How can I use adb to grant permission without root?

Asked 3 years, 6 months ago   Active 11 months ago   Viewed 45k times

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Background

I'm trying to create an app that can grant and revoke permissions of other apps.
To do this I'm using adb commands:

```
pm grant packageName permissionName
```

This works great if I call it through a shell with root permissions.

Problem

The problem is that when I call this command without root permissions, I receive

> Operation not allowed: java.lang.SecurityException: grantRuntimePermission: Neither user 2000 nor current process has android.permission.GRANT_RUNTIME_PERMISSIONS

This is to be expected (it would be a big problem otherwise).

Question

Is it possible to allow my app to manage other apps permissions through Android settings?
I'm looking for something like granting USAGE_STATS permission to an app going to Settings -> Security -> "App with usage access", but for GRANT_RUNTIME_PERMISSIONS (and REVOKE_RUNTIME_PERMISSIONS).

android   adb   android-permissions

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edited Aug 29, 2018 at 16:21   asked Aug 29, 2018 at 14:03
  Phantômaxx   **Stefano Siano**
  37.2k 21 80 109   **469** 1 3 12

> I'm leaving this answer here, hoping it will be useful to anyone having the same need. I tried signing the app as a system app, asking permissions and adding sharedUserId to manifest tag, and it seems to work for now. I'm gonna test it and check if it really works in every case. I will update this answer when tests finish – Stefano Siano Aug 31, 2018 at 9:39 ✏️

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6 Answers

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I was trying to install BBS to my Redmi Note 4, MIUI 10.1 (not sure if details are relevant). Got same error. Then I found a menu item three rows below main 'USB debugging' menu in developer options. It was called

USB debugging (Security settings)

Allow granting permissions and simulating input via USB debugging

Attempt to enable this option prompted three warning windows with information about terrible things that can happen if you proceed. After last confirmation (not sure if the phone was connected or I connected it after) I ran

```
adb -d shell pm grant packageName android.permission.BATTERY_STATS
```

but now it succeeded.

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edited Dec 27, 2018 at 6:27   answered Dec 27, 2018 at 0:06
  Ru Chern Chong   **brand**
  3,414 13 31 42   **411** 4 6

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custom ROMs derived from them). This is the approach I currently took for my app, Permission Ruler. I'm still trying to understand if this makes sense and works reliably though. – Stefano Siano Jan 2, 2019 at 9:50

1   Still works with MIUI12. Note that you will have to sign into your MI account before being able to do this. – Agoston Horvath Sep 12, 2020 at 18:35 ✎

And you have to have working SIM card inserted. If your SIM slot is busted for example, you are out of luck – Matija Nalis May 13, 2021 at 12:26

By the time I got here I'd forgotten what I was doing. – John Hunt Oct 19, 2021 at 14:45

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In `Developer Options` , scroll (all the way) down until u find `Disable Permission Monitoring`

and turn it on.

Now the `pm` command should work

I noticed that they change it to: `USB debugging (Security setting'`

and location moved up

and it require a sim

Share Follow   edited May 12, 2020 at 9:03   answered Aug 30, 2019 at 6:40

Elia Weiss
6,711   11   55   92

4   Perfect solution. I encountered this error in Android 10. This setting works as expected. Thanks – nikhilesh_koshti May 25, 2020 at 14:47

Can't find any such thing in Debugger Options (on an Android 10 Samsungs Active Tab 3) :-/ – Frank Nocke Jun 24, 2021 at 16:15

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For those who are using MIUI:

I'm using MIUI 12.0.5 Stable. And in this version - to run any granting permission commands, we must first enable "USB Debugging" and "USB Debugging (Security settings)" from the developer options, and only after then we will be able to execute permission commands via adb like this one:

```
adb shell pm grant com.ivianuu.immersivemodemanager
android.permission.WRITE_SECURE_SETTINGS
```

Share Follow   answered Apr 7, 2021 at 9:44

Arshit Vaghasiya
81   1   4

It works, thanks. – Jesse JunJing Nov 12, 2021 at 6:48

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It worked for me with the solution Elia Weiss provided. (unfortunately I haven't enough reputation to upvote and comment)

Switch on "Developer Options" / "Disable Permission Monitoring" (at the end of the section)

This is probably different depending on Android versions and or OS variants.

In my case it's ColorOS 6.1 / Android 9 on a realme X2 global variant. (exactly: OS version RMX1993EX_11_A15)

Share Follow   edited Dec 30, 2019 at 15:50   answered Dec 30, 2019 at 15:40

Harald
51   1   3

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Xiaomi users may need to enable an setting in the Developer Options. It's called "USB debugging (Security settings)" with the subheading "Allow granting permissions and simulating input via USB debugging"

Share Follow   answered Feb 22, 2021 at 12:42

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You can not do that. It is straight forward security breach which of course Google will not allow you.

You can not control permissions of other apps via your app or simply by using adb commands.

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answered Aug 29, 2018 at 14:06

Vikasdeep Singh
19.1k   9   74   97

Ok, there's no way to do it directly. But is there anything that can be used to workaround this? like opening settings and automatically clicking on the screen with an accessibility service, or something else? – Stefano Siano Aug 29, 2018 at 14:36

@StefanoSiano there is no full proof workaround for this. This is two step work; 1.) Open app specific setting if you know package name of that app 2.) Toggling via Accessibility I am not sure if it will work 100% because each OEM has their own customized UI and the their ids etc. – Vikasdeep Singh Aug 30, 2018 at 0:55

And I'd like to do it when the screen is off, too... Is there anything that could be done using Device Administrator APIs, or some way to set the app as system app (using any kind of Android settings)? – Stefano Siano Aug 30, 2018 at 7:12

1   @StefanoSiano can not be done with screen off. Nutshell **you can not do it secretly**. – Vikasdeep Singh Aug 30, 2018 at 7:24

1   The only way I found is to install another app as system app, signing it with the same key of the ROM (this will work only for pure AOSP, LineageOs or custom ROMs derived from them). This is the approach I currently took for my app, Permission Ruler. I'm still trying to understand if this makes sense and works reliably though. – Stefano Siano Jan 2, 2019 at 9:51