

## ANDROID STATIC ANALYSIS REPORT



# Elysai (4.0.3)

File Name:	Elysai_ Talk to Al Friends_4.0.3_Apkpure.apk
Package Name:	ai.flowstorm.poppy
Scan Date:	April 14, 2024, 4:08 a.m.
App Security Score:	55/100 (MEDIUM RISK)
Grade:	
Trackers Detection:	2/432

## **FINDINGS SEVERITY**

<b>≟</b> HIGH	▲ MEDIUM	i INFO	✓ SECURE	<b>◎</b> HOTSPOT
1	14	1	2	2

### FILE INFORMATION

**File Name:** Elysai\_ Talk to Al Friends\_4.0.3\_Apkpure.apk

Size: 60.14MB

MD5: 3dff77c714b3f28ca4cd9fefd8cae5ee

**SHA1**: ea0172d0aa5a76423078207ba7270745f66ce73b

**SHA256**: 1dcc40a665735e8b829f65aa9353cf664bd93c0b5bb9a09a0bec965fdbc9fc2c

## **i** APP INFORMATION

App Name: Elysai

 $\textbf{\textit{Package Name:}} \ ai. flows torm. poppy$ 

Main Activity: ai.promethist.elysai.ui.activity.StartActivity

Target SDK: 33 Min SDK: 26 Max SDK:

**Android Version Name:** 4.0.3

#### **EXE** APP COMPONENTS

Activities: 8 Services: 9 Receivers: 11 Providers: 4

Exported Activities: 1
Exported Services: 1
Exported Receivers: 3
Exported Providers: 0

## **\*** CERTIFICATE INFORMATION

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

X.509 Subject: C=US, ST=California, L=Mountain View, O=Google Inc., OU=Android, CN=Android

Signature Algorithm: rsassa\_pkcs1v15 Valid From: 2021-04-09 14:03:25+00:00 Valid To: 2051-04-09 14:03:25+00:00

Issuer: C=US, ST=California, L=Mountain View, O=Google Inc., OU=Android, CN=Android

Serial Number: 0x45bdef2ae6eeb2c97a968a753449991edc4bb403

Hash Algorithm: sha256

md5: 9200e3331269d6f48d05823a15ecba05

sha1: bb5f428233f01186693f509942e977903108c1a4

sha256; ddc26f7d663ccfdec6e6b69fed2ccffc65120d0fcb19c077074a70c1cabdc5e0

sha512: 570a207e75b65041098996e83ac3f0ea208abdc4b2e4fb5823f2f44b2cae6f902c6fdb088d0220ab212447b6adb490b8de2f92cca71e7a36f3774f1c970917fb

PublicKey Algorithm: rsa

Bit Size: 4096

Fingerprint: ff9f47adaf77baf4d41144b7719c1c3c8600dd87d9a263f0f0ff298961426b2a

Found 1 unique certificates

## **⋮** APPLICATION PERMISSIONS

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.INTERNET	normal	full Internet access	Allows an application to create network sockets.
android.permission.ACCESS_NETWORK_STATE	normal	view network status	Allows an application to view the status of all networks.
android.permission.RECORD_AUDIO	dangerous	record audio	Allows application to access the audio record path.
android.permission.MODIFY_AUDIO_SETTINGS	normal	change your audio settings	Allows application to modify global audio settings, such as volume and routing.
android.permission.POST_NOTIFICATIONS	dangerous	allows an app to post notifications.	Allows an app to post notifications
android.permission.WAKE_LOCK	normal	prevent phone from sleeping	Allows an application to prevent the phone from going to sleep.
com.google.android.c2dm.permission.RECEIVE	normal	recieve push notifications	Allows an application to receive push notifications from cloud.
android.permission.RECEIVE_BOOT_COMPLETED	normal	automatically start at 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.

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.FOREGROUND_SERVICE	normal	enables regular apps to use Service.startForeground.	Allows a regular application to use Service.startForeground.
ai.flowstorm.poppy.DYNAMIC_RECEIVER_NOT_EXPORTED_PERMISSION	unknown	Unknown permission	Unknown permission from android reference

# **M** APKID ANALYSIS

FILE	DETAILS		
	FINDINGS	DETAILS	
classes.dex	Anti-VM Code	Build.FINGERPRINT check Build.MANUFACTURER check	
	Compiler	r8 without marker (suspicious)	
	FINDINGS	DETAILS	
classes2.dex	Anti-VM Code	Build.MANUFACTURER check	
	Compiler	r8 without marker (suspicious)	

FILE	DETAILS		
	FINDINGS	DETAILS	
classes3.dex	Anti-VM Code	Build.FINGERPRINT check Build.MANUFACTURER check Build.TAGS check	
	Compiler	r8 without marker (suspicious)	
	FINDINGS	DETAILS	
classes4.dex	Anti-VM Code	Build.FINGERPRINT check Build.MODEL check Build.MANUFACTURER check Build.PRODUCT check Build.HARDWARE check Build.TAGS check possible VM check	
	Anti Debug Code	Debug.isDebuggerConnected() check	
	Compiler	r8 without marker (suspicious)	
classes5.dex	FINDINGS	DETAILS	
	Compiler	r8 without marker (suspicious)	

FILE	DETAILS		
	FINDINGS	DETAILS	
classes6.dex	Compiler	r8 without marker (suspicious)	
classes7.dex	FINDINGS	DETAILS	
	Compiler	r8 without marker (suspicious)	
classes8.dex	FINDINGS	DETAILS	
classeso.dex	Compiler	r8 without marker (suspicious)	
	FINDINGS	DETAILS	
classes9.dex	Compiler	r8 without marker (suspicious)	



NO	SCOPE	SEVERITY	DESCRIPTION

## **CERTIFICATE ANALYSIS**

#### HIGH: 0 | WARNING: 0 | INFO: 1

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

## **Q** MANIFEST ANALYSIS

#### HIGH: 0 | WARNING: 6 | INFO: 0 | SUPPRESSED: 0

NO	ISSUE	SEVERITY	DESCRIPTION
1	App can be installed on a vulnerable Android version Android 8.0, minSdk=26]	warning	This application can be installed on an older version of android that has multiple vulnerabilities. Support an Android version => 10, API 29 to receive reasonable security updates.
2	Activity (ai.promethist.elysai.ui.MainActivity) is not Protected. [android:exported=true]	warning	An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.
3	Broadcast Receiver (com.google.firebase.iid.FirebaseInstanceIdReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: com.google.android.c2dm.permission.SEND [android:exported=true]	warning	A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.

NO	ISSUE	SEVERITY	DESCRIPTION
4	Service (androidx.work.impl.background.systemjob.SystemJobService) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_JOB_SERVICE [android:exported=true]	warning	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.
5	Broadcast Receiver (androidx.work.impl.diagnostics.DiagnosticsReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.DUMP [android:exported=true]	warning	A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.
6	Broadcast Receiver (androidx.profileinstaller.ProfileInstallReceiver) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.DUMP [android:exported=true]	warning	A Broadcast Receiver is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.

# </> CODE ANALYSIS

NO	ISSUE	SEVERITY	STANDARDS	FILES
				ai/flowstorm/client/SimpleClientCallback.java ai/flowstorm/client/gps/NMEA.java ai/flowstorm/client/io/WavFileAudioRecorder.java ai/flowstorm/client/signal/SignalProcessProvider.java ai/flowstorm/client/signal/SignalProcessor\$Companio n\$test\$1\$1.java ai/flowstorm/client/util/InetInterface.java ai/flowstorm/common/AppConfig.java ai/flowstorm/common/client/HttpPollingSocketClient.j ava ai/flowstorm/common/monitoring/LoggerMonitoring.j ava ai/flowstorm/core/model/JobLog.java ai/flowstorm/util/Stack.java ai/flowstorm/util/Stack.java ai/promethist/elysai/RedirectLogOutputStream.java ai/promethist/elysai/util/AndroidLog.java ai/promethist/elysai/util/AndroidLog.java ai/promethist/elysai/util/NotificationSchedule.java ai/promethist/elysai/util/VideoProvider\$createLocalFil eVideoPlayer\$1\$2.java ch/qos/logback/classic/pattern/TargetLengthBasedClas sNameAbbreviator.java ch/qos/logback/classic/spi/PackagingDataCalculator.ja va ch/qos/logback/classic/spi/PackagingDataCalculator.ja va ch/qos/logback/classic/spi/ThrowableProxy.java ch/qos/logback/classic/spi/ThrowableProxy.java ch/qos/logback/core/joran/util/ConfigurationWatchList Util.java ch/qos/logback/core/recovery/ResilientOutputStreamB ase.java ch/qos/logback/core/spi/ContextAwareBase.java ch/qos/logback/core/spi/ContextAwareImpl.java ch/qos/logback/core/spi/ContextAwareImpl.java ch/qos/logback/core/spi/ContextAwareImpl.java

NO	ISSUE	SEVERITY	STANDARDS	com/ctc/wstx/compat/QNameCreator.java  Ght Sc/wstx/shaded/msv_core/datatype/regexp/REUt  il.java
1	The App logs information. Sensitive information should never be logged.	info	CWE: CWE-532: Insertion of Sensitive Information into Log File OWASP MASVS: MSTG-STORAGE-3	com/ctc/wstx/shaded/msv_core/datatype/regexp/Rang eToken.java com/ctc/wstx/shaded/msv_core/driver/textui/ReportEr rorHandler.java com/ctc/wstx/shaded/msv_core/reader/xmlschema/X MLSchemaReader.java com/ctc/wstx/shaded/msv_core/scanner/dtd/DTDPars er.java com/ctc/wstx/shaded/msv_core/verifier/Verifier.java com/ctc/wstx/shaded/msv_core/verifier/identity/Field Matcher.java com/ctc/wstx/shaded/msv_core/verifier/identity/Fields Matcher.java com/ctc/wstx/shaded/msv_core/verifier/identity/Fields Matcher.java com/ctc/wstx/shaded/msv_core/verifier/identity/Select orMatcher.java com/ctc/wstx/shaded/msv_core/verifier/regexp/Conte ntModelAcceptor.java com/ctc/wstx/shaded/msv_core/verifier/regexp/Expre ssionAcceptor.java com/ctc/wstx/shaded/msv_core/verifier/regexp/Expre ssionAcceptor.java com/ctc/wstx/shaded/msv_core/verifier/regexp/xmlsc hema/XSAcceptor.java com/ctc/wstx/shaded/msv_core/verifier/regexp/xmlsc hema/XSAcceptor.java com/ctc/wstx/shaded/msv_core/writer/relaxng/Patter nWriter.java com/ctc/wstx/shaded/msv_core/writer/regexp/core/writer/regexp/core/writer/regexp/core/writ

NO	ISSUE	SEVERITY	STANDARDS	CheckBoxPref\$edit\$1\$1.java  FdbfgSmal/composeprefs3/ui/prefs/DropDownPrefKt\$  DropDownPref\$edit\$1\$1.java
				com/jamal/composeprefs3/ui/prefs/EditTextPrefKt\$Edi tTextPref\$edit\$1\$1.java
				com/jamal/composeprefs3/ui/prefs/ListPrefKt\$ListPref \$edit\$1\$1.java
				com/jamal/composeprefs3/ui/prefs/MultiSelectListPre fKt\$MultiSelectListPref\$edit\$1\$1.java
				com/jamal/composeprefs3/ui/prefs/SliderPrefKt\$Slide rPref\$edit\$1\$1.java
				com/jamal/composeprefs3/ui/prefs/SwitchPrefKt\$Swit
				com/jcraft/jogg/Buffer.java
				com/jcraft/jorbis/ChainingExample.java com/jcraft/jorbis/DecodeExample.java
				com/mikepenz/aboutlibraries/Libs.java com/mikepenz/aboutlibraries/LibsBuilder.java
				com/mikepenz/aboutlibraries/LibsFragmentCompat.ja va
				com/mikepenz/fastadapter/FastAdapter.java com/mikepenz/fastadapter/VerboseLogger.java
				com/mikepenz/fastadapter/listeners/OnBindViewHold erListenerImpl.java
				com/sun/jna/Native.java
				io/sentry/SystemOutLogger.java io/sentry/android/core/AndroidLogger.java
				io/sentry/transport/StdoutTransport.java javax/xml/bind/helpers/DefaultValidationEventHandler
				.java javax/xml/stream/FactoryFinder.java
				javazoom/jl/converter/jlc.java javazoom/jl/player/PlayerApplet.java
				javazoom/jl/player/advanced/jlap.java
				javazoom/jl/player/jlp.java javazoom/spi/mpeg/sampled/convert/DecodedMpegA
				udioInputStream.java javazoom/spi/mpeg/sampled/file/tag/lcyInputStream.j
				ava junit/runner/BaseTestRunner.java

NO	ISSUE	SEVERITY	STANDARDS	junit/runner/Version.java <b>Junit/Se</b> xtui/TestRunner.java
				org/glassfish/hk2/osgiresourcelocator/Servicel oaderl mpl.java org/jaudiotagger/Test.java org/jaudiotagger/audio/mp4/Mp4AtomTree.java org/jaudiotagger/audio/mp4/atom/Mp4StcoBox.java org/jaudiotagger/audio/ogg/OggFileReader.java org/jaudiotagger/audio/wav/WavCleaner.java org/jaudiotagger/tag/images/StandardImageHandler.ja va org/jaudiotagger/test/ExtractID3TagFromFile.java org/jaudiotagger/test/MergeID3AndMP3Files.java org/jaudiotagger/test/TestAudioTagger.java org/jaudiotagger/utils/FileTypeUtil.java org/jflac/frame/EntropyPartitionedRice.java org/jflac/io/RandomFileInputStream.java org/jflac/util/RingBuffer.java org/slf4j/helpers/Util.java org/tritonus/lowlevel/cdda/cooked_ioctl/Cookedloctl.ja va org/tritonus/lowlevel/gsm/GSMDecoder.java org/tritonus/lowlevel/gsm/GSMDecoder.java
				org/tritonus/sampled/mixer/alsa/AlsaPortMixerProvid  &li/fttttttonus/sampled/mixer/alsa/AlsaPortMixerProvid  &li/ftttttttttttttttttttttttttttttttttttt

NO	ISSUE	SEVERITY	STANDARDS	.java <b>Elizas</b> /logback/classic/sift/JNDIBasedContextDiscrimin ator.iava
2	Files may contain hardcoded sensitive information like usernames, passwords, keys etc.	warning	CWE: CWE-312: Cleartext Storage of Sensitive Information OWASP Top 10: M9: Reverse Engineering OWASP MASVS: MSTG-STORAGE-14	ch/qos/logback/core/CoreConstants.java ch/qos/logback/core/db/BindDataSourceToJNDIAction. java ch/qos/logback/core/net/ssl/SSL.java ch/qos/logback/core/rolling/helper/DateTokenConvert er.java ch/qos/logback/core/rolling/helper/IntegerTokenConvert er.java coil/memory/MemoryCache.java coil/memory/MemoryCacheService.java coil/memory/MemoryCacheService.java com/auth0/jwk/GuavaCachedJwkProvider.java com/ctc/wstx/shaded/msv_core/reader/trex/ng/RELAX NGReader.java com/ctc/wstx/shaded/msv_core/reader/xmlschema/X MLSchemaReader.java com/ctc/wstx/shaded/msv_core/verifier/identity/IDCo nstraintChecker.java io/reactivex/internal/schedulers/SchedulerPoolFactory. java io/sentry/RequestDetailsResolver.java org/glassfish/jersey/SslConfigurator.java org/glassfish/jersey/internal/I10n/Localizer.java org/jaudiotagger/tag/id3/ID3v22Frames.java org/jaudiotagger/tag/id3/ID3v24Frames.java

NO	ISSUE	SEVERITY	STANDARDS	FILES	
3	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	ai/flowstorm/security/Digest.java gnu/trove/TByteArrayList.java gnu/trove/TDoubleArrayList.java gnu/trove/TFloatArrayList.java gnu/trove/TIntArrayList.java gnu/trove/TLongArrayList.java org/junit/runner/manipulation/Ordering.java org/tritonus/lowlevel/dsp/PinkNoise.java org/tritonus/lowlevel/dsp/WhiteNoise.java org/tritonus/sampled/convert/pvorbis/VorbisFormatC onversionProvider.java org/tritonus/sampled/convert/vorbis/VorbisFormatCo nversionProvider.java org/tritonus/share/sampled/FloatSampleTools.java	
4	MD5 is a weak hash known to have hash collisions.  warning		CWE: CWE-327: Use of a Broken or Risky Cryptographic Algorithm OWASP Top 10: M5: Insufficient Cryptography OWASP MASVS: MSTG-CRYPTO-4	ai/flowstorm/security/Digest.java com/adobe/internal/xmp/impl/XMPUtilsImpl.java	
5	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	ai/promethist/elysai/util/AudioPlayer.java coil/decode/SourceImageSource.java com/sun/jna/Native.java org/glassfish/jersey/message/internal/FileProvider.jav a org/glassfish/jersey/message/internal/Utils.java org/jaudiotagger/audio/generic/AudioFileWriter.java org/jaudiotagger/tag/id3/AbstractID3v2Tag.java org/junit/rules/TemporaryFolder.java	
6	This App uses SSL certificate pinning to detect or prevent MITM attacks in secure communication channel.	secure	OWASP MASVS: MSTG-NETWORK-4	ch/qos/logback/core/net/ssl/SSLContextFactoryBean.ja va org/glassfish/jersey/SslConfigurator.java	

NO	ISSUE	SEVERITY	STANDARDS	FILES
7	App can read/write to External Storage. Any App can read data written to External Storage.	warning	CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	io/sentry/android/core/DefaultAndroidEventProcessor. java
8	This App may have root detection capabilities.	secure	OWASP MASVS: MSTG-RESILIENCE-1	io/sentry/android/core/DefaultAndroidEventProcessor. java io/sentry/android/core/util/RootChecker.java
9	This App may request root (Super User) privileges.	warning	CWE: CWE-250: Execution with Unnecessary Privileges OWASP MASVS: MSTG-RESILIENCE-1	io/sentry/android/core/util/RootChecker.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	arm64-v8a/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['memmove_chk', 'memcpy_chk', 'vsnprintf_chk', 'read_chk', 'strlen_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
2	arm64-v8a/libsentry- android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['_vsnprintf_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
3	x86/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
4	x86/libsentry-android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
5	armeabi-v7a/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
6	armeabi-v7a/libsentry- android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
7	x86_64/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['memcpy_chk', 'strlen_chk', 'read_chk', 'vsnprintf_chk', 'memmove_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
8	x86_64/libsentry-android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['_vsnprintf_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
9	arm64-v8a/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['memmove_chk', 'memcpy_chk', 'vsnprintf_chk', 'read_chk', 'strlen_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
10	arm64-v8a/libsentry- android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['_vsnprintf_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
11	x86/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
12	x86/libsentry-android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
13	armeabi-v7a/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
14	armeabi-v7a/libsentry- android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	False warning The binary does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option - D_FORTIFY_SOURCE=2 to fortify functions. This check is not applicable for Dart/Flutter libraries.	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
15	x86_64/libsentry.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['memcpy_chk', 'strlen_chk', 'read_chk', 'vsnprintf_chk', 'memmove_chk']	False warning Symbols are available.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
16	x86_64/libsentry-android.so	True info The binary has NX bit set. This marks a memory page non- executable making attacker injected shellcode non- executable.	True info This binary has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	None info The binary does not have run-time search path or RPATH set.	None info The binary does not have RUNPATH set.	True info The binary has the following fortified functions: ['_vsnprintf_chk']	False warning Symbols are available.

## ■ NIAP ANALYSIS v1.3

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
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## **\*: ::** ABUSED PERMISSIONS

TYPE	MATCHES	PERMISSIONS
Malware Permissions	5/24	android.permission.INTERNET, android.permission.ACCESS_NETWORK_STATE, android.permission.RECORD_AUDIO, android.permission.WAKE_LOCK, android.permission.RECEIVE_BOOT_COMPLETED
Other Common Permissions	3/45	android.permission.MODIFY_AUDIO_SETTINGS, com.google.android.c2dm.permission.RECEIVE, android.permission.FOREGROUND_SERVICE

#### **Malware Permissions:**

Top permissions that are widely abused by known malware.

#### **Other Common Permissions:**

Permissions that are commonly abused by known malware.

## • OFAC SANCTIONED COUNTRIES

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

DOMAIN	COUNTRY/REGION
www.shoutcastserver.com	IP: 154.205.99.42 Country: Hong Kong Region: Hong Kong City: Hong Kong

## **Q** DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION

DOMAIN	STATUS	GEOLOCATION
www.tritonus.org	ok	IP: 138.201.54.42 Country: Germany Region: Hessen City: Frankfurt am Main Latitude: 50.115520 Longitude: 8.684170 View: Google Map
www.thaiopensource.com	ok	IP: 119.81.18.13 Country: Singapore Region: Singapore City: Singapore Latitude: 1.289670 Longitude: 103.850067 View: Google Map
www.javazoom.net	ok	No Geolocation information available.
www.server.com	ok	IP: 52.8.126.80  Country: United States of America Region: California City: San Francisco Latitude: 37.774929 Longitude: -122.419418 View: Google Map
logback.qos.ch	ok	IP: 159.100.250.151 Country: Switzerland Region: Vaud City: Lausanne Latitude: 46.515999 Longitude: 6.632820 View: Google Map

DOMAIN	STATUS	GEOLOCATION
www.sun.com	ok	IP: 23.53.4.27 Country: Canada Region: Quebec City: Montreal Latitude: 45.508839 Longitude: -73.587807 View: Google Map
xml.apache.org	ok	IP: 151.101.2.132 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
musicbrainz.org	ok	IP: 142.132.240.1 Country: Canada Region: Manitoba City: Winnipeg Latitude: 49.889748 Longitude: -97.153961 View: Google Map
www.w3.org	ok	IP: 104.18.23.19 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map

DOMAIN	STATUS	GEOLOCATION
core-elysai-preview.flowstorm.ai	ok	IP: 104.26.8.152 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
core-preview.flowstorm.ai	ok	IP: 104.26.8.152 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
relaxng.org	ok	IP: 185.199.109.153  Country: United States of America Region: Pennsylvania City: California Latitude: 40.065632 Longitude: -79.891708 View: Google Map
xml.org	ok	IP: 104.239.240.11 Country: United States of America Region: Texas City: Windcrest Latitude: 29.499678 Longitude: -98.399246 View: Google Map

DOMAIN	STATUS	GEOLOCATION
java.sun.com	ok	IP: 23.53.4.27 Country: Canada Region: Quebec City: Montreal Latitude: 45.508839 Longitude: -73.587807 View: Google Map
ns.useplus.org	ok	IP: 54.83.4.77  Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map
core.flowstorm.ai	ok	IP: 104.26.8.152 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
www.aiim.org	ok	IP: 199.60.103.225 Country: United States of America Region: Massachusetts City: Cambridge Latitude: 42.370129 Longitude: -71.086304 View: Google Map

DOMAIN	STATUS	GEOLOCATION
s3.eu-central-1.amazonaws.com	ok	IP: 52.219.169.193 Country: United States of America Region: Washington City: Seattle Latitude: 47.627499 Longitude: -122.346199 View: Google Map
core-elysai.flowstorm.ai	ok	IP: 104.26.8.152 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
raw.githubusercontent.com	ok	IP: 185.199.111.133 Country: United States of America Region: Pennsylvania City: California Latitude: 40.065632 Longitude: -79.891708 View: Google Map
iptc.org	ok	IP: 3.64.29.21 Country: Germany Region: Hessen City: Frankfurt am Main Latitude: 50.115520 Longitude: 8.684170 View: Google Map

DOMAIN	STATUS	GEOLOCATION
yaml.org	ok	IP: 185.199.110.153  Country: United States of America Region: Pennsylvania City: California Latitude: 40.065632 Longitude: -79.891708 View: Google Map
www.iso-relax.org	ok	No Geolocation information available.
repository.flowstorm.ai	ok	IP: 172.67.71.153  Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
zayda.eu.ngrok.io	ok	IP: 3.17.7.232 Country: United States of America Region: Ohio City: Columbus Latitude: 39.961182 Longitude: -82.998787 View: Google Map
www.npes.org	ok	IP: 172.64.80.1  Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203  View: Google Map

DOMAIN	STATUS	GEOLOCATION
ns.adobe.com	ok	No Geolocation information available.
www.shoutcastserver.com	ok	IP: 154.205.99.42 Country: Hong Kong Region: Hong Kong City: Hong Kong Latitude: 22.285521 Longitude: 114.157692 View: Google Map
www.xml.gr.jp	ok	IP: 49.212.36.76 Country: Japan Region: Tokyo City: Tokyo Latitude: 35.689507 Longitude: 139.691696 View: Google Map
cipa.jp	ok	IP: 118.82.81.189 Country: Japan Region: Tokyo City: Tokyo Latitude: 35.689507 Longitude: 139.691696 View: Google Map
promethist.firebaseio.com	ok	IP: 35.190.39.113 Country: United States of America Region: Missouri City: Kansas City Latitude: 39.099731 Longitude: -94.578568 View: Google Map

DOMAIN	STATUS	GEOLOCATION
drewnoakes.com	ok	IP: 34.229.76.186  Country: United States of America Region: Virginia City: Ashburn Latitude: 39.043720 Longitude: -77.487488 View: Google Map
github.com	ok	IP: 140.82.114.4 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
www.elysai.com	ok	IP: 34.149.87.45 Country: United States of America Region: Texas City: Houston Latitude: 29.941401 Longitude: -95.344498 View: Google Map
apache.org	ok	IP: 151.101.2.132 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map

DOMAIN	STATUS	GEOLOCATION
www.apple.com	ok	IP: 23.223.216.31 Country: France Region: Ile-de-France City: Aubervilliers Latitude: 48.916672 Longitude: 2.383330 View: Google Map
purl.org	ok	IP: 207.241.239.241 Country: United States of America Region: California City: San Francisco Latitude: 37.781734 Longitude: -122.459435 View: Google Map
play.google.com	ok	IP: 172.217.13.206 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map
xerces.apache.org	ok	IP: 151.101.2.132 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
javax.xml.xmlconstants	ok	No Geolocation information available.

DOMAIN	STATUS	GEOLOCATION
www.slf4j.org	ok	IP: 159.100.250.151 Country: Switzerland Region: Vaud City: Lausanne Latitude: 46.515999 Longitude: 6.632820 View: Google Map
mikepenz.com	ok	IP: 172.64.80.1 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map
www.id3.org	ok	IP: 167.99.106.11  Country: United States of America Region: California City: Santa Clara Latitude: 37.354111 Longitude: -121.955238 View: Google Map

# FIREBASE DATABASES

FIREBASE URL	DETAILS
https://promethist.firebaseio.com/.json	high Firebase DB is exposed publicly.



EMAIL	FILE
support@elysai.com	Android String Resource

## **A** TRACKERS

TRACKER	CATEGORIES	URL
Google Firebase Analytics	Analytics	https://reports.exodus-privacy.eu.org/trackers/49
Sentry	Crash reporting	https://reports.exodus-privacy.eu.org/trackers/447

# **▶** HARDCODED SECRETS

# POSSIBLE SECRETS "google\_api\_key": "AlzaSyBkwcaAK5dSFqjda2YPMWFOOGJMypG-4IU" "library\_AboutLibraries\_authorWebsite": "http://mikepenz.com/" "google\_crash\_reporting\_api\_key": "AlzaSyBkwcaAK5dSFqjda2YPMWFOOGJMypG-4IU" "library\_fastadapter\_authorWebsite": "http://mikepenz.com/"

POSSIBLE SECRETS
"firebase_database_url" : "https://promethist.firebaseio.com"
6486cb2f8af625324033ea9e
01360240043788015936020505
e2719d58-a985-b3c9-781a-b030af78d30e
648724376ab74917ac641788
16a09e667f3bcc908b2fb1366ea957d3e3adec17512775099da2f590b0667322a
6486cb426ab74917ac5eef04
6483253f8af62532402ef021
49f946663a8deb7054212b8adda248c6
648723c86ab74917ac63e62d
646b32029878b4484e1dce3b
9a04f079-9840-4286-ab92-e65be0885f95
648724256ab74917ac641778
632af932091b903bd1ba601b
258EAFA5-E914-47DA-95CA-C5AB0DC85B11

# POSSIBLE SECRETS c103703e120ae8cc73c9248622f3cd1e 64ad211ef3a1040e23386b12 6486cb188af625324033e900 edef8ba9-79d6-4ace-a3c8-27dcd51d21ed 64ef37ff35094e2b1ee0d962 648324fb8af62532402edf9d



Title: Elysai: Talk to Al Friends

Score: 4.18 Installs: 100,000+ Price: 0 Android Version Support: Category: Health & Fitness Play Store URL: ai.flowstorm.poppy

Developer Details: PromethistAl a.s., 5442656805872185667, None, https://www.elysai.com/, info@elysai.com,

Release Date: Apr 9, 2021 Privacy Policy: Privacy link

### Description:

Meet the first Al-powered Digital Personas that teach you the art of life satisfaction. Talk with them to learn how to work with your emotions and perceptions and live a better life each day. You can talk freely about your everyday issues or just release tension and unwind. Here, anyone can openly share their feelings, get support and learn more about themselves. Our Digital Personas are socially intelligent virtual beings who were created at the intersection of well-being and entertainment. The combination of our cutting-edge conversational Al technology and psychological research enables the Digital Personas to have complex and truly engaging conversations while being more humanlike and better suited to people's needs for communication, trust and comfort. Enjoy the exciting experience of talking with an Al who is able to recognize human moods and learns more about the world of feelings and emotions from each conversation. Every user's needs are different – and so are the interactions.

## Report Generated by - MobSF v3.9.8 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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