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← C ☆ SendEvent from NdkMediaDrm does not send events with empty data Duplicates (0)

Hotlists (4) Mark as Duplicate

Bug P3 + Add Hotlist adexe s nau

Dependencies

STATUS UPDATE No update yet. Edit

DESCRIPTION dr...@gmail.com created issue #1

May 2, 2022 06:16PM :

Description

Comments (1)

My problem is that AMediaDrmListener from NDK does not receive any events from the widevine driver on Pixel devices.

Blocking (0)

AMediaDrm allows to register a custom listener with coambeauting and allows to receive information about internal events. The list of supported event types can be found in GDAMediaDrmEventType enumeration. For example, EVENT_KEY_REQUIRED event is useful to support periodical license renewals.

Resources (5)

Using the API is straitforward and in a simplified form, it might look like this:

```
AMediaDrm* drm = AMediaDrm createByUUID("...");
void OnEventListener(AMediaDrm* drm, const AMediaDrmSessionId* sessionId, AMediaDrmEventType eventType, int extra, const uint8_t* data, size_t dataSize)
media\_status\_t \ status = AMediaDrm\_setOnEventListener(drm, \ OnEventListener);
if (status != AMEDIA OK) {
    std::cout << "Error while setting EventListener" << std::endl;</pre>
    return status:
```

AMediaDrm_setOnEventListener returns AMEDIA_OK, which means that the callback was succesfully registered. Unfortunately, during the playback of protected content, there are no evidences of OnEventListener callback execution. Log file, that was collected using adb logcat command, contains NdkMediaDrm: invalid event data size=0 errors. Searching for the error message in the AOSP source code pointed to a SendEvent function in GDMdkMediaDrm.cpp. This function only sends events if the data vector (3rd function argument) is not empty, otherwise nothing is sent and error message is printed. Such logic exists in SendEvent function since the commit from more than 3 years ago

https://android.googlesource.com/platform/frameworks/av/+/ad02cc6c4091a44fb60c475731c8f4cac9a55ab0%5E%21/#F0. Before that, it was possible to send events with empty data. Seems that drivers/plugins that are responsible for DRMs (like widevine) send events with empty data vectors. And new "logic" in SendEvent breaks existing implementations of such drivers.

However, the problem does not affect MediaDrm Java API. In such case, no NDK code is involved. My guess, that code that is responsible for sending the events is located here: https://android.googlesource.com/platform/frameworks/base.git/+/refs/heads/master/media/ini/android_media_MediaDrm.cpp#523. There are no additional checks for data vector emptiness. It was tested with the same device and ExoPlayer application.

AMediaDrm events seems to be important to support correct playback of protected content on Android devices. It should work in the same way for C++ and Java applications.

Affected versions

r25

Host OS

Linux

Host OS version

Ubuntu 20.04

Affected ABIs

arm64-v8a

Build system

ndk-build

minSdkVersion

30

COMMENTS

All comments

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