← C ☆ Baseline Profiles - Problem Generating Release BaselineProfile

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WAI   Bug   P2   + Add Hotlist   adexe s nau

👥 **STATUS UPDATE** No update yet.   Edit

📄 **DESCRIPTION** ja...@veeva.com created issue #1

Component used: Baseline Profiles

Version used: AGP=7.3.0-rc01, uiautomator=2.2.0 & benchmark-macro-junit4=1.1.0

Devices/Android versions reproduced on:

```
testOptions {
        managedDevices {
            devices {
                pixel2Api31(com.android.build.api.dsl.ManagedVirtualDevice) {
                    device = "Pixel 2"
                    apiLevel = 31
                    systemImageSource = "aosp"
                }
            }
        }
    }
```

- **Sample project** to trigger the issue: https://github.com/leinardi/Forlago/tree/baseline-profiles

Issue description:

My team is trying to implement the **Baseline profiles**(🔗official documentation) for our app. Following the steps indicated in this video(🔗Improving Performance with Baseline Profiles) if we us

```
./gradlew :macrobenchmark:pixel2Api31BenchmarkAndroidTest -P android.testInstrumentationRunnerArguments.class=com.example.BaselineProfileGenerator
```

```
com.example.BaselineProfileGenerator > generate[pixel2Api31] FAILED
        java.lang.IllegalStateException: Unable to confirm activity launch completion [] Please report a bug with the output of `adb shell dumpsys gfxinfo co
            at androidx.benchmark.macro.MacrobenchmarkScope.startActivityImpl(MacrobenchmarkScope.kt:179)
Tests on pixel2Api31 failed: There was 1 failure(s).
```

This is how it looks like our *BaselineProfileGenerator*:

```
@OptIn(ExperimentalBaselineProfilesApi::class)
@RunWith(AndroidJUnit4ClassRunner::class)
class BaselineProfileGenerator {
    @get:Rule
    val rule = BaselineProfileRule()

    @Test
    fun generate() {
        rule.collectBaselineProfile("com.example.app") {
            pressHome()
            startActivityAndWait()
        }
    }
}
```

If we configure the benchmark for *Debug* it works well:

```
benchmark {
    initWith buildTypes.debug
    signingConfig signingConfigs.debug
    matchingFallbacks = ['debug']
    debuggable false
    proguardFiles('benchmark-rules.pro')
}
```

But configuring it for *Release*, benchmark throws the previous exception when you try to generate it.

```
benchmark {
    initWith buildTypes.release
    signingConfig signingConfigs.debug
```

```
        matchingFallbacks = ['release']
        debuggable false
        proguardFiles('benchmark-rules.pro')
    }
}
```

✓ Links (4)

🔗 **Links (4)**

"Sample project to trigger the issue: https://github.com/leinardi/Forlago/tree/baseline-profiles"

"…am is trying to implement the Baseline profiles(🔗official documentation) for our app. Following the steps indicated in this video(Improving Performance with Baseline Profiles) if we use the Debu

"…rying to implement the Baseline profiles(official documentation) for our app. Following the steps indicated in this video(🔗Improving Performance with Baseline Profiles) if we use the DebugBuild

"Could you 🔗file a bug with the details to the Macrobenchmark library component as this might be a different problem. Thank y… "

COMMENTS

ra...@google.com <ra...@google.com> #2

Can you double check and make sure your app is getting launched and not crashing ?

Also, if you could send us all the messages in logcat with the log tag `Benchmark`, that would be very helpful.

---

ja...@veeva.com <ja...@veeva.com> #3

Yes, when I run the command below to generate the Basesile profile file, the app is launched in the virtual device but I get the next exception.

```
./gradlew :macrobenchmark:pixel2Api31BenchmarkAndroidTest -P android.testInstrumentationRunnerArguments.class=com.leinardi.forlago.BaselineProfileGenerato
```

This is the result that we have on Logcat:

1. Filtering `Benchmark`:

```
08-26 08:38:34.702  2296  2313 D Benchmark: Usable output directory: /storage/emulated/0/Android/media/com.leinardi.forlago.macrobenchmark
08-26 08:38:34.702  2296  2313 D Benchmark: Output Directory: /sdcard/Android/media/com.leinardi.forlago.macrobenchmark/additional_test_output
08-26 08:38:34.735  2296  2313 D Benchmark: Killing process com.leinardi.forlago
08-26 08:38:34.747  2296  2313 D Benchmark: Resetting com.leinardi.forlago
08-26 08:38:34.781  2296  2313 D Benchmark: Copying APK to /data/local/tmp/com.leinardi.forlago-1661495914781.apk
08-26 08:38:34.820  2296  2313 D Benchmark: Uninstalling com.leinardi.forlago
08-26 08:38:34.912  2296  2313 D Benchmark: Installing com.leinardi.forlago
08-26 08:38:35.334  2296  2313 D Benchmark: Deleting /data/local/tmp/com.leinardi.forlago-1661495914781.apk
08-26 08:38:35.345  2296  2313 D Benchmark: Profile Installation Skip File Operation: WRITE_SKIP_FILE
08-26 08:38:36.948  2296  2313 D Benchmark: Killing process com.leinardi.forlago
08-26 08:38:38.045  2296  2313 D Benchmark: Starting activity with command: am start -W "intent:#Intent;action=android.intent.action.MAIN;category=android
08-26 08:38:40.054  2296  2313 D Benchmark: Result: Starting: Intent { act=android.intent.action.MAIN cat=[android.intent.category.LAUNCHER] flg=0x1000080C
08-26 08:38:40.054  2296  2313 D Benchmark: Status: ok
08-26 08:38:40.054  2296  2313 D Benchmark: LaunchState: COLD
08-26 08:38:40.054  2296  2313 D Benchmark: Activity: com.leinardi.forlago/.ui.MainActivity
08-26 08:38:40.054  2296  2313 D Benchmark: TotalTime: 1934
08-26 08:38:40.054  2296  2313 D Benchmark: WaitTime: 1935
08-26 08:38:40.054  2296  2313 D Benchmark: Complete
08-26 08:38:52.325  2296  2313 D Benchmark: Killing process com.leinardi.forlago
```

2. Complete Logcat result:

```
2022-08-26 08:41:55.764    524-556    ActivityTaskManager   system_process                          I  Displayed com.leinardi.forlago/.ui.MainActivity: +1s89
2022-08-26 08:41:55.764    524-835    ActivityTaskManager   system_process                          W    Force finishing activity com.leinardi.forlago/.ui.Ma
2022-08-26 08:41:55.776   2547-2547   Process               com.leinardi.forlago                    I  Sending signal. PID: 2547 SIG: 9
2022-08-26 08:41:55.790    524-725    ActivityManager       system_process                          I  Process com.leinardi.forlago (pid 2547) has died: fg
2022-08-26 08:41:55.790    524-836    WindowManager         system_process                          I  WIN DEATH: Window{9146b48 u0 com.leinardi.forlago/com.
2022-08-26 08:41:55.790    524-836    InputManager-JNI      system_process                          W  Input channel object '9146b48 com.leinardi.forlago/com
2022-08-26 08:41:55.792   1297-1532   MediaProvider         com.android.providers.media.module      I  Deleted 0 0 0 0 0 1 items on external_primary due to
2022-08-26 08:41:55.793    524-725    InputManager-JNI      system_process                          W  Input channel object 'd0082ce Splash Screen com.leinar
2022-08-26 08:41:55.801   2295-2312   Benchmark             com.leinardi.forlago.macrobenchmark     D  Result: Starting: Intent { act=android.intent.action.M
                                                                                                       Status: ok
                                                                                                       LaunchState: COLD
                                                                                                       Activity: com.leinardi.forlago/.ui.MainActivity
                                                                                                       TotalTime: 1895
                                                                                                       WaitTime: 1897
                                                                                                       Complete
2022-08-26 08:41:56.264    524-559    ActivityTaskManager   system_process                          W  Activity top resumed state loss timeout for ActivityRe
2022-08-26 08:42:08.557   2295-2312   Benchmark             com.leinardi.forlago.macrobenchmark     D  Killing process com.leinardi.forlago
2022-08-26 08:42:08.580    524-2583   ActivityManager       system_process                          I  Force stopping com.leinardi.forlago appid=10107 user=0
2022-08-26 08:42:08.588   2295-2312   TestRunner            com.leinardi.forlago.macrobenchmark     E  failed: generate(com.leinardi.forlago.BaselineProfileG
2022-08-26 08:42:08.589   2295-2312   TestRunner            com.leinardi.forlago.macrobenchmark     E  ----- begin exception -----
2022-08-26 08:42:08.590   2295-2312   TestRunner            com.leinardi.forlago.macrobenchmark     E  java.lang.IllegalStateException: Unable to confirm act
```

```
                                                                    at androidx.benchmark.macro.MacrobenchmarkScope.star
                                                                    at androidx.benchmark.macro.MacrobenchmarkScope.star
                                                                    at androidx.benchmark.macro.MacrobenchmarkScope.star
                                                                    at androidx.benchmark.macro.MacrobenchmarkScope.star
                                                                    at com.leinardi.forlago.BaselineProfileGenerator$gene
                                                                    at com.leinardi.forlago.BaselineProfileGenerator$gene
                                                                    at androidx.benchmark.macro.BaselineProfilesKt$colle
                                                                    at androidx.benchmark.macro.BaselineProfilesKt$colle
                                                                    at androidx.benchmark.macro.CompilationMode$Partial.
                                                                    at androidx.benchmark.macro.CompilationMode.resetAndC
                                                                    at androidx.benchmark.macro.BaselineProfilesKt.colle
                                                                    at androidx.benchmark.macro.junit4.BaselineProfileRul
                                                                    at com.leinardi.forlago.BaselineProfileGenerator.gene
                                                                    at java.lang.reflect.Method.invoke(Native Method)
                                                                    at org.junit.runners.model.FrameworkMethod$1.runRefle
                                                                    at org.junit.internal.runners.model.ReflectiveCallab
                                                                    at org.junit.runners.model.FrameworkMethod.invokeExpl
                                                                    at org.junit.internal.runners.statements.InvokeMethoo
                                                                    at androidx.benchmark.macro.junit4.BaselineProfileRul
                                                                    at androidx.test.rule.GrantPermissionRule$RequestPer
                                                                    at org.junit.rules.RunRules.evaluate(RunRules.java:2(
                                                                    at org.junit.runners.ParentRunner$3.evaluate(ParentRu
                                                                    at org.junit.runners.BlockJUnit4ClassRunner$1.evalua
                                                                    at org.junit.runners.ParentRunner.runLeaf(ParentRunn
                                                                    at org.junit.runners.BlockJUnit4ClassRunner.runChild
                                                                    at org.junit.runners.BlockJUnit4ClassRunner.runChild
                                                                    at org.junit.runners.ParentRunner$4.run(ParentRunner.
                                                                    at org.junit.runners.ParentRunner$1.schedule(ParentRu
                                                                    at org.junit.runners.ParentRunner.runChildren(Parentl
                                                                    at org.junit.runners.ParentRunner.access$100(ParentRu
                                                                    at org.junit.runners.ParentRunner$2.evaluate(ParentRu
                                                                    at org.junit.runners.ParentRunner$3.evaluate(ParentRu
                                                                    at org.junit.runners.ParentRunner.run(ParentRunner.ja
                                                                    at org.junit.runners.Suite.runChild(Suite.java:128)
                                                                    at org.junit.runners.Suite.runChild(Suite.java:27)
                                                                    at org.junit.runners.ParentRunner$4.run(ParentRunner.
                                                                    at org.junit.runners.ParentRunner$1.schedule(ParentRu
                                                                    at org.junit.runners.ParentRunner.runChildren(Parentl
                                                                    at org.junit.runners.ParentRunner.access$100(ParentRu
                                                                    at org.junit.runners.ParentRunner$2.evaluate(ParentRu
                                                                    at org.junit.runners.ParentRunner$3.evaluate(ParentRu
                                                                    at org.junit.runners.ParentRunner.run(ParentRunner.ja
                                                                    at org.junit.runner.JUnitCore.run(JUnitCore.java:137)
                                                                    at org.junit.runner.JUnitCore.run(JUnitCore.java:115)
                                                                    at androidx.test.internal.runner.TestExecutor.execute
                                                                    at androidx.test.runner.AndroidJUnitRunner.onStart(A
                                                                    at android.app.Instrumentation$InstrumentationThread.
 2022-08-26 08:42:08.592  2295-2312  TestRunner          com.leinardi.forlago.macrobenchmark  E  ----- end exception -----
 2022-08-26 08:42:08.594  2295-2312  TestRunner          com.leinardi.forlago.macrobenchmark  I  finished: generate(com.leinardi.forlago.BaselineProfil
 2022-08-26 08:42:08.600  2295-2312  TestRunner          com.leinardi.forlago.macrobenchmark  I  run finished: 1 tests, 1 failed, 0 ignored
 2022-08-26 08:42:08.604  2295-2312  MonitoringInstr     com.leinardi.forlago.macrobenchmark  I  waitForActivitiesToComplete() took: 0ms
 2022-08-26 08:42:08.613   524-2583  ActivityManager     system_process                       I  Force stopping com.leinardi.forlago.macrobenchmark app
 2022-08-26 08:42:08.617   524-2583  ActivityManager     system_process                       I  Killing 2295:com.leinardi.forlago.macrobenchmark/u0a1C
 2022-08-26 08:42:08.624   524-725   ActivityManager     system_process                       V  Got obituary of 2295:com.leinardi.forlago.macrobenchma
 -------------------------- PROCESS ENDED (2295) for package com.leinardi.forlago.macrobenchmark --------------------------
```

ra...@google.com <ra...@google.com>

> Unable to confirm activity launch completion

> [] Please report a bug with the output of `adb shell dumpsys gfxinfo com.leinardi.forlago framestats`

After a process launch, can you please report the output of running `adb shell dumpsys gfxinfo com.leinardi.forlago framestats`.

ja...@gmail.com <ja...@gmail.com>

Sure! But I think it is not going to help so much:

```
Applications Graphics Acceleration Info:
Uptime: 24156 Realtime: 24156

** Graphics info for pid 2516 [com.leinardi.forlago] **
Profile data in ms:
```

```
    View hierarchy:


    Total ViewRootImpl   : 0
    Total attached Views : 0
    Total RenderNode     : 0.00 kB (used) / 0.00 kB (capacity)
```

In the link below you can try to run the command and see the issue:

Sample project to trigger the issue: https://github.com/leinardi/Forlago/tree/baseline-profiles

Message last modified on Aug 29, 2022 04:44PM

---

ja...@veeva.com <ja...@veeva.com> #6

Hey, is there any update about this issue?

---

le...@gmail.com <le...@gmail.com> #7

I'm also waiting for a fix for this issue.

---

ko...@gmail.com <ko...@gmail.com> #8

I have the exact same issue.

---

ro...@veeva.com <ro...@veeva.com> #9

Don't hold your breath while waiting for a fix...

---

ml...@google.com <ml...@google.com> #10

I tried running the sample code and the problem doesn't seem to be within the library, but within the app itself.

It crashes upon startup with the exception:

```
FATAL EXCEPTION: main
Process: com.leinardi.forlago, PID: 4684
java.lang.IllegalStateException: Default FirebaseApp is not initialized in this process com.leinardi.forlago. Make sure to call FirebaseApp.initializeApp(
at com.google.firebase.FirebaseApp.getInstance(FirebaseApp.java:47)
at com.leinardi.forlago.library.logging.CrashlyticsTree.log(CrashlyticsTree.kt:15)
at timber.log.Timber$Tree.prepareLog(Timber.kt:97)
at timber.log.Timber$Tree.e(Timber.kt:3)
at timber.log.Timber$Forest.e(Timber.kt:6)
at com.leinardi.forlago.library.android.interactor.android.GetAppUpdateInfoInteractor$invoke$2.invokeSuspend(GetAppUpdateInfoInteractor.kt:181)
at kotlin.coroutines.jvm.internal.BaseContinuationImpl.resumeWith(ContinuationImpl.kt:9)
at kotlinx.coroutines.DispatchedTask.run(DispatchedTask.kt:99)
at kotlinx.coroutines.internal.LimitedDispatcher.run(LimitedDispatcher.kt:12)
at kotlinx.coroutines.scheduling.TaskImpl.run(Tasks.kt:3)
at kotlinx.coroutines.scheduling.CoroutineScheduler$Worker.run(CoroutineScheduler.kt:82)
Suppressed: kotlinx.coroutines.DiagnosticCoroutineContextException: [StandaloneCoroutine{Cancelling}@c988cf0, Dispatchers.Main.immediate]
```

Once I commented out `CrashlyticsTree`, the profile is generated properly.

So make sure you provide proper configuration for the `release` or `benchmark` buildType.

Message last modified on Nov 8, 2022 10:56PM

---

ja...@veeva.com <ja...@veeva.com> #11

Thank you! Yes, I just ran again to generate the Baseline Profile without using `CrashlyticsTree` and it worked fine. Sorry for the waste of time, we didn't realize about the CrashlyticsTree ex

---

ml...@google.com <ml...@google.com> #12

Status: Won't Fix (Intended Behavior)

We're glad the problem was solved :)

---

zx...@gmail.com <zx...@gmail.com> #13

Got the same exception:
java.lang.IllegalStateException: Unable to confirm activity launch completion [] Please report a bug with the output of `adb shell dumpsys gfxinfo xxx.xxx framestats`

The output of running:

```
adb shell dumpsys gfxinfo xxx.xxx framestats
```

↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓↓

Applications Graphics Acceleration Info:
Uptime: 58875860 Realtime: 155716577

** Graphics info for pid 29158 [xxx.xxx] **
Profile data in ms:

    xxx.xxx/xxx.xxx.module.launcher.WelcomeActivity/android.view.ViewRootImpl@701de9e (visibility=0)
    xxx.xxx/xxx.xxx.module.launcher.WelcomeActivity/android.view.ViewRootImpl@9d41d7f (visibility=0)
View hierarchy:

  xxx.xxx/xxx.xxx.module.launcher.WelcomeActivity/android.view.ViewRootImpl@701de9e
  12 views, 14.72 kB of render nodes

  xxx.xxx/xxx.xxx.module.launcher.WelcomeActivity/android.view.ViewRootImpl@9d41d7f
  25 views, 30.66 kB of render nodes

Total ViewRootImpl   : 2
Total attached Views : 37
Total RenderNode   : 45.38 kB (used) / 45.38 kB (capacity)

↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑↑

ml...@google.com <ml...@google.com> #14

Could you, please, verify that your app is not crashing just after the launch?

zx...@gmail.com <zx...@gmail.com> #15

Yes, i'm sure, without any crash stack.

BY THE WAY, There is a business logic of my app: after the launch, a dialog window was displayed above the WelcomeActivity. As you can see, the output of the framestats, the View hierarch

when i commented out the dialog logic, it worked fine.

envs:
[google pixel 3 / Android 12]
[Android Studio Flamingo | 2022.2.1 Patch 2]
[jdk 17]
[gradle 8.1]
[macOS 13.4.1 (c) (22F770820d)]

Looking forward to your reply!

Thx~

Message last modified on Jul 31, 2023 12:45PM

ml...@google.com <ml...@google.com> #16

Could you ⊖file a bug with the details to the Macrobenchmark library component as this might be a different problem. Thank you!