AppSweep
GUARDSQUARE

BUILD REPORT SUMMARY

appsweep.guardsquare.com

Leveraging AppSweep helps you identify and fix security issues in your code and dependencies with actionable recommendations and insights that will help you build more secure mobile apps.

11 MASTG Kotlin App

owasp.mastgkotlin · Analysed Apr 28 2023, 16:32

Version

1.0

App size

10.58 MB

Commit Hash

03942dfd2d2799f67ffed62a0a2b17a02642eb1f

App composition

Bytecode size:	10.00 MB
Number of Java classes:	4473
Number of Kotlin classes:	2106

Analysis duration

1m 8s

Obfuscation mapping

✕ Not Provided

Tags

Debug

Issue Summary

3 **High Severity Issues**
2 internal · 1 in dependencies

6 **Medium Severity Issues**
4 internal · 2 in dependencies

4 **Low Severity Issues**
3 internal · 4 in dependencies

46 **Dependencies**
38 transitive dependencies

High ● **Android manifest attribute `android:debuggable="true"` is set**

The attribute `android:debuggable` is set to `true` in the app's manifest. This means that your app can be debugged using Java Wired Debugging Protocol (JWDP). Using JWDP, it is possible to gain full access to the Java process and execute arbitrary code in the context of a debuggable app.
Releasing an app with this flag set can lead to leakage of sensitive information and leaves the app vulnerable to debugging.
Note that setting `android:debuggable` to `false` is necessary to prevent debugging, but is not sufficient. An adversary can still connect a debugger and use it to reverse-engineer or tamper with the app's behaviour.

Recommendations

Ensure that the flag `android:debuggable` is set to `false` in your AndroidManifest.xml when building for release.

Fix with DexGuard

Setting the attribute `android:debuggable` to `"false"` is necessary to prevent debugging, but is not sufficient. An adversary can still connect a debugger and use it to reverse-engineer or tamper with the app's behaviour.
Enable debugging protection in DexGuard using this configuration line:

```
-raspchecks debug
```

or consult the RASP section in your Dexguard Manual to learn more.

External Links

OWASP recommendations regarding debuggable flags

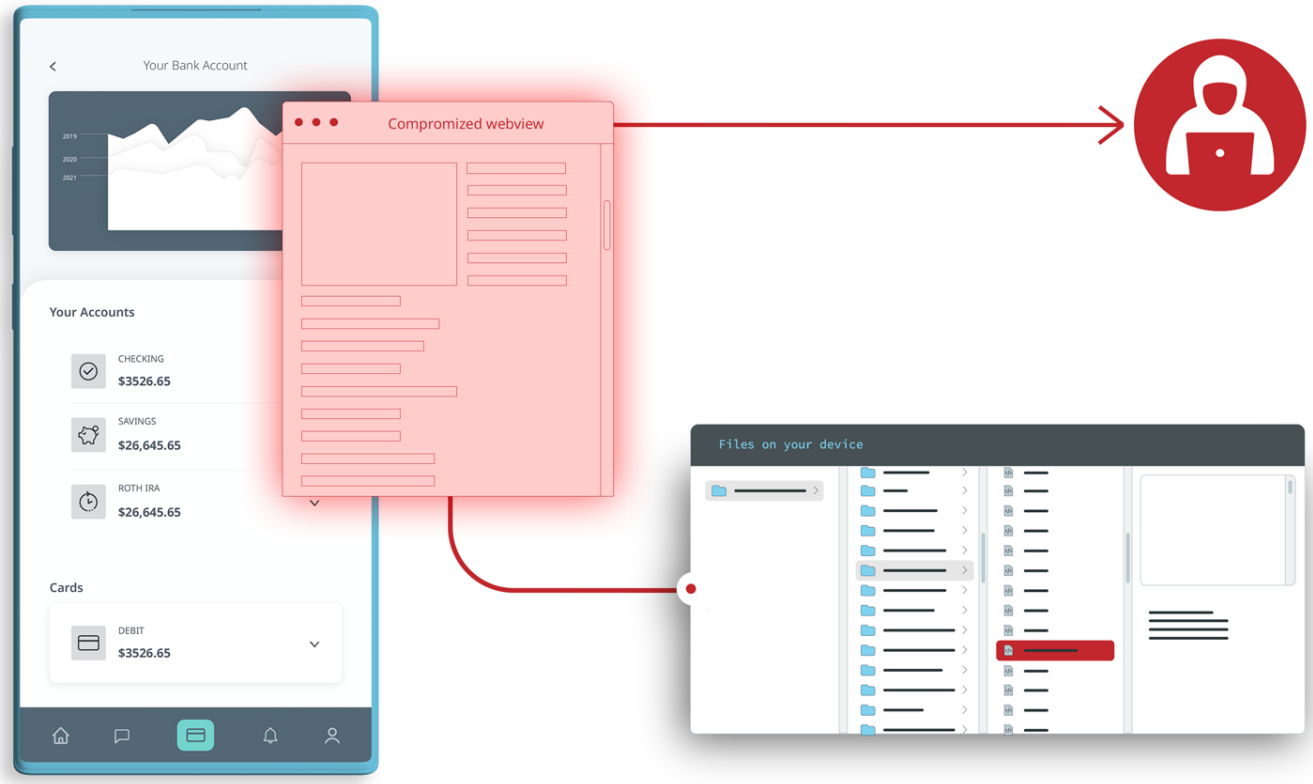
1 Finding

- AndroidManifest.xml

High

The app enables dangerous file access via `setAllowFileAccessFromFileURLs`

Your app uses the API setAllowFileAccessFromFileURLs, to enable dangerous file access. This method is deprecated and is not considered secure.
If local file access is enabled in a WebView, an attacker who gains access to that WebView, for example through a man-in-the-middle (MitM) attack, can gain access to user's files on the device through the vulnerable app.



Recommendations

Use `androidx#webkit#WebViewAssetLoader` to load file content securely.

External Links

WebSettings | Android Developers

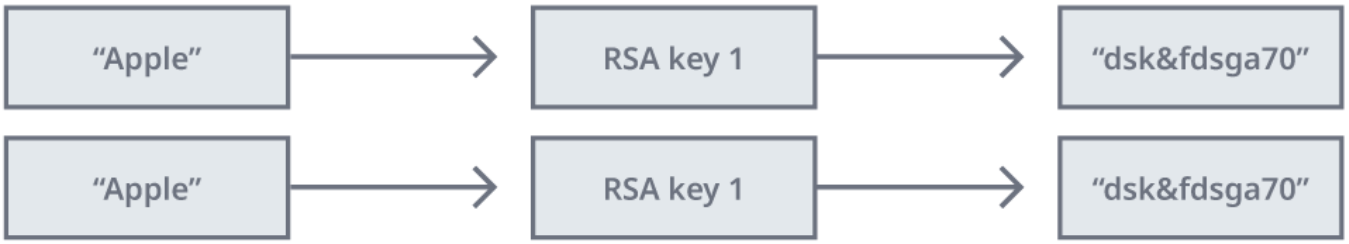
1 Finding

- **setAllowFileAccessFromFileURLs**
  owasp.mastgkotlin.InsecureWebViewActivity:24

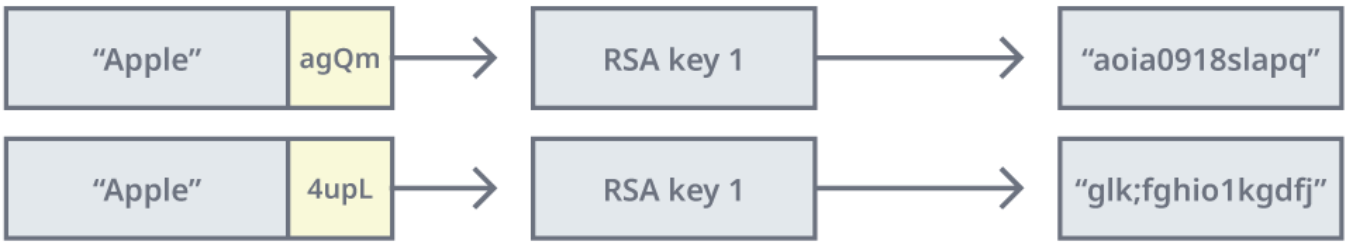
High

Asymmetric cipher with insecure padding used

Asymmetric encryption algorithms should be used with OAEP padding. Secure paddings must be used to protect against a number of attacks against RSA.
The simplest implementation of RSA is deterministic. This means that for the same message and the same encryption key the result will always be the same. In most cases it is important to not reveal the fact that an identical message is being sent. In case when the same message is sent to multiple recipients encrypted with several public keys, an additional attack can be performed that may retrieve the message without having any of the recipients' keys.
Padding is a way to diversify encryption by adding extra random information. With padding, the above issues do not apply and the encryption is safe to use.
Without padding, the same data generates the same ciphertext for the same keypair.



With padding, even the same data always generates different ciphertext.



Using the RSA algorithm without Optimal Asymmetric Encryption Padding (OAEP) might weaken the encryption.

Recommendations

Use `OAEPPadding` to secure your asymmetric cipher.

External Links

CWE-780: Use of RSA Algorithm without OAEP

Attacks against plain RSA without padding

M5: Insufficient CryptographyTestValidDescription

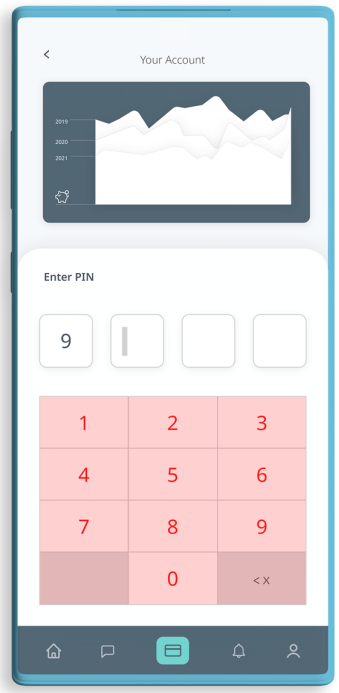
OWASP recommendations regarding RSA algorithms not supporting padding

2 Findings

- de.adorsys.android.securestoragelibrary.a (de.adorsys.android:securestoragelibrary:0.0.2)
- de.adorsys.android.securestoragelibrary.a (de.adorsys.android:securestoragelibrary:0.0.2)

Medium ● **Elements of `RegisterActivity` are not protected against tapjacking**

Tapjacking is a technique that allows an attacker to capture the taps in your app (for example, on a virtual pin-pad), or trick users into making taps without their consent (for example, switching off an important security setting).
Tapjacking protection is especially important for security relevant parts of the app like pin or password entry.



The essence of the attack is that a malicious app places a window over your app.
If the attacker wants to capture user clicks, that window will be transparent. The overlay window gets an opportunity to learn about the taps made in your app without the device user being aware.
If the attacker wants to trick the user into clicking something in your app, the window will be opaque with fake controls lying exactly over the corresponding controls in your app.
For instance, as seen in the image to the left, placing transparent overlays over each button on a pin pad allows an attacker to capture users' pin codes.

Recommendations

Add `filterTouchesWhenObscured="true"` to the relevant view elements in the respective layout files, or set the protection programmatically.

External Links

Android Developer - View Security

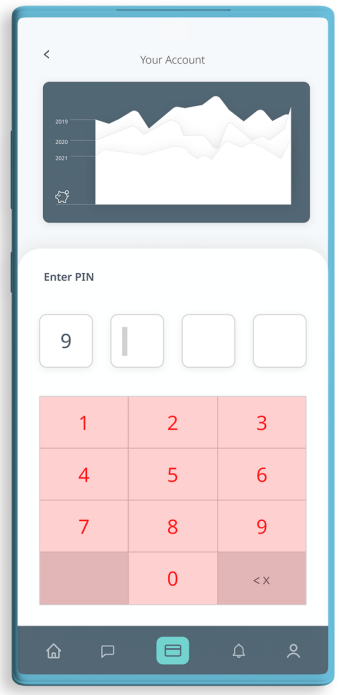
OWASP recommendations regarding tapjacking

1 Finding

- **Button**
  res/layout/activity_main.xml

Medium ● **Elements of `MainActivity` are not protected against tapjacking**

Tapjacking is a technique that allows an attacker to capture the taps in your app (for example, on a virtual pin-pad), or trick users into making taps without their consent (for example, switching off an important security setting).
Tapjacking protection is especially important for security relevant parts of the app like pin or password entry.



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For instance, as seen in the image to the left, placing transparent overlays over each button on a pin pad allows an attacker to capture users' pin codes.

Recommendations

Add `filterTouchesWhenObscured="true"` to the relevant view elements in the respective layout files, or set the protection programmatically.

External Links

Android Developer - View Security

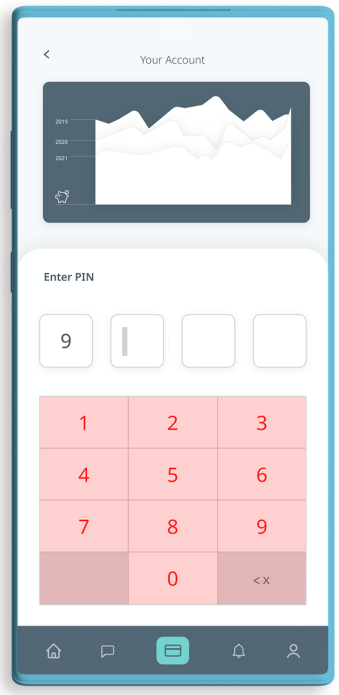
OWASP recommendations regarding tapjacking

1 Finding

- **Button**
  res/layout/activity_main.xml

Medium ● **Elements of `MenuActivity` are not protected against tapjacking**

Tapjacking is a technique that allows an attacker to capture the taps in your app (for example, on a virtual pin-pad), or trick users into making taps without their consent (for example, switching off an important security setting).
Tapjacking protection is especially important for security relevant parts of the app like pin or password entry.



The essence of the attack is that a malicious app places a window over your app.
If the attacker wants to capture user clicks, that window will be transparent. The overlay window gets an opportunity to learn about the taps made in your app without the device user being aware.
If the attacker wants to trick the user into clicking something in your app, the window will be opaque with fake controls lying exactly over the corresponding controls in your app.
For instance, as seen in the image to the left, placing transparent overlays over each button on a pin pad allows an attacker to capture users' pin codes.

Recommendations

Add `filterTouchesWhenObscured="true"` to the relevant view elements in the respective layout files, or set the protection programmatically.

External Links

Android Developer - View Security

OWASP recommendations regarding tapjacking

1 Finding

- **Button**
  res/layout/activity_menu.xml

Medium

Insecure biometric class used

Usage of an insecure biometry class - either deprecated or third party biometric SDK. Only `BiometricManager` and `BiometricPrompt` are considered secure and advised for use.

Recommendations

Only use official, not deprecated biometric classes. Other classes can have security issues and facilitate breaking biometric authentication.

External Links

OWASP biometric authentication recommendations

15 Findings

- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
- 1 occurences in androidx.core.hardware.fingerprint
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- 1 occurences in androidx.core.hardware.fingerprint

Medium

Outdated protocol SSL enabled

Initializing SSLContext with a generic or old TLS version may enable outdated and insecure communication protocols on devices with API level less than 26.

Recommendations

Explicitly initialize SSLContext with `TLSv1.2` or `TLSv1.3`. Additionally, make sure your server configuration only allows `TLSv1.2` or newer versions.

External Links

OWASP recommendations regarding outdated TLS certificates

1 Finding

- com.github.kittinunf.fuel.core.FuelManager$socketFactory$2:33 (com.github.kittinunf.fuel:fuel:1.12.1)

Medium

The app allows cleartext communication

Cleartext communication should be disabled as it allows attackers to spy on your network traffic. Android allows developers to configure their cleartext communication through the manifest or by importing a network security configuration file. Beware, if you're adding a network configuration file, it will always override the values in the manifest. Even if the flag is not set in the network security file the default value of that flag will override the values set in the manifest. Additionally, below Android 28 cleartext is enabled by default and starting from Android 28 the flag is disabled by default.

Recommendations

Ensure that the flag `cleartextTrafficPermitted` is set to `false` in your `base-config` tag of the security network file. If the app doesn't contain a network security configuration, ensure `android:usesCleartextTraffic` is set to `false` in the `application` tag of the manifest.

External Links

MASTG: Verifying Data Encryption on the Network

Android Documentation - security config

1 Finding

- AndroidManifest.xml

Low

The app logs information

Logs may give important information to an attacker, in particular, once sensitive data is logged. But even the log messages in the code itself can give a reverse engineer a lot of information what is happening, and can make reverse engineering much easier.
Keeping logging in your app also increases the app size, often unnecessarily.

Recommendations

Remove all logging statements before releasing the app. Using tools, this can be done in an automated way.

Fix with ProGuard

The ProGuard configuration can be modified to remove logging by adding

```
-assumenosideeffects class ↩️
                  android.util.Log {
    public static int v(...);
    public static int i(...);
    public static int w(...);
    public static int d(...);
    public static int e(...);
}
```

More detailed information can be found in the ProGuard Community.

External Links

OWASP recommendations regarding using loggers

36 Findings

- 2 occurences in androidx.appcompat.view.menu
- 12 occurences in androidx.loader.app
- 3 occurences in androidx.appcompat.view
- 1 occurences in androidx.tracing
- 8 occurences in androidx.core.os
- 27 occurences in androidx.core.graphics.drawable

- 9 occurences in androidx.vectordrawable.graphics.drawable
- 1 occurences in androidx.core.view.inputmethod
- 13 occurences in androidx.core.graphics
- 1 occurences in androidx.customview.widget
- 1 occurences in androidx.loader.content
- 32 occurences in androidx.appcompat.app
- 58 occurences in androidx.constraintlayout.motion.widget
- 1 occurences in androidx.core.content.pm
- 9 occurences in androidx.core.util
- 7 occurences in androidx.constraintlayout.helper.widget
- 4 occurences in de.adorsys.android.securestoragelibrary
- 7 occurences in androidx.core.text
- 53 occurences in androidx.constraintlayout.widget
- 4 occurences in androidx.core.content
- 15 occurences in org.jetbrains.anko
- 2 occurences in androidx.activity.result
- 2 occurences in androidx.viewpager.widget
- 8 occurences in androidx.core.content.res
- 2 occurences in androidx.concurrent.futures
- 8 occurences in androidx.constraintlayout.motion.utils
- 2 occurences in androidx.constraintlayout.utils.widget
- 2 occurences in androidx.appcompat.graphics.drawable
- 13 occurences in androidx.core.widget
- 101 occurences in androidx.fragment.app
- 3 occurences in androidx.startup
- 32 occurences in androidx.core.view
- 30 occurences in androidx.core.app
- 58 occurences in androidx.appcompat.widget
- 1 occurences in androidx.core.view.accessibility
- 3 occurences in owasp.mastgkotlin

Low

Legacy cryptographic classes used

Several classes in the `java.security` package have been marked as legacy and must no longer be used. Please refer to the Android SDK documentation for information on how to securely use cryptography in your app.

Recommendations

Only use supported cryptography classes.

External Links

Check the Android SDK documentation to find out which cryptography classes are no longer supported

OWASP recommendations regarding legacy cryptography class usage

2 Findings

- **Legacy class java.security.PrivilegedAction used**
  1 occurences in
  com.google.gson.internal.bind

- **Legacy class java.security.AccessController used**
  1 occurences in
  com.google.gson.internal.bind

Low

Classes contain Kotlin Metadata

Kotlin Metadata may give important information to a reverse engineer, like class names.

Recommendations

Kotlin Metadata should be removed from the app to minimize its size and make reverse-engineering more difficult. This can be done automatically with Guardsquare's ProGuard or DexGuard.

Fix with ProGuard

By default, ProGuard will remove all Kotlin Metadata. If you do not have a specific reason to keep parts of this Metadata, you can use the ProGuard default configuration.

External Links

Kotlin Metadata Printer | Guardsquare

98 Findings

Kotlin Metadata class annotation found
- 22 occurences in kotlinx.coroutines.selects

Kotlin Metadata class annotation found
- 17 occurences in androidx.core.splashscreen

Kotlin Metadata class annotation found
- 3 occurences in androidx.core.content

Kotlin Metadata class annotation found
- 20 occurences in kotlin.internal

Kotlin Metadata class annotation found
- 47 occurences in kotlinx.coroutines.flow.internal

Kotlin Metadata class annotation found
- 6 occurences in org.jetbrains.anko.custom

Kotlin Metadata class annotation found
- 16 occurences in androidx.core.graphics

Kotlin Metadata class annotation found
- 5 occurences in org.jetbrains.anko.internals

Kotlin Metadata class annotation found
- 13 occurences in androidx.savedstate

Kotlin Metadata class annotation found
- 8 occurences in org.jetbrains.anko.collections

Kotlin Metadata class annotation found
- 62 occurences in com.github.kittinunf.fuel.core

Kotlin Metadata class annotation found
- 5 occurences in kotlin.concurrent

Kotlin Metadata class annotation found
- 1 occurences in kotlin.jdk7

Kotlin Metadata class annotation found
- 7 occurences in com.github.kittinunf.fuel.util

Kotlin Metadata class annotation found
- 9 occurences in androidx.lifecycle.viewmodel

Kotlin Metadata class annotation found
- 76 occurences in kotlin.sequences

Kotlin Metadata class annotation found
- 115 occurences in kotlinx.coroutines.channels

Kotlin Metadata class annotation found
- 13 occurences in com.github.kittinunf.fuel.core.interceptors

Kotlin Metadata class annotation found
- 23 occurences in kotlinx.coroutines.sync

Kotlin Metadata class annotation found
- 1 occurences in kotlin.jvm.internal.unsafe

Kotlin Metadata class annotation found
- 5 occurences in kotlin.io.path

Kotlin Metadata class annotation found
- 3 occurences in androidx.annotation

Kotlin Metadata class annotation found
- 2 occurences in com.github.kittinunf.fuel.android.util

Kotlin Metadata class annotation found
- 2 occurences in kotlin.system

Kotlin Metadata class annotation found
- 1 occurences in androidx.core.database

Kotlin Metadata class annotation found
- 3 occurences in androidx.activity.result

Kotlin Metadata class annotation found
- 8 occurences in androidx.core.widget

Kotlin Metadata class annotation found
- 38 occurences in kotlin.io

Kotlin Metadata class annotation found
- 1 occurences in kotlin.jvm.jdk8

Kotlin Metadata class annotation found
- 239 occurences in kotlinx.coroutines.flow

Kotlin Metadata class annotation found
- 5 occurences in kotlin.math

Kotlin Metadata class annotation found
- 2 occurences in com.github.kittinunf.fuel.toolbox

Kotlin Metadata class annotation found
- 2 occurences in kotlin.experimental

Kotlin Metadata class annotation found
- 32 occurences in androidx.core.util

Kotlin Metadata class annotation found
- 1 occurences in kotlin.random.jdk8

Kotlin Metadata class annotation found
- 24 occurences in kotlin.coroutines

Kotlin Metadata class annotation found
- 1 occurences in androidx.core.location

Kotlin Metadata class annotation found
- 5 occurences in kotlin.streams.jdk8

Kotlin Metadata class annotation found
- 2 occurences in kotlin.internal.jdk7

Kotlin Metadata class annotation found
- 4 occurences in androidx.core.graphics.drawable

Kotlin Metadata class annotation found
- 91 occurences in org.jetbrains.anko

Kotlin Metadata class annotation found
- 15 occurences in androidx.core.view

Kotlin Metadata class annotation found
- 32 occurences in androidx.activity.result.contract

Kotlin Metadata class annotation found
- 8 occurences in kotlinx.android.parcel

Kotlin Metadata class annotation found
- 22 occurences in kotlin.jvm

Kotlin Metadata class annotation found
- 7 occurences in kotlinx.coroutines.test

Kotlin Metadata class annotation found
- 11 occurences in kotlin.contracts

Kotlin Metadata class annotation found
- 1 occurences in com.github.kittinunf.fuel.android.core

Kotlin Metadata class annotation found
- 76 occurences in kotlinx.coroutines.internal

Kotlin Metadata class annotation found
- 12 occurences in androidx.core.os

Kotlin Metadata class annotation found
- 5 occurences in com.github.kittinunf.fuel.rx

Kotlin Metadata class annotation found
- 10 occurences in kotlin.coroutines.intrinsics

Kotlin Metadata class annotation found
- 1 occurences in kotlin.collections.jdk8

Kotlin Metadata class annotation found
- 1 occurences in kotlin.js

Kotlin Metadata class annotation found
- 1 occurences in androidx.core.database.sqlite

Kotlin Metadata class annotation found
- 8 occurences in kotlin.properties

Kotlin Metadata class annotation found
- 14 occurences in androidx.core.animation

Kotlin Metadata class annotation found
- 2 occurences in kotlin.internal.jdk8

Kotlin Metadata class annotation found
- 7 occurences in com.github.kittinunf.fuel

Kotlin Metadata class annotation found
- 24 occurences in kotlin.jvm.functions

Kotlin Metadata class annotation found
- 1 occurences in kotlin.jvm.optionals

Kotlin Metadata class annotation found
- 1 occurences in kotlin.time.jdk8

Kotlin Metadata class annotation found
- 68 occurences in kotlin.text

Kotlin Metadata class annotation found
- 176 occurences in kotlinx.coroutines

Kotlin Metadata class annotation found
- 1 occurences in collections

Kotlin Metadata class annotation found
- 132 occurences in kotlin.collections

Kotlin Metadata class annotation found
- 1 occurences in owasp.mastgkotlin.util

Kotlin Metadata class annotation found
- 27 occurences in kotlinx.coroutines.debug.internal

Kotlin Metadata class annotation found
- 4 occurences in androidx.activity

Kotlin Metadata class annotation found
- 3 occurences in androidx.annotation.experimental

Kotlin Metadata class annotation found
- 37 occurences in kotlin.ranges

Kotlin Metadata class annotation found
- 51 occurences in kotlin.reflect

Kotlin Metadata class annotation found
- 28 occurences in kotlin.time

Kotlin Metadata class annotation found
- 15 occurences in kotlin.random

Kotlin Metadata class annotation found
- 1 occurences in kotlin.coroutines.cancellation

Kotlin Metadata class annotation found
- 2 occurences in com.github.kittinunf.fuel.android.extension

Kotlin Metadata class annotation found
- 1 occurences in androidx.core.net

Kotlin Metadata class annotation found
- 11 occurences in kotlin.collections.unsigned

Kotlin Metadata class annotation found
- 4 occurences in kotlinx.android.extensions

Kotlin Metadata class annotation found
- 16 occurences in kotlin.coroutines.jvm.internal

Kotlin Metadata class annotation found
- 23 occurences in kotlin.comparisons

Kotlin Metadata class annotation found
- 1 occurences in kotlin.text.jdk8

Kotlin Metadata class annotation found
- 9 occurences in com.github.kittinunf.fuel.core.requests

Kotlin Metadata class annotation found
- 12 occurences in androidx.core.transition

Kotlin Metadata class annotation found
- 6 occurences in kotlin.annotation

Kotlin Metadata class annotation found
- 22 occurences in kotlinx.coroutines.scheduling

Kotlin Metadata class annotation found
- 10 occurences in com.github.kittinunf.result

Kotlin Metadata class annotation found
- 8 occurences in kotlinx.coroutines.android

Kotlin Metadata class annotation found
- 49 occurences in kotlin.jvm.internal

Kotlin Metadata class annotation found
- 28 occurences in androidx.lifecycle

Kotlin Metadata class annotation found
- 9 occurences in kotlin.jvm.internal.markers

Kotlin Metadata class annotation found
- 19 occurences in kotlin.collections.builders

Kotlin Metadata class annotation found
- 2 occurences in kotlinx.coroutines.intrinsics

Kotlin Metadata class annotation found
- 2 occurences in com.github.kittinunf.fuel.core.deserializers

Kotlin Metadata class annotation found
- 7 occurences in owasp.mastgkotlin

Kotlin Metadata class annotation found
- 2 occurences in androidx.core.content.res

Kotlin Metadata class annotation found
- 7 occurences in androidx.core.text

Kotlin Metadata class annotation found
- 113 occurences in kotlin

Low

Calls to Kotlin assertions leak information

The class `kotlin.jvm.internal.Intrinsics` contains methods injected by the Kotlin compiler in order to perform checks or assertions on parameters and other elements of the code being null.
This is useful for example to guarantee interoperability with Java but results in methods that leak information via their parameters. Most obfuscation techniques hide the name of the parameter but not strings containing the name of the parameter. E.g., a call to `kotlin.jvm.internal.Intrinsics.checkNotNullParameter(secretParameterName, "secretParameterName")` might be obfuscated as `a.z(b, "secretParameterName")`, leaking the actual name of the parameter.
This information can help reverse engineers better and easier understand the behavior of your app.

Recommendations

The calls to Kotlin assertions leaking information or the strings they take as argument should be removed in release builds. This can be done automatically with Guardsquare's ProGuard or DexGuard. R8 can only remove the calls to Kotlin assertions but not obfuscate their parameters.

Fix with ProGuard

If `-keepkotlinmetadata` is in your ProGuard configuration and `-dontobfuscate` is not specified the input strings of kotlin assertions are removed.
As an alternative you can remove completely the calls to Kotlin assertions adding this to your ProGuard configuration:

```
-assumenosideeffects class ↩️
                  kotlin.jvm.internal.Intrinsics {
    public static void checkNotNull(...);
    public static void checkExpressionValueIsNotNull(...);
    public static void checkNotNullExpressionValue(...);
    public static void checkParameterIsNotNull(...);
    public static void checkNotNullParameter(...);
    public static void checkReturnedValueIsNotNull(...);
    public static void checkFieldIsNotNull(...);
    public static void throwUninitializedPropertyAccessException(...);
    public static void throwNpe(...);
    public static void throwJavaNpe(...);
    public static void throwAssert(...);
    public static void throwIllegalArgument(...);
    public static void throwIllegalState(...);
}
```

78 Findings

- 27 occurences in org.jetbrains.anko.custom
- 1 occurences in kotlin.jdk7
- 2 occurences in owasp.mastgkotlin.util
- 53 occurences in androidx.core.text
- 57 occurences in androidx.core.transition
- 77 occurences in kotlin.comparisons
- 13 occurences in kotlin.internal
- 2 occurences in kotlin.collections.jdk8
- 8 occurences in com.github.kittinunf.fuel.util
- 60 occurences in owasp.mastgkotlin
- 122 occurences in kotlin.ranges
- 1 occurences in com.github.kittinunf.fuel.android.util
- 3 occurences in androidx.activity.result
- 15 occurences in com.github.kittinunf.fuel.core.requests
- 3 occurences in kotlin.internal.jdk8
- 37 occurences in kotlin.concurrent
- 164 occurences in androidx.core.util
- 11 occurences in kotlin.properties
- 58 occurences in kotlin.time
- 42 occurences in androidx.core.splashscreen
- 14 occurences in androidx.lifecycle.viewmodel
- 14 occurences in com.github.kittinunf.fuel.core.interceptors
- 2 occurences in kotlin.time.jdk8
- 16 occurences in kotlin.reflect
- 4491 occurences in kotlin.collections
- 20 occurences in androidx.core.content
- 4 occurences in kotlin.internal.jdk7
- 18 occurences in androidx.core.graphics.drawable
- 1024 occurences in kotlin.text
- 593 occurences in org.jetbrains.anko
- 3 occurences in kotlinx.coroutines.debug.internal
- 50 occurences in kotlin.coroutines
- 3 occurences in kotlinx.coroutines.internal
- 175 occurences in kotlin
- 3 occurences in com.github.kittinunf.fuel.core.deserializers
- 19 occurences in kotlin.streams.jdk8

- 11 occurences in kotlin.coroutines.jvm.internal
- 84 occurences in androidx.lifecycle
- 2 occurences in kotlin.text.jdk8
- 216 occurences in androidx.core.graphics
- 32 occurences in kotlin.random
- 1 occurences in kotlinx.coroutines.flow
- 5 occurences in kotlinx.coroutines
- 24 occurences in org.jetbrains.anko.collections
- 74 occurences in androidx.activity.result.contract
- 26 occurences in androidx.core.os
- 1 occurences in kotlinx.coroutines.flow.internal
- 96 occurences in androidx.core.view
- 4 occurences in androidx.core.database.sqlite
- 1 occurences in com.github.kittinunf.fuel.android.core
- 3 occurences in com.github.kittinunf.fuel.toolbox
- 11 occurences in kotlin.jvm
- 1 occurences in kotlin.random.jdk8
- 51 occurences in kotlin.collections.builders
- 2 occurences in androidx.core.location
- 12 occurences in androidx.activity
- 37 occurences in org.jetbrains.anko.internals
- 432 occurences in kotlin.sequences
- 6 occurences in collections
- 55 occurences in androidx.core.animation
- 30 occurences in com.github.kittinunf.result
- 1 occurences in kotlin.contracts
- 29 occurences in androidx.savedstate
- 2 occurences in kotlin.system
- 14 occurences in androidx.core.widget
- 6 occurences in com.github.kittinunf.fuel.android.extension
- 14 occurences in com.github.kittinunf.fuel.rx
- 19 occurences in androidx.core.content.res
- 11 occurences in kotlin.coroutines.intrinsics
- 61 occurences in com.github.kittinunf.fuel
- 10 occurences in kotlin.jvm.optionals
- 5 occurences in androidx.core.net
- 267 occurences in kotlin.io.path
- 216 occurences in kotlin.io
- 1316 occurences in kotlin.collections.unsigned
- 7 occurences in androidx.core.database
- 58 occurences in kotlin.jvm.internal
- 169 occurences in com.github.kittinunf.fuel.core