



[CTS][Android-11] process crash in CtsViewTestCases

android.view.cts.ASurfaceControlTest#testSurfaceControl_createFromWindow

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Comments (3) Dependencies Duplicates (0) Blocking (0) Resources (1)

Assigned Bug P3 [AOSP] assigned adexe s nau

STATUS UPDATE No update yet. Edit

DESCRIPTION br...@imagination.corp-partner.google.com created issue #1 Jun 24, 2021 05:52PM

[Branches]
Android-10 / Android-11

[Test cases]
- CtsViewTestCases
android.view.cts.ASurfaceControlTest#testSurfaceControl_createFromWindow
android.view.cts.ASurfaceControlTest#testSurfaceTransaction_setColorAndBuffer_bufferAlpha_0_5

[Description]
Issue was found in testing on slower devices. It is a synchronization problem and causes process crash. When the test is ending, mSurfacePixelValidator.finish(...) closes the buffer that PixelChecker#validatePlane(...) is still checking. The crash hides other checks to the test no matter it is pass or failed. As Android is going to support longer period of migrating versions, slower device may need to take into account more.

[Debugging files]
1. Attached SurfacePixelValidator2.j.debug.java for android-11 cts branch can generate log below.
2. log.CtsViewTestCases.createFromWindow.txt

[Replicate]
It is testing on slower devices. In this case, devices are around 80~110 fps in ASurfaceControl relevant cases. I think it is easier to replicate when device is slower.

[log]
- Analyze the debugging log:
After 'Stopping capture', there is 1000 ms delay before 'Ending test case'. There are around two frames to validate between 'Stopping capture' and 'Ending test case'. In slower device, the two PixelChecker.validatePlane() calls might exceed the 1000 ms delay. And mImageReader.close() releases the buffer that it is currently checking. That causes crashed.

\$ cat log.CtsViewTestCases.createFromWindow.txt | grep -e CTS-DEBUG -e "Stopping capture" -e "Ending test"
-- device log --

```
06-24 05:17:12.531 14348 14398 D SurfacePixelValidator: CTS-DEBUG enter onImageAvailable mResultLock
06-24 05:17:12.531 14348 14398 D SurfacePixelValidator: CTS-DEBUG exit onImageAvailable mResultLock
06-24 05:17:12.544 14348 14398 D SurfacePixelValidator: CTS-DEBUG before onImageAvailable validatePlane
06-24 05:17:12.700 14348 14348 D CapturedActivity: Stopping capture
06-24 05:17:12.700 14348 14348 D SurfacePixelValidator: CTS-DEBUG waitForFrame
06-24 05:17:12.700 14348 14348 D SurfacePixelValidator: CTS-DEBUG enter waitForFrame mResultLock
06-24 05:17:13.167 14348 14398 D SurfacePixelValidator: CTS-DEBUG after onImageAvailable validatePlane
06-24 05:17:13.167 14348 14398 D SurfacePixelValidator: CTS-DEBUG enter onImageAvailable mResultLock
06-24 05:17:13.167 14348 14398 D SurfacePixelValidator: CTS-DEBUG exit onImageAvailable mResultLock
06-24 05:17:13.180 14348 14398 D SurfacePixelValidator: CTS-DEBUG before onImageAvailable validatePlane
06-24 05:17:13.672 14348 14348 D CapturedActivity: Ending test case
06-24 05:17:13.672 14348 14348 D SurfacePixelValidator: CTS-DEBUG finish
06-24 05:17:13.672 14348 14348 D SurfacePixelValidator: CTS-DEBUG enter finish mResultLock
06-24 05:17:13.672 14348 14348 D SurfacePixelValidator: CTS-DEBUG before finish mImageReader.close() ->
The image reader closes while validatePlane() is still checking pixels
06-24 05:17:13.672 14348 14348 D SurfacePixelValidator: CTS-DEBUG after finish mImageReader.close()
```

----- beginning of crash
06-24 05:17:13.672 14348 14398 F libc : Fatal signal 11 (SIGSEGV), code 1 (SEGV_MAPERR), fault addr 0x75bf35af215c in tid 14398 (SurfacePixelVal), pid 14348 (ndroid.view.cts)
06-24 05:17:13.672 14348 14394 D CapturedActivity: Test finished, passFrames 74, failFrames 0
06-24 05:17:13.690 14403 14403 I crash_dump64: obtaining output fd from tombstoned, type: kDebuggerTombstone
06-24 05:17:13.690 354 354 I tombstoned: received crash request for pid 14398
06-24 05:17:13.691 14403 14403 I crash_dump64: performing dump of process 14348 (target tid = 14398)

Reporter ☐ br...@imagination.corp-partn...
Type Bug
Priority P3
Severity S3
Status Assigned
Access Default access View
Assignee ☐ vi...@google.com
Verifier --
Collaborators
CC
br...@imagination.corp-partner.goc
vi...@google.com
AOSP ID --
ReportedBy Developer
Found In --
Targeted To --
Verified In --
In Prod ☐

```
06-24 05:17:13.696 14403 14403 F DEBUG : *** **
06-24 05:17:13.696 14403 14403 F DEBUG : Build fingerprint:
'Android/full_pc_x86_64/pc:11/RP1A.201005.004.A1/eng.buildb.20210618.193927:userdebug/test-keys'
06-24 05:17:13.696 14403 14403 F DEBUG : Revision: '0'
06-24 05:17:13.696 14403 14403 F DEBUG : ABI: 'x86_64'
06-24 05:17:13.697 14403 14403 F DEBUG : Timestamp: 2021-06-24 05:17:13+0000
06-24 05:17:13.697 14403 14403 F DEBUG : pid: 14348, tid: 14398, name: SurfacePixelVal >>>
android.view.cts <<<
06-24 05:17:13.697 14403 14403 F DEBUG : uid: 10134
06-24 05:17:13.697 14403 14403 F DEBUG : signal 11 (SIGSEGV), code 1 (SEGV_MAPERR), fault addr
0x75bf35af215c
06-24 05:17:13.697 14403 14403 F DEBUG : rax 0000000012f22844 rbx 0000000012f23c40 rcx
0000000000000000 rdx 0000000000001400
06-24 05:17:13.697 14403 14403 F DEBUG : r8 0000000012f22d80 r9 0000000000001400 r10
000075bf35af1c00 r11 000000000000024f
06-24 05:17:13.697 14403 14403 F DEBUG : r12 0000000000001400 r13 000075bf35c985c8 r14
000075bf35af1c00 r15 0000000000000000
06-24 05:17:13.697 14403 14403 F DEBUG : rdi 0000000012f22844 rsi 000075bf22bcf3bc
06-24 05:17:13.697 14403 14403 F DEBUG : rbp 000075c04fb34a70 rsp 000075bf35c984f0 rip
000075c22011b1e6
06-24 05:17:13.706 384 483 E BufferQueueProducer: [SurfaceView -
android.view.cts/android.view.cts.surfacevalidator.CapturedActivity#0](id:1800000012f,api:0,p:-1,c:384)
disconnect: not connected (req=2)
06-24 05:17:13.737 14403 14403 F DEBUG : backtrace:
06-24 05:17:13.737 14403 14403 F DEBUG : #00 pc 00000000000511e6
/apex/com.android.runtime/lib64/bionic/libc.so (memmove+374) (BuildId:
dab539f0ab87cd72cb724aebfcabac2)
06-24 05:17:13.737 14403 14403 F DEBUG : #01 pc 0000000000322837 [anon:dalvik-main space (region
space)]
06-24 05:17:13.737 14403 14403 F DEBUG : #02 pc 0000000000491307
/apex/com.android.art/lib64/libart.so (art::JNI<false>::SetByteArrayRegion(_JNIEnv*, _jbyteArray*, int, int,
signed char const*)+855) (BuildId: 395b06492f5ec91bc8cf84734c9beb55)
06-24 05:17:13.737 14403 14403 F DEBUG : #03 pc 0000000000322837 [anon:dalvik-main space (region
space)]
06-24 05:17:13.737 14403 14403 F DEBUG : #04 pc 0000000000015af7
/apex/com.android.art/javalib/x86_64/boot-core-libart.oat (art_jni_trampoline+263) (BuildId:
06c723e2ff44ead3e0ba45af7efe3dfad2b4a85d)
06-24 05:17:13.737 14403 14403 F DEBUG : #05 pc 000000000002e2c00 <unknown>
06-24 05:17:13.737 14403 14403 F DEBUG : #06 pc 000000000002b8329
/apex/com.android.art/javalib/x86_64/boot.oat (java.nio.DirectByteBuffer.get+361) (BuildId:
063a75624879be7d4274ea340748b04abbd86b8d)
06-24 05:17:13.737 14403 14403 F DEBUG : #07 pc 0000000000001400 <unknown>
06-24 05:17:13.737 14403 14403 F DEBUG : #08 pc 0000000000200482e /memfd:jit-cache (deleted) (offset
0x2000000) (android.view.cts.surfacevalidator.PixelChecker.validatePlane+462)
06-24 05:17:13.737 14403 14403 F DEBUG : #09 pc 000000000010374b [anon:stack_and_tls:14398]
06-24 05:17:13.738 384 384 E Layer : [SurfaceView -
android.view.cts/android.view.cts.surfacevalidator.CapturedActivity#0] No local sync point found
```

-- host log --

Use "help" or "help all" to get more information on running commands.

Using commandline arguments as starting command: [run, cts-dev, -m, CtsViewTestCases, -t,
android.view.cts.ASurfaceControlTest#testSurfaceControl_createFromWindow, --abi=x86_64]

06-24 13:16:05 I/TestInvocation: Starting invocation for 'cts' with '['

DeviceBuildInfo{bid=eng.brande.20210622.122815, serial=emulator-5554} on device 'emulator-5554']

06-24 13:16:06 W/NativeDevice: Emulator output for emulator-5554 was not captured in background

06-24 13:16:09 D/ITestSuite: [Total Unique Modules = 1]

06-24 13:16:09 D/ModuleDefinition: Running module x86_64 CtsViewTestCases

06-24 13:17:12 I/ModuleListener: [1/1]

android.view.cts.ASurfaceControlTest#testSurfaceControl_createFromWindow FAILURE: Test failed to run to
completion. Reason: 'Instrumentation run failed due to 'Process crashed.'. Check device logcat for details

06-24 13:18:14 E/JdwpProxyServer: Address already in use

java.net.BindException: Address already in use

at java.base/sun.nio.ch.Net.bind0(Native Method)

at java.base/sun.nio.ch.Net.bind(Net.java:461)

at java.base/sun.nio.ch.Net.bind(Net.java:453)

at java.base/sun.nio.ch.ServerSocketChannelImpl.bind(ServerSocketChannelImpl.java:227)

at java.base/sun.nio.ch.ServerSocketAdaptor.bind(ServerSocketAdaptor.java:80)

at java.base/sun.nio.ch.ServerSocketAdaptor.bind(ServerSocketAdaptor.java:73)

at com.android.ddmlib.internal.jdwp.JdwpProxyServer.startAsServer(JdwpProxyServer.java:131)

at com.android.ddmlib.internal.jdwp.JdwpProxyServer.retryAsServer(JdwpProxyServer.java:256)

at com.android.ddmlib.internal.jdwp.JdwpProxyServer.runAsFallbackServer(JdwpProxyServer.java:235)

at com.android.ddmlib.internal.jdwp.JdwpProxyServer.run(JdwpProxyServer.java:314)

at java.base/java.lang.Thread.run(Thread.java:834)

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0 B 

 Restricted

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✓ Links (1)

Hide all

"<https://android-review.googlesource.com/c/platform/cts...> "

br...@ #2

COMMENTS

All comments ▼

↓ Oldest first



br...@imagination.corp-partner.google.com <br...@imagination.corp-partner.google.com> #2

Jun 24, 2021 07:16PM ⋮

The proposed fix:

<https://android-review.googlesource.com/c/platform/cts/+1745385>



vi...@google.com <vi...@google.com> #3

Jun 25, 2021 03:51PM ⋮

Assigned to vi...@google.com.

We've shared this with our product and engineering teams and will continue to provide updates as more information becomes available.