On qualcomm chipset device, OpenGL API eglCreateContext will fail after 200 times call

Assigned Bug P2 + Add Hotlist

STATUS UPDATE No update yet. Edit

DESCRIPTION wd...@gmail.com created issue #1 Oct 11, 2021 07:47PM

Environment: Qualcomm chipset devices (Pixel 3, Samsung SM-G973W and so on) Other device like Huawei, does not have this issue

Reproduce Steps:

1. In Jni C++ code, initialize EGL with EGL APIs, do OpenGL draws, finally release EGL make sure eglMakeCurrent(_eglDisplay, EGL_NO_SURFACE, EGL_NO_SURFACE, EGL_NO_CONTEXT); eglDestroyContext(_eglDisplay, _eglContext); eglDestroySurface(_eglDisplay, _eglSurface); eglTerminate(_eglDisplay); are called
2. repeat step 1 for 200 times
3. When initialize EGL for the 201 times, eglCreateContext will fail with error log in LogCat as below 2021-10-11 14:45:12.785 15507-23961/sg.bigo.android.cocos.demo W/Adreno-GSL: <gsl_ldd_control:553>: ioctl fd 63 code 0xc0080913 (IOCTL_KGSL_DRAWCTXT_CREATE) failed: errno 28 No space left on device

My analysis: I have checked qualcomm gpu driver code at https://android.googlesource.com/kernel/msm.git/+/refs/tags/android-12.0.0_r0.7/drivers/gpu/msm/kgsl.c

kgsl_context_init do will return ENOSPC if proc_priv->ctxt_count is above KGSL_MAX_CONTEXTS_PER_PROC which is 200.

```
    if (atomic_read(&proc_priv->ctxt_count) > KGSL_MAX_CONTEXTS_PER_PROC) {
        dev_err(device->dev,
                "Per process context limit reached for pid %u\n",
                pid_nr(dev_priv->process_priv->pid));
        spin_unlock(&proc_priv->ctxt_count_lock);
        return -ENOSPC;
}
```

I guess there is bug that kgsl_context_destroy may not be called, so code below is not executed. atomic_dec(&context->proc_priv->ctxt_count); idr_remove(&device->context_idr, context->id);

I can not add log in qualcomm gpu driver, so I can not debug further.

At app level, all I can do is make sure all EGL releasing APIs are called, which I do sure these APIs are called.

I have tested on several qualcomm chipset devices with different phone manufacturer. All qualcomm chipset device has this issue.

Please check if there is any BUG. Thanks

Daniel.W

Links (3) Hide all

Links (3)

"...lysis: I have checked qualcomm gpu driver code at https://android.googlesource.com/kernel/msm.git/+/refs/tags/android-12.0.0_r0.7/drivers/gpu/msm/kgsl.c" wd...@ #1
"For steps to capture a bug report, please refer: https://developer.android.com/studio/debug/bug-report#bugreportdevice" vi...@ #2
"https://issuetracker.google.com/components/192644" wd...@ #6

COMMENTS All comments Oldest first

vi...@google.com <vi...@google.com> Oct 12, 2021 02:57PM

Assigned to vi...@google.com.

vi...@google.com <vi...@google.com> #2 Oct 12, 2021 08:36PM

Thank you for reporting this issue. For us to further investigate this issue, please provide the following additional information:

Android build
Which Android build are you using? (e.g. PPP5.180610.010). Also confirm if this a regression from Android 11 to 12?

Android full bug report (to be captured after reproducing the issue)
For steps to capture a bug report, please refer: https://developer.android.com/studio/debug/bug-report#bugreportdevice

Screen record of the issue
Please capture screen record or video of the issue using following steps:
adb shell screenrecord /sdcard/video.mp4
Subsequently use following command to pull the recorded file:
adb pull /sdcard/video.mp4
Attach the file to this issue.

Reporter
Type
Priority
Severity
Status
Access
Assignee
Verifier
Collaborat
CC

AOSP ID
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Found In
Targeted T
Verified In
In Prod

Capture the issue in a screenshot
Press the volume down and power buttons simultaneously. The image will appear in the picture gallery. Attach the screenshot image to this issue.

Note: Please avoid uploading directly to the issue using attachments. Please upload to google drive and share the folder to android-bugreport@google.com, then share the link here.

wd...@gmail.com <wd...@gmail.com> #3 Oct 13, 2021 06:47PM

screen record is not useful for this issue.
If record video, it needs over one hour.

The symptom is after 200 times of EGL initialization in C++ jni code, the 201 time EGL call eglCreateContext will fail, then OpenGL will fail to draw.

I tried on 3 qualcomm chipset devices, there is this issue.
Pixel 3, Android 11
Redmi K20 Pro, Android 10, MIUI 12.0.2
Samsung G973W, Android 11

I also tried on 2 other device which are not qualcomm chipset, there is no such issue
Huawei P20 Pro, Android 10
Redmi note 4, Android 6

vi...@google.com <vi...@google.com> Oct 13, 2021 11:28PM

Reassigned to an...@google.com.

ia...@google.com <ia...@google.com> #4 Oct 14, 2021 09:47AM

Reassigned to ph...@qualcomm.corp-partner.google.com.

Looks like a Qualcomm-specific issue, across a broad set of OEM devices. I will attempt to send this to Qualcomm, via this Android bug tracker. If not successful, I suggest filing a bug directly with Qualcomm.

ia...@google.com <ia...@google.com> #5 Oct 14, 2021 09:53AM

I was not able to assign this bug to the Qualcomm graphics component (since this is publicly visible). I have now assigned the bug to a Qualcomm graphics contact, but was warned that this contact may not have access to this bug.

If, after a few days, you do not hear back from Qualcomm about this bug, I suggest you try to contact Qualcomm directly.

wd...@gmail.com <wd...@gmail.com> #6 Oct 14, 2021 02:17PM

Got it. Thanks

On Thu, Oct 14, 2021 at 6:53 AM <buganizer-system@google.com> wrote:

- Show quoted text -