QGIS Application - Bug report #21303
Postgis: very noticeable slowdown when opening the attributes table if the table has a large number of columns
2019-02-18 03:35 PM - Giovanni Manghi

Status: Closed
Priority: High
Assignee: Alessandro Pasotti
Category: Attribute table
Affected QGIS version: 3.5 (master)
Regression?: Yes
Operating System:
Easy fix?: No
Resolution: fixed/implemented
Pull Request or Patch supplied: Yes
Copied to github as #: 29121

Description
I'm observing the following (on 3.4.4 and master, Linux and Windows):

if the table of attributes has a large number of columns (63 in my case), then operations like opening the table and pasting features is MUCH slower if compared to the same data loaded in QGIS 2.18.

My test scenario is a PostGIS layer (both client and server are on very fast connections) which has only a hand full (~4000) of small polygons (none larger than 80ha with no more than 600 vertexes, but much less on average).

Associated revisions
Revision 4f30a44b - 2019-02-20 03:02 PM - Alessandro Pasotti

Postgis: cache information about enum fields

This is called several times and can slow down substantially the opening of the attribute table.

Partially fixes #21303 (down from ~30 to ~6 seconds on a remote connection)

The remaining ~4 seconds (compared to ~2 seconds in 2.18) are due to the check for enums and provider-side constraints, that were not implemented in 2.18.

See: QgsEnumerationWidgetFactory::fieldScore and the call to enumValues for details, fieldScore is called several times because QgsAttributeTableModel::loadAttributes is also called multiple times and it queries for widget configuration all the times.

History
#1 - 2019-02-18 03:37 PM - Giovanni Manghi

pasting new features (copied from an identical layer) is also unbearably slow, on QGIS 2.18 is done in very quick way (saving afterwards can be slow on both versions, depending on how many features were pasted).
If the number of columns is reduced (like ~10) then opening the table operation do work at an acceptable speed, while pasting features remains VERY slow even if the copy operation was done on similar/equal layer with just a few columns.

Confirmed

- Subject changed from very noticeable slowdown in table of attributes operations if the table as a large number of columns to very noticeable slowdown in table of attributes operations if the table has a large number of columns

Can you split the ticket in two?

I've found the bottleneck for the paste slowdown issue, but the opening slowdown is completely unrelated.

Alessandro Pasotti wrote:

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sure

I cannot reproduce with a (localhost) PG table with 4000 records and 100 columns, maybe you could share a project and data?

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test project sent privately.

#10 - 2019-02-20 11:29 AM - Alessandro Pasotti
- Assignee set to Alessandro Pasotti

#11 - 2019-02-20 03:11 PM - Alessandro Pasotti
- Status changed from Open to In Progress
- Pull Request or Patch supplied changed from No to Yes
- Resolution set to fixed/implemented

from 30 secs to 6 secs: https://github.com/qgis/QGIS/pull/9219

There is no room for substantial further speed improvements because of the new checks for enums that need to happen at least once.

#12 - 2019-02-20 03:12 PM - Alessandro Pasotti
- Subject changed from very noticeable slowdown when opening the attributes table if the table has a large number of columns to Postgis: very noticeable slowdown when opening the attributes table if the table has a large number of columns

#13 - 2019-02-21 08:31 AM - Alessandro Pasotti
- Status changed from In Progress to Closed
- % Done changed from 0 to 100

Applied in changeset commit:qgis|4f30a44be2d59a00169da8ba982d0e95d8e9e2a2.