



# ANDROID STATIC ANALYSIS REPORT



 UnCiv (3.11.11)

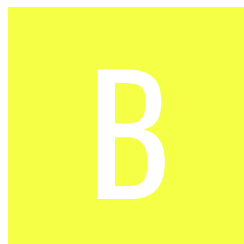
File Name: installer312.apk

Package Name: com.unciv.app






Scan Date: May 31, 2022, 9:17 a.m.

App Security Score: 46/100 (MEDIUM RISK)

Grade:



## FINDINGS SEVERITY

 HIGH	 MEDIUM	 INFO	 SECURE	 HOTSPOT
2	6	2	1	0

## FILE INFORMATION

File Name: installer312.apk

Size: 6.84MB

MD5: 1ab25d1eda13131f41b9c93b6cc68382

SHA1: ead4058aa95b00484a47bb142603c02500f40e23

SHA256: 272aa51cd7b991f078ce994b6d7b1a18a69c9cccc0982a81309f8fdb2f730f4e

## APP INFORMATION

App Name: UnCiv

Package Name: com.unciv.app

Main Activity: com.unciv.app.AndroidLauncher

Target SDK: 29

Min SDK: 14

Max SDK:

Android Version Name: 3.11.11

Android Version Code: 497

## APP COMPONENTS

Activities: 1

Services: 4

Receivers: 8

Providers: 1

Exported Activities: 0

Exported Services: 1

Exported Receivers: 0

Exported Providers: 0

## CERTIFICATE INFORMATION

APK is signed

v1 signature: True

v2 signature: False

v3 signature: False

Found 1 unique certificates

Subject: C=UK, ST=ORG, L=ORG, O=fdroid.org, OU=FDroid, CN=FDroid

Signature Algorithm: rsassa\_pkcs1v15

Valid From: 2019-09-25 16:45:44+00:00

Valid To: 2047-02-10 16:45:44+00:00

Issuer: C=UK, ST=ORG, L=ORG, O=fdroid.org, OU=FDroid, CN=FDroid

Serial Number: 0x53faccba

Hash Algorithm: sha256

md5: e94dfa6b1b21d492e95f268ec9ce4ff8

sha1: f1750e8b22fcb39b52d50232c8bdde4e919a1fe1

sha256: cd16e386469f23988fc9cdeca01bfebd0deaed13a4907bce76e91acc9662c68

sha512: 3889b03b847b9d8e03e79cf9d29bba7fa11192aa158fb141ba8a284065c74b013aa974660262e48a716cac5b0130e66f0c5f5c7a9385a4b50230cef594a94b3a

TITLE	SEVERITY	DESCRIPTION
Signed Application	<a href="#">info</a>	Application is signed with a code signing certificate

TITLE	SEVERITY	DESCRIPTION
Application vulnerable to Janus Vulnerability	high	Application is signed with v1 signature scheme, making it vulnerable to Janus vulnerability on Android 5.0-8.0, if signed only with v1 signature scheme. Applications running on Android 5.0-7.0 signed with v1, and v2/v3 scheme is also vulnerable.

## ≡ APPLICATION PERMISSIONS

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.INTERNET	normal	full Internet access	Allows an application to create network sockets.
android.permission.WAKE_LOCK	normal	prevent phone from sleeping	Allows an application to prevent the phone from going to sleep.
android.permission.ACCESS_NETWORK_STATE	normal	view network status	Allows an application to view the status of all networks.
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.FOREGROUND_SERVICE	normal		Allows a regular application to use Service.startForeground.

FILE	DETAILS	
classes.dex	FINDINGS	DETAILS
	Compiler	r8

## NETWORK SECURITY

NO	SCOPE	SEVERITY	DESCRIPTION
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## MANIFEST ANALYSIS

NO	ISSUE	SEVERITY	DESCRIPTION
1	Application Data can be Backed up [android:allowBackup=true]	warning	This flag allows anyone to backup your application data via adb. It allows users who have enabled USB debugging to copy application data off of the device.
2	Launch Mode of Activity (com.unciv.app.AndroidLauncher) 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.

NO	ISSUE	SEVERITY	DESCRIPTION
3	<p>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]</p>	warning	<p>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.</p>

## </> CODE ANALYSIS

NO	ISSUE	SEVERITY	STANDARDS	FILES
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NO	ISSUE	SEVERITY	STANDARDS	FILES
1	<a href="#">The App logs information. Sensitive information should never be logged.</a>	info	CWE: CWE-532: Insertion of Sensitive Information into Log File OWASP MASVS: MSTG-STORAGE-3	com/unciv/logic/map/mapgenerator/NaturalWonderGenerator.java com/unciv/UncivGame.java com/unciv/models/ruleset/Ruleset.java com/unciv/ui/worldscreen/mainmenu/DropBox.java com/badlogic/gdx/backends/android/surfaceview/GLSurfaceView20.java com/unciv/logic/GameSaver.java com/badlogic/gdx/backends/android/AndroidOnScreenKeyboard.java com/badlogic/gdx/graphics/glutils/ETC1.java com/badlogic/gdx/input/RemoteInput.java com/badlogic/gdx/backends/android/AndroidLiveWallpaperService.java com/badlogic/gdx/backends/android/AndroidApplicationLogger.java com/badlogic/gdx/backends/android/surfaceview/GdxEglConfigChooser.java com/unciv/logic/battle/Battle.java com/badlogic/gdx/backends/android/ZipResourceFile.java com/unciv/models/translations/Translations.java com/badlogic/gdx/backends/android/AndroidGraphicsLiveWallpaper.java com/badlogic/gdx/graphics/g2d/PixmapPacker.java com/badlogic/gdx/backends/android/AndroidFragmentApplication.java com/unciv/models/simulation/Simulation.java com/unciv/models/ruleset/RulesetCache.java com/badlogic/gdx/backends/android/AndroidLiveWallpaper.java com/unciv/ui/worldscreen/mainmenu/Zip.java com/unciv/ui/mapeditor/MapDownloadPopup.java com/unciv/logic/map/mapgenerator/MapGenerator.java com/unciv/ui/worldscreen/mainmenu/Github.java



NO	ISSUE	SEVERITY	STANDARDS	FILES
2	<a href="#">This App copies data to clipboard. Sensitive data should not be copied to clipboard as other applications can access it.</a>	info	OWASP MASVS: MSTG-STORAGE-10	com/unciv/app/CopyToClipboardReceiver.java com/badlogic/gdx/backends/android/AndroidClipboard.java
3	App creates temp file. Sensitive information should never be written into a temp file.	warning	CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	com/badlogic/gdx/utils/SharedLibraryLoader.java com/badlogic/gdx/files/FileHandle.java
4	<a href="#">The App uses an insecure Random Number Generator.</a>	warning	CWE: CWE-330: Use of Insufficiently Random Values OWASP Top 10: M5: Insufficient Cryptography OWASP MASVS: MSTG-CRYPTO-6	com/badlogic/gdx/math/RandomXS128.java com/unciv/logic/battle/BattleDamage.java com/unciv/logic/city/CityInfo.java com/unciv/logic/battle/Battle.java com/badlogic/gdx/math/MathUtils.java com/unciv/logic/GameInfo.java
5	<a href="#">Files may contain hardcoded sensitive information like usernames, passwords, keys etc.</a>	warning	CWE: CWE-312: Cleartext Storage of Sensitive Information OWASP Top 10: M9: Reverse Engineering OWASP MASVS: MSTG-STORAGE-14	com/unciv/ui/worldscreen/unit/UnitIconAndKey.java
6	<a href="#">App can read/write to External Storage. Any App can read data written to External Storage.</a>	warning	CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	com/badlogic/gdx/backends/android/APKExpansionSupport.java com/badlogic/gdx/files/FileHandle.java com/badlogic/gdx/backends/android/AndroidFiles.java

## SHARED LIBRARY BINARY ANALYSIS

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
1	lib/armeabi-v7a/libgdx.so	<p>True <a href="#">info</a></p> <p>The shared object has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable.</p>	<p>True <a href="#">info</a></p> <p>This shared object 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.</p>	<p>Full RELRO <a href="#">info</a></p> <p>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.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have run-time search path or RPATH set.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have RUNPATH set.</p>	<p>False <a href="#">warning</a></p> <p>The shared object 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.</p>	<p>True <a href="#">info</a></p> <p>Symbols are stripped.</p>

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
2	lib/x86/libgdx.so	<p>True <a href="#">info</a></p> <p>The shared object has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable.</p>	<p>True <a href="#">info</a></p> <p>This shared object 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.</p>	<p>Full RELRO <a href="#">info</a></p> <p>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.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have run-time search path or RPATH set.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have RUNPATH set.</p>	<p>False <a href="#">warning</a></p> <p>The shared object 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.</p>	<p>True <a href="#">info</a></p> <p>Symbols are stripped.</p>

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
3	lib/arm64-v8a/libgdx.so	<p>True <a href="#">info</a></p> <p>The shared object has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable.</p>	<p>True <a href="#">info</a></p> <p>This shared object 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.</p>	<p>Partial RELRO <a href="#">warning</a></p> <p>This shared object has partial RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In partial RELRO, the non-PLT part of the GOT section is read only but .got.plt is still writeable. Use the option -z,relro,-z,now to enable full RELRO.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have run-time search path or RPATH set.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have RUNPATH set.</p>	<p>False <a href="#">warning</a></p> <p>The shared object 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.</p>	<p>True <a href="#">info</a></p> <p>Symbols are stripped.</p>

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
4	lib/armeabi/libgdx.so	<p>True <a href="#">info</a></p> <p>The shared object has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable.</p>	<p>True <a href="#">info</a></p> <p>This shared object 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.</p>	<p>Full RELRO <a href="#">info</a></p> <p>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.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have run-time search path or RPATH set.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have RUNPATH set.</p>	<p>False <a href="#">warning</a></p> <p>The shared object 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.</p>	<p>True <a href="#">info</a></p> <p>Symbols are stripped.</p>

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
5	lib/x86_64/libgdx.so	<p>True <a href="#">info</a></p> <p>The shared object has NX bit set. This marks a memory page non-executable making attacker injected shellcode non-executable.</p>	<p>True <a href="#">info</a></p> <p>This shared object 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.</p>	<p>Full RELRO <a href="#">info</a></p> <p>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.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have run-time search path or RPATH set.</p>	<p>None <a href="#">info</a></p> <p>The shared object does not have RUNPATH set.</p>	<p>False <a href="#">warning</a></p> <p>The shared object 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.</p>	<p>True <a href="#">info</a></p> <p>Symbols are stripped.</p>

## NIAP ANALYSIS v1.3

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
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NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
1	<a href="#">FCS_RBG_EXT.1.1</a>	Security Functional Requirements	Random Bit Generation Services	The application use no DRBG functionality for its cryptographic operations.
2	<a href="#">FCS_STO_EXT.1.1</a>	Security Functional Requirements	Storage of Credentials	The application does not store any credentials to non-volatile memory.
3	<a href="#">FCS_CKM_EXT.1.1</a>	Security Functional Requirements	Cryptographic Key Generation Services	The application generate no asymmetric cryptographic keys.
4	<a href="#">FDP_DEC_EXT.1.1</a>	Security Functional Requirements	Access to Platform Resources	The application has access to ['network connectivity'].
5	<a href="#">FDP_DEC_EXT.1.2</a>	Security Functional Requirements	Access to Platform Resources	The application has access to no sensitive information repositories.
6	<a href="#">FDP_NET_EXT.1.1</a>	Security Functional Requirements	Network Communications	The application has user/application initiated network communications.
7	<a href="#">FDP_DAR_EXT.1.1</a>	Security Functional Requirements	Encryption Of Sensitive Application Data	The application implement functionality to encrypt sensitive data in non-volatile memory.
8	<a href="#">FMT_MEC_EXT.1.1</a>	Security Functional Requirements	Supported Configuration Mechanism	The application invoke the mechanisms recommended by the platform vendor for storing and setting configuration options.
9	<a href="#">FTP_DIT_EXT.1.1</a>	Security Functional Requirements	Protection of Data in Transit	The application does encrypt some transmitted data with HTTPS/TLS/SSH between itself and another trusted IT product.

## DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION
api.github.com	ok	IP: 140.82.121.6 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>
github.com	ok	IP: 140.82.121.4 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>
api.dropboxapi.com	ok	IP: 162.125.65.19 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>
content.dropboxapi.com	ok	IP: 162.125.65.14 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>



DOMAIN	STATUS	GEOLOCATION
www.reddit.com	ok	IP: 199.232.149.140 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>
discord.gg	ok	IP: 162.159.130.234 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: <a href="#">Google Map</a>

## EMAILS

EMAIL	FILE
yairm210@hotmail.com	com/unciv/ui/worldscreen/bottombar/BattleTable.java
yairm210@hotmail.com	com/unciv/ui/utills/CrashController.java
yairm210@hotmail.com	com/unciv/ui/saves/LoadGameScreen.java
yairm210@hotmail.com	com/unciv/app/CrashReportSenderAndroid.java

## Report Generated by - MobSF v3.5.2 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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