📁 Android Public Tracker > App Development > Jetpack (androidx) > Infrastructure   263304883 ⌄

← ↻ ☆   **Investigate why appsearch test APKs are so large**   +1 ²   Hotlists (1)   Mark as Duplicate   🔔   ⋮

Comments (9)   Dependencies   Duplicates (0)   Blocking (0)   Resources (4)

Bug   P2 | + Add Hotlist

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

📄 **DESCRIPTION** au...@google.com created issue #1

```
-rw-r--r--@   1 yboyar  primarygroup     66M Dec 20 03:34 sqlite-sqlite-inspection_sqlite-inspection-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     67M Dec 20 03:34 work-work-inspection_work-inspection-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     87M Dec 20 03:42 compose-ui-ui-inspection_ui-inspection-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     94M Dec 20 03:31 appsearch-appsearch-test-util_appsearch-test-util-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     94M Dec 20 03:31 appsearch-appsearch-ktx_appsearch-ktx-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     94M Dec 20 03:31 appsearch-appsearch-builtin-types_appsearch-builtin-types-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     95M Dec 20 03:31 appsearch-appsearch_appsearch-debug-androidTest.apk
-rw-r--r--@   1 yboyar  primarygroup     96M Dec 20 03:31 appsearch-appsearch-local-storage_appsearch-local-storage-debug-androidTest.apk
```

It seems that appsearch test apks are larger than expected. I suspect that we might be shipping some unnecessary native debug symbols. We should see if we can do some shrinking on these.

✓ Mentioned issues (1)

⚙ **Mentioned issues (1)**

[P1]   AndroidTest.packaging.jniLibs.keepDebugSymbols doesn't affect androidTest packaging   "Might be related to b/228846664"

COMMENTS

◯   **au...@google.com** <au...@google.com> #2

Might be related to b/228846664

◯   **je...@google.com** <je...@google.com> #3

I notice that most (253732 / 266620) of the unzipped size of appsearch-appsearch-local-storage_appsearch-local-storage-debug-androidTest.apk (as of `/google/data/ro/projects/andro`
`androidx_device_tests 'androidTest.zip'`) is coming from four copies of libicing.so :

```
/usr/local/google/workspace/temp/Downloads/appsearch-size/appsearch-work/appsearch-appsearch-local-storage_appsearch-local-storage-debug-androidTest.apk_u
    8     ./kotlin/annotation
    8     ./kotlin/collections
    8     ./kotlin/coroutines
    8     ./kotlin/internal
    8     ./kotlin/ranges
    8     ./kotlin/reflect
    8     ./mockito-extensions
    8     ./org/mockito/internal/creation/bytebuddy/inject
    8     ./res/drawable-v21
    8     ./res/layout-v16
   12     ./junit/runner
   12     ./org/mockito/internal/creation/bytebuddy
   12     ./res/menu
   16     ./junit
   16     ./org/mockito/internal/creation
   16     ./res/layout-v17
   20     ./org/mockito/internal
   20     ./res/drawable
   20     ./res/layout-v21
   24     ./org/mockito
   24     ./res/drawable-hdpi-v4
   24     ./res/drawable-mdpi-v4
   24     ./res/drawable-xhdpi-v4
   28     ./org
   32     ./res/layout
   60     ./META-INF
   68     ./kotlin
  192     ./res
60604     ./lib/armeabi-v7a
63280     ./lib/x86
```

```
64512   ./lib/x86_64
65332   ./lib/arm64-v8a
253732  ./lib
266620  .
266620  total
/usr/local/google/workspace/temp/Downloads/appsearch-size/appsearch-work/appsearch-appsearch-local-storage_appsearch-local-storage-debug-androidTest.apk_u
64508   lib/x86_64/libicing.so
63276   lib/x86/libicing.so
65328   lib/arm64-v8a/libicing.so
60600   lib/armeabi-v7a/libicing.so
253712  total
```

je...@google.com <je...@google.com> #4

Do we know if there are any architectures that we know are unneeded and can be removed?

je...@google.com <je...@google.com> #5

Comment #2 also seems to be correct about test apks keeping lots of debug symbols; I'm observing a large difference in sizes among different copies of a libicing.so built in different ways:

```
/usr/local/google/workspace/aosp-androidx-git/out 12:25 (androidx-main)$ find -name "*.so" | grep arm64-v8a | xargs du -h
58M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/cxx/RelWithDebInfo/5f2o5e6x/obj/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/cxx/Debug/3h58my6l/obj/arm64-v8a/libicing.so
4.4M   ./androidx/appsearch/appsearch-local-storage/build/intermediates/library_and_local_jars_jni/debug/jni/arm64-v8a/libicing.so
2.1M   ./androidx/appsearch/appsearch-local-storage/build/intermediates/library_and_local_jars_jni/release/jni/arm64-v8a/libicing.so
4.4M   ./androidx/appsearch/appsearch-local-storage/build/intermediates/stripped_native_libs/debug/out/lib/arm64-v8a/libicing.so
2.1M   ./androidx/appsearch/appsearch-local-storage/build/intermediates/stripped_native_libs/release/out/lib/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/library_jni/debug/jni/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/merged_native_libs/debug/out/lib/arm64-v8a/libicing.so
58M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/merged_native_libs/release/out/lib/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/merged_native_libs/debugAndroidTest/out/lib/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/outputs/apk/androidTest/debug/appsearch-local-storage-debug-androidTest.apk_unzipped/lib/arm64-
```

In particular, compare these files:

```
2.1M   ./androidx/appsearch/appsearch-local-storage/build/intermediates/stripped_native_libs/release/out/lib/arm64-v8a/libicing.so
64M    ./androidx/appsearch/appsearch-local-storage/build/intermediates/merged_native_libs/debugAndroidTest/out/lib/arm64-v8a/libicing.so
```

au...@google.com <au...@google.com> #6

What can we do here to drop these debug symbols from our test apks?

sp...@google.com <sp...@google.com> #7

Currently, AGP doesn't support stripping .so files for test APKs, but the proposal is to enable stripping for test APK .so files by default in AGP (Issue 228846664).

au...@google.com <au...@google.com> #8

Reassigned to bu...@google.com.

Bugjuggler: b/228846664

bu...@google.com <bu...@google.com> #9

Accepted by bu...@google.com.

Hi. I've received your bug and will wait for b/228846664 to be resolved and then assign the bug to jeffrygaston@google.com.

bu...@google.com <bu...@google.com>

Assigned to je...@google.com.

je...@google.com <je...@google.com>

Status: New