MOBSF

ANDROID STATIC ANALYSIS REPORT

🤖 COVID-19 (1.0)

File Name:	COVID-19_com.Eha.covid_19.apk
Package Name:	com.Eha.covid_19
Average CVSS Score:	6.3
App Security Score:	10/100 (CRITICAL RISK)
Trackers Detection:	5/285

📦 FILE INFORMATION

File Name: COVID-19_com.Eha.covid_19.apk
Size: 43.16MB
MD5: fc9a769b1bfbdf18de6edc6f5714cd7d
SHA1: 97923cfeebd8e4b3fbcd37268783c4d38431edeb
SHA256: b3f41907b55aa0e76f83819ef9308dd494fc4294f6782bf9ec0aaa7a32dbcaee

ℹ️ APP INFORMATION

App Name: COVID-19
Package Name: com.Eha.covid_19
Main Activity: com.valamobileapp.MainActivity
Target SDK: 28
Min SDK: 19
Max SDK:
Android Version Name: 1.0
Android Version Code: 2

▦ APP COMPONENTS

Activities: 6
Services: 11
Receivers: 8
Providers: 6
Exported Activities: 0
Exported Services: 3
Exported Receivers: 4
Exported Providers: 0

✺ CERTIFICATE INFORMATION

APK is signed
v1 signature: True
v2 signature: True
v3 signature: False
Found 1 unique certificates
Subject: C=US, ST=California, L=Mountain View, O=Google Inc., OU=Android, CN=Android
Signature Algorithm: rsassa_pkcs1v15
Valid From: 2020-03-11 10:39:51+00:00
Valid To: 2050-03-11 10:39:51+00:00
Issuer: C=US, ST=California, L=Mountain View, O=Google Inc., OU=Android, CN=Android
Serial Number: 0xa739ebb5d55e987a47b2cb79c0de46ed27894fde
Hash Algorithm: sha256
md5: 371b2a4cc85ed912e1fa782542507439
sha1: 43ba5c7057ed55e828dd97fa41a459e541e06d08
sha256: 951921c26d0b879d5effaa0974741e495a3a2aad87477635b436873871ef15dc
sha512:
1642447798dab1c1e3ec0b11110437c8f79801d97b9778c1df8af4c9a8123af8e3af5086a9d8c88f3e8aa68095a376e302188bd5d1f31ca84ea6c80c2b46315c

PublicKey Algorithm: rsa
Bit Size: 4096
Fingerprint: 38210b15839440c6c54e79dde6ffface0bfac28f27be4bef93c3523cc96ad407

Certificate Status: Good
Description: Certificate looks good.

APPLICATION PERMISSIONS

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.INTERNET	dangerous	full Internet access	Allows an application to create network sockets.
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.ACCESS_NETWORK_STATE	normal	view network status	Allows an application to view the status of all networks.
android.permission.SYSTEM_ALERT_WINDOW	dangerous	display system-level alerts	Allows an application to show system-alert windows. Malicious applications can take over the entire screen of the phone.
android.permission.RECORD_AUDIO	dangerous	record audio	Allows application to access the audio record path.
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.WRITE_EXTERNAL_STORAGE	dangerous	read/modify/delete SD card contents	Allows an application to write to the SD card.
android.permission.READ_EXTERNAL_STORAGE	dangerous	read SD card contents	Allows an application to read from SD Card.

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.WAKE_LOCK	dangerous	prevent phone from sleeping	Allows an application to prevent the phone from going to sleep.
android.permission.DOWNLOAD_WITHOUT_NOTIFICATION	dangerous	Unknown permission from android reference	Unknown permission from android reference
android.permission.FOREGROUND_SERVICE	normal		Allows a regular application to use Service.startForeground
android.permission.VIBRATE	normal	control vibrator	Allows the application to control the vibrator.
android.permission.RECEIVE_BOOT_COMPLETED	normal	automatically start at 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.
android.permission.READ_PHONE_STATE	dangerous	read phone state and identity	Allows the application to access the phone features of the device. An application with this permission can determine the phone number and serial number of this phone, whether a call is active, the number that call is connected to and so on.
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.ACCESS_COARSE_LOCATION	dangerous	coarse (network-based) 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.
com.android.vending.CHECK_LICENSE	dangerous	Unknown permission from android reference	Unknown permission from android reference

PERMISSION	STATUS	INFO	DESCRIPTION
com.google.android.c2dm.permission.RECEIVE	signature	C2DM permissions	Permission for cloud to device messaging.
com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.sec.android.provider.badge.permission.READ	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.sec.android.provider.badge.permission.WRITE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.htc.launcher.permission.READ_SETTINGS	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.htc.launcher.permission.UPDATE_SHORTCUT	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.sonyericsson.home.permission.BROADCAST_BADGE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.sonymobile.home.permission.PROVIDER_INSERT_BADGE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.anddoes.launcher.permission.UPDATE_COUNT	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.majeur.launcher.permission.UPDATE_BADGE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.huawei.android.launcher.permission.CHANGE_BADGE	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.huawei.android.launcher.permission.READ_SETTINGS	dangerous	Unknown permission from android reference	Unknown permission from android reference
com.huawei.android.launcher.permission.WRITE_SETTINGS	dangerous	modify global system settings	Allows an application to modify the system's settings data. Malicious applications can corrupt your system's configuration.

🔍 APKID ANALYSIS

FILE	DETAILS

	FINDINGS	DETAILS
classes.dex	Anti-VM Code	Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.BRAND check Build.DEVICE check Build.PRODUCT check Build.HARDWARE check Build.BOARD check possible Build.SERIAL check network operator name check possible VM check
	Compiler	dx

	FINDINGS	DETAILS
classes2.dex	Anti-VM Code	Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.PRODUCT check Build.HARDWARE check possible Build.SERIAL check Build.TAGS check possible VM check
	Compiler	dx

	FINDINGS	DETAILS
classes3.dex	Anti-VM Code	Build.MANUFACTURER check
	Compiler	dx

🖼 BROWSABLE ACTIVITIES

ACTIVITY	INTENT
com.valamobileapp.MainActivity	Schemes: eha.covid19://,

🔍 MANIFEST ANALYSIS

ISSUE	SEVERITY	DESCRIPTION
Clear text traffic is Enabled For App [android:usesCleartextTraffic=true]	high	The app intends to use cleartext network traffic, such as cleartext HTTP, FTP stacks, DownloadManager, and MediaPlayer. The default value for apps that target API level 27 or lower is "true". Apps that target API level 28 or higher default to "false". The key reason for avoiding cleartext traffic is the lack of confidentiality, authenticity, and protections against tampering; a network attacker can eavesdrop on transmitted data and also modify it without being detected.
Launch Mode of Activity (com.valamobileapp.MainActivity) is not standard.	high	An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent. So it is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.
Broadcast Receiver (com.dieam.reactnativepushnotification.modules.RNPushNotificationBootEventReceiver) is not Protected. An intent-filter exists.	high	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. The presence of intent-filter indicates that the Broadcast Receiver is explicitly exported.
Service (com.reactlibrary.RNSnwMbHoverMenuService) is not Protected. [android:exported=true]	high	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.
Service (com.reactlibrary.RNSnwMbMqttService) is not Protected. [android:exported=true]	high	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.
Service (com.valamobileapp.WindowService) is not Protected. [android:exported=true]	high	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

ISSUE	SEVERITY	DESCRIPTION
Broadcast Receiver (com.learnium.RNDeviceInfo.RNDeviceReceiver) is not Protected. [android:exported=true]	high	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.
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]	high	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.
Broadcast Receiver (com.google.android.gms.measurement.AppMeasurementInstallReferrerReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.INSTALL_PACKAGES [android:exported=true]	high	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.

</> CODE ANALYSIS

ISSUE	SEVERITY	STANDARDS	FILES
			vn/bkav/coreca/libotp/AuthenticatorClient.java vn/bkav/coreca/libotp/DataBaseSQL.java vn/bkav/coreca/libotp/Utils.java vn/bkav/coreca/libotp/Webservices.java vn/bkav/coreca/libotp/TimeBasedOneTimePasswordUtil.java vn/bkav/coreca/libotp/Keystore/CryptoFile.java vn/bkav/coreca/libotp/ws/SSLConection.ja

ISSUE	SEVERITY	STANDARDS	FILES
			va vlabkav/coreca/libotp/ws/SSL.java net/sqlcipher/DatabaseUtils.java net/sqlcipher/AbstractCursor.java net/sqlcipher/BulkCursorToCursorAdaptor.java net/sqlcipher/DefaultDatabaseErrorHandler.java net/sqlcipher/database/SQLiteDebug.java net/sqlcipher/database/SQLiteQuery.java net/sqlcipher/database/SQLiteDatabase.java net/sqlcipher/database/SqliteWrapper.java net/sqlcipher/database/SQLiteQueryBuilder.java net/sqlcipher/database/SQLiteCursor.java net/sqlcipher/database/SQLiteCompiledSql.java net/sqlcipher/database/SQLiteProgram.java net/sqlcipher/database/SQLiteContentHelper.java net/sqlcipher/database/SQLiteOpenHelper.java org/bouncycastle/LICENSE.java org/bouncycastle/asn1/util/Dump.java org/bouncycastle/crypto/engines/NaccacheSternEngine.java org/bouncycastle/crypto/examples/JPAKEExample.java org/bouncycastle/crypto/examples/DESExample.java org/bouncycastle/crypto/generators/NaccacheSternKeyPairGenerator.java org/bouncycastle/jcajce/provider/symmetric/util/BaseWrapCipher.java org/bouncycastle/jcajce/provider/keystore/pkcs12/PKCS12KeyStoreSpi.java org/bouncycastle/jce/provider/BrokenJCEBlockCipher.java org/bouncycastle/math/ec/tools/F2mSqrtOptimizer.java org/bouncycastle/math/ec/tools/DiscoverEndomorphisms.java org/bouncycastle/math/ec/tools/TraceOptimizer.java org/bouncycastle/pqc/crypto/gmss/GMSSKeyPairGenerator.java org/bouncycastle/pqc/crypto/gmss/GMSSRootCalc.java org/bouncycastle/pqc/crypto/gmss/GMSSSigner.java org/bouncycastle/pqc/crypto/gmss/GMSSPrivateKeyParameters.java org/bouncycastle/pqc/crypto/gmss/util/GMSSUtil.java org/bouncycastle/pqc/math/linearalgebra/PolynomialRingGF2.java org/bouncycastle/pqc/math/linearalgebra/IntegerFunctions.java org/reactnative/barcodedetector/RNBarcodeDetector.java org/reactnative/camera/tasks/BarcodeDetectorAsyncTask.java org/reactnative/camera/tasks/TextRecogni

ISSUE	SEVERITY	STANDARDS	FILES
			zerAsyncTask.java org/reactnative/camera/tasks/FaceDetectorAsyncTask.java org/reactnative/facedetector/RNFaceDetector.java org/reactnative/facedetector/tasks/FileFaceDetectionAsyncTask.java org/kobjects/crypt/Crypt.java io/github/elyx0/reactnativedocumentpicker/DocumentPickerModule.java io/invertase/firebase/RNFirebaseModule.java io/invertase/firebase/Utils.java io/invertase/firebase/database/RNFirebaseDatabaseReference.java io/invertase/firebase/database/RNFirebaseDatabase.java io/invertase/firebase/database/RNFirebaseDatabaseUtils.java io/invertase/firebase/instanceid/RNFirebaseInstanceId.java io/invertase/firebase/firestore/RNFirebaseFirestore.java io/invertase/firebase/firestore/FirestoreSerialize.java io/invertase/firebase/firestore/RNFirebaseFirestoreDocumentReference.java io/invertase/firebase/firestore/RNFirebaseFirestoreCollectionReference.java io/invertase/firebase/config/RNFirebaseRemoteConfig.java io/invertase/firebase/auth/RNFirebaseAuth.java io/invertase/firebase/admob/RNFirebaseAdMob.java io/invertase/firebase/storage/RNFirebaseStorage.java io/invertase/firebase/links/RNFirebaseLinks.java io/invertase/firebase/functions/RNFirebaseFunctions.java io/invertase/firebase/fabric/crashlytics/RNFirebaseCrashlytics.java io/invertase/firebase/perf/RNFirebasePerformance.java io/invertase/firebase/messaging/RNFirebaseMessaging.java io/invertase/firebase/messaging/RNFirebaseMessagingService.java io/invertase/firebase/notifications/RNFirebaseNotifications.java io/invertase/firebase/notifications/RNFirebaseNotificationManager.java io/invertase/firebase/notifications/RNFirebaseNotificationsRebootReceiver.java io/invertase/firebase/notifications/DisplayNotificationTask.java io/invertase/firebase/analytics/RNFirebaseAnalytics.java bolts/MeasurementEvent.java me/leolin/shortcutbadger/ShortcutBadger.java me/leolin/shortcutbadger/impl/HuaweiHomeBadger.java cl/json/RNShareModule.java

ISSUE	SEVERITY	STANDARDS	FILES
The App logs information. Sensitive information should never be logged.	info	**CVSS V2:** 7.5 (high) **CWE:** CWE-532 - Insertion of Sensitive Information into Log File **OWASP MASVS:** MSTG-STORAGE-3	cl/json/RNShareModule.java cl/json/social/SingleShareIntent.java com/dieam/reactnativepushnotification/apis/AsyncStoragePersistApi.java com/dieam/reactnativepushnotification/apis/ValaApi.java com/dieam/reactnativepushnotification/apis/AsyncStorageApi.java com/dieam/reactnativepushnotification/modules/RNPushNotification.java com/dieam/reactnativepushnotification/modules/RNPushNotificationListenerService.java com/dieam/reactnativepushnotification/modules/RNPushNotificationConfig.java com/dieam/reactnativepushnotification/modules/RNPushNotificationBootEventReceiver.java com/dieam/reactnativepushnotification/modules/RNPushNotificationRegistrationService.java com/dieam/reactnativepushnotification/modules/RNPushNotificationPublisher.java com/dieam/reactnativepushnotification/modules/RNPushNotificationListenerServiceGcm.java com/dieam/reactnativepushnotification/modules/RNPushNotificationAttributes.java com/dieam/reactnativepushnotification/modules/RNPushNotificationHelper.java com/dieam/reactnativepushnotification/helpers/ApplicationBadgeHelper.java com/horcrux/svg/RadialGradientView.java com/horcrux/svg/VirtualView.java com/horcrux/svg/ImageView.java com/horcrux/svg/UseView.java com/horcrux/svg/MaskView.java com/horcrux/svg/LinearGradientView.java com/horcrux/svg/Brush.java com/horcrux/svg/PatternView.java com/horcrux/svg/ClipPathView.java com/airbnb/android/react/maps/AirMapHeatmap.java com/airbnb/android/react/maps/FileUtil.java com/airbnb/android/react/maps/AirMapGradientPolyline.java com/scottyab/aescrypt/AESCrypt.java com/imagepicker/utils/MediaUtils.java com/davidgalindo/rnarcgismapview/RNAGSRouter.java com/davidgalindo/rnarcgismapview/RNAGSMapView.java com/lwansbrough/RCTCamera/RCTCamera.java com/lwansbrough/RCTCamera/RCTCameraViewFinder.java com/lwansbrough/RCTCamera/RCTCameraModule.java com/lwansbrough/RCTCamera/MutableImage.java com/esri/arcgisruntime/internal/d/h/d.java com/esri/arcgisruntime/internal/d/h/e.java

ISSUE	SEVERITY	STANDARDS	FILES
			com/esri/arcgisruntime/internal/d/e/c/f.ja va com/wenkesj/voice/VoiceModule.java com/reactnativecommunity/webview/RNC WebViewModule.java com/reactnativecommunity/webview/RNC WebViewManager.java com/reactnativecommunity/cameraroll/Ca meraRollModule.java com/reactnativecommunity/geolocation/G eolocationModule.java com/reactnativecommunity/asyncstorage/ AsyncStorageModule.java com/reactnativecommunity/asyncstorage/ ReactDatabaseSupplier.java com/swmansion/reanimated/nodes/Debu gNode.java com/swmansion/gesturehandler/react/RN GestureHandlerRootHelper.java com/swmansion/gesturehandler/react/RN GestureHandlerRootView.java com/rnfs/Downloader.java com/rnim/rn/audio/AudioRecorderManag er.java com/brentvatne/react/ReactVideoView.jav a com/RNSnwBkavCA/RNSnwBkavCAModul e.java com/adobe/xmp/XMPMetaFactory.java com/RNFetchBlob/RNFetchBlobReq.java com/zmxv/RNSound/RNSoundModule.jav a com/drew/tools/ProcessUrlUtility.java com/drew/tools/ExtractJpegSegmentTool.j ava com/drew/tools/ProcessAllImagesInFolder Utility.java com/drew/imaging/ImageMetadataReader .java com/drew/lang/CompoundException.java com/tuanpm/RCTMqtt/RCTMqttModule.ja va com/wix/reactnativekeyboardinput/utils/L ogger.java com/bumptech/glide/Glide.java com/bumptech/glide/GeneratedAppGlide ModuleImpl.java com/bumptech/glide/util/ContentLengthIn putStream.java com/bumptech/glide/util/pool/FactoryPoo ls.java com/bumptech/glide/signature/Applicatio nVersionSignature.java com/bumptech/glide/gifdecoder/Standard GifDecoder.java com/bumptech/glide/gifdecoder/GifHeade rParser.java com/bumptech/glide/module/ManifestPar ser.java com/bumptech/glide/manager/RequestMa nagerFragment.java com/bumptech/glide/manager/DefaultCon nectivityMonitor.java com/bumptech/glide/manager/SupportRe questManagerFragment.java

ISSUE	SEVERITY	STANDARDS	FILES
			com/bumptech/glide/manager/RequestManagerRetriever.java
			com/bumptech/glide/manager/DefaultConnectivityMonitorFactory.java
			com/bumptech/glide/manager/RequestTracker.java
			com/bumptech/glide/load/model/FileLoader.java
			com/bumptech/glide/load/model/StreamEncoder.java
			com/bumptech/glide/load/model/ByteBufferEncoder.java
			com/bumptech/glide/load/model/ByteBufferFileLoader.java
			com/bumptech/glide/load/model/ResourceLoader.java
			com/bumptech/glide/load/resource/bitmap/DefaultImageHeaderParser.java
			com/bumptech/glide/load/resource/bitmap/HardwareConfigState.java
			com/bumptech/glide/load/resource/bitmap/DrawableToBitmapConverter.java
			com/bumptech/glide/load/resource/bitmap/BitmapEncoder.java
			com/bumptech/glide/load/resource/bitmap/Downsampler.java
			com/bumptech/glide/load/resource/bitmap/TransformationUtils.java
			com/bumptech/glide/load/resource/bitmap/VideoDecoder.java
			com/bumptech/glide/load/resource/gif/GifDrawableEncoder.java
			com/bumptech/glide/load/resource/gif/ByteBufferGifDecoder.java
			com/bumptech/glide/load/resource/gif/StreamGifDecoder.java
			com/bumptech/glide/load/data/AssetPathFetcher.java
			com/bumptech/glide/load/data/HttpUrlFetcher.java
			com/bumptech/glide/load/data/LocalUriFetcher.java
			com/bumptech/glide/load/data/mediastore/ThumbFetcher.java
			com/bumptech/glide/load/data/mediastore/ThumbnailStreamOpener.java
			com/bumptech/glide/load/engine/SourceGenerator.java
			com/bumptech/glide/load/engine/DecodePath.java
			com/bumptech/glide/load/engine/Engine.java
			com/bumptech/glide/load/engine/GlideException.java
			com/bumptech/glide/load/engine/DecodeJob.java
			com/bumptech/glide/load/engine/cache/DiskLruCacheWrapper.java
			com/bumptech/glide/load/engine/cache/MemorySizeCalculator.java
			com/bumptech/glide/load/engine/prefill/BitmapPreFillRunner.java
			com/bumptech/glide/load/engine/executor/GlideExecutor.java
			com/bumptech/glide/load/engine/bitmap_

ISSUE	SEVERITY	STANDARDS	FILES
			recycle/LruArrayPool.java com/bumptech/glide/load/engine/bitmap_ recycle/LruBitmapPool.java com/bumptech/glide/request/SingleReque st.java com/bumptech/glide/request/target/Custo mViewTarget.java com/bumptech/glide/request/target/View Target.java com/learnium/RNDeviceInfo/RNDeviceMo dule.java com/learnium/RNDeviceInfo/resolver/Dev iceIdResolver.java com/valamobileapp/MainActivity.java com/valamobileapp/ShareActivity.java
			vn/bkav/coreca/libotp/AuthenticatorClient. java net/no_mad/tts/TextToSpeechModule.java org/ksoap2/serialization/SoapPrimitive.jav a org/bouncycastle/asn1/ASN1Object.java org/bouncycastle/asn1/ASN1ObjectIdentifi er.java org/bouncycastle/asn1/ASN1TaggedObject .java org/bouncycastle/asn1/ASN1Set.java org/bouncycastle/asn1/ASN1Sequence.jav a org/bouncycastle/asn1/DERExternal.java org/bouncycastle/asn1/x509/Extension.jav a org/bouncycastle/asn1/x509/PKIXNameCo nstraintValidator.java org/bouncycastle/asn1/x509/CertificateLis t.java org/bouncycastle/asn1/x509/X509Name.j ava org/bouncycastle/asn1/x509/X509Extensi on.java org/bouncycastle/asn1/x500/style/Abstrac tX500NameStyle.java org/bouncycastle/crypto/ec/ECPair.java org/bouncycastle/crypto/params/ElGamal PrivateKeyParameters.java org/bouncycastle/crypto/params/DHPrivat eKeyParameters.java org/bouncycastle/crypto/params/DHKeyP arameters.java org/bouncycastle/crypto/params/DSAPara meters.java org/bouncycastle/crypto/params/ElGamal PublicKeyParameters.java org/bouncycastle/crypto/params/DHPara meters.java org/bouncycastle/crypto/params/GOST34 10Parameters.java org/bouncycastle/crypto/params/CramerS houpKeyParameters.java org/bouncycastle/crypto/params/ElGamal KeyParameters.java org/bouncycastle/crypto/params/ElGamal Parameters.java org/bouncycastle/crypto/params/CramerS

ISSUE	SEVERITY	STANDARDS	FILES
			houpParameters.java org/bouncycastle/crypto/params/DHPublicKeyParameters.java org/bouncycastle/crypto/params/CramerShoupPublicKeyParameters.java org/bouncycastle/crypto/params/CramerShoupPrivateKeyParameters.java org/bouncycastle/jcajce/provider/config/ProviderConfigurationPermission.java org/bouncycastle/jcajce/provider/asymmetric/dh/BCDHPublicKey.java org/bouncycastle/jcajce/provider/asymmetric/dh/BCDHPrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/elgamal/BCElGamalPrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/elgamal/BCElGamalPublicKey.java org/bouncycastle/jcajce/provider/asymmetric/gost/BCGOST3410PrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/gost/BCGOST3410PublicKey.java org/bouncycastle/jcajce/provider/asymmetric/rsa/BCRSAPrivateCrtKey.java org/bouncycastle/jcajce/provider/asymmetric/rsa/BCRSAPrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/rsa/BCRSAPublicKey.java org/bouncycastle/jcajce/provider/asymmetric/ec/BCECPrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/ec/BCECPublicKey.java org/bouncycastle/jcajce/provider/asymmetric/dsa/BCDSAPrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/dsa/BCDSAPublicKey.java org/bouncycastle/jcajce/provider/asymmetric/x509/X509CertificateObject.java org/bouncycastle/jcajce/provider/asymmetric/x509/X509CRLObject.java org/bouncycastle/jcajce/provider/asymmetric/x509/X509CRLEntryObject.java org/bouncycastle/jcajce/provider/asymmetric/ecgost/BCECGOST3410PublicKey.java org/bouncycastle/jcajce/provider/asymmetric/ecgost/BCECGOST3410PrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/dstu/BCDSTU4145PrivateKey.java org/bouncycastle/jcajce/provider/asymmetric/dstu/BCDSTU4145PublicKey.java org/bouncycastle/jce/X509LDAPCertStoreParameters.java org/bouncycastle/jce/spec/GOST3410PublicKeyParameterSetSpec.java org/bouncycastle/jce/spec/GOST3410ParameterSpec.java org/bouncycastle/jce/spec/ECParameterSpec.java org/bouncycastle/jce/provider/JDKDSAPrivateKey.java org/bouncycastle/jce/provider/PKIXNameConstraintValidator.java org/bouncycastle/jce/provider/JCERSAPublicKey.java org/bouncycastle/jce/provider/X509CRLO

ISSUE	SEVERITY	STANDARDS	FILES
			bject.java org/bouncycastle/jce/provider/JCEECPublic Key.java
			org/bouncycastle/jce/provider/JCERSAPriv ateKey.java
			org/bouncycastle/jce/provider/JCERSAPriv ateCrtKey.java
			org/bouncycastle/jce/provider/JCEECPrivat eKey.java
			org/bouncycastle/jce/provider/JDKDSAPub licKey.java
			org/bouncycastle/jce/provider/X509CRLEn tryObject.java
			org/bouncycastle/util/Arrays.java
			org/bouncycastle/util/io/pem/PemHeader. java
			org/bouncycastle/math/ec/ECFieldElement .java
			org/bouncycastle/math/ec/ECCurve.java
			org/bouncycastle/math/ec/SimpleBigDeci mal.java
			org/bouncycastle/math/ec/ECPoint.java
			org/bouncycastle/math/ec/custom/djb/Cu rve25519FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP521R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP256R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP192R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP160R2FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP256K1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP192K1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP160R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP224K1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP224R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP384R1FieldElement.java
			org/bouncycastle/math/ec/custom/sec/Se cP128R1FieldElement.java
			org/bouncycastle/math/field/PrimeField.ja va
			org/bouncycastle/math/field/GenericPolyn omialExtensionField.java
			org/bouncycastle/x509/X509CertificatePai r.java
			org/bouncycastle/x509/AttributeCertificate Issuer.java
			org/bouncycastle/x509/AttributeCertificate Holder.java
			org/bouncycastle/cms/SignerId.java
			org/bouncycastle/cms/KeyAgreeRecipientI d.java
			org/bouncycastle/cms/OriginatorId.java
			org/bouncycastle/cms/KeyTransRecipientI d.java
This App uses Java Hash Code. It's a weak hash function and	warning	CVSS V2: 2.3 (low) CWE: CWE-327 - Use of a Broken or Risky	org/bouncycastle/pqc/jcajce/provider/mce liece/BCMcElieceCCA2PublicKey.java

ISSUE	SEVERITY	STANDARDS	FILES
should never be used in Secure (Crypto)Implementation.		Cryptographic Algorithm OWASP MASVS MSTG-CRYPTO-4	org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcEliecePrivateKey.java
			org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcEliecePublicKey.java
			org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcElieceCCA2PrivateKey.java
			org/bouncycastle/pqc/jcajce/provider/rainbow/BCRainbowPrivateKey.java
			org/bouncycastle/pqc/math/linearalgebra/GF2mVector.java
			org/bouncycastle/pqc/math/linearalgebra/GF2Polynomial.java
			org/bouncycastle/pqc/math/linearalgebra/GF2Vector.java
			org/bouncycastle/pqc/math/linearalgebra/Permutation.java
			org/bouncycastle/pqc/math/linearalgebra/GF2Matrix.java
			org/bouncycastle/pqc/math/linearalgebra/GF2mMatrix.java
			org/bouncycastle/pqc/math/linearalgebra/GF2nPolynomial.java
			org/bouncycastle/pqc/math/linearalgebra/GF2nONBElement.java
			org/bouncycastle/pqc/math/linearalgebra/GF2nPolynomialElement.java
			org/bouncycastle/pqc/math/linearalgebra/GF2nField.java
			org/bouncycastle/pqc/math/linearalgebra/PolynomialGF2mSmallM.java
			org/bouncycastle/cert/X509CertificateHolder.java
			org/bouncycastle/cert/AttributeCertificateIssuer.java
			org/bouncycastle/cert/X509AttributeCertificateHolder.java
			org/bouncycastle/cert/AttributeCertificateHolder.java
			org/bouncycastle/cert/X509CRLHolder.java
			org/bouncycastle/cert/selector/X509CertificateHolderSelector.java
			org/bouncycastle/cert/ocsp/CertificateID.java
			org/bouncycastle/cert/ocsp/OCSPResp.java
			org/bouncycastle/cert/ocsp/BasicOCSPResp.java
			org/bouncycastle/cert/ocsp/RespID.java
			org/bouncycastle/pkcs/PKCS10CertificationRequest.java
			org/reactnative/camera/RNCameraViewHelper.java
			org/reactnative/camera/events/BarCodeReadEvent.java
			org/reactnative/camera/events/PictureSavedEvent.java
			io/invertase/firebase/Utils.java
			io/invertase/firebase/database/RNFirebaseDatabaseReference.java
			io/invertase/firebase/database/RNFirebaseDatabase.java
			io/invertase/firebase/database/RNFirebaseDatabaseUtils.java

ISSUE	SEVERITY	STANDARDS	FILES
			io/invertase/firebase/firestore/RNFirebaseFirestore.java
			io/invertase/firebase/firestore/RNFirebaseFirestoreCollectionReference.java
			io/invertase/firebase/auth/RNFirebaseAuth.java
			io/invertase/firebase/admob/RNFirebaseAdMobUtils.java
			io/invertase/firebase/perf/RNFirebasePerformance.java
			io/invertase/firebase/notifications/RNFirebaseNotificationManager.java
			io/invertase/firebase/notifications/DisplayNotificationTask.java
			retrofit2/Utils.java
			cl/json/social/TargetChosenReceiver.java
			com/dieam/reactnativepushnotification/modules/RNPushNotificationHelper.java
			com/horcrux/svg/PropHelper.java
			com/horcrux/svg/TSpanView.java
			com/horcrux/svg/SVGLength.java
			com/airbnb/android/react/maps/AirMapPolylineManager.java
			com/imagepicker/utils/UI.java
			com/lwansbrough/RCTCamera/RCTCamera.java
			com/oblador/vectoricons/VectorIconsModule.java
			com/esri/arcgisruntime/mapping/view/SketchVertex.java
			com/esri/arcgisruntime/security/UserCredential.java
			com/esri/arcgisruntime/internal/n/f.java
			com/esri/arcgisruntime/internal/h/b/ab.java
			com/esri/arcgisruntime/internal/d/ac.java
			com/esri/arcgisruntime/internal/d/i/b/a/aj.java
			com/esri/arcgisruntime/internal/d/a/p.java
			com/esri/arcgisruntime/internal/d/p/g.java
			com/esri/arcgisruntime/internal/p/o.java
			com/esri/arcgisruntime/geometry/Point.java
			com/esri/arcgisruntime/geometry/Geometry.java
			com/wenkesj/voice/VoiceModule.java
			com/reactnativecommunity/webview/RNCWebViewManager.java
			com/reactnativecommunity/netinfo/ConnectivityReceiver.java
			com/rnim/rn/audio/AudioRecorderManager.java
			com/RNFetchBlob/RNFetchBlobFS.java
			com/zmxv/RNSound/RNSoundModule.java
			com/drew/metadata/Face.java
			com/wix/reactnativekeyboardinput/utils/ViewUtils.java
			com/bumptech/glide/util/Util.java
			com/bumptech/glide/util/MultiClassKey.java
			com/bumptech/glide/util/CachedHashCod

ISSUE	SEVERITY	STANDARDS	FILES
			eArrayMap.java com/bumptech/glide/signature/MediaStoreSignature.java com/bumptech/glide/signature/ObjectKey.java com/bumptech/glide/load/Option.java com/bumptech/glide/load/Options.java com/bumptech/glide/load/MultiTransformation.java com/bumptech/glide/load/model/GlideUrl.java com/bumptech/glide/load/model/ModelCache.java com/bumptech/glide/load/model/LazyHeaders.java com/bumptech/glide/load/resource/bitmap/CenterInside.java com/bumptech/glide/load/resource/bitmap/CenterCrop.java com/bumptech/glide/load/resource/bitmap/DrawableTransformation.java com/bumptech/glide/load/resource/bitmap/Rotate.java com/bumptech/glide/load/resource/bitmap/CircleCrop.java com/bumptech/glide/load/resource/bitmap/FitCenter.java com/bumptech/glide/load/resource/bitmap/RoundedCorners.java com/bumptech/glide/load/resource/bitmap/BitmapDrawableTransformation.java com/bumptech/glide/load/resource/gif/GifDrawableTransformation.java com/bumptech/glide/load/engine/EngineKey.java com/bumptech/glide/load/engine/DataCacheKey.java com/bumptech/glide/load/engine/EngineJob.java com/bumptech/glide/load/engine/ResourceCacheKey.java com/bumptech/glide/load/engine/prefill/PreFillType.java com/bumptech/glide/load/engine/bitmap_recycle/AttributeStrategy.java com/bumptech/glide/load/engine/bitmap_recycle/LruArrayPool.java com/bumptech/glide/load/engine/bitmap_recycle/SizeConfigStrategy.java com/bumptech/glide/request/SingleRequest.java

ISSUE	SEVERITY	STANDARDS	FILES
Files may contain hardcoded sensitive informations like usernames, passwords, keys etc.	high	**CVSS V2:** 7.4 (high) **CWE:** CWE-312 - Cleartext Storage of Sensitive Information **OWASP Top 10:** M9: Reverse Engineering **OWASP MASVS:** MSTG-STORAGE-14	vn/bkav/coreca/libotp/DataBaseSQL.java org/eclipse/paho/client/mqttv3/internal/wire/MqttPingResp.java org/eclipse/paho/client/mqttv3/internal/wire/MqttConnack.java org/eclipse/paho/client/mqttv3/internal/wire/MqttDisconnect.java org/eclipse/paho/client/mqttv3/internal/wire/MqttConnect.java org/eclipse/paho/client/mqttv3/internal/wire/MqttPingReq.java org/bouncycastle/crypto/tls/ExporterLabel.java org/reactnative/facedetector/tasks/FileFaceDetectionAsyncTask.java io/invertase/firebase/functions/RNFirebaseFunctions.java io/invertase/firebase/notifications/RNFirebaseNotifications.java io/invertase/firebase/notifications/RNFirebaseNotificationManager.java bolts/MeasurementEvent.java com/dieam/reactnativepushnotification/modules/RNPushNotificationHelper.java com/esri/arcgisruntime/security/DefaultOAuthIntentReceiver.java com/esri/arcgisruntime/internal/d/i/b/a/w.java com/esri/arcgisruntime/internal/p/ab.java com/bumptech/glide/manager/RequestManagerRetriever.java com/bumptech/glide/load/Option.java com/bumptech/glide/load/engine/DataCacheKey.java com/bumptech/glide/load/engine/ResourceCacheKey.java com/bumptech/glide/load/engine/EngineResource.java
This App uses SQL Cipher. SQLCipher provides 256-bit AES encryption to sqlite database files.	info	**CVSS V2:** 0 (info) **OWASP MASVS:** MSTG-CRYPTO-1	vn/bkav/coreca/libotp/DataBaseSQL.java

ISSUE	SEVERITY	STANDARDS	FILES
The App uses an insecure Random Number Generator.	high	**CVSS V2:** 7.5 (high) **CWE:** CWE-330 - Use of Insufficiently Random Values **OWASP Top 10:** M5: Insufficient Cryptography **OWASP MASVS:** MSTG-CRYPTO-6	vn/bkav/coreca/libotp/Keystore/CryptoFile.java vn/bkav/coreca/libotp/Util/RandomString.java org/bouncycastle/asn1/ua/DSTU4145PointEncoder.java org/bouncycastle/math/ec/ECFieldElement.java org/bouncycastle/math/ec/ECCurve.java org/bouncycastle/math/raw/Mod.java org/bouncycastle/pqc/math/linearalgebra/GF2Polynomial.java org/bouncycastle/pqc/math/linearalgebra/GF2nPolynomialField.java org/bouncycastle/pqc/math/linearalgebra/GF2nPolynomialElement.java org/bouncycastle/pqc/math/linearalgebra/GF2nONBField.java org/kobjects/crypt/Crypt.java com/dieam/reactnativepushnotification/utils/ValaUtils.java com/dieam/reactnativepushnotification/modules/RNPushNotification.java com/dieam/reactnativepushnotification/modules/RNPushNotificationListenerService.java com/dieam/reactnativepushnotification/modules/RNPushNotificationListenerServiceGcm.java com/esri/arcgisruntime/mapping/popup/PopupAttachment.java com/esri/arcgisruntime/internal/d/i/a/j.java
			vn/bkav/coreca/libotp/ws/SSLConection.java org/bouncycastle/asn1/eac/EACObjectIdentifiers.java org/bouncycastle/asn1/eac/CertificateHolderAuthorization.java org/bouncycastle/asn1/smime/SMIMECapabilities.java org/bouncycastle/asn1/smime/SMIMECapability.java org/bouncycastle/asn1/crmf/CRMFObjectIdentifiers.java org/bouncycastle/asn1/misc/MiscObjectIdentifiers.java org/bouncycastle/asn1/ntt/NTTObjectIdentifiers.java org/bouncycastle/asn1/cmp/CMPObjectIdentifiers.java org/bouncycastle/asn1/ua/UAObjectIdentifiers.java org/bouncycastle/asn1/bc/BCObjectIdentifiers.java org/bouncycastle/asn1/sec/SECObjectIdentifiers.java org/bouncycastle/asn1/anssi/ANSSIObjectIdentifiers.java

ISSUE	SEVERITY	STANDARDS	FILES
			org/bouncycastle/asn1/microsoft/MicrosoftObjectIdentifiers.java
			org/bouncycastle/asn1/kisa/KISAObjectIdentifiers.java
			org/bouncycastle/asn1/x9/X9ObjectIdentifiers.java
			org/bouncycastle/asn1/nist/NISTObjectIdentifiers.java
			org/bouncycastle/asn1/gnu/GNUObjectIdentifiers.java
			org/bouncycastle/asn1/x509/X509AttributeIdentifiers.java
			org/bouncycastle/asn1/x509/Extension.java
			org/bouncycastle/asn1/x509/X509ObjectIdentifiers.java
			org/bouncycastle/asn1/x509/X509Extensions.java
			org/bouncycastle/asn1/x509/X509Name.java
			org/bouncycastle/asn1/x509/KeyPurposeId.java
			org/bouncycastle/asn1/x509/PolicyQualifierId.java
			org/bouncycastle/asn1/x509/X509Extension.java
			org/bouncycastle/asn1/x509/AccessDescription.java
			org/bouncycastle/asn1/x509/qualified/ETSIQCObjectIdentifiers.java
			org/bouncycastle/asn1/x509/qualified/RFC3739QCObjectIdentifiers.java
			org/bouncycastle/asn1/x509/sigi/SigIObjectIdentifiers.java
			org/bouncycastle/asn1/isismtt/ISISMTTObjectIdentifiers.java
			org/bouncycastle/asn1/x500/style/BCStyle.java
			org/bouncycastle/asn1/x500/style/RFC4519Style.java
			org/bouncycastle/asn1/cms/CMSObjectIdentifiers.java
			org/bouncycastle/asn1/dvcs/DVCSObjectIdentifiers.java
			org/bouncycastle/asn1/iana/IANAObjectIdentifiers.java
			org/bouncycastle/asn1/ocsp/OCSPObjectIdentifiers.java
			org/bouncycastle/asn1/cryptopro/CryptoProObjectIdentifiers.java
			org/bouncycastle/asn1/bsi/BSIObjectIdentifiers.java
		CVSS V2: 4.3 (medium)	org/bouncycastle/asn1/pkcs/PKCSObjectIdentifiers.java
IP Address disclosure	warning	**CWE:** CWE-200 - Exposure of Sensitive Information to an Unauthorized Actor	org/bouncycastle/asn1/oiw/OIWObjectIdentifiers.java
		OWASP MASVS: MSTG-CODE-2	org/bouncycastle/asn1/teletrust/TeleTrusTObjectIdentifiers.java
			org/bouncycastle/jcajce/provider/symmetric/CAST5.java
			org/bouncycastle/jcajce/provider/symmetric/DESede.java
			org/bouncycastle/jcajce/provider/symmetric/ARC4.java

ISSUE	SEVERITY	STANDARDS	FILES
			org/bouncycastle/jcajce/provider/symmetric/DSA.java org/bouncycastle/jcajce/provider/symmetric/AES.java org/bouncycastle/jcajce/provider/symmetric/RC2.java org/bouncycastle/jcajce/provider/digest/SM3.java org/bouncycastle/jcajce/provider/asymmetric/EC.java org/bouncycastle/jcajce/provider/asymmetric/DSA.java org/bouncycastle/jcajce/provider/asymmetric/x509/X509CertificateObject.java org/bouncycastle/jce/PKCS10CertificationRequest.java org/bouncycastle/jce/provider/X509CertificateObject.java org/bouncycastle/jce/provider/CertPathValidatorUtilities.java org/bouncycastle/jce/provider/RFC3280CertPathUtilities.java org/bouncycastle/voms/VOMSAttribute.java org/bouncycastle/x509/CertPathValidatorUtilities.java org/bouncycastle/cms/DefaultCMSSignatureAlgorithmNameGenerator.java org/bouncycastle/cms/CMSSignedHelper.java org/bouncycastle/cms/CMSEnvelopedGenerator.java org/bouncycastle/cms/CMSCompressedDataGenerator.java org/bouncycastle/cms/CMSCompressedDataStreamGenerator.java org/bouncycastle/cms/jcajce/ZlibCompressor.java org/bouncycastle/pqc/asn1/PQCObjectIdentifiers.java org/bouncycastle/pqc/crypto/mceliece/McEliecePKCSCipher.java org/bouncycastle/pqc/crypto/mceliece/McElieceKeyPairGenerator.java org/bouncycastle/pqc/crypto/mceliece/McElieceFujisakiCipher.java org/bouncycastle/pqc/crypto/mceliece/McElieceKobaraImaiCipher.java org/bouncycastle/pqc/crypto/mceliece/McElieceCCA2KeyPairGenerator.java org/bouncycastle/pqc/crypto/mceliece/McEliecePointchevalCipher.java org/bouncycastle/pqc/crypto/gmss/GMSSKeyPairGenerator.java org/bouncycastle/pqc/jcajce/provider/mceliece/McElieceCCA2KeyFactorySpi.java org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcElieceCCA2PublicKey.java org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcEliecePrivateKey.java org/bouncycastle/pqc/jcajce/provider/mceliece/BCMcEliecePublicKey.java org/bouncycastle/pqc/jcajce/provider/mceliece/McElieceKeyFactorySpi.java

ISSUE	SEVERITY	STANDARDS	FILES
			org/bouncycastle/pqc/jcajce/provider/mce liece/BCMcElieceCCA2PrivateKey.java org/bouncycastle/operator/jcajce/Operato rHelper.java org/bouncycastle/operator/jcajce/JceSym metricKeyWrapper.java
Insecure Implementation of SSL. Trusting all the certificates or accepting self signed certificates is a critical Security Hole. This application is vulnerable to MITM attacks	high	**CVSS V2:** 7.4 (high) **CWE:** CWE-295 - Improper Certificate Validation **OWASP Top 10:** M3: Insecure Communication **OWASP MASVS:** MSTG-NETWORK-3	com/RNShwBkavCA/RNShwBkavCAModul e.java vn/bkav/coreca/libotp/ws/SSLConection.ja va vn/bkav/coreca/libotp/ws/SSL.java
SHA-1 is a weak hash known to have hash collisions.	high	**CVSS V2:** 5.9 (medium) **CWE:** CWE-327 - Use of a Broken or Risky Cryptographic Algorithm **OWASP Top 10:** M5: Insufficient Cryptography **OWASP MASVS:** MSTG-CRYPTO-4	org/bouncycastle/tsp/TimeStampTokenGe nerator.java
App can read/write to External Storage. Any App can read data written to External Storage.	high	**CVSS V2:** 5.5 (medium) **CWE:** CWE-276 - Incorrect Default Permissions **OWASP Top 10:** M2: Insecure Data Storage **OWASP MASVS:** MSTG-STORAGE-2	io/invertase/firebase/storage/RNFirebaseS torage.java cl/json/ShareFiles.java cl/json/RNSharePathUtil.java cl/json/ShareFile.java com/imagepicker/utils/MediaUtils.java com/imagepicker/utils/RealPathUtil.java com/lwansbrough/RCTCamera/RCTCamer aModule.java com/reactnativecommunity/webview/RNC WebViewModule.java com/reactnativecommunity/cameraroll/Ca meraRollModule.java com/rnfs/RNFSManager.java com/rnim/rn/audio/AudioRecorderManag er.java com/RNFetchBlob/RNFetchBlobFS.java com/RNFetchBlob/Utils/PathResolver.java com/alinz/parkerdan/shareextension/Real PathUtil.java com/learnium/RNDeviceInfo/RNDeviceMo dule.java
Insecure WebView Implementation. Execution of user controlled code in WebView is a critical Security Hole.	warning	**CVSS V2:** 8.8 (high) **CWE:** CWE-749 - Exposed Dangerous Method or Function **OWASP Top 10:** M1: Improper Platform Usage **OWASP MASVS:** MSTG-PLATFORM-7	bolts/WebViewAppLinkResolver.java
App creates temp file. Sensitive information should never be written into a temp file.	high	**CVSS V2:** 5.5 (medium) **CWE:** CWE-276 - Incorrect Default Permissions **OWASP Top 10:** M2: Insecure Data Storage **OWASP MASVS:** MSTG-STORAGE-2	com/airbnb/android/react/maps/AirMapM odule.java com/airbnb/android/react/maps/FileUtil.ja va com/lwansbrough/RCTCamera/RCTCamer aModule.java com/esri/arcgisruntime/ArcGISRuntimeEn vironment.java com/esri/arcgisruntime/internal/e/b/a.jav a com/reactnativecommunity/webview/RNC WebViewModule.java com/RNFetchBlob/RNFetchBlobBody.java

ISSUE	SEVERITY	STANDARDS	FILES
MD5 is a weak hash known to have hash collisions.	high	**CVSS V2:** 7.4 (high) **CWE:** CWE-327 - Use of a Broken or Risky Cryptographic Algorithm **OWASP Top 10:** M5: Insufficient Cryptography **OWASP MASVS:** MSTG-CRYPTO-4	com/esri/arcgisruntime/internal/d/i/a/j.java com/RNFetchBlob/RNFetchBlobUtils.java
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.	high	**CVSS V2:** 5.9 (medium) **CWE:** CWE-89 - Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection') **OWASP Top 10:** M7: Client Code Quality	com/reactnativecommunity/asyncstorage/ReactDatabaseSupplier.java

⚒ DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION
xmlpull.org	good	**IP:** 74.50.62.60 **Country:** United States of America **Region:** Texas **City:** Dallas **Latitude:** 32.814899 **Longitude:** -96.879204 **View:** Google Map
drewnoakes.com	good	**IP:** 50.17.237.32 **Country:** United States of America **Region:** Virginia **City:** Ashburn **Latitude:** 39.04372 **Longitude:** -77.487488 **View:** Google Map
ns.useplus.org	good	**IP:** 54.83.4.77 **Country:** United States of America **Region:** Virginia **City:** Ashburn **Latitude:** 39.04372 **Longitude:** -77.487488 **View:** Google Map
servicend.hcdt.vn	good	**IP:** 123.27.79.2 **Country:** Viet Nam **Region:** Nam Dinh **City:** Nam Dinh **Latitude:** 20.41667 **Longitude:** 106.166672 **View:** Google Map

DOMAIN	STATUS	GEOLOCATION
xml.apache.org	good	IP: 40.79.78.1 Country: United States of America Region: Virginia City: Boydton Latitude: 36.667641 Longitude: -78.387497 View: Google Map
www.wireless-village.org	good	IP: 104.28.30.61 Country: United States of America Region: California City: San Francisco Latitude: 37.7757 Longitude: -122.395203 View: Google Map
ns.adobe.com	good	No Geolocation information available.
www.w3.org	good	IP: 128.30.52.100 Country: United States of America Region: Massachusetts City: Cambridge Latitude: 42.365078 Longitude: -71.104523 View: Google Map
javax.xml.xmlconstants	good	No Geolocation information available.
xml.org	good	IP: 104.239.240.11 Country: United States of America Region: Texas City: Windcrest Latitude: 29.499678 Longitude: -98.399246 View: Google Map
cipa.jp	good	IP: 118.82.81.189 Country: Japan Region: Tokyo City: Tokyo Latitude: 35.689507 Longitude: 139.691696 View: Google Map
www.aiim.org	good	IP: 107.181.102.220 Country: United States of America Region: West Virginia City: Parkersburg Latitude: 39.266739 Longitude: -81.561508 View: Google Map

DOMAIN	STATUS	GEOLOCATION
twitter.com	good	IP: 104.244.42.193 Country: United States of America Region: California City: San Francisco Latitude: 37.773968 Longitude: -122.410446 View: Google Map
www.npes.org	good	IP: 216.33.126.92 Country: United States of America Region: Virginia City: Vienna Latitude: 38.926575 Longitude: -77.26236 View: Google Map
purl.org	good	IP: 207.241.224.2 Country: United States of America Region: California City: San Francisco Latitude: 37.781734 Longitude: -122.459435 View: Google Map
www.openmobilealliance.org	good	IP: 104.26.9.105 Country: United States of America Region: California City: San Francisco Latitude: 37.7757 Longitude: -122.395203 View: Google Map
raw.githubusercontent.com	good	IP: 151.101.80.133 Country: United States of America Region: California City: San Francisco Latitude: 37.7757 Longitude: -122.395203 View: Google Map
github.com	good	IP: 13.237.44.5 Country: Australia Region: New South Wales City: Sydney Latitude: -33.867851 Longitude: 151.207321 View: Google Map
plus.google.com	good	IP: 172.217.167.110 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map

DOMAIN	STATUS	GEOLOCATION
schemas.xmlsoap.org	good	IP: 104.116.232.20 Country: Australia Region: Western Australia City: Perth Latitude: -31.95224 Longitude: 115.861397 View: Google Map
iptc.org	good	IP: 194.232.153.3 Country: Austria Region: Wien City: Vienna Latitude: 48.208488 Longitude: 16.37208 View: Google Map
service.tms.bkavca.com	good	IP: 18.211.9.206 Country: United States of America Region: Virginia City: Ashburn Latitude: 39.04372 Longitude: -77.487488 View: Google Map
xerces.apache.org	good	IP: 40.79.78.1 Country: United States of America Region: Virginia City: Boydton Latitude: 36.667641 Longitude: -78.387497 View: Google Map
www.facebook.com	good	IP: 157.240.8.35 Country: Australia Region: New South Wales City: Sydney Latitude: -33.867851 Longitude: 151.207321 View: Google Map
apache.org	good	IP: 95.216.24.32 Country: Finland Region: Uusimaa City: Helsinki Latitude: 60.169521 Longitude: 24.93545 View: Google Map
www.zetetic.net	good	IP: 52.85.43.104 Country: Australia Region: Victoria City: Melbourne Latitude: -37.813999 Longitude: 144.963318 View: Google Map

DOMAIN	STATUS	GEOLOCATION
www.bouncycastle.org	good	**IP:** 203.32.61.103 **Country:** Australia **Region:** Victoria **City:** Fitzroy **Latitude:** -37.798389 **Longitude:** 144.978333 **View:** Google Map
vala-a412d.firebaseio.com	good	**IP:** 35.201.97.85 **Country:** United States of America **Region:** California **City:** Mountain View **Latitude:** 37.405991 **Longitude:** -122.078514 **View:** Google Map
103.237.99.177	good	**IP:** 103.237.99.177 **Country:** Viet Nam **Region:** Ha Noi **City:** Hanoi **Latitude:** 21.0245 **Longitude:** 105.841171 **View:** Google Map
pinterest.com	good	**IP:** 151.101.192.84 **Country:** United States of America **Region:** California **City:** San Francisco **Latitude:** 37.7757 **Longitude:** -122.395203 **View:** Google Map
chart.googleapis.com	good	**IP:** 216.58.203.106 **Country:** United States of America **Region:** California **City:** Mountain View **Latitude:** 37.405991 **Longitude:** -122.078514 **View:** Google Map
example.com	good	No Geolocation information available.

🌐 URLS

URL	FILE
http://service.tms.bkavca.com	vn/bkav/coreca/libotp/Webservices.java
https://chart.googleapis.com/chart?chs=200x200&cht=qr&chl=200x200&chld=M	vn/bkav/coreca/libotp/TimeBasedOneTimePasswordUtil.java

URL	FILE
http://schemas.xmlsoap.org/soap/encoding/ http://www.w3.org/2003/05/soap-encoding http://schemas.xmlsoap.org/soap/envelope/ http://www.w3.org/2003/05/soap-envelope http://www.w3.org/2001/XMLSchema http://www.w3.org/1999/XMLSchema http://www.w3.org/2001/XMLSchema-instance http://www.w3.org/1999/XMLSchema-instance	org/ksoap2/SoapEnvelope.java
http://xml.apache.org/xml-soap	org/ksoap2/serialization/MarshalHashtable.java
http://xmlpull.org/v1/doc/features.html#process-docdecl http://xmlpull.org/v1/doc/features.html#process-namespaces http://xmlpull.org/v1/doc/features.html#report-namespace-prefixes http://xmlpull.org/v1/doc/features.html#validation	org/xmlpull/v1/XmlPullParser.java
http://www.bouncycastle.org)	org/bouncycastle/LICENSE.java
www.bouncycastle.org	org/bouncycastle/crypto/examples/DESExample.java
http://www.w3.org/2000/xmlns/	org/kxml2/wap/WbxmlParser.java
http://www.wireless-village.org/CSP http://www.wireless-village.org/PA http://www.wireless-village.org/TRC http://www.openmobilealliance.org/DTD/WV-CSP http://www.openmobilealliance.org/DTD/WV-PA http://www.openmobilealliance.org/DTD/WV-TRC www.wireless-village.org	org/kxml2/wap/wv/WV.java
http://www. https://www.	org/kxml2/wap/wml/Wml.java
http://xmlpull.org/v1/doc/features.html#indent-output	org/kxml2/io/KXmlSerializer.java
http://xmlpull.org/v1/doc/ http://www.w3.org/2000/xmlns/	org/kxml2/io/KXmlParser.java
http://xmlpull.org/v1/doc/properties.html#xmldecl-standalone	org/kxml2/kdom/Document.java
file:///	org/kobjects/util/Util.java
javascript:boltsWebViewAppLinkResolverResult.setValue((function()	bolts/WebViewAppLinkResolver.java
http://localhost/	retrofit2/Response.java
https://www.facebook.com/sharer/sharer.php?u={url}	cl/json/social/FacebookPagesManagerShare.java
https://plus.google.com/share?url={url}	cl/json/social/GooglePlusShare.java
https://twitter.com/intent/tweet?text={message}&url={url}	cl/json/social/TwitterShare.java

URL	FILE
https://www.facebook.com/sharer/sharer.php?u={url}	cl/json/social/FacebookShare.java
https://pinterest.com/pin/create/button/?url={url}&media=$media&description={message}	cl/json/social/PinterestShare.java
https://servicend.hcdt.vn:7443	com/dieam/reactnativepushnotification/http/HttpClient.java
http://example.com/	com/esri/arcgisruntime/internal/d/i/b/a/j.java
http://103.237.99.177/TMS/services/TMService?wsdl	com/RNSnwBkavCA/RNSnwBkavCAModule.java

URL	FILE
http://ns.adobe.com/StockPhoto/1.0/ http://ns.adobe.com/asf/1.0/ http://ns.adobe.com/bwf/bext/1.0/ http://ns.adobe.com/camera-raw-settings/1.0/ http://ns.adobe.com/creatorAtom/1.0/ http://purl.org/dc/elements/1.1/ http://purl.org/dc/1.1/ http://ns.adobe.com/DICOM/ http://ns.adobe.com/xmp/1.0/DynamicMedia/ http://ns.adobe.com/exif/1.0/ http://cipa.jp/exif/1.0/ http://ns.adobe.com/exif/1.0/aux/ http://iptc.org/std/Iptc4xmpCore/1.0/xmlns/ http://iptc.org/std/Iptc4xmpExt/2008-02-29/ http://ns.adobe.com/iX/1.0/ http://ns.adobe.com/jp2k/1.0/ http://ns.adobe.com/jpeg/1.0/ http://ns.adobe.com/pdf/1.3/ http://www.aiim.org/pdfa/ns/extension/ http://www.aiim.org/pdfa/ns/field# http://www.aiim.org/pdfa/ns/id/ http://www.aiim.org/pdfa/ns/property# http://www.aiim.org/pdfa/ns/schema# http://www.aiim.org/pdfa/ns/type# http://ns.adobe.com/pdfx/1.3/ http://www.npes.org/pdfx/ns/id/ http://ns.adobe.com/photoshop/1.0/ http://ns.useplus.org/ldf/xmp/1.0/ http://ns.adobe.com/png/1.0/ http://ns.adobe.com/album/1.0/ http://www.w3.org/1999/02/22-rdf-syntax-ns# http://ns.adobe.com/riff/info/ http://ns.adobe.com/xmp/1.0/Script/ http://ns.adobe.com/swf/1.0/ http://ns.adobe.com/tiff/1.0/ http://ns.adobe.com/xmp/transient/1.0/ http://ns.adobe.com/TransformXMP/ http://ns.adobe.com/xmp/wav/1.0/ http://www.w3.org/XML/1998/namespace http://ns.adobe.com/xap/1.0/ http://ns.adobe.com/xap/1.0/bj/ http://ns.adobe.com/xap/1.0/mm/ http://ns.adobe.com/xmp/note/ http://ns.adobe.com/xap/1.0/rights/ http://ns.adobe.com/xap/1.0/sType/Dimensions# http://ns.adobe.com/xap/1.0/sType/Font# http://ns.adobe.com/xap/1.0/g/ http://ns.adobe.com/xmp/Identifier/qual/1.0/ http://ns.adobe.com/xap/1.0/g/img/ http://ns.adobe.com/xap/1.0/sType/ManifestItem# http://ns.adobe.com/xap/1.0/t/pg/ http://ns.adobe.com/xap/1.0/sType/ResourceEvent# http://ns.adobe.com/xap/1.0/sType/ResourceRef# http://ns.adobe.com/xap/1.0/sType/Job# http://ns.adobe.com/xap/1.0/sType/Version# http://ns.adobe.com/xap/1.0/t/	com/adobe/xmp/XMPConst.java

URL	FILE
http://purl.org/dc/elements/1.1/ http://ns.adobe.com/xap/1.0/ http://ns.adobe.com/tiff/1.0/ http://ns.adobe.com/exif/1.0/ http://ns.adobe.com/exif/1.0/aux/	com/adobe/xmp/impl/Utils.java
http://ns.adobe.com/xap/1.0/ http://purl.org/dc/elements/1.1/ http://ns.adobe.com/tiff/1.0/ http://ns.adobe.com/exif/1.0/ http://ns.adobe.com/exif/1.0/aux/	com/adobe/xmp/impl/XMPSchemaRegistryImpl.java
http://www.w3.org/1999/02/22-rdf-syntax-ns# http://ns.adobe.com/xap/1.0/	com/adobe/xmp/impl/XMPSerializerRDF.java
http://purl.org/dc/elements/1.1/	com/adobe/xmp/impl/ParseRDF.java
http://javax.xml.XMLConstants/feature/secure-processing http://apache.org/xml/features/disallow-doctype-decl http://xml.org/sax/features/external-general-entities http://xerces.apache.org/xerces2-j/features.html#disallow-doctype-decl http://xml.org/sax/features/external-parameter-entities http://xerces.apache.org/xerces2-j/features.html#external-parameter-entities http://apache.org/xml/features/nonvalidating/load-external-dtd	com/adobe/xmp/impl/XMPMetaParser.java
http://purl.org/dc/elements/1.1/ http://ns.adobe.com/exif/1.0/	com/adobe/xmp/impl/XMPNormalizer.java
https://drewnoakes.com/code/exif/ https://raw.githubusercontent.com/drewnoakes/metadata-extractor-images/master/%s/%s) https://raw.githubusercontent.com/drewnoakes/metadata-extractor-images/master/%s/metadata/%s.txt)	com/drew/tools/ProcessAllImagesInFolderUtility.java
https://raw.githubusercontent.com/drewnoakes/metadata-extractor-images/master/%s	com/drew/imaging/ImageMetadataReader.java
http://purl.org/dc/elements/1.1/ http://ns.adobe.com/exif/1.0/aux/ http://ns.adobe.com/exif/1.0/ http://ns.adobe.com/tiff/1.0/ http://ns.adobe.com/xap/1.0/	com/drew/metadata/Schema.java
http://ns.adobe.com/xmp/note/ http://ns.adobe.com/xmp/extension/ http://ns.adobe.com/xap/1.0/	com/drew/metadata/xmp/XmpReader.java
file:///android_asset/	com/bumptech/glide/load/model/AssetUriLoader.java
data:image	com/bumptech/glide/load/model/DataUrlLoader.java

URL	FILE
https://vala-a412d.firebaseio.com https://www.zetetic.net/sqlcipher/ https://www.zetetic.net/sqlcipher/license/ https://github.com/sqlcipher/android-database-sqlcipher	Android String Resource

🗄 FIREBASE DATABASES

FIREBASE URL	DETAILS
https://vala-a412d.firebaseio.com	info App talks to a Firebase Database.

🕵 TRACKERS

TRACKER	URL
Facebook Analytics	https://reports.exodus-privacy.eu.org/trackers/66
Facebook Login	https://reports.exodus-privacy.eu.org/trackers/67
Facebook Places	https://reports.exodus-privacy.eu.org/trackers/69
Facebook Share	https://reports.exodus-privacy.eu.org/trackers/70
Google Firebase Analytics	https://reports.exodus-privacy.eu.org/trackers/49

▶ PLAYSTORE INFORMATION

Title: COVID-19

Score: 4.15 **Installs:** 100,000+ **Price:** 0 **Android Version Support:** 4.4 and up **Category:** Medical **Play Store URL:** com.Eha.covid_19

Developer Details: Electronic Health Administration, Electronic+Health+Administration, None, http://ehealth.gov.vn/, ttudcnttbyt@gmail.com,

Release Date: Mar 11, 2020 **Privacy Policy:** Privacy link

Description:

COVID-19 is a free application developed by the cooperation between Advanced International Joint Stock Company (AIC Group) and Electronic Health Administration - Ministry of Health, Viet Nam. It provides ultimate guidances for preventing and fighting against respiratory diseases caused by a new strain of coronavirus (officially named COVID-19). Features: - Virtual Medical Assistant (Chatbot): conducts one-on-one conversations with users by human sounding voice, works in real time and answers the questions about COVID-19 on the spot; - Board-certified Specialist Consultation: allow people to interact with a group of specialists at National Hospital for Tropical Diseases by chatting, audio/video calling for medical advices. - Interactions between Government and citizens: Users can send comments, requests, supports, and travel or health declaration. Users also can get the most recent advices and notices from the Government, WHO, CDC, NHC, Johns Hopkins University and other medical instituations. - COVID-19 Live Updates: shows live statistics and rolling updates from coronavirus disease in Viet Nam and the world. The numbers of cases per day, per week, per month, confirmed cases, increased numbers, etc. are analyzed and visually shown in map, graphics, number tables with comparisons and simulations by a group of data analysts continuously working 24/7. - COVID-19 Map: automatically synchronizes world wide data from WHO, CDC, NHC, etc. - Prevention of COVID-19: provides guidances documents, videos, animation clips from WHO, Ministry of Health, Viet Nam and other medical

institutions. - Medical Facility GPS: enables users to search nearby hospitals, pharmacies, and certified COVID-19 test labs.

App Security Score Calculation

Every app is given an ideal score of 100 to begin with.
For every findings with severity high we reduce 15 from the score.
For every findings with severity warning we reduce 10 from the score.
For every findings with severity good we add 5 to the score.
If the calculated score is greater than 100, then the app security score is considered as 100.
And if the calculated score is less than 0, then the app security score is considered as 10.

Risk Calculation

APP SECURITY SCORE	RISK
0 - 15	CRITICAL
16 - 40	HIGH
41 - 70	MEDIUM
71 - 100	LOW

Report Generated by - MobSF v3.0.8 Beta

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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