

QGIS Application - Bug report #19747

Warning: libpng warning: iCCP: known incorrect sRGB profile

2018-09-01 03:56 PM - Johannes Kroeger

Status: Closed
Priority: Normal
Assignee:
Category: Unknown
Affected QGIS version: 3.3(master)
Operating System:
Pull Request or Patch supplied:
Crashes QGIS or corrupts data:

Regression?: No
Easy fix?: Yes
Resolution: up/downstream
Copied to github as #: 27572

Description

I always thought the "Warning: libpng warning: iCCP: known incorrect sRGB profile" messages in the terminal on QGIS launch were something local to my machine.

Today I decided to look into it and found that it is actually bad metadata embedded in some of the PNG icons of plugins (potentially also in files that are not accessed on start-up, I did not check).

<https://stackoverflow.com/questions/22745076/libpng-warning-iccp-known-incorrect-srgb-profile> has a nice overview and proposed fixes for removing this bad metadata.

I tested it successfully with icon.png from GeodesicDensifier: <https://github.com/GeoscienceAustralia/GeodesicDensifier>

Before:

```
$ strace -e file qgis 2>&1 | grep -C 5 "iCCP:" | grep "GeodesicDensifier/icon.png"
...
openat(AT_FDCWD, "/home/me/.local/share/QGIS/QGIS3/profiles/default/python/plugins/GeodesicDensifier/icon.png",
O_RDONLY|O_CLOEXEC) = 30
statx(30, "", AT_STATX_SYNC_AS_STAT|AT_EMPTY_PATH, STATX_ALL, {stx_mask=STATX_ALL, stx_attributes=0,
stx_mode=S_IFREG|0644, stx_size=3090, ...}) = 0
statx(30, "", AT_STATX_SYNC_AS_STAT|AT_EMPTY_PATH, STATX_ALL, {stx_mask=STATX_ALL, stx_attributes=0,
stx_mode=S_IFREG|0644, stx_size=3090, ...}) = 0
Warning: libpng warning: iCCP: known incorrect sRGB profile
statx(30, "", AT_STATX_SYNC_AS_STAT|AT_EMPTY_PATH, STATX_ALL, {stx_mask=STATX_ALL, stx_attributes=0,
stx_mode=S_IFREG|0644, stx_size=3090, ...}) = 0
statx(30, "", AT_STATX_SYNC_AS_STAT|AT_EMPTY_PATH, STATX_ALL, {stx_mask=STATX_ALL, stx_attributes=0,
stx_mode=S_IFREG|0644, stx_size=3090, ...}) = 0
```

After pngcrush -ow -rem allb -reduce (does more than needed but nothing bad):

```
$ strace -e file qgis 2>&1 | grep -C 5 "iCCP:" | grep "GeodesicDensifier/icon.png"
...
```

But that requires each author of the affected plugins to fix it. I could not find any hint of a way to suppress the warning on the QGIS/Qt side.

So, just filing this here for others to find. :)

History

#1 - 2018-09-01 04:01 PM - Johannes Kroeger

To get a list of affected files: `find . -type f -iname '*.png' -exec pngcrush -n -q {} \; 2>&1 | grep -B 2 "ICCP: known incorrect sRGB profile" | grep ".png:"`

#2 - 2018-09-01 04:14 PM - Johannes Kroeger

Actually, even after processing all my local plugins with this, I get three messages on QGIS launch. Two very early on (around "setting up the GUI") and one left-over at the plugin stage. I could not figure out which files caused those via strace.

Looking through the QGIS git repository I found (please ignore the leading directories):

```
./src/qgis/tests/testdata/control_images/expected_qgis_local_server/expected_qgis_local_server.png
./src/qgis/doc/images/projects/thumbnails/b3196a2b5781e788e6adac40ecf6964eddc4d38e.png.100x50_q85.png
./src/qgis/doc/images/projects/thumbnails/5a65a575314f063d065ef84840e734e411c770f2.png.100x50_q85.png
./src/qgis/images/north_arrows/default.png
./src/qgis/src/plugins/georeferencer/icons_old/default/mActionTransformSettings.png
```

Of those I only have the doc thumbnails on my system. Fixing those with `pngcrush -ow -rem allb -reduce` does not get rid of the warnings at launch.

Anyone got an idea which files (maybe embedded somehow?) cause those?

#3 - 2018-09-01 04:14 PM - Johannes Kroeger

- Status changed from *Closed* to *Reopened*

opening to gather feedback

#4 - 2018-09-02 12:48 AM - Nyal Dawson

- Status changed from *Reopened* to *Closed*

Unfortunately some of these are thrown from PNGs inside webkit, and are caused when we import WebKit libraries. This needs to be fixed upstream.

#5 - 2018-09-02 01:14 PM - Johannes Kroeger

Thanks, I filed https://bugs.webkit.org/show_bug.cgi?id=189230

#6 - 2018-09-20 02:03 PM - Kalin KOZHUHAROV

Indeed...

I found the two files, but ``mogrify`` and ``pngcrush`` on them does not fix the warnings (they are no longer with incorrect iCCP profile).

```
./src/qgis/doc/images/projects/thumbnails/b3196a2b5781e788e6adac40ecf6964eddc4d38e.png.100x50_q85.png
./src/qgis/doc/images/projects/thumbnails/5a65a575314f063d065ef84840e734e411c770f2.png.100x50_q85.png
```

There is something more involved, probably a generated PNG ?!?

I tried to locate files with the following:

```
$ strace -f -o /tmp/qgis.trace -s512 -e trace=file qgis
```

```
Warning: QSqlQuery::prepare: database not open
```

```
Warning: libpng warning: iCCP: known incorrect sRGB profile
```

```
Warning: libpng warning: iCCP: known incorrect sRGB profile
```

```
$ cat /tmp/qgis.trace|grep -i "\.png"|fgrep -v ENOENT|cut -d'"' -f2|sort -u
```

```
/usr/share/qgis/images/icons/qgis-icon-60x60.png
```

```
$ pngcrush -n -q /usr/share/qgis/images/icons/qgis-icon-60x60.png
```

```
/usr/share/qgis/images/icons/qgis-icon-60x60.png:
```

```
Total length of data found in critical chunks      =    3746
```

```
CPU time decode 0.000109, encode 0.000000, other 0.000103, total 0.000250 sec
```

So the only png from disk is the above and it is not a problem...

A had a go with gdb, but since most stuff is not compiled with debug, I quickly gave up...

Anybody has pointers as to where to go on from here?

How to find what file (probably not image) contained the bad sRGB profile?