

# ANDROID STATIC ANALYSIS REPORT



**#** Hinge Health (1.165.0)

File Name: com.hingehealth.phoenix\_7440289.apk

Package Name: com.hingehealth.phoenix

Scan Date: Aug. 30, 2025, 9:20 p.m.

App Security Score:

**53/100 (MEDIUM RISK)** 

Grade:

B

Trackers Detection:

4/432

## FINDINGS SEVERITY

| <del>滇</del> HIGH | <b>▲</b> MEDIUM | <b>i</b> INFO | <b>✓</b> SECURE | <b>ℚ</b> HOTSPOT |
|-------------------|-----------------|---------------|-----------------|------------------|
| 1                 | 20              | 6             | 2               | 1                |



File Name: com.hingehealth.phoenix\_7440289.apk

Size: 73.87MB

MD5: d39529257d2326ad67ae5ac576f19ea2

**SHA1:** d182db5616ee8a3e6cdc5c7d8b53f34d2f23355e

SHA256: 184dae32f21889f5e9d26543d52a32a40d7dd8086fca1188870331256bf2aa73

#### **i** APP INFORMATION

App Name: Hinge Health

Package Name: com.hingehealth.phoenix

Main Activity: com.hingehealth.phoenix.MainActivity

Target SDK: 34 Min SDK: 28 Max SDK:

Android Version Name: 1.165.0
Android Version Code: 7440289

#### **APP COMPONENTS**

Activities: 20
Services: 19
Receivers: 16
Providers: 16
Exported Activities: 3
Exported Services: 1
Exported Receivers: 4
Exported Providers: 1



Binary is signed v1 signature: False v2 signature: False v3 signature: True v4 signature: False

X.509 Subject: C=US, ST=California, L=San Francisco, O=Hinge Health, OU=Engineering, CN=Julian Diaz

Signature Algorithm: rsassa\_pkcs1v15 Valid From: 2018-08-17 00:08:12+00:00 Valid To: 2043-08-11 00:08:12+00:00

Issuer: C=US, ST=California, L=San Francisco, O=Hinge Health, OU=Engineering, CN=Julian Diaz

Serial Number: 0x189bfdd2

Hash Algorithm: sha256

md5: da9063933009bfb33d0748112f8fc205

sha1: 2c3f72f88b97213f442c3cd3d7316464f3e22ec6

sha256: 7a6677775744d8d70185e93f55dc10e6042ac1b7d47b197af19778973f241420

sha512: 3c08619e9129741d4b7a8b36cba3d1f45e7ccdb06b3bae37a1da82f1fd531e85128a03661822ef2254a05eb00d20f1d9b85368f6984edaf94326855ca59238b5

PublicKey Algorithm: rsa

Bit Size: 2048

Fingerprint: 14e5928286ecf11cbf3ef8788eb0be7126a9ba51f09095fe11ebd73c7dbe7afa

Found 1 unique certificates

#### **⋮** APPLICATION PERMISSIONS

| PERMISSION                                | STATUS    | INFO  | DESCRIPTION   |
|---|-----------|---|---|
| android.permission.INTERNET               | normal    | full Internet access  | Allows an application to create network sockets.  |
| android.permission.WRITE_CALENDAR         | dangerous | add or modify calendar<br>events and send emails<br>to guests | Allows an application to add or change the events on your calendar, which may send emails to guests. Malicious applications can use this to erase or modify your calendar events or to send emails to guests.   |
| android.permission.READ_CALENDAR          | dangerous | read calendar events  | Allows an application to read all of the calendar events stored on your phone. Malicious applications can use this to send your calendar events to other people.  |
| android.permission.READ_EXTERNAL_STORAGE  | dangerous | read external storage<br>contents                             | Allows an application to read from external storage.  |
| android.permission.WRITE_EXTERNAL_STORAGE | dangerous | read/modify/delete<br>external storage contents               | Allows an application to write to external storage.   |
| android.permission.BLUETOOTH              | normal    | create Bluetooth<br>connections                               | Allows applications to connect to paired bluetooth devices.   |
| android.permission.BLUETOOTH_ADMIN        | normal    | bluetooth administration                                      | Allows applications to discover and pair bluetooth devices.   |
| android.permission.ACCESS_COARSE_LOCATION | dangerous | coarse (network-based)<br>location                            | Access coarse location sources, such as the mobile network database, to determine an approximate phone location, where available. Malicious applications can use this to determine approximately where you are. |
| android.permission.ACCESS_FINE_LOCATION   | dangerous | fine (GPS) location   | Access fine location sources, such as the Global Positioning System on the phone, where available. Malicious applications can use this to determine where you are and may consume additional battery power.     |
| android.permission.BLUETOOTH_SCAN         | dangerous | required for discovering and pairing Bluetooth devices.       | Required to be able to discover and pair nearby Bluetooth devices.  |

| PERMISSION   | STATUS    | INFO   | DESCRIPTION  |
|--|-----------|--|--|
| android.permission.BLUETOOTH_CONNECT                   | dangerous | necessary for connecting<br>to paired Bluetooth<br>devices.  | Required to be able to connect to paired Bluetooth devices.  |
| android.permission.FOREGROUND_SERVICE                  | normal    | enables regular apps to<br>use<br>Service.startForeground.   | Allows a regular application to use Service.startForeground.   |
| android.permission.FOREGROUND_SERVICE_CONNECTED_DEVICE | normal    | enables foreground<br>services with connected<br>device use. | Allows a regular application to use Service.startForeground with the type "connectedDevice".   |
| android.permission.CAMERA                              | dangerous | take pictures and videos                                     | Allows application to take pictures and videos with the camera. This allows the application to collect images that the camera is seeing at any time. |
| android.permission.MODIFY_AUDIO_SETTINGS               | normal    | change your audio<br>settings                                | Allows application to modify global audio settings, such as volume and routing.  |
| android.permission.RECORD_AUDIO                        | dangerous | record audio   | Allows application to access the audio record path.  |
| android.permission.POST_NOTIFICATIONS                  | dangerous | allows an app to post notifications.                         | Allows an app to post notifications  |
| android.permission.ACCESS_NETWORK_STATE                | normal    | view network status  | Allows an application to view the status of all networks.  |
| android.permission.ACCESS_WIFI_STATE                   | normal    | view Wi-Fi status  | Allows an application to view the information about the status of Wi-Fi.   |
| android.permission.WAKE_LOCK                           | normal    | prevent phone from sleeping                                  | Allows an application to prevent the phone from going to sleep.  |
| android.permission.DOWNLOAD_WITHOUT_NOTIFICATION       | unknown   | Unknown permission   | Unknown permission from android reference  |
| android.permission.USE_BIOMETRIC                       | normal    | allows use of device-<br>supported biometric<br>modalities.  | Allows an app to use device supported biometric modalities.  |
| android.permission.USE_FINGERPRINT                     | normal    | allow use of fingerprint                                     | This constant was deprecated in API level 28. Applications should request USE_BIOMETRIC instead.   |
| android.permission.VIBRATE                             | normal    | control vibrator   | Allows the application to control the vibrator.  |

| PERMISSION   | STATUS    | INFO  | DESCRIPTION   |
|--|-----------|---|---|
| android.permission.DETECT_SCREEN_CAPTURE                               | normal    | notifies when a screen<br>capture of the app's<br>windows is attempted. | Allows an application to get notified when a screen capture of its windows is attempted.  |
| com.google.android.c2dm.permission.RECEIVE                             | normal    | recieve push notifications  | Allows an application to receive push notifications from cloud.   |
| android.permission.RECEIVE_BOOT_COMPLETED                              | normal    | automatically start at<br>boot  | Allows an application to start itself as soon as the system has finished booting. This can make it take longer to start the phone and allow the application to slow down the overall phone by always running. |
| com.hingehealth.phoenix.DYNAMIC_RECEIVER_NOT_EXPORTED_PERMISSION       | unknown   | Unknown permission  | Unknown permission from android reference   |
| android.permission.SCHEDULE_EXACT_ALARM                                | normal    | permits exact alarm<br>scheduling for<br>background work.               | Allows an app to use exact alarm scheduling APIs to perform timing sensitive background work.   |
| android.permission.BROADCAST_CLOSE_SYSTEM_DIALOGS                      | unknown   | Unknown permission  | Unknown permission from android reference   |
| android.permission.ACCESS_NOTIFICATION_POLICY                          | normal    | marker permission for accessing notification policy.                    | Marker permission for applications that wish to access notification policy.   |
| com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE | normal    | permission defined by google  | A custom permission defined by Google.  |
| com.google.android.providers.gsf.permission.READ_GSERVICES             | unknown   | Unknown permission  | Unknown permission from android reference   |
| com.google.android.gms.permission.ACTIVITY_RECOGNITION                 | dangerous | allow application to recognize physical activity                        | Allows an application to recognize physical activity.   |

## ক্ল APKID ANALYSIS

| FILE DETAILS |  |
|--------------|--|
|--------------|--|

| FILE         | DETAILS   |   |  |  |  |
|--------------|---|---|--|--|--|
|              | FINDINGS  | DETAILS   |  |  |  |
|              | yara_issue                                      | yara issue - dex file recognized by apkid but not yara module   |  |  |  |
| classes.dex  | Anti-VM Code                                    | Build.FINGERPRINT check Build.MANUFACTURER check  |  |  |  |
|              | Compiler unknown (please file detection issue!) |   |  |  |  |
|              |   |   |  |  |  |
|              | FINDINGS  | DETAILS   |  |  |  |
|              | yara_issue                                      | yara issue - dex file recognized by apkid but not yara module   |  |  |  |
| classes2.dex | Anti-VM Code                                    | Build.FINGERPRINT check Build.MANUFACTURER check possible Build.SERIAL check SIM operator check   |  |  |  |
|              | Compiler  | unknown (please file detection issue!)  |  |  |  |
|              | FINDINGS  | DETAILS.  |  |  |  |
|              | FINDINGS  | DETAILS   |  |  |  |
|              | yara_issue                                      | yara issue - dex file recognized by apkid but not yara module   |  |  |  |
| classes3.dex | Anti-VM Code                                    | Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.PRODUCT check Build.HARDWARE check Build.HARDWARE check Build.BOARD check Build.TAGS check |  |  |  |
|              | Compiler  | unknown (please file detection issue!)  |  |  |  |

| FILE         | DETAILS         |  |  |  |
|--------------|-----------------|--|--|--|
|              | FINDINGS        | DETAILS  |  |  |
|              | yara_issue      | yara issue - dex file recognized by apkid but not yara module  |  |  |
| classes4.dex | Anti-VM Code    | Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.PRODUCT check Build.HARDWARE check Build.BOARD check Build.BOARD check possible Build.SERIAL check Build.TAGS check network operator name check possible VM check |  |  |
|              | Anti Debug Code | Debug.isDebuggerConnected() check  |  |  |
|              | Compiler        | unknown (please file detection issue!)   |  |  |
|              |                 |  |  |  |
|              | FINDINGS        | DETAILS  |  |  |
|              | yara_issue      | yara issue - dex file recognized by apkid but not yara module  |  |  |
| classes5.dex | Anti-VM Code    | Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.PRODUCT check Build.HARDWARE check Build.TAGS check possible VM check   |  |  |
|              | Anti Debug Code | Debug.isDebuggerConnected() check  |  |  |
|              | Compiler        | unknown (please file detection issue!)   |  |  |
|              |                 |  |  |  |

### BROWSABLE ACTIVITIES

| ACTIVITY                                    | INTENT   |
|---|--|
| com.hingehealth.phoenix.MainActivity        | Schemes: hingehealth://, https://, Hosts: linksv2.hingehealth.com, open.hingehealth.com, open.hingehealth.io, open.hingehealth.dev, Path Prefixes: /a, |
| com.auth0.android.provider.RedirectActivity | Schemes: com.hingehealth.phoenix.auth0://, Hosts: login.hingehealth.com, Path Prefixes: /android/com.hingehealth.phoenix/callback,                     |

## **△** NETWORK SECURITY

| NO | SCOPE | SEVERITY | DESCRIPTION |
|----|-------|----------|-------------|
|    |       |          |             |

### **CERTIFICATE ANALYSIS**

HIGH: 0 | WARNING: 0 | INFO: 1

| TITLE              | SEVERITY | DESCRIPTION   |
|--------------------|----------|---|
| Signed Application | info     | Application is signed with a code signing certificate |

## **Q** MANIFEST ANALYSIS

HIGH: 0 | WARNING: 10 | INFO: 0 | SUPPRESSED: 0

| NO | ISSUE  | SEVERITY | DESCRIPTION  |
|----|--|----------|--|
| 1  | App can be installed on a vulnerable Android version<br>Android 9, minSdk=28]                    | warning  | This application can be installed on an older version of android that has multiple vulnerabilities. Support an Android version => 10, API 29 to receive reasonable security updates. |
| 2  | Activity (com.auth0.android.provider.RedirectActivity) is not Protected. [android:exported=true] | warning  | An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.  |

| NO | ISSUE   | SEVERITY | DESCRIPTION  |
|----|---|----------|--|
| 3  | Content Provider (expo.modules.clipboard.ClipboardFileProvider) is not Protected. [android:exported=true]   | warning  | A Content Provider is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.   |
| 4  | Activity (com.canhub.cropper.CropImageActivity) is not Protected. [android:exported=true]   | warning  | An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.  |
| 5  | Broadcast Receiver (com.google.firebase.iid.FirebaseInstanceIdReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: com.google.android.c2dm.permission.SEND [android:exported=true] | warning  | A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission. |
| 6  | Service (androidx.work.impl.background.systemjob.SystemJobService) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_JOB_SERVICE [android:exported=true]          | warning  | A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.            |
| 7  | Broadcast Receiver (androidx.work.impl.diagnostics.DiagnosticsReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.DUMP [android:exported=true]                 | warning  | A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission. |
| 8  | Broadcast Receiver (androidx.profileinstaller.ProfileInstallReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.DUMP [android:exported=true]                   | warning  | A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission. |
| 9  | Activity (app.notifee.core.NotificationReceiverActivity) is not Protected. [android:exported=true]  | warning  | An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.  |
| 10 | Broadcast Receiver (app.notifee.core.AlarmPermissionBroadcastReceiver) is not Protected. [android:exported=true]  | warning  | A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.   |

## </> CODE ANALYSIS

HIGH: 1 | WARNING: 8 | INFO: 5 | SECURE: 1 | SUPPRESSED: 0

| NO | ISSUE | SEVERITY | STANDARDS | FILES  |
|----|-------|----------|-----------|--|
|    |       |          |           | app/notifiee/core/AlarmPermissionBroadcastReceiver.java app/notifiee/core/RebootBroadcastReceiver.java app/notifiee/core/RebootBroadcastReceiver.java app/notifiee/core/RebootBroadcastReceiver.java app/notifiee/core/RebootBroadcastReceiver.java app/notifiee/core/RebootBroadcastReceiver.java cl/json/RosharePathUtil.java cl/json/social/SingleShareIntent.java com/airbnb/android/react/lottie/LottieAnimationView.pava com/airbnb/lottie/LottieAnimationView.java com/airbnb/lottie/LottieAnimationView.java com/airbnb/lottie/LottieAnimationView.java com/airbnb/lottie/utils/LogcatLogger.java com/authO/android/authentication/storage/CryptoUtil.java com/authO/android/provider/AuthProvider.java com/authO/android/provider/AuthProvider.java com/authO/android/provider/AuthProvider.java com/authO/android/provider/CallbackHelper.java com/authO/android/provider/CallbackHelper.java com/authO/android/provider/LogoutManager.java com/authO/android/provider/LogoutManager.java com/authO/android/provider/PermissionHandler.java com/brentvatne/exoplayer/ReactExoplayerView.java com/brentvatne/exoplayer/ReactExoplayerView.java com/brentvatne/exoplayer/ReactExoplayerView.java com/brentvatne/exoplayer/ReactExoplayerViewManager.java com/bumptech/glide/Gide_java com/bumptech/glide/Gide_java com/bumptech/glide/Gide_java com/bumptech/glide/Gide_java com/bumptech/glide/Gide_java com/bumptech/glide/Gide_java com/bumptech/glide/load/data/AssetPathFetcher.java com/bumptech/glide/load/data/AssetPathFetcher.java com/bumptech/glide/load/data/AssetPathFetcher.java com/bumptech/glide/load/data/AssetPathFetcher.java com/bumptech/glide/load/data/AssetPathFetcher.java com/bumptech/glide/load/data/Mediastore/ThumbFetcher.java com/bumptech/glide/load/data/Mediastore/ThumbFetcher.java com/bumptech/glide/load/data/Mediastore/ThumbFetcher.java com/bumptech/glide/load/data/mediastore/ThumbFetcher.java com/bumptech/glide/load/data/mediastore/ThumbFetcher.java com/bumptech/glide/load/engine/DecodePath.java com/bumptech/glide/load/engine/GlideException.java com/bumptech |

| va com/bum ava com/bum   | mptech/glide/load/engine/cache/DiskLruCacheWrapper.ja   |
|--|---|
| com/bun ava com/bun ava com/bun com/bun ava com/bun co | mptech/glide/load/resource/bitmap/BitmapEncoder.java mptech/glide/load/resource/bitmap/BitmapImageDecode ceDecoder.java mptech/glide/load/resource/bitmap/DefaultImageHeader ava mptech/glide/load/resource/bitmap/Downsampler.java mptech/glide/load/resource/bitmap/DrawableToBitmapC |

| NO | ISSUE   | SEVERITY | STANDARDS  | pe.java FUHFSatadog/legacy/trace/api/DDTraceApiInfo.java   |
|----|---|----------|--|--|
| 1  | The App logs information. Sensitive information should never be logged. | info     | CWE: CWE-532: Insertion of Sensitive Information into Log File OWASP MASVS: MSTG-STORAGE-3 | Fühfsatadog/legacy/trace/api/DDTraceApiInfo.java com/datadog/opentracing/DDTraceOTInfo.java com/datadog/reactnative/DatadogSDKWrapperStorage.java com/datadog/trace/core/DDTraceCoreInfo.java com/github/penfeizhou/animation/decode/FrameSeqDecoder.java a com/horcrux/svg/Brush.java com/horcrux/svg/ClipPathView.java com/horcrux/svg/ImageView.java com/horcrux/svg/PatternView.java com/horcrux/svg/PatternView.java com/horcrux/svg/RadialGradientView.java com/horcrux/svg/RadialGradientView.java com/horcrux/svg/SvgViewManager.java com/horcrux/svg/JuseView.java com/horcrux/svg/JuseView.java com/horcrux/svg/VietView.java com/horcrux/svg/VietView.java com/horcrux/svg/IseView.java com/horcrux/svg/IseView.java com/learnium/RNDeviceInfo/RNDeviceModule.java com/learnium/RNDeviceInfo/RNDeviceModule.java com/learnium/RNDeviceInfo/RNInstallReferrerClient.java com/learnium/RNDeviceInfo/RsVInstallReferrerClient.java com/microsoft/appcenter/AppCenter.java com/microsoft/appcenter/AppCenter.java com/microsoft/appcenter/AppCenter.java com/microsoft/appcenter/AppCenter.java com/microsoft/appcenter/Constants.java com/microsoft/appcenter/Flags.java com/microsoft/appcenter/Channel/DefaultChannel.java com/microsoft/appcenter/channel/DefaultChannel.java com/microsoft/appcenter/channel/OneCollectorChannelListener.java com/microsoft/appcenter/http/AbstractAppCallTemplate.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/http/DefaultHttpClientCallTask.java com/microsoft/appcenter/ingestion/OneCollectorIngestion.java com/microsoft/appcenter/ingestion/models/one/CommonSchem aDataUtils.java com/microsoft/appcenter/ingestion/models/one/CommonSchem |
|    |   |          |  | aLog.java com/microsoft/appcenter/persistence/DatabasePersistence.java com/microsoft/appcenter/utils/AppCenterLog.java com/microsoft/appcenter/utils/AsyncTaskUtils.java com/microsoft/appcenter/utils/DeviceInfoHelper.java   |
|    |   |          |  | com/microsoft/appcenter/utils/ldHelper.java<br>com/microsoft/appcenter/utils/NetworkStateHelper.java<br>com/microsoft/appcenter/utils/context/SessionContext.java<br>com/microsoft/appcenter/utils/context/UserIdContext.java<br>com/microsoft/appcenter/utils/crypto/CryptoUtils.java<br>com/microsoft/appcenter/utils/storage/DatabaseManager.java<br>com/microsoft/appcenter/utils/storage/FileManager.java   |

| commissionerical and configuration Checker Java commissionerical Microfliguration Checker Java commissionerical Microfliguration Checker Java commissionerical Microfliguration (Jumpmerical Microfliguration) commissionerical Audit of Microfli |
|--|
| expo/modules/core/logging/OSLogHandler.java io/nlopez/smartlocation/utils/LoggerFactory.java io/sentry/SystemOutLogger.java io/sentry/android/core/AndroidLogger.java io/sentry/android/core/SentryLogcatAdapter.java io/sentry/android/replay/WindowManagerSpy.java io/sentry/android/replay/WindowSpy.java   |

| O | ISSUE | SEVERITY | STANDARDS | it/innove/BleManager.java <b>FlinES</b> ve/CompanionScanner.java  |
|---|-------|----------|-----------|---|
|   |       |          |           | it/innove/DefaultScanManager.java   |
|   |       |          |           | it/innove/LegacyScanManager.java  |
|   |       |          |           | it/innove/Peripheral.java   |
|   |       |          |           | no/nordicsemi/android/dfu/BaseDfulmpl.java  |
|   |       |          |           | no/nordicsemi/android/dfu/DfuBaseService.java   |
|   |       |          |           | org/greenrobot/eventbus/Logger.java   |
|   |       |          |           | org/jctools/maps/ConcurrentAutoTable.java   |
|   |       |          |           | org/jctools/maps/NonBlockingHashMap.java  |
|   |       |          |           | org/jctools/maps/NonBlockingHashMapLong.java  |
|   |       |          |           | org/jctools/maps/NonBlockingIdentityHashMap.java  |
|   |       |          |           | org/jctools/maps/NonBlockingSetInt.java   |
|   |       |          |           | org/slf4j/helpers/Util.java   |
|   |       |          |           | tvi/webrtc/DefaultVideoEncoderFactory.java  |
|   |       |          |           | uk/co/playerdata/reactnativemcumanager/DeviceUpgrade.java   |
|   |       |          |           | com/auth0/android/authentication/AuthenticationAPIClient.java   |
|   |       |          |           | com/auth0/android/authentication/AuthenticationException.java   |
|   |       |          |           | com/auth0/android/authentication/ParameterBuilder.java  |
|   |       |          |           | com/auth0/android/management/ManagementException.java   |
|   |       |          |           | com/auth0/android/management/UsersAPIClient.java  |
|   |       |          |           | com/auth0/android/util/Auth0UserAgent.java  |
|   |       |          |           | com/auth0/react/CredentialsParser.java  |
|   |       |          |           | com/bumptech/glide/load/Option.java   |
|   |       |          |           | com/bumptech/glide/load/engine/DataCacheKey.java  |
|   |       |          |           | com/bumptech/glide/load/engine/EngineResource.java  |
|   |       |          |           | com/bumptech/glide/load/engine/ResourceCacheKey.java  |
|   |       |          |           | com/datadog/android/api/net/RequestFactory.java   |
|   |       |          |           | com/datadog/android/core/internal/metrics/BatchMetricsDispatc   |
|   |       |          |           | her.java  |
|   |       |          |           | com/datadog/android/log/internal/LogsFeature.java   |
|   |       |          |           | com/datadog/android/rum/internal/FeaturesContextResolver.jav  |
|   |       |          |           | com/datadog/android/rum/internal/domain/event/RumEventMet   |
|   |       |          |           | a.java  |
|   |       |          |           | com/datadog/android/rum/internal/domain/scope/ExternalReso<br>urceTimingsKt.java                                      |
|   |       |          |           | com/datadog/android/rum/internal/domain/scope/RumRawEven  |
|   |       |          |           | t.java<br>com/datadog/android/rum/internal/domain/scope/RumSessionS   |
|   |       |          |           | cope.java   |
|   |       |          |           | com/datadog/android/rum/internal/domain/scope/RumViewInfo.<br>java  |
|   |       |          |           | com/datadog/android/rum/internal/metric/SessionEndedMetric.j  |
|   |       |          |           | ava<br>com/datadog/android/telemetry/internal/TelemetryEventHandler   |
|   |       |          |           | .java   |
|   |       |          |           | com/datadog/android/trace/internal/FeatureSdkCoreExtKt.java<br>com/datadog/android/trace/internal/TracingFeature.java |
|   |       |          |           | com/datadog/android/trace/internal/domain/event/CoreTracerSp  |
|   |       |          |           | anToSpanEventMapper.java  |
|   |       |          |           |   |

| NO | ISSUE  | SEVERITY | STANDARDS   | com/datadog/android/trace/internal/domain/event/MetaKeysKt.j |
|----|--|----------|---|--|
| NO | Files may contain hardcoded sensitive information like usernames, passwords, keys etc. | warning  | CWE: CWE-312: Cleartext Storage of Sensitive Information OWASP Top 10: M9: Reverse Engineering OWASP MASVS: MSTG-STORAGE-14 |  |

| NO | ISSUE  | SEVERITY | STANDARDS   | aLog.java  Fult Sicrosoft/appcenter/persistence/DatabasePersistence.java  |
|----|--|----------|---|---|
|    |  |          |   | com/microsoft/appcenter/utils/context/SessionContext.java com/microsoft/appcenter/utils/storage/DatabaseManager.java com/microsoft/codepush/react/CodePushConstants.java com/microsoft/codepush/react/CodePushTelemetryManager.java com/nimbusds/jose/HeaderParameterNames.java com/nimbusds/jose/jwk/JWKParameterNames.java com/oblador/keychain/KeychainModule.java expo/modules/adapters/react/NativeModulesProxy.java expo/modules/adapters/react/NativeModulesProxy.java expo/modules/aipboard/GetImageOptions.java expo/modules/iipboard/GetImageOptions.java expo/modules/image/records/SourceMap.java expo/modules/imagepicker/ImagePickerModuleKt.java expo/modules/interfaces/permissions/PermissionsResponse.java expo/modules/location/taskConsumers/LocationTaskConsumer.j ava io/invertase/notifee/NotifeeEventSubscriber.java io/runtime/mcumgr/McuManager.java io/sentry/Baggage.java io/sentry/RequestDetailsResolver.java io/sentry/SpanDataConvention.java io/sentry/TraceContext.java io/sentry/protocol/User.java org/jctools/maps/NonBlockingHashMap.java |
| 3  | App can write to App Directory. Sensitive<br>Information should be encrypted.  | info     | CWE: CWE-276: Incorrect Default Permissions<br>OWASP MASVS: MSTG-STORAGE-14   | com/auth0/android/authentication/storage/SharedPreferencesSt<br>orage.java<br>com/iterable/iterableapi/IterableKeychain.java<br>com/lyft/kronos/AndroidClockFactory.java  |
| 4  | The App uses the encryption mode CBC with PKCS5/PKCS7 padding. This configuration is vulnerable to padding oracle attacks. | high     | CWE: CWE-649: Reliance on Obfuscation or Encryption of Security-Relevant Inputs without Integrity Checking OWASP Top 10: M5: Insufficient Cryptography OWASP MASVS: MSTG-CRYPTO-3 | com/nimbusds/jose/crypto/impl/AESCBC.java<br>com/nimbusds/jose/jca/JCASupport.java  |
| 5  | App can read/write to External Storage. Any App can read data written to External Storage.                                 | warning  | CWE: CWE-276: Incorrect Default Permissions<br>OWASP Top 10: M2: Insecure Data Storage<br>OWASP MASVS: MSTG-STORAGE-2   | com/ReactNativeBlobUtil/ReactNativeBlobUtilFS.java com/ReactNativeBlobUtil/Utils/PathResolver.java com/canhub/cropper/BitmapUtils.java com/canhub/cropper/CropImage.java com/learnium/RNDeviceInfo/RNDeviceModule.java com/reactnativecommunity/webview/RNCWebViewModuleImpl.j ava com/rnfs/RNFSManager.java expo/modules/clipboard/ClipboardFileProvider.java io/sentry/android/core/DeviceInfoUtil.java   |

| NO | ISSUE  | SEVERITY | STANDARDS   | FILES   |
|----|--|----------|---|---|
| 6  | App creates temp file. Sensitive information should never be written into a temp file.   | warning  | CWE: CWE-276: Incorrect Default Permissions<br>OWASP Top 10: M2: Insecure Data Storage<br>OWASP MASVS: MSTG-STORAGE-2                       | com/ReactNativeBlobUtil/ReactNativeBlobUtilBody.java<br>com/canhub/cropper/BitmapUtils.java<br>com/canhub/cropper/CroplmageActivity.java<br>com/reactnativecommunity/webview/RNCWebViewModuleImpl.j<br>ava<br>io/sentry/react/RNSentryModuleImpl.java   |
| 7  | The App uses an insecure Random Number<br>Generator.   | warning  | CWE: CWE-330: Use of Insufficiently Random Values<br>OWASP Top 10: M5: Insufficient Cryptography<br>OWASP MASVS: MSTG-CRYPTO-6              | com/datadog/android/trace/AndroidTracer.java<br>com/datadog/opentracing/DDTracer.java<br>com/datadog/opentracing/StringCachingBigInteger.java<br>com/microsoft/appcenter/http/HttpClientRetryer.java  |
| 8  | App uses SQLite Database and execute raw SQL query. Untrusted user input in raw SQL queries can cause SQL Injection. Also sensitive information should be encrypted and written to the database. | warning  | CWE: CWE-89: Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection') OWASP Top 10: M7: Client Code Quality     | com/iterable/iterableapi/IterableDatabaseManager.java com/iterable/iterableapi/IterableTaskStorage.java com/microsoft/appcenter/persistence/DatabasePersistence.java com/microsoft/appcenter/utils/storage/DatabaseManager.java com/mixpanel/android/mpmetrics/MPDbAdapter.java com/reactnativecommunity/asyncstorage/AsyncLocalStorageUtil.j ava com/reactnativecommunity/asyncstorage/ReactDatabaseSupplier .java io/sentry/android/sqlite/SentrySupportSQLiteDatabase.java |
| 9  | This App may request root (Super User) privileges.   | warning  | CWE: CWE-250: Execution with Unnecessary Privileges OWASP MASVS: MSTG-RESILIENCE-1  | io/sentry/android/core/internal/util/RootChecker.java   |
| 10 | This App may have root detection capabilities.   | secure   | OWASP MASVS: MSTG-RESILIENCE-1  | io/sentry/android/core/DeviceInfoUtil.java<br>io/sentry/android/core/internal/util/RootChecker.java   |
| 11 | MD5 is a weak hash known to have hash collisions.  | warning  | CWE: CWE-327: Use of a Broken or Risky Cryptographic Algorithm<br>OWASP Top 10: M5: Insufficient Cryptography<br>OWASP MASVS: MSTG-CRYPTO-4 | com/ReactNativeBlobUtil/ReactNativeBlobUtilUtils.java<br>com/airbnb/lottie/network/NetworkCache.java<br>expo/modules/asset/AssetModule.java<br>expo/modules/filesystem/FileSystemModule.java  |
| 12 | This App uses SQL Cipher. Ensure that secrets are not hardcoded in code.   | info     | OWASP MASVS: MSTG-CRYPTO-1  | com/microsoft/appcenter/utils/storage/DatabaseManager.java  |
| 13 | This app listens to Clipboard changes. Some malware also listen to Clipboard changes.  | info     | OWASP MASVS: MSTG-PLATFORM-4  | expo/modules/clipboard/ClipboardModule.java   |
| 14 | This App copies data to clipboard. Sensitive data should not be copied to clipboard as other applications can access it.   | info     | OWASP MASVS: MSTG-STORAGE-10  | expo/modules/clipboard/ClipboardModule.java   |

| NO | ISSUE                 | SEVERITY | STANDARDS   | FILES                            |
|----|-----------------------|----------|---|----------------------------------|
| 15 | IP Address disclosure | warning  | CWE: CWE-200: Information Exposure OWASP MASVS: MSTG-CODE-2 | com/nimbusds/jose/jwk/Curve.java |

## ► SHARED LIBRARY BINARY ANALYSIS

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 1  | arm64-v8a/libnative-filters.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 2  | arm64-v8a/libreact_featureflagsjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                      | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------------|---|---|--|--|---|---|---|---------------------------------|
| 3  | arm64-v8a/libreact_render_debug.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 4  | arm64-v8a/libfolly_runtime.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', '_memset_chk', '_vsnprintf_chk', '_memcpy_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 5  | arm64-v8a/libexpo-modules-core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 6  | arm64-v8a/libreact_performance_timeline.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|---|--|---|---|---|---------------------------------|
| 7  | arm64-v8a/libjsinspector.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 8  | arm64-v8a/libavfilter.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|--|---------------------------------|
| 9  | arm64-v8a/libreact-native-quick-sqlite.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'memcpy_chk', 'memset_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|--|--|---|---|---|---------------------------------|
| 10 | arm64-v8a/libavcodec.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 11 | arm64-v8a/libanimation-decoder-gif.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', '_memmove_chk', '_vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 12 | arm64-v8a/libreact_codegen_rncore.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|--|---------------------------------|
| 13 | arm64-v8a/libtensorflowlite_gpu_delegate.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'read_chk', 'strlen_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------|---|---|--|--|---|---|---|---------------------------------|
| 14 | arm64-v8a/libavutil.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|---|--|---|---|---|---------------------------------|
| 15 | arm64-v8a/libreact_utils.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                    | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH  | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------------|---|---|---|--|---|--|--|---------------------------------|
| 16 | arm64-v8a/libtensorflowlite_c.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | \$ORIGIN/:\$ORIGIN/*\$ORIGIN// high The binary has RUNPATH set. In certain cases, an attacker can abuse this feature and or modify environment variables to run arbitrary libraries for code execution and privilege escalation. The only time a library should set RUNPATH is when it is linked to private libraries in the same package. Remove the compiler optionenable-newdtags,-rpath to remove RUNPATH. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'read_chk', 'strlen_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 17 | arm64-v8a/libreactnativejni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------|---|---|---|--|---|---|---|---------------------------------|
| 18 | arm64-v8a/libfabricjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 19 | arm64-v8a/libhermes_executor.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 20 | arm64-<br>v8a/libreact_nativemodule_microtasks.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 21 | arm64-v8a/libhermesinstancejni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------|---|---|---|--|---|---|---|---------------------------------|
| 22 | arm64-v8a/libjsi.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|---|--|---|---|--|---------------------------------|
| 23 | arm64-v8a/libworklets.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 24 | arm64-v8a/libibg-native.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'memmove_chk', 'vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------|---|---|---|--|---|---|---|---------------------------------|
| 25 | arm64-v8a/libhermes.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk', 'strchr_chk', 'memcpy_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|--|---------------------------------|
| 26 | arm64-v8a/libreact_render_mapbuffer.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['memcpy_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 27 | arm64-v8a/libturbomodulejsijni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 28 | arm64-v8a/libtwilio_video_android_so.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'FD_SET_chk', '_memcpy_chk', '_memset_chk', '_FD_CLR_chk', '_FD_ISSET_chk', '_vsnprintf_chk', '_strchr_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|--|---------------------------------|
| 29 | arm64-v8a/libreact_nativemodule_dom.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|--|--|---|---|---|---------------------------------|
| 30 | arm64-v8a/libreact_render_consistency.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 31 | arm64-v8a/libc++_shared.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 32 | arm64-v8a/libavdevice.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------|---|---|---|--|---|---|--|---------------------------------|
| 33 | arm64-v8a/libyoga.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 34 | arm64-v8a/libmapbufferjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 35 | arm64-v8a/libreact_debug.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 36 | arm64-v8a/libreact_render_graphics.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------|---|---|---|--|---|---|---|---------------------------------|
| 37 | arm64-v8a/libfbjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                      | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 38 | arm64-v8a/libreact_featureflags.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 39 | arm64-<br>v8a/libreact_render_uimanager_consistency.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 40 | arm64-v8a/libreact_render_imagemanager.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 41 | arm64-v8a/libimagepipeline.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 42 | arm64-v8a/libjsijniprofiler.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 43 | arm64-v8a/libavif_android.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|--|--|---|---|---|---------------------------------|
| 44 | arm64-v8a/libswscale.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|---|--|---|---|---|---------------------------------|
| 45 | arm64-v8a/libconceal.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|---|--|---|---|---|---------------------------------|
| 46 | arm64-v8a/librrc_view.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 47 | arm64-v8a/libreact_devsupportjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|--|---------------------------------|
| 48 | arm64-v8a/libreact_nativemodule_core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 49 | arm64-v8a/libreact_render_core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 50 | arm64-v8a/librrc_textinput.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------|---|---|---|--|---|---|--|---------------------------------|
| 51 | arm64-v8a/libglog.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk', '_memcpy_chk', '_vsnprintf_chk', '_strncat_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------|---|---|---|--|---|---|---|---------------------------------|
| 52 | arm64-v8a/librnscreens.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 53 | arm64-v8a/libreanimated.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 54 | arm64-v8a/libnative-imagetranscoder.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'strlen_chk', 'memcpy_chk', '_memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                                    | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 55 | arm64-<br>v8a/librrc_legacyviewmanagerinterop.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 56 | arm64-v8a/libreact_nativemodule_defaults.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                                      | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 57 | arm64-<br>v8a/libreact_render_componentregistry.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|---|--|---|---|--|---------------------------------|
| 58 | arm64-v8a/libexpo-av.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 59 | arm64-v8a/libsentry-android.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 60 | arm64-v8a/libwrEngineRNJNI.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'strlen_chk', 'strchr_chk', 'strcat_chk', '_write_chk', '_read_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 61 | arm64-v8a/libreact_newarchdefaults.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                                       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 62 | arm64-<br>v8a/libreact_nativemodule_featureflags.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 63 | arm64-v8a/libreactnativeblob.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|------------------------|---|---|---|--|---|---|--|---------------------------------|
| 64 | arm64-v8a/libsentry.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk', 'read_chk', 'memcpy_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 65 | arm64-v8a/libavformat.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------------|---|---|--|--|---|---|---|---------------------------------|
| 66 | arm64-v8a/libruntimeexecutor.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 67 | arm64-v8a/librninstance.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 68 | arm64-v8a/libswresample.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|---|--|---|---|---|---------------------------------|
| 69 | arm64-v8a/libjscinstance.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------|---|---|---|--|---|---|--|---------------------------------|
| 70 | arm64-v8a/librrc_image.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 71 | arm64-<br>v8a/libreact_render_observers_events.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 72 | arm64-v8a/libuimanagerjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|---|--|---|---|--|---------------------------------|
| 73 | arm64-v8a/libexpo-gl.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['memcpy_chk', 'strlen_chk', 'memset_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 74 | arm64-v8a/libnative-filters.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 75 | arm64-v8a/libreact_featureflagsjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                      | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------------------|---|---|--|--|---|---|---|---------------------------------|
| 76 | arm64-v8a/libreact_render_debug.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 77 | arm64-v8a/libfolly_runtime.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'memset_chk', 'vsnprintf_chk', '_memcpy_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 78 | arm64-v8a/libexpo-modules-core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 79 | arm64-v8a/libreact_performance_timeline.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 80 | arm64-v8a/libjsinspector.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 81 | arm64-v8a/libavfilter.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 82 | arm64-v8a/libreact-native-quick-sqlite.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'memcpy_chk', '_memset_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-------------------------|---|---|--|--|---|---|---|---------------------------------|
| 83 | arm64-v8a/libavcodec.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 84 | arm64-v8a/libanimation-decoder-gif.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', '_memmove_chk', '_vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 85 | arm64-v8a/libreact_codegen_rncore.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|--|---------------------------------|
| 86 | arm64-v8a/libtensorflowlite_gpu_delegate.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'read_chk', 'strlen_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|------------------------|---|---|--|--|---|---|---|---------------------------------|
| 87 | arm64-v8a/libavutil.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|-----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 88 | arm64-v8a/libreact_utils.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                    | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH  | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------------|---|---|---|--|---|--|--|---------------------------------|
| 89 | arm64-v8a/libtensorflowlite_c.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | \$ORIGIN/:\$ORIGIN/*\$ORIGIN// high The binary has RUNPATH set. In certain cases, an attacker can abuse this feature and or modify environment variables to run arbitrary libraries for code execution and privilege escalation. The only time a library should set RUNPATH is when it is linked to private libraries in the same package. Remove the compiler optionenable-newdtags,-rpath to remove RUNPATH. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'read_chk', 'strlen_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 90 | arm64-v8a/libreactnativejni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------|---|---|---|--|---|---|--|---------------------------------|
| 91 | arm64-v8a/libfabricjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|---------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 92 | arm64-v8a/libhermes_executor.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---|---|---|---|--|---|---|---|---------------------------------|
| 93 | arm64-<br>v8a/libreact_nativemodule_microtasks.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|-----------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 94 | arm64-v8a/libhermesinstancejni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO | SHARED OBJECT       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|---------------------|---|---|---|--|---|---|---|---------------------------------|
| 95 | arm64-v8a/libjsi.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|--------------------------|---|---|---|--|---|---|--|---------------------------------|
| 96 | arm64-v8a/libworklets.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 97 | arm64-v8a/libibg-native.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', '_memmove_chk', '_vsnprintf_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|----|------------------------|---|---|---|--|---|---|--|---------------------------------|
| 98 | arm64-v8a/libhermes.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk', 'strchr_chk', '_memcpy_chk'] | True info Symbols are stripped. |

| NO | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|----|--|---|---|---|--|---|---|---|---------------------------------|
| 99 | arm64-v8a/libreact_render_mapbuffer.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_memcpy_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-----------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 100 | arm64-v8a/libturbomodulejsijni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|---|---------------------------------|
| 101 | arm64-v8a/libtwilio_video_android_so.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'FD_SET_chk', 'memcy_chk', 'FD_CLR_chk', 'FD_CLSET_chk', 'strchr_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|---|--|---|---|--|---------------------------------|
| 102 | arm64-v8a/libreact_nativemodule_dom.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|--|--|---|---|---|---------------------------------|
| 103 | arm64-v8a/libreact_render_consistency.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 104 | arm64-v8a/libc++_shared.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 105 | arm64-v8a/libavdevice.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|----------------------|---|---|---|--|---|---|--|---------------------------------|
| 106 | arm64-v8a/libyoga.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_vsnprintf_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 107 | arm64-v8a/libmapbufferjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 108 | arm64-v8a/libreact_debug.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 109 | arm64-v8a/libreact_render_graphics.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-----------------------|---|---|---|--|---|---|---|---------------------------------|
| 110 | arm64-v8a/libfbjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                      | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 111 | arm64-v8a/libreact_featureflags.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|---|--|---|---|---|---------------------------------|
| 112 | arm64-<br>v8a/libreact_render_uimanager_consistency.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|---|---------------------------------|
| 113 | arm64-v8a/libreact_render_imagemanager.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 114 | arm64-v8a/libimagepipeline.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 115 | arm64-v8a/libjsijniprofiler.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 116 | arm64-v8a/libavif_android.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-------------------------|---|---|--|--|---|---|---|---------------------------------|
| 117 | arm64-v8a/libswscale.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-------------------------|---|---|---|--|---|---|---|---------------------------------|
| 118 | arm64-v8a/libconceal.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--------------------------|---|---|---|--|---|---|---|---------------------------------|
| 119 | arm64-v8a/librrc_view.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 120 | arm64-v8a/libreact_devsupportjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|--|---------------------------------|
| 121 | arm64-v8a/libreact_nativemodule_core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|-----------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 122 | arm64-v8a/libreact_render_core.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 123 | arm64-v8a/librrc_textinput.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT        | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|----------------------|---|---|---|--|---|---|---|---------------------------------|
| 124 | arm64-v8a/libglog.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', '_memcpy_chk', '_vsnprintf_chk', '_strncat_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---------------------------|---|---|---|--|---|---|---|---------------------------------|
| 125 | arm64-v8a/librnscreens.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 126 | arm64-v8a/libreanimated.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|---|--|---|---|---|---------------------------------|
| 127 | arm64-v8a/libnative-imagetranscoder.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'strlen_chk', 'memcpy_chk', '_memmove_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                                    | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|---|--|---|---|---|---------------------------------|
| 128 | arm64-<br>v8a/librrc_legacyviewmanagerinterop.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|---|---------------------------------|
| 129 | arm64-v8a/libreact_nativemodule_defaults.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                                      | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--|---|---|---|--|---|---|---|---------------------------------|
| 130 | arm64-<br>v8a/libreact_render_componentregistry.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-------------------------|---|---|---|--|---|---|---|---------------------------------|
| 131 | arm64-v8a/libexpo-av.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                  | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|--------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 132 | arm64-v8a/libsentry-android.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['_vsnprintf_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                 | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|-------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 133 | arm64-v8a/libwrEngineRNJNI.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['vsnprintf_chk', 'strlen_chk', 'strchr_chk', 'strcat_chk', '_write_chk', '_read_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                         | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---------------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 134 | arm64-v8a/libreact_newarchdefaults.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                                       | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|---|---------------------------------|
| 135 | arm64-<br>v8a/libreact_nativemodule_featureflags.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|---------------------------------|---|---|---|--|---|---|--|---------------------------------|
| 136 | arm64-v8a/libreactnativeblob.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT          | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|------------------------|---|---|---|--|---|---|--|---------------------------------|
| 137 | arm64-v8a/libsentry.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk', 'vsnprintf_chk', 'read_chk', 'memcpy_chk', 'memmove_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT            | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|--------------------------|---|---|--|--|---|---|---|---------------------------------|
| 138 | arm64-v8a/libavformat.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                   | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---------------------------------|---|---|--|--|---|---|---|---------------------------------|
| 139 | arm64-v8a/libruntimeexecutor.so | True info The binary has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|----------------------------|---|---|---|--|---|---|--|---------------------------------|
| 140 | arm64-v8a/librninstance.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT              | NX  | PIE   | STACK<br>CANARY  | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|----------------------------|---|---|--|--|---|---|---|---------------------------------|
| 141 | arm64-v8a/libswresample.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | False high This binary does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option - fstack- protector- all to enable stack canaries. Not applicable for Dart/Flutter libraries unless Dart FFI is used. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT               | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|-----------------------------|---|---|---|--|---|---|---|---------------------------------|
| 142 | arm64-v8a/libjscinstance.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT             | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|---------------------------|---|---|---|--|---|---|--|---------------------------------|
| 143 | arm64-v8a/librrc_image.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['strlen_chk'] | True info Symbols are stripped. |

| NO  | SHARED OBJECT                                     | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|---|---|---|---|--|---|---|---|---------------------------------|
| 144 | arm64-<br>v8a/libreact_render_observers_events.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT                | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY   | SYMBOLS<br>STRIPPED             |
|-----|------------------------------|---|---|---|--|---|---|---|---------------------------------|
| 145 | arm64-v8a/libuimanagerjni.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries. | True info Symbols are stripped. |

| NO  | SHARED OBJECT           | NX  | PIE   | STACK<br>CANARY   | RELRO  | RPATH   | RUNPATH   | FORTIFY  | SYMBOLS<br>STRIPPED             |
|-----|-------------------------|---|---|---|--|---|---|--|---------------------------------|
| 146 | arm64-v8a/libexpo-gl.so | True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable. | Dynamic Shared Object (DSO) info The shared object is build with - fPIC flag which enables Position independent code. This makes Return Oriented Programming (ROP) attacks much more difficult to execute reliably. | True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return. | Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only. | None info The binary does not have run-time search path or RPATH set. | None info The binary does not have RUNPATH set. | True info The binary has the following fortified functions: ['memcpy_chk', 'strlen_chk', 'memset_chk'] | True info Symbols are stripped. |

## ■ NIAP ANALYSIS v1.3

| NO | IDENTIFIER | REQUIREMENT | FEATURE | DESCRIPTION |
|----|------------|-------------|---------|-------------|
|    |            |             |         |             |

# BEHAVIOUR ANALYSIS

| RULE ID | BEHAVIOUR | LABEL | FILES |
|---------|-----------|-------|-------|
|---------|-----------|-------|-------|

| RULE ID | BEHAVIOUR   | LABEL   | FILES   |
|---------|---|---------|---|
| 00063   | Implicit intent(view a web page, make a phone call, etc.) | control | app/notifee/core/Notifee.java cl/json/RNShareImpl.java cl/json/social/InstagramShare.java cl/json/social/SingleShareIntent.java com/ReactNativeBlobUtil/ReactNativeBlobUtilImpl.java com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java com/auth0/android/provider/BrowserPicker.java com/auth0/android/provider/WebAuthProvider.java com/auth0/android/provider/WebAuthProvider.java com/brentvatne/exoplayer/ReactExoplayerView.java com/brentvatne/exoplayer/ReactExoplayerView.java com/canhub/cropper/CropImageActivity.java com/lingehealth/phoenix/MainActivity.java com/literable/iterableapi/IterableActionRunner.java com/iterable/iterableapi/IterableActionRunner.java com/iterable/iterableapi/IterableNotificationHelper.java expo/modules/adapters/react/permissions/PermissionsService.java expo/modules/calendar/CalendarModule.java expo/modules/filesystem/FileSystemModule.java expo/modules/imagepicker/contracts/CameraContract.java expo/modules/imagepicker/contracts/CameraContract.java n/o/t/i/f/e/e/m.java no/nordicsemi/android/dfu/DfuBaseService.java |

| RULE ID | BEHAVIOUR                          | LABEL | FILES  |
|---------|------------------------------------|-------|--|
| 00013   | Read file and put it into a stream | file  | com/ReactNativeBlobUtil/ReactNativeBlobUtilBody, java com/ReactNativeBlobUtil/ReactNativeBlobUtilS_java com/ReactNativeBlobUtil/ReactNativeBlobUtilS_java com/actNativeBlobUtil/ReactNativeBlobUtilStream_java com/airbnb/android/react/Iottie/LottieAnimationNiewPropertyManager_java com/airbnb/lottie/network/NetworkCache_java com/airbnb/lottie/network/NetworkCache_java com/bumptech/glide/doisk/rucache/DiskLruCache_java com/bumptech/glide/lotad/mageHeaderParervUtils_java com/bumptech/glide/lotad/mageHeaderParervUtils_java com/bumptech/glide/lotad/resource/bitmap/ImageReader_java com/bumptech/glide/lotad/resource/bitmap/ImageReader_java com/canhub/cropper/utils/GetUnfForFileK.java com/datadog/android/core/internal/persistence/file/batch/PlainBatchFileReaderWriter_java com/fasterxml/jackson/core/JookenStreamFactory_java com/fasterxml/jackson/core/JookenStreamFactory_java com/fasterxml/jackson/core/JookenStreamFactory_java com/fasterxml/jackson/databind/ObjectReader_java com/gatkepsafe/relinker/elf/ElfParser_java com/github/penfeizhou/animation/apg/decode/APNGParser_java com/github/penfeizhou/animation/apg/decode/APNGParser_java com/github/penfeizhou/animation/apg/decode/GiParser_java com/github/penfeizhou/animation/apg/decode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/apg/decode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/animation/forfidecode/GiParser_java com/github/penfeizhou/forfidecode/GiParser_java com/github/penfeizhou/forfidecode/GiParser_java com/github/penfeizhou/forfidecode/GiParser_java com/github/pe |

| RULE ID | BEHAVIOUR  | LABEL           | FILES  |
|---------|--|-----------------|--|
| 00022   | Open a file from given absolute path of the file | file            | cl/json/RNSharePathUtil.java cl/json/ShareFile.java cl/json/ShareFile.java cl/json/ShareFile.java com/ReactNativeBlobUtil/ReactNativeBlobUtilFS.java com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java com/ReactNativeBlobUtil/Utils/PathResolver.java com/airbnb/lottie/LottieCompositionFactory.java com/airbnb/lottie/Inctwork/NetworkFetcher.java com/airbnb/lottie/network/NetworkFetcher.java com/canhub/cropper/utils/GetUriForFileKt.java com/canhub/cropper/utils/GetUriForFileKt.java com/datadog/android/core/internal/patadogNdkCrashHandler.java com/datadog/android/ndk/internal/DatadogNdkCrashHandler.java com/fasterxml/jackson/databind/ser/std/FileSerializer.java com/fasterxml/jackson/databind/ser/std/FileSerializer.java com/microsoft/appcenter/utils/storage/FileManager.java com/microsoft/codepush/react/CodePushUgateUtils.java com/microsoft/codepush/react/CodePushUgateUtils.java com/microsoft/codepush/react/CodePushUgateUtils.java com/microsoft/codepush/react/FileUtils.java com/microsoft/codepush/react/FileUtils.java com/microsoft/codepush/react/FileUtils.java com/microsoft/codepush/react/FileUtils.java expo/modules/filesystem/FileSystemModule.java expo/modules/filesystem/FileSystemModule.java expo/modules/image/Exporters/RawlmageExporter.java io/sentry/DirectoryProcessor.java io/sentry/FreviousSessionFinalizer.java io/sentry/FreviousSessionFinalizer.java io/sentry/FreviousSessionFinalizer.java io/sentry/android/core/cache/AndroidEnvelopeCache.java io/sentry/android/core/cache/AndroidBrevlapoeCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/android/replay/ReplayCache.java io/sentry/react/RNSentryModuleImpl.java |
| 00096   | Connect to a URL and set request method          | command network | com/airbnb/lottie/network/DefaultLottieNetworkFetcher.java<br>com/iterable/iterableapi/lterableRequestTask.java<br>com/mixpanel/android/util/HttpService.java<br>io/sentry/transport/HttpConnection.java   |

| RULE ID | BEHAVIOUR   | LABEL           | FILES   |
|---------|---|-----------------|---|
| 00089   | Connect to a URL and receive input stream from the server                 | command network | com/bumptech/glide/load/data/HttpUrlFetcher.java com/iterable/iterableapi/IterableRequestTask.java com/microsoft/codepush/react/CodePushUpdateManager.java com/mixpanel/android/util/HttpService.java com/nimbusds/jose/util/DefaultResourceRetriever.java com/rnfs/Downloader.java io/sentry/transport/HttpConnection.java   |
| 00109   | Connect to a URL and get the response code                                | network command | com/bumptech/glide/load/data/HttpUrlFetcher.java com/iterable/iterableapi/IterableDeeplinkManager.java com/iterable/iterableapi/IterableRequestTask.java com/mixpanel/android/util/HttpService.java com/nimbusds/jose/util/DefaultResourceRetriever.java com/rnfs/Downloader.java io/sentry/transport/HttpConnection.java   |
| 00091   | Retrieve data from broadcast  | collection      | com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java com/datadog/android/rum/_RumInternalProxy.java com/iterable/iterableapi/IterableApi.java com/iterable/iterableapi/IterablePushNotificationUtil.java expo/modules/location/services/LocationTaskService.java   |
| 00036   | Get resource file from res/raw directory                                  | reflection      | app/notifee/core/Notifee.java cl/json/RNSharePathUtil.java com/auth0/android/provider/WebAuthProvider.java com/brentvatne/exoplayer/ReactExoplayerViewManager.java com/canhub/cropper/utils/GetUriForFileKt.java com/iterable/iterableapi/IterableActionRunner.java com/iterable/iterableapi/IterableNotificationHelper.java expo/modules/adapters/react/permissions/PermissionsService.java expo/modules/av/player/MediaPlayerData.java expo/modules/filesystem/FileSystemModule.java expo/modules/image/records/SourceMap.java n/o/t/i/f/e/e/n.java |
| 00051   | Implicit intent(view a web page, make a phone call, etc.) via setData     | control         | app/notifee/core/Notifee.java cl/json/social/InstagramShare.java com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java com/hingehealth/phoenix/MainActivity.java com/iterable/iterableapi/IterableActionRunner.java expo/modules/adapters/react/permissions/PermissionsService.java expo/modules/calendar/CalendarModule.java n/o/t/i/f/e/e/m.java  |
| 00001   | Initialize bitmap object and compress data (e.g. JPEG) into bitmap object | camera          | expo/modules/clipboard/ClipboardImageKt.java  |

| RULE ID | BEHAVIOUR LABEL  |                                 | FILES   |  |
|---------|--|---------------------------------|---|--|
| 00189   | Get the content of a SMS message sms                     |                                 | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java<br>expo/modules/imagepicker/MediaHandler.java  |  |
| 00192   | Get messages in the SMS inbox                            | sms                             | cl/json/RNSharePathUtil.java<br>com/ReactNativeBlobUtil/Utils/PathResolver.java<br>com/rnfs/RNFSManager.java  |  |
| 00188   | Get the address of a SMS message                         | sms                             | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java<br>expo/modules/imagepicker/MediaHandler.java  |  |
| 00011   | Query data from URI (SMS, CALLLOGS)                      | sms calllog collection          | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java  |  |
| 00191   | Get messages in the SMS inbox                            | sms                             | com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java<br>com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java   |  |
| 00200   | Query data from the contact list                         | collection contact              | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java<br>expo/modules/imagepicker/MediaHandler.java  |  |
| 00201   | Query data from the call log                             | collection calllog              | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>expo/modules/calendar/CalendarModule.java<br>expo/modules/imagepicker/MediaHandler.java  |  |
| 00077   | Read sensitive data(SMS, CALLLOG, etc)                   | collection sms calllog calendar | com/ReactNativeBlobUtil/Utils/PathResolver.java<br>com/bumptech/glide/load/data/mediastore/ThumbFetcher.java<br>expo/modules/calendar/CalendarModule.java<br>expo/modules/imagepicker/MediaHandler.java |  |
| 00078   | Get the network operator name collection telephony       |                                 | com/learnium/RNDeviceInfo/RNDeviceModule.java<br>com/microsoft/appcenter/utils/DeviceInfoHelper.java<br>com/mixpanel/android/mpmetrics/SystemInformation.java   |  |
| 00005   | Get absolute path of file and put it to JSON object file |                                 | com/airbnb/lottie/LottieCompositionFactory.java<br>com/microsoft/codepush/react/CodePushUtils.java  |  |
| 00072   | Write HTTP input stream into a file command network file |                                 | com/microsoft/codepush/react/CodePushUpdateManager.java<br>com/rnfs/Downloader.java   |  |

| RULE ID | BEHAVIOUR   | LABEL                | FILES  |
|---------|---|----------------------|--|
| 00030   | Connect to the remote server through the given URL          | network              | com/airbnb/lottie/network/DefaultLottieNetworkFetcher.java<br>com/bumptech/glide/load/data/HttpUrlFetcher.java<br>com/rnfs/Downloader.java<br>io/sentry/transport/HttpConnection.java  |
| 00012   | Read data and put it into a buffer stream                   | file                 | com/datadog/android/core/internal/persistence/file/batch/PlainBatchFileReaderWriter.java com/microsoft/codepush/react/FileUtils.java com/rnfs/Uploader.java io/sentry/EnvelopeSender.java io/sentry/OutboxSender.java io/sentry/cache/CacheStrategy.java io/sentry/cache/EnvelopeCache.java io/sentry/config/FilesystemPropertiesLoader.java io/sentry/util/FileUtils.java |
| 00024   | Write file after Base64 decoding                            | reflection file      | cl/json/ShareFile.java cl/json/ShareFiles.java com/ReactNativeBlobUtil/ReactNativeBlobUtilBody.java com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java com/airbnb/lottie/LottieCompositionFactory.java expo/modules/filesystem/FileSystemModule.java  |
| 00183   | Get current camera parameters and change the setting.       | camera               | com/twilio/video/CameraCapturer.java<br>tvi/webrtc/Camera1Session.java   |
| 00009   | Put data in cursor to JSON object                           | file                 | com/mixpanel/android/mpmetrics/MPDbAdapter.java<br>com/reactnativecommunity/asyncstorage/AsyncLocalStorageUtil.java  |
| 00056   | Modify voice volume   | control              | com/zmxv/RNSound/RNSoundModule.java<br>tvi/webrtc/audio/WebRtcAudioTrack.java<br>tvi/webrtc/voiceengine/WebRtcAudioTrack.java  |
| 00112   | Get the date of the calendar event                          | collection calendar  | com/fasterxml/jackson/databind/ser/std/StdKeySerializers.java<br>com/fasterxml/jackson/databind/util/StdDateFormat.java<br>expo/modules/calendar/CalendarModule.java   |
| 00132   | Query The ISO country code                                  | telephony collection | com/microsoft/appcenter/utils/DeviceInfoHelper.java  |
| 00208   | Capture the contents of the device screen collection screen |                      | tvi/webrtc/ScreenCapturerAndroid.java  |
| 00028   | Read file from assets directory file                        |                      | com/caverock/androidsvg/SimpleAssetResolver.java<br>com/rnfs/RNFSManager.java  |
| 00147   | Get the time of current location collection location        |                      | expo/modules/location/LocationHelpers.java   |

| RULE ID | BEHAVIOUR   | LABEL                           | FILES   |  |
|---------|---|---------------------------------|---|--|
| 00043   | Calculate WiFi signal strength collection wifi                      |                                 | com/reactnativecommunity/netinfo/ConnectivityReceiver.java                        |  |
| 00052   | Deletes media specified by a content URI(SMS, CALL_LOG, File, etc.) | sms                             | expo/modules/calendar/CalendarModule.java   |  |
| 00187   | Query a URI and check the result                                    | collection sms calllog calendar | expo/modules/calendar/CalendarModule.java   |  |
| 00080   | Save recorded audio/video to a file                                 | record file                     | expo/modules/av/AVManager.java  |  |
| 00101   | Initialize recorder   | record                          | expo/modules/av/AVManager.java  |  |
| 00121   | Create a directory  | file command                    | expo/modules/av/AVManager.java<br>expo/modules/filesystem/FileSystemModule.java   |  |
| 00199   | Stop recording and release recording resources                      | record                          | expo/modules/av/AVManager.java  |  |
| 00198   | Initialize the recorder and start recording record                  |                                 | expo/modules/av/AVManager.java  |  |
| 00136   | Stop recording record command                                       |                                 | expo/modules/av/AVManager.java  |  |
| 00194   | Set the audio source (MIC) and recorded file format                 | record                          | expo/modules/av/AVManager.java  |  |
| 00090   | Set recroded audio/video file format                                | record                          | expo/modules/av/AVManager.java  |  |
| 00197   | Set the audio encoder and initialize the recorder                   | record                          | expo/modules/av/AVManager.java  |  |
| 00102   | Set the phone speaker on command                                    |                                 | com/twiliorn/library/CustomTwilioVideoView.java<br>expo/modules/av/AVManager.java |  |
| 00138   | Set the audio source (MIC)  | record                          | expo/modules/av/AVManager.java  |  |
| 00196   | Set the recorded file format and output path record file            |                                 | expo/modules/av/AVManager.java  |  |
| 00133   | Start recording record command                                      |                                 | expo/modules/av/AVManager.java  |  |
| 00104   | Check if the given path is directory file                           |                                 | expo/modules/av/AVManager.java<br>expo/modules/filesystem/FileSystemModule.java   |  |
| 00041   | Save recorded audio/video to file                                   | record                          | expo/modules/av/AVManager.java  |  |

| RULE ID | BEHAVIOUR                                   | LABEL           | FILES  |
|---------|---|-----------------|--|
| 00125   | Check if the given file path exist          | file            | com/ReactNativeBlobUtil/ReactNativeBlobUtilReq.java<br>expo/modules/filesystem/FileSystemModule.java |
| 00004   | Get filename and put it to JSON object      | file collection | com/airbnb/lottie/LottieCompositionFactory.java<br>com/mixpanel/android/mpmetrics/MPDbAdapter.java   |
| 00062   | Query WiFi information and WiFi Mac Address | wifi collection | com/learnium/RNDeviceInfo/RNDeviceModule.java  |
| 00130   | Get the current WIFI information            | wifi collection | com/learnium/RNDeviceInfo/RNDeviceModule.java  |
| 00134   | Get the current WiFi IP address             | wifi collection | com/learnium/RNDeviceInfo/RNDeviceModule.java  |
| 00082   | Get the current WiFi MAC address            | collection wifi | com/learnium/RNDeviceInfo/RNDeviceModule.java  |
| 00094   | Connect to a URL and read data from it      | command network | com/mixpanel/android/util/HttpService.java   |
| 00108   | Read the input stream from given URL        | network command | com/mixpanel/android/util/HttpService.java   |

### FIREBASE DATABASES ANALYSIS

| TITLE                               | SEVERITY | DESCRIPTION   |  |
|-------------------------------------|----------|---|--|
| App talks to a<br>Firebase database | info     | The app talks to Firebase database at https://phoenix-hingehealth.firebaseio.com  |  |
| Firebase Remote<br>Config disabled  | secure   | Firebase Remote Config is disabled for https://firebaseremoteconfig.googleapis.com/v1/projects/959418427180/namespaces/firebase:fetch? key=AlzaSyCTDa4xTKlkuDwO82cYQZjVcOV3XpZqJj4. This is indicated by the response: {'state': 'NO_TEMPLATE'} |  |

### **\*: ::** ABUSED PERMISSIONS

| TYPE                   | MATCHES | PERMISSIONS  |
|------------------------|---------|--|
| Malware<br>Permissions | 12/25   | android.permission.INTERNET, android.permission.READ_EXTERNAL_STORAGE, android.permission.WRITE_EXTERNAL_STORAGE, android.permission.ACCESS_COARSE_LOCATION, android.permission.ACCESS_FINE_LOCATION, android.permission.CAMERA, android.permission.RECORD_AUDIO, android.permission.ACCESS_NETWORK_STATE, android.permission.ACCESS_WIFI_STATE, android.permission.WAKE_LOCK, android.permission.VIBRATE, android.permission.RECEIVE_BOOT_COMPLETED |

| TYPE                           | MATCHES | PERMISSIONS  |
|--------------------------------|---------|--|
| Other<br>Common<br>Permissions | 9/44    | android.permission.READ_CALENDAR, android.permission.BLUETOOTH, android.permission.BLUETOOTH_ADMIN, android.permission.FOREGROUND_SERVICE, android.permission.MODIFY_AUDIO_SETTINGS, com.google.android.c2dm.permission.RECEIVE, android.permission.ACCESS_NOTIFICATION_POLICY, com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE, com.google.android.gms.permission.ACTIVITY_RECOGNITION |

#### **Malware Permissions:**

Top permissions that are widely abused by known malware.

### Other Common Permissions:

Permissions that are commonly abused by known malware.

### ! OFAC SANCTIONED COUNTRIES

This app may communicate with the following OFAC sanctioned list of countries.

| DOMAIN | COUNTRY/REGION |
|--------|----------------|
|        |                |

### **Q DOMAIN MALWARE CHECK**

| DOMAIN                           | STATUS | GEOLOCATION   |
|----------------------------------|--------|---|
| pinterest.com                    | ok     | IP: 151.101.0.84  Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203  View: Google Map |
| codepush.appcenter.ms            | ok     | No Geolocation information available.   |
| mobile.events.data.microsoft.com | ok     | IP: 104.46.162.226 Country: Australia Region: Victoria City: Melbourne Latitude: -37.813999 Longitude: 144.963318 View: Google Map                      |

| DOMAIN              | STATUS | GEOLOCATION  |
|---------------------|--------|--|
| apache.org          | ok     | IP: 151.101.2.132 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map   |
| api.eu.iterable.com | ok     | IP: 34.254.102.241 Country: Ireland Region: Dublin City: Dublin Latitude: 53.343990 Longitude: -6.267190 View: Google Map                                |
| xml.org             | ok     | IP: 104.239.142.8 Country: United States of America Region: Texas City: Windcrest Latitude: 29.499678 Longitude: -98.399246 View: Google Map             |
| www.tensorflow.org  | ok     | IP: 142.250.217.142 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map |
| plus.google.com     | ok     | IP: 172.217.12.142 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map  |

| DOMAIN          | STATUS | GEOLOCATION  |
|-----------------|--------|--|
| play.google.com | ok     | IP: 142.250.188.238 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map |
| crbug.com       | ok     | IP: 216.239.32.29 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map   |
| www.w3.org      | ok     | IP: 104.18.23.19 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map    |
| github.com      | ok     | IP: 140.82.112.3 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map    |
| twitter.com     | ok     | IP: 172.66.0.227 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map    |

| DOMAIN                   | STATUS | GEOLOCATION   |
|--------------------------|--------|---|
| www.ietf.org             | ok     | IP: 104.16.45.99 Country: United States of America Region: Texas City: Dallas Latitude: 32.783058 Longitude: -96.806671 View: Google Map                |
| www.openssl.org          | ok     | IP: 34.49.79.89  Country: United States of America Region: Texas City: Houston Latitude: 29.941401 Longitude: -95.344498 View: Google Map               |
| 10.0.2.2                 | ok     | IP: 10.0.2.2  Country: -  Region: -  City: -  Latitude: 0.000000  Longitude: 0.000000  View: Google Map   |
| auth0.com                | ok     | IP: 104.18.37.18  Country: United States of America Region: Texas City: Dallas Latitude: 32.783058 Longitude: -96.806671 View: Google Map               |
| intake.profile.s         | ok     | No Geolocation information available.   |
| android.googlesource.com | ok     | IP: 142.250.101.82 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map |

| DOMAIN             | STATUS | GEOLOCATION  |
|--------------------|--------|--|
| www.slf4j.org      | ok     | IP: 159.100.250.151 Country: Switzerland Region: Vaud City: Lausanne Latitude: 46.515999 Longitude: 6.632820 View: Google Map                          |
| notifee.app        | ok     | IP: 52.52.192.191 Country: United States of America Region: California City: San Francisco Latitude: 37.774929 Longitude: -122.419418 View: Google Map |
| docs.swmansion.com | ok     | IP: 104.21.27.136 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map |
| api.mixpanel.com   | ok     | IP: 130.211.34.183 Country: United States of America Region: Missouri City: Kansas City Latitude: 39.099731 Longitude: -94.578568 View: Google Map     |
| ecs.us1.twilio.com | ok     | IP: 54.152.156.101 Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map         |

| DOMAIN                             | STATUS | GEOLOCATION  |
|------------------------------------|--------|--|
| www.example.com                    | ok     | IP: 23.220.73.43 Country: Colombia Region: Antioquia City: Medellin Latitude: 6.251840 Longitude: -75.563591 View: Google Map                          |
| manage.auth0.com                   | ok     | IP: 104.18.39.72 Country: United States of America Region: Texas City: Dallas Latitude: 32.783058 Longitude: -96.806671 View: Google Map               |
| reactnative.dev                    | ok     | IP: 52.52.192.191 Country: United States of America Region: California City: San Francisco Latitude: 37.774929 Longitude: -122.419418 View: Google Map |
| javax.xml.xmlconstants             | ok     | No Geolocation information available.  |
| phoenix-hingehealth.firebaseio.com | ok     | IP: 34.120.206.254 Country: United States of America Region: Missouri City: Kansas City Latitude: 39.099731 Longitude: -94.578568 View: Google Map     |
| ecs.stage-us1.twilio.com           | ok     | IP: 52.44.227.152 Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map          |

| DOMAIN             | STATUS | GEOLOCATION  |
|--------------------|--------|--|
| in.appcenter.ms    | ok     | IP: 68.220.193.245 Country: United States of America Region: Georgia City: Atlanta Latitude: 33.818501 Longitude: -84.361015 View: Google Map            |
| api.iterable.com   | ok     | IP: 44.219.225.80 Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map            |
| links.iterable.com | ok     | IP: 18.208.50.220 Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map            |
| www.webrtc.org     | ok     | IP: 142.250.217.142 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map |
| xmlpull.org        | ok     | IP: 185.199.108.153 Country: United States of America Region: Pennsylvania City: California Latitude: 40.065632 Longitude: -79.891708 View: Google Map   |

| DOMAIN                  | STATUS | GEOLOCATION   |
|-------------------------|--------|---|
| www.facebook.com        | ok     | IP: 31.13.70.36 Country: United States of America Region: California City: Los Angeles Latitude: 34.052231 Longitude: -118.243683 View: Google Map        |
| webrtc.googlesource.com | ok     | IP: 142.250.141.82  Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514  View: Google Map |
| ecs.dev-us1.twilio.com  | ok     | IP: 34.195.140.185  Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map           |
| aomediacodec.github.io  | ok     | IP: 185.199.111.153  Country: United States of America Region: Pennsylvania City: California Latitude: 40.065632 Longitude: -79.891708 View: Google Map   |

### **EMAILS**

| EMAIL             | FILE  |
|-------------------|---|
| appro@openssl.org | lib/arm64-v8a/libtwilio_video_android_so.so             |
| appro@openssl.org | apktool_out/lib/arm64-v8a/libtwilio_video_android_so.so |



| TRACKER      | CATEGORIES      | URL  |
|--------------|-----------------|--|
| Google AdMob | Advertisement   | https://reports.exodus-privacy.eu.org/trackers/312 |
| Instabug     | Crash reporting | https://reports.exodus-privacy.eu.org/trackers/206 |
| MixPanel     | Analytics       | https://reports.exodus-privacy.eu.org/trackers/118 |
| Sentry       | Crash reporting | https://reports.exodus-privacy.eu.org/trackers/447 |

# **₽** HARDCODED SECRETS

| POSSIBLE SECRETS  |
|---|
| "firebase_database_url" : "https://phoenix-hingehealth.firebaseio.com"  |
| "google_api_key" : "AlzaSyCTDa4xTKIkuDwO82cYQZjVcOV3XpZqJj4"  |
| "google_crash_reporting_api_key" : "AlzaSyCTDa4xTKIkuDwO82cYQZjVcOV3XpZqJj4"  |
| 11839296a789a3bc0045c8a5fb42c7d1bd998f544449579b446817afbd17273e662c97ee72995ef42640c550b9013fad0761353c7086a272c24088be94769fd16650                          |
| 16a09e667f3bcc908b2fb1366ea957d3e3adec17512775099da2f590b0667322a   |
| 115792089237316195423570985008687907853269984665640564039457584007908834671663  |
| e3f1f98c9da02a93bb547f448b472d727e14b22455235796fe49863856252508  |
| 6864797660130609714981900799081393217269435300143305409394463459185543183397656052122559640661454554977296311391480858037121987999716643812574028291115057151 |
| 27580193559959705877849011840389048093056905856361568521428707301988689241309860865136260764883745107765439761230575  |
| 41058363725152142129326129780047268409114441015993725554835256314039467401291   |
| c06c8400-8e06-11e0-9cb6-0002a5d5c51b  |

| POSSIBLE SECRETS  |
|---|
| 258EAFA5-E914-47DA-95CA-C5AB0DC85B11  |
| 8D53DC1D-1DB7-4CD3-868B-8A527460AA84  |
| 4fe342e2fe1a7f9b8ee7eb4a7c0f9e162bce33576b315ececbb6406837bf51f5  |
| 32670510020758816978083085130507043184471273380659243275938904335757337482424   |
| ae2044fb577e65ee8bb576ca48a2f06e  |
| 6864797660130609714981900799081393217269435300143305409394463459185543183397656052122559640661454554977296311391480858037121987999716643812574028291115057148 |
| edef8ba9-79d6-4ace-a3c8-27dcd51d21ed  |
| bb392ec0-8d4d-11e0-a896-0002a5d5c51b  |
| 1093849038073734274511112390766805569936207598951683748994586394495953116150735016013708737573759623248592132296706313309438452531591012912142327488478985984 |
| 39402006196394479212279040100143613805079739270465446667946905279627659399113263569398956308152294913554433653942643  |
| 9a04f079-9840-4286-ab92-e65be0885f95  |
| 55066263022277343669578718895168534326250603453777594175500187360389116729240   |
| 48439561293906451759052585252797914202762949526041747995844080717082404635286   |
| 5ac635d8aa3a93e7b3ebbd55769886bc651d06b0cc53b0f63bce3c3e27d2604b  |
| c6858e06b70404e9cd9e3ecb662395b4429c648139053fb521f828af606b4d3dbaa14b5e77efe75928fe1dc127a2ffa8de3348b3c1856a429bf97e7e31c2e5bd66                            |
| e2719d58-a985-b3c9-781a-b030af78d30e  |
| 3617de4a96262c6f5d9e98bf9292dc29f8f41dbd289a147ce9da3113b5f0b8c00a60b1ce1d7e819d7a431d7c90ea0e5f  |
| 3757180025770020463545507224491183603594455134769762486694567779615544477440556316691234405012945539562144444537289428522585666729196580810124344277578376784 |
| 39402006196394479212279040100143613805079739270465446667948293404245721771496870329047266088258938001861606973112316  |
| 85053bf24bba75239b16a601d9387e17  |

| POSSIBLE SECRETS  |
|---|
| DA2E7828-FBCE-4E01-AE9E-261174997C48  |
| 115792089237316195423570985008687907852837564279074904382605163141518161494337  |
| b3312fa7e23ee7e4988e056be3f82d19181d9c6efe8141120314088f5013875ac656398d8a2ed19d2a85c8edd3ec2aef  |
| 39402006196394479212279040100143613805079739270465446667948293404245721771496870329047266088258938001861606973112319  |
| aa87ca22be8b05378eb1c71ef320ad746e1d3b628ba79b9859f741e082542a385502f25dbf55296c3a545e3872760ab7  |
| 01360240043788015936020505  |
| 115792089210356248762697446949407573530086143415290314195533631308867097853951  |
| 051953eb9618e1c9a1f929a21a0b68540eea2da725b99b315f3b8b489918ef109e156193951ec7e937b1652c0bd3bb1bf073573df883d2c34f1ef451fd46b503f00                           |
| 2661740802050217063228768716723360960729859168756973147706671368418802944996427808491545080627771902352094241225065558662157113545570916814161637315895999846 |
| 5181942b9ebc31ce68dacb56c16fd79f  |
| 6864797660130609714981900799081393217269435300143305409394463459185543183397655394245057746333217197532963996371363321113864768612440380340372808892707005449 |
| 1ddaa4b892e61b0f7010597ddc582ed3  |
| 5c4ece41241a1bb513f6e3e5df74ab7d5183dfffbd71bfd43127920d880569fd  |
| 115792089210356248762697446949407573530086143415290314195533631308867097853948  |
| 8325710961489029985546751289520108179287853048861315594709205902480503199884419224438643760392947333078086511627871   |
| 24b2477514809255df232947ce7928c4  |
| 26247035095799689268623156744566981891852923491109213387815615900925518854738050089022388053975719786650872476732087  |
| 36134250956749795798585127919587881956611106672985015071877198253568414405109   |
| 6b17d1f2e12c4247f8bce6e563a440f277037d812deb33a0f4a13945d898c296  |
| 115792089210356248762697446949407573529996955224135760342422259061068512044369  |

## > PLAYSTORE INFORMATION

Title: Hinge Health

Score: 4.8350563 Installs: 500,000+ Price: 0 Android Version Support: Category: Health & Fitness Play Store URL: com.hingehealth.phoenix

Developer Details: Hinge Health, Inc., Hinge+Health,+Inc., None, https://www.hingehealth.com/, hello@hingehealth.com,

Release Date: Sep 24, 2020 Privacy Policy: Privacy link

#### **Description:**

At Hinge Health, we're on a mission to help people get relief from joint and muscle pain and move with confidence. We combine expert clinical care and advanced technology to go beyond traditional physical therapy. Our programs are available at no cost to our members through 2,200+ employers and health plans. Check if you're eligible at hinge.health/covered HOW HINGE HEALTH CAN HELP YOU: PERSONALIZED EXERCISE THERAPY Get a care program that's based on your medical history, self-reported information, and clinical questionnaire. Designed by physical therapists. ON-THE-GO EXERCISES Online exercise sessions take as little as 10-15 minutes and you can do them anytime, anywhere through the Hinge Health mobile app. EXPERT CLINICAL CARE\* We'll connect you with a dedicated physical therapist and health coach to tailor your exercise program as you go and provide the clinical and behavioral care that you need. Reach out anytime by scheduling a video visit or through in-app messaging. AN EASY-TO-USE APP The Hinge Health app has everything you need. Get your exercises, reach out to your care team, and learn about your condition. Set goals, track your progress, and celebrate all your wins big and small. DRUG-FREE PAIN RELIEF\* Enso (r) is a wearable device that relieves pain within minutes and may be available to you based on program and eligibility. WOMEN'S PELVIC HEALTH PROGRAM\* Pelvic floor therapy can address unique symptoms and life stages including pregnancy and postpartum, bladder and bowel control, pelvic pain, and other disruptive or painful disorders. EDUCATIONAL CONTENT\* Unlimited access to a library of videos and articles that cover such topics as nutrition, sleep management, relaxation techniques, women's reproductive health and more. PAIN RELIEF THAT WORKS Studies have shown that Hinge Health members reduce their pain by 68% on average in just 12 weeks\*\*. From gardening to hiking, to playing with your kids, live the life you love—with less pain. Take a couple of minutes to prioritize your pain relief today. Check

## **⋮**≡ SCAN LOGS

| Timestamp           | Event                       | Error |
|---------------------|-----------------------------|-------|
| 2025-08-30 21:20:15 | Generating Hashes           | ОК    |
| 2025-08-30 21:20:16 | Extracting APK              | ОК    |
| 2025-08-30 21:20:16 | Unzipping                   | ОК    |
| 2025-08-30 21:20:17 | Parsing APK with androguard | ОК    |

|                     |   | 1  |
|---------------------|---|----|
| 2025-08-30 21:20:17 | Extracting APK features using aapt/aapt2                              | ОК |
| 2025-08-30 21:20:17 | Getting Hardcoded Certificates/Keystores                              | ОК |
| 2025-08-30 21:20:20 | Parsing AndroidManifest.xml   | ОК |
| 2025-08-30 21:20:20 | Extracting Manifest Data  | ОК |
| 2025-08-30 21:20:20 | Manifest Analysis Started   | ОК |
| 2025-08-30 21:20:22 | Performing Static Analysis on: Hinge Health (com.hingehealth.phoenix) | ОК |
| 2025-08-30 21:20:22 | Fetching Details from Play Store: com.hingehealth.phoenix             | ОК |
| 2025-08-30 21:20:22 | Checking for Malware Permissions                                      | ОК |
| 2025-08-30 21:20:22 | Fetching icon path  | ОК |
| 2025-08-30 21:20:22 | Library Binary Analysis Started                                       | ОК |
| 2025-08-30 21:20:22 | Analyzing lib/arm64-v8a/libnative-filters.so                          | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_featureflagsjni.so                   | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_debug.so                      | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libfolly_runtime.so                           | ОК |

| 2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libexpo-modules-core.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libreact_performance_timeline.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libjsinspector.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libavfilter.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libavcodec.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libavcodec.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libanimation-decoder.gif.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/libreact_codegen_rmcore.so         OK           2025-08-30 21:20:23         Analyzing lib/arm64-v8a/librensorflowlite_gpu_delegate.so         OK |
|---|
| 2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libjsinspector.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libavfilter.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact-native-quick-sqlite.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libavcodec.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libanimation-decoder-gif.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact_codegen_rncore.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact_codegen_rncore.so       OK   |
| 2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libavfilter.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact-native-quick-sqlite.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libavcodec.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libanimation-decoder-gif.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact_codegen_rmcore.so       OK         2025-08-30 21:20:23       Analyzing lib/arm64-v8a/libreact_codegen_rmcore.so       OK  |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libavcodec.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libavcodec.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libanimation-decoder-gif.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreact_codegen_rncore.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreact_codegen_rncore.so OK  |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libavcodec.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libanimation-decoder-gif.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreact_codegen_rncore.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libtensorflowlite_gpu_delegate.so OK   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libanimation-decoder-gif.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreact_codegen_rncore.so OK  2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libtensorflowlite_gpu_delegate.so OK   |
| 2025-08-30 21:20:23  Analyzing lib/arm64-v8a/libreact_codegen_rncore.so  OK  2025-08-30 21:20:23  Analyzing lib/arm64-v8a/libtensorflowlite_gpu_delegate.so  OK   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libtensorflowlite_gpu_delegate.so OK  |
|   |
|   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libavutil.so OK   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreact_utils.so OK  |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libtensorflowlite_c.so OK   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libreactnativejni.so OK   |
| 2025-08-30 21:20:23 Analyzing lib/arm64-v8a/libfabricjni.so OK  |

| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libhermes_executor.so               | ОК |
|---------------------|---|----|
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_nativemodule_microtasks.so | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libhermesinstancejni.so             | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libjsi.so                           | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libworklets.so                      | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libibg-native.so                    | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libhermes.so                        | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_mapbuffer.so        | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libturbomodulejsijni.so             | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libtwilio_video_android_so.so       | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_nativemodule_dom.so        | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_consistency.so      | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libc++_shared.so                    | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libavdevice.so                      | ОК |

| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libyoga.so                               | ОК |
|---------------------|--|----|
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libmapbufferjni.so                       | OK |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_debug.so                        | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_graphics.so              | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libfbjni.so                              | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_featureflags.so                 | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_uimanager_consistency.so | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libreact_render_imagemanager.so          | OK |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libimagepipeline.so                      | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libjsijniprofiler.so                     | OK |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libavif_android.so                       | OK |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libswscale.so                            | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/libconceal.so                            | ОК |
| 2025-08-30 21:20:23 | Analyzing lib/arm64-v8a/librrc_view.so                           | ОК |

| Analyzing lib/arm64-v8a/libreact_devsupportjni.so            | ОК   |
|--|--|
| Analyzing lib/arm64-v8a/libreact_nativemodule_core.so        | ОК   |
| Analyzing lib/arm64-v8a/libreact_render_core.so              | ОК   |
| Analyzing lib/arm64-v8a/librrc_textinput.so                  | ОК   |
| Analyzing lib/arm64-v8a/libglog.so                           | ОК   |
| Analyzing lib/arm64-v8a/librnscreens.so                      | ОК   |
| Analyzing lib/arm64-v8a/libreanimated.so                     | ОК   |
| Analyzing lib/arm64-v8a/libnative-imagetranscoder.so         | ОК   |
| Analyzing lib/arm64-v8a/librrc_legacyviewmanagerinterop.so   | ОК   |
| Analyzing lib/arm64-v8a/libreact_nativemodule_defaults.so    | ОК   |
| Analyzing lib/arm64-v8a/libreact_render_componentregistry.so | ОК   |
| Analyzing lib/arm64-v8a/libexpo-av.so                        | ОК   |
| Analyzing lib/arm64-v8a/libsentry-android.so                 | ОК   |
| Analyzing lib/arm64-v8a/libwrEngineRNJNI.so                  | ОК   |
|  | Analyzing lib/arm64-v8a/libreact_render_core.so  Analyzing lib/arm64-v8a/libreact_render_core.so  Analyzing lib/arm64-v8a/libroscreens.so  Analyzing lib/arm64-v8a/libroscreens.so |

| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libreact_newarchdefaults.so           | ОК |
|---------------------|---|----|
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libreact_nativemodule_featureflags.so | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libreactnativeblob.so                 | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libsentry.so                          | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libavformat.so                        | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libruntimeexecutor.so                 | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/librninstance.so                      | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libswresample.so                      | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libjscinstance.so                     | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/librrc_image.so                       | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libreact_render_observers_events.so   | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libuimanagerjni.so                    | ОК |
| 2025-08-30 21:20:24 | Analyzing lib/arm64-v8a/libexpo-gl.so                         | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libnative-filters.so      | ОК |

| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_featureflagsjni.so       | ОК |
|---------------------|---|----|
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_debug.so          | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libfolly_runtime.so               | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libexpo-modules-core.so           | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_performance_timeline.so  | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libjsinspector.so                 | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libavfilter.so                    | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact-native-quick-sqlite.so   | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libavcodec.so                     | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libanimation-decoder-gif.so       | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_codegen_rncore.so        | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libtensorflowlite_gpu_delegate.so | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libavutil.so                      | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_utils.so                 | ОК |

| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libtensorflowlite_c.so              | ОК |
|---------------------|---|----|
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreactnativejni.so                | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libfabricjni.so                     | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libhermes_executor.so               | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_nativemodule_microtasks.so | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libhermesinstancejni.so             | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libjsi.so                           | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libworklets.so                      | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libibg-native.so                    | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libhermes.so                        | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_mapbuffer.so        | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libturbomodulejsijni.so             | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libtwilio_video_android_so.so       | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_nativemodule_dom.so        | ОК |

| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_consistency.so           | ОК |
|---------------------|--|----|
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libc++_shared.so                         | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libavdevice.so                           | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libyoga.so                               | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libmapbufferjni.so                       | OK |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_debug.so                        | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_graphics.so              | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libfbjni.so                              | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_featureflags.so                 | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_uimanager_consistency.so | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_imagemanager.so          | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libimagepipeline.so                      | ОК |
| 2025-08-30 21:20:24 | Analyzing apktool_out/lib/arm64-v8a/libjsijniprofiler.so                     | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libavif_android.so                       | ОК |

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| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libswscale.so                        | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libconceal.so                        | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librrc_view.so                       | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_devsupportjni.so            | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_nativemodule_core.so        | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_core.so              | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librrc_textinput.so                  | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libglog.so                           | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librnscreens.so                      | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreanimated.so                     | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libnative-imagetranscoder.so         | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librrc_legacyviewmanagerinterop.so   | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_nativemodule_defaults.so    | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_componentregistry.so | ОК |

| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libexpo-av.so                         | ОК |
|---------------------|---|----|
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libsentry-android.so                  | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libwrEngineRNJNI.so                   | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_newarchdefaults.so           | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_nativemodule_featureflags.so | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreactnativeblob.so                 | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libsentry.so                          | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libavformat.so                        | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libruntimeexecutor.so                 | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librninstance.so                      | OK |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libswresample.so                      | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libjscinstance.so                     | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/librrc_image.so                       | ОК |
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libreact_render_observers_events.so   | ОК |

| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libuimanagerjni.so | OK |
|---------------------|--|----|
| 2025-08-30 21:20:25 | Analyzing apktool_out/lib/arm64-v8a/libexpo-gl.so      | ОК |
| 2025-08-30 21:20:25 | Reading Code Signing Certificate                       | ОК |
| 2025-08-30 21:20:25 | Running APKiD 2.1.5                                    | ОК |
| 2025-08-30 21:20:30 | Detecting Trackers                                     | ОК |
| 2025-08-30 21:20:36 | Decompiling APK to Java with JADX                      | ОК |
| 2025-08-30 21:21:07 | Converting DEX to Smali                                | ОК |
| 2025-08-30 21:21:07 | Code Analysis Started on - java_source                 | ОК |
| 2025-08-30 21:21:13 | Android SBOM Analysis Completed                        | ОК |
| 2025-08-30 21:21:29 | Android SAST Completed                                 | ОК |
| 2025-08-30 21:21:29 | Android API Analysis Started                           | ОК |
| 2025-08-30 21:21:44 | Android API Analysis Completed                         | ОК |
| 2025-08-30 21:21:44 | Android Permission Mapping Started                     | ОК |
| 2025-08-30 21:22:01 | Android Permission Mapping Completed                   | ОК |

| 2025-08-30 21:22:02 | Android Behaviour Analysis Started               | ОК |
|---------------------|--|----|
| 2025-08-30 21:22:18 | Android Behaviour Analysis Completed             | OK |
| 2025-08-30 21:22:18 | Extracting Emails and URLs from Source Code      | OK |
| 2025-08-30 21:22:23 | Email and URL Extraction Completed               | ОК |
| 2025-08-30 21:22:23 | Extracting String data from APK                  | ОК |
| 2025-08-30 21:22:23 | Extracting String data from SO                   | ОК |
| 2025-08-30 21:22:24 | Extracting String data from Code                 | ОК |
| 2025-08-30 21:22:24 | Extracting String values and entropies from Code | ОК |
| 2025-08-30 21:22:30 | Performing Malware check on extracted domains    | ОК |
| 2025-08-30 21:22:33 | Saving to Database                               | ОК |

### Report Generated by - MobSF v4.4.0

Mobile Security Framework (MobSF) is an automated, all-in-one mobile application (Android/iOS/Windows) pen-testing, malware analysis and security assessment framework capable of performing static and dynamic analysis.

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