debug this, I've added a breakpoint within the `setCanvasLayers()` function where the project CRS is changed. It revealed the link between `countSymbolFeatures()` and the bogus `setCrs()` call which wrongly changes the project CRS while the project is being loaded.

The gdb "where" at the breakpoint:

```
(gdb) where
#0  QgsLayerTreeMapCanvasBridge::setCanvasLayers (this=0x555556255010) at
/home/webmaster/dev/cpp/QGIS/src/gui/layertree/qgslyartreemapcanvasbridge.cpp:121
#1  0x00007ffff6b1255d in QgsLayerTreeMapCanvasBridge::qt_static_metacall (_o=0x555556255010,
_c=QMetaObject::InvokeMetaMethod, _id=5, _a=0x55555c7e53a0)
    at /home/webmaster/dev/cpp/QGIS/bm-qt5/src/gui/layertree/moc_qgslyartreemapcanvasbridge.cpp:135
#2  0x00007ffff45c3699 in QObject::event(QEvent*) () from /usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#3  0x00007ffff4ed08ac in QApplicationPrivate::notify_helper(QObject*, QEvent*) () from
/usr/lib/x86_64-linux-gnu/libQt5Widgets.so.5
#4  0x00007ffff4ed5d4f in QApplication::notify(QObject*, QEvent*) () from /usr/lib/x86_64-linux-gnu/libQt5Widgets.so.5
#5  0x00007ffff57ef671 in QgsApplication::notify (this=0x7fffffd990, receiver=0x555556255010, event=0x55555c73fd60)
    at /home/webmaster/dev/cpp/QGIS/src/core/qgsapplication.cpp:336
#6  0x00007ffff45953b0 in QCoreApplication::notifyInternal2(QObject*, QEvent*) () from /usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#7  0x00007ffff459733c in QCoreApplicationPrivate::sendPostedEvents(QObject*, int, QThreadData*) () from
```

```

/usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#8 0x00007ffff45eb083 in ?? () from /usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#9 0x00007ffffd61c7d7 in g_main_context_dispatch () from /lib/x86_64-linux-gnu/libglib-2.0.so.0
#10 0x00007ffffd61ca40 in ?? () from /lib/x86_64-linux-gnu/libglib-2.0.so.0
#11 0x00007ffffd61caec in g_main_context_iteration () from /lib/x86_64-linux-gnu/libglib-2.0.so.0
#12 0x00007ffff45eb48f in QEventDispatcherGlib::processEvents(QFlags<QEventLoop::ProcessEventsFlag>) () from
/usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#13 0x00007ffff5b113a2 in QgsVectorLayer::countSymbolFeatures (this=0x55555c7cb640, showProgress=true) at
/home/webmaster/dev/cpp/QGIS/src/core/qgsvectorlayer.cpp:785
#14 0x00007ffff597aa6f in QgsDefaultVectorLayerLegend::createLayerTreeModelLegendNodes (this=0x55555c5c7eb0,
nodeLayer=0x55555c73fc50)
    at /home/webmaster/dev/cpp/QGIS/src/core/qgsmaplayerlegend.cpp:195
#15 0x00007ffff578ba87 in QgsLayerTreeModel::addLegendToLayer (this=0x5555564e3940, nodeL=0x55555c73fc50)
    at /home/webmaster/dev/cpp/QGIS/src/core/layertree/qgslyartreemodel.cpp:1201
#16 0x00007ffff578958b in QgsLayerTreeModel::connectToLayer (this=0x5555564e3940, nodeLayer=0x55555c73fc50)
    at /home/webmaster/dev/cpp/QGIS/src/core/layertree/qgslyartreemodel.cpp:851
#17 0x00007ffff5788f36 in QgsLayerTreeModel::nodeLayerLoaded (this=0x5555564e3940) at
/home/webmaster/dev/cpp/QGIS/src/core/layertree/qgslyartreemodel.cpp:775
#18 0x00007ffff5e18f66 in QgsLayerTreeModel::qt_static_metacall (_o=0x5555564e3940,
_c=QMetaObject::InvokeMetaMethod, _id=7, _a=0x7fffffb570)
    at /home/webmaster/dev/cpp/QGIS/bm-qt5/src/core/layertree/moc_qgslyartreemodel.cpp:127
#19 0x00007ffff45c2b49 in QMetaObject::activate(QObject*, int, int, void**) () from /usr/lib/x86_64-linux-gnu/libQt5Core.so.5
#20 0x00007ffff5e18cd1 in QgsLayerTreeLayer::layerLoaded (this=0x55555c73fc50) at
/home/webmaster/dev/cpp/QGIS/bm-qt5/src/core/layertree/moc_qgslyartreelayer.cpp:150
#21 0x00007ffff5782d3e in QgsLayerTreeLayer::resolveReferences (this=0x55555c73fc50, project=0x55555c85c10)
    at /home/webmaster/dev/cpp/QGIS/src/core/layertree/qgslyartreelayer.cpp:58

```

Associated revisions

Revision 21df6252 - 2017-03-22 03:33 AM - Nyall Dawson

Fix incorrect project CRS when loading project (fix #16149)

This commit fixes a situation where loading a project results in incorrect project & canvas CRS. The bug is triggered whenever something in the project load calls a processEvents() call, eg restoring a project with layer count enabled on a layer or with a composer html item.

When this occurs, the "auto-set CRS to first added layer" code would kick in early and replace the project's CRS with that of the first layer loaded.

To avoid this disable the "auto-set CRS" code when loading layers from a project.

Revision 31762193 - 2017-03-29 05:37 AM - Nyall Dawson

Merge pull request #4290 from nyalldawson/fix_16149

Fix incorrect project CRS when loading project (fix #16149)

History

#1 - 2017-03-28 08:29 PM - Nyal Dawson

- Status changed from Open to Closed

Fixed in changeset commit:"31762193dfbafd42f04e357f75f2f0ea0dfa834f".

Files

test2-projectcrs.zip	2.73 MB	2017-02-05	Mathieu Pellerin - nIRV
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