

ANDROID STATIC ANALYSIS REPORT



• Solitaire (1.0.2)

File Name:	installer3802.apk			
Package Name:	org.secuso.privacyfriendlysolitaire			
Scan Date:	May 31, 2022, 5:44 p.m.			
App Security Score:	52/100 (MEDIUM RISK			
Grade:				

FINDINGS SEVERITY

派 HIGH	▲ MEDIUM	i INFO	✓ SECURE	≪ HOTSPOT
1	5	2	1	0

FILE INFORMATION

File Name: installer3802.apk

Size: 3.8MB

MD5: 5d0b444868117283d13e70dfd130cbd8

SHA1: f607cf7e27d021b57ed4df54a73e03f00d5440ad

SHA256: 3917cc798768793e773d517924deb1a67eb02feb7551d7d1e674298fef4e6243

i APP INFORMATION

App Name: Solitaire

Package Name: org.secuso.privacyfriendlysolitaire

Main Activity: org.secuso.privacyfriendlysolitaire.Activities.SplashActivity

Target SDK: 26 Min SDK: 21 Max SDK:

Android Version Name: 1.0.2 Android Version Code: 3

APP COMPONENTS

Activities: 7 Services: 0 Receivers: 0 Providers: 0

Exported Activities: O Exported Services: O Exported Receivers: O Exported Providers: O



APK is signed v1 signature: True v2 signature: False v3 signature: False

Found 1 unique certificates Subject: CN=Philipp Rack

Signature Algorithm: rsassa_pkcs1v15 Valid From: 2014-09-10 20:08:38+00:00 Valid To: 2064-08-28 20:08:38+00:00

Issuer: CN=Philipp Rack Serial Number: 0x7e8ad4ee Hash Algorithm: sha256

md5: 19e202e493d8f3457c4d644384f6de47

sha1: ce01a61218b97ac4deaa75da4e5afbda059dff20

sha256: 466d66dc058f73043e5e9bdd5606fdaec19d8f80c47f44c1807d65775d735c3f

sha512: 19c5e7d279047057951b490b305c5aa806be70cfc4dbac3130bd34b37b450da982bc1645c9e769b4c8e56e7d4a085ac34bd83b138e5090b9ba0e4516dbcd4976

TITLE	SEVERITY	DESCRIPTION
Signed Application	info	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.

M APKID ANALYSIS

FILE	DETAILS					
classes.dex	FINDINGS DETAILS					
	Compiler	r8				

△ NETWORK SECURITY

NO SCOPE SEVERITY DESCRIPTION

Q MANIFEST ANALYSIS

NO	ISSUE	SEVERITY	DESCRIPTION
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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.

</> CODE ANALYSIS

NO	ISSUE	SEVERITY	STANDARDS	FILES
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NO	ISSUE	SEVERITY	STANDARDS	FILES	
1	The App logs information. Sensitive information should never be logged.	info	CWE: CWE-532: Insertion of Sensitive Information into Log File OWASP MASVS: MSTG-STORAGE-3	com/badlogic/gdx/backends/android/AndroidLiveW allpaper.java com/badlogic/gdx/input/RemoteInput.java junit/runner/Version.java junit/runner/BaseTestRunner.java com/badlogic/gdx/backends/android/surfaceview/G LSurfaceView20API18.java com/badlogic/gdx/backends/android/AndroidOnscr eenKeyboard.java com/badlogic/gdx/backends/android/surfaceview/G LSurfaceView20.java com/badlogic/gdx/graphics/glutils/ETC1.java com/badlogic/gdx/backends/android/AndroidApplic ationLogger.java com/badlogic/gdx/backends/android/surfaceview/G LSurfaceViewAPI18.java com/badlogic/gdx/backends/android/surfaceview/G dxEglConfigChooser.java junit/textui/TestRunner.java com/badlogic/gdx/backends/android/AndroidFragm entApplication.java com/badlogic/gdx/backends/android/ZipResourceFil e.java com/badlogic/gdx/backends/android/AndroidGraph icsLiveWallpaper.java com/badlogic/gdx/backends/android/AndroidGraph icsLiveWallpaper.java com/badlogic/gdx/backends/android/AndroidLiveW allpaperService.java	
2	The App uses an insecure Random Number Generator.	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/badlogic/gdx/math/MathUtils.java	

NO	ISSUE	SEVERITY	STANDARDS	FILES	
3	App can read/write to External Storage. Any App can read data written to External Storage. Permissions OWASP Top Storage		CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	com/badlogic/gdx/files/FileHandle.java com/badlogic/gdx/backends/android/APKExpansion Support.java com/badlogic/gdx/backends/android/AndroidFiles.j ava	
4	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/files/FileHandle.java org/junit/rules/TemporaryFolder.java com/badlogic/gdx/utils/SharedLibraryLoader.java	
5	This App copies data to clipboard. Sensitive data should not be copied to clipboard as other applications can access it.	info	OWASP MASVS: MSTG-STORAGE-10	com/badlogic/gdx/backends/android/AndroidClipbo ard.java	

SHARED LIBRARY BINARY ANALYSIS

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
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NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
1	lib/armeabi-v7a/libgdx.so	True info The shared object has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info 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.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The shared object does not have run-time search path or RPATH set.	None info The shared object does not have RUNPATH set.	False warning 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.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
2	lib/x86/libgdx.so	True info The shared object has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info 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.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The shared object does not have run-time search path or RPATH set.	None info The shared object does not have RUNPATH set.	False warning 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.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
3	lib/arm64-v8a/libgdx.so	True info The shared object has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info 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.	Partial RELRO warning 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.	None info The shared object does not have run-time search path or RPATH set.	None info The shared object does not have RUNPATH set.	False warning 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.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
4	lib/armeabi/libgdx.so	True info The shared object has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info 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.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The shared object does not have run-time search path or RPATH set.	None info The shared object does not have RUNPATH set.	False warning 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.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
5	lib/x86_64/libgdx.so	True info The shared object has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info 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.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The shared object does not have run-time search path or RPATH set.	None info The shared object does not have RUNPATH set.	False warning 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.	True info Symbols are stripped.

■ NIAP ANALYSIS v1.3

NO IDENTIFIER REQUIREMENT FEATURE DESCRIPTION

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
1	FCS_RBG_EXT.1.1	Security Functional Requirements	Random Bit Generation Services	The application use no DRBG functionality for its cryptographic operations.
2	FCS_STO_EXT.1.1	Security Functional Requirements	Storage of Credentials	The application does not store any credentials to non-volatile memory.
3	FCS_CKM_EXT.1.1	Security Functional Requirements	Cryptographic Key Generation Services	The application generate no asymmetric cryptographic keys.
4	FDP_DEC_EXT.1.1	Security Functional Requirements	Access to Platform Resources	The application has access to no hardware resources.
5	FDP_DEC_EXT.1.2	Security Functional Requirements	Access to Platform Resources	The application has access to no sensitive information repositories.
6	FDP_NET_EXT.1.1	Security Functional Requirements	Network Communications	The application has no network communications.
7	FDP_DAR_EXT.1.1	Security Functional Requirements	Encryption Of Sensitive Application Data	The application implement functionality to encrypt sensitive data in non-volatile memory.
8	FMT_MEC_EXT.1.1	Security Functional Requirements	Supported Configuration Mechanism	The application invoke the mechanisms recommended by the platform vendor for storing and setting configuration options.
9	FTP_DIT_EXT.1.1	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.



POSSIBLE SECRETS	
"about_author" : "Authors:"	
"about_author" : "Autoren:"	

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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