

ANDROID STATIC ANALYSIS REPORT



Fit Notifications (2.9.16)

File Name:	installer229.apk
Package Name:	com.abhijitvalluri.android.fitnotifications
Scan Date:	May 31, 2022, 5:54 a.m.
App Security Score:	52/100 (MEDIUM RISK)
Grade:	

FINDINGS SEVERITY

派 HIGH	▲ MEDIUM	i INFO	✓ SECURE	≪ HOTSPOT
1	7	1	1	0

FILE INFORMATION

File Name: installer229.apk

Size: 3.89MB

MD5: bf82e7b18bf93b25aa7c0d6802681421

SHA1: 288b2e3e3ed1cf76dbd03fd12959b63b57786ad6

SHA256: 6eb25b071a5dbefa9125c34ff68dae952dc84a1877997bd8c400faed7d2b4d32

i APP INFORMATION

App Name: Fit Notifications

Package Name: com.abhijitvalluri.android.fitnotifications

Main Activity: com.abhijitvalluri.android.fitnotifications.HomeActivity

Target SDK: 26 Min SDK: 19 Max SDK:

Android Version Name: 2.9.16 Android Version Code: 39

APP COMPONENTS

Activities: 5 Services: 1 Receivers: 1 Providers: 1

Exported Activities: O Exported Services: 1 Exported Receivers: 1 Exported Providers: O



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: 2018-09-02 19:42:24+00:00 Valid To: 2046-01-18 19:42:24+00:00

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

Serial Number: 0x57846b92 Hash Algorithm: sha256

md5: 43ee970df7fc300b7edeeba9c1ef5f1f

sha1: e9c9a6f35828f6d5197ff2d06bf624efe8aae913

sha256: 071d1112d3a82088b8c9e2b2601f41de9b9edd0c3134a73d3a6283c5369c87d5

sha512: 3c6cf3f59fbb73eeb4cf1df98c609b8963875a64ffad898322b1ae50a06e0796e3f91a248c1fc9e8c71bc184be08a94ece1ed47640fa3881ae97ce008eba38fa

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			
	FINDINGS	DETAILS		
classes.dex	Compiler	dx (possible dexmerge)		
	Manipulator Found	dexmerge		

△ NETWORK SECURITY

NO SCOPE	SEVERITY	DESCRIPTION
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Q 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	Service (com.abhijitvalluri.android.fitnotifications.services.NLService) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_NOTIFICATION_LISTENER_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.
3	Broadcast Receiver (com.abhijitvalluri.android.fitnotifications.widget.ServiceToggle) is not Protected. An intent-filter exists.	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. The presence of intent-filter indicates that the Broadcast Receiver is explicitly exported.

</> CODE ANALYSIS

NO	ISSUE	SEVERITY	STANDARDS	FILES
				com/ibm/icu/text/RBBISymbolTable.java com/ibm/icu/impl/StringPrepDataReader.ja va com/ibm/icu/impl/Trie2Writable.java com/ibm/icu/impl/ICUDebug.java com/ibm/icu/text/RBBINode.java com/ibm/icu/impl/URLHandler.java com/abhijitvalluri/android/fitnotifications/ HomeActivity.java com/ibm/icu/impl/duration/impl/XMLRecor

NO	ISSUE	SEVERITY	STANDARDS	dWriter.java FohrE3ohijitvalluri/android/fitnotifications/u tils/TranslitUtil.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/ibm/icu/impl/duration/impl/PeriodFor matterData.java com/ibm/icu/impl/ICUService.java com/abhijitvalluri/android/fitnotifications/d atabase/AppSelectionDbHelper.java com/abhijitvalluri/android/fitnotifications/s ervices/BasicMessageExtractor.java com/ibm/icu/text/RuleBasedBreakIterator.j ava android/databinding/adapters/TextViewBin dingAdapter.java com/ibm/icu/impl/text/RbnfScannerProvid erlmpl.java com/abhijitvalluri/android/fitnotifications/s ervices/NLService.java com/ibm/icu/impl/ICUBinary.java com/ibm/icu/impl/ICUResourceBundle.java com/ibm/icu/impl/ICUResourceBundle.java com/ibm/icu/text/RBBISetBuilder.java com/abhijitvalluri/android/fitnotifications/A ppChoicesActivity.java com/abhijitvalluri/android/fitnotifications/s ervices/GroupSummaryMessageExtractor.ja va com/abhijitvalluri/android/fitnotifications/s ervices/GenericMessageExtractor.java com/ibm/icu/text/RBBIRuleScanner.java com/ibm/icu/impl/duration/impl/XMLRecor dReader.java com/ibm/icu/impl/duration/impl/XMLRecor dReader.java com/abhijitvalluri/android/fitnotifications/u tils/AppSelectionsStore.java com/abhijitvalluri/android/fitnotifications/u tils/DebugLog.java com/ibm/icu/impl/OlsonTimeZone.java com/ibm/icu/impl/OlsonTimeZone.java com/ibm/icu/itext/PluralSamples.java com/ibm/icu/itext/RuleBasedNumberForma t.java

NO	ISSUE	SEVERITY	STANDARDS	com/ibm/icu/impl/ResourceBundleWrappe F.JavaS com/abhijitvalluri/android/fitnotifications/s
				ervices/lgnoreSummaryMessageExtractor.ja va com/ibm/icu/text/RBBITableBuilder.java
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	com/ibm/icu/impl/ICUDataVersion.java com/ibm/icu/util/ULocale.java com/ibm/icu/impl/CalendarUtil.java com/ibm/icu/text/DateIntervalInfo.java com/ibm/icu/util/TimeZone.java com/ibm/icu/text/NumberFormat.java
3	App uses SQLite Database and execute raw SQL query. Untrusted user input in raw SQL queries can cause SQL Injection. Also sensitive information should be encrypted and written to the database.	warning	CWE: CWE-89: Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection') OWASP Top 10: M7: Client Code Quality	com/abhijitvalluri/android/fitnotifications/d atabase/AppSelectionDbHelper.java com/abhijitvalluri/android/fitnotifications/u tils/AppSelectionsStore.java
4	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	com/abhijitvalluri/android/fitnotifications/u tils/DebugLog.java

■ NIAP ANALYSIS v1.3

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
1	FCS_STO_EXT.1.1	Security Functional Requirements	Storage of Credentials	The application does not store any credentials to non-volatile memory.
2	FCS_CKM_EXT.1.1	Security Functional Requirements	Cryptographic Key Generation Services	The application generate no asymmetric cryptographic keys.

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
3	FDP_DEC_EXT.1.1	Security Functional Requirements	Access to Platform Resources	The application has access to no hardware resources.
4	FDP_DEC_EXT.1.2	Security Functional Requirements	Access to Platform Resources	The application has access to no sensitive information repositories.
5	FDP_NET_EXT.1.1	Security Functional Requirements	Network Communications	The application has no network communications.
6	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.
7	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.
8	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.

Q DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION

DOMAIN	STATUS	GEOLOCATION
chasen.aist-nara.ac.jp	ok	IP: 163.221.116.25 Country: Japan Region: Nara City: Nara Latitude: 34.682999 Longitude: 135.800003 View: Google Map
lao-dictionary.googlecode.com	ok	IP: 142.250.102.82 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map
play.google.com	ok	IP: 142.251.36.46 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map
casper.beckman.uiuc.edu	ok	No Geolocation information available.
opensource.org	ok	IP: 104.21.84.214 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map

DOMAIN	STATUS	GEOLOCATION
abhijitvalluri.com	ok	IP: 198.54.116.205 Country: United States of America Region: Georgia City: Atlanta Latitude: 33.727291 Longitude: -84.425377 View: Google Map
code.google.com	ok	IP: 142.250.179.174 Country: United States of America Region: California City: Mountain View Latitude: 37.405991 Longitude: -122.078514 View: Google Map
www.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
github.com	ok	IP: 140.82.121.3 Country: United States of America Region: California City: San Francisco Latitude: 37.775700 Longitude: -122.395203 View: Google Map

DOMAIN	STATUS	GEOLOCATION
sourceforge.net	ok	IP: 172.64.153.13 Country: United States of America Region: Texas City: Dallas Latitude: 32.783058 Longitude: -96.806671 View: Google Map
www.unicode.org	ok	IP: 66.34.208.12 Country: United States of America Region: Texas City: Dallas Latitude: 32.814899 Longitude: -96.879204 View: Google Map
android.abhijitvalluri.com	ok	No Geolocation information available.

EMAILS

EMAIL	FILE
android@abhijitvalluri.com	com/abhijitvalluri/android/fitnotifications/HomeActivity.java
android@abhijitvalluri.com	com/abhijitvalluri/android/fitnotifications/utils/DebugLog.java
c-tsai4@uiuc.edu android@abhijitvalluri.com	Android String Resource



POSSIBLE SECRETS
"disable_forward_screen_on_key" : "disableWhenScreenOn"
"dismiss_relayed_notif_key" : "DismissOtherNotifications"
"display_app_name_key" : "displayAppName"
"done_first_launch_key" : "FirstLaunch"
"forward_priority_only_notifications_key" : "forwardPriorityOnlyNotifications"
"limit_notif_key" : "limitNotifications"
"notif_limit_duration_key" : "NotiflimitDuration"
"notification_listener_service_state_key" : "NlsState"
"relayed_dismiss_delay_key" : "RelayedDismissDelay"
"show_enabled_apps_key" : "ShowEnabledApps"
"split_notification_key" : "splitNotifications"
"transliterate_notification_key" : "transliterateNotifications"
"version_key" : "AppVersion"

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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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