ANDROID STATIC ANALYSIS REPORT

app_icon

VPN Hotspot (2.7.1)

File Name:	installer187.apk
Package Name:	be.mygod.vpnhotspot
Scan Date:	May 31, 2022, 2:25 p.m.
App Security Score:	51/100 (MEDIUM RISK)
Grade:	B

FINDINGS SEVERITY

HIGH	MEDIUM	INFO	✓ SECURE	HOTSPOT
1	11	1	1	1

FILE INFORMATION

File Name: installer187.apk
Size: 2.29MB
MD5: 0bc0c805c39f669dc0500ae91f8fdabf
SHA1: 65c6fe915c5c6c54ac1e254dda29ce4398c4e9ec
SHA256: 73647ff5928e365f3af611b29a12f8727aad5fb58c96ba539d145bc816a96270

APP INFORMATION

App Name: VPN Hotspot
Package Name: be.mygod.vpnhotspot
Main Activity: be.mygod.vpnhotspot.MainActivity
Target SDK: 29
Min SDK: 21
Max SDK:
Android Version Name: 2.7.1
Android Version Code: 220

APP COMPONENTS

Activities: 2
Services: 11
Receivers: 1
Providers: 1
Exported Activities: 0
Exported Services: 6
Exported Receivers: 1
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: 2018-02-16 06:02:55+00:00
Valid To: 2045-07-04 06:02:55+00:00
Issuer: C=UK, ST=ORG, L=ORG, O=fdroid.org, OU=FDroid, CN=FDroid
Serial Number: 0x369a8019
Hash Algorithm: sha256
md5: 37392daf375d3615e456c1ae49bd799d
sha1: 6bad8e2af869dab12e9de78c8e6c7f22555fbb06
sha256: b4d8ac376cd9a67f2cba4b8c117c7aecac53ef1f0222c843aafecad7d3fdc69a
sha512: 49f4b156081a3a46e182f1b7a69717b2ea4811beb368cfcd08a33cc8a24c37c20a12c49acc6b2c37de806873af63c5ceb49dac0934843ebd55e7fe1b148e0723

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.

☰ APPLICATION PERMISSIONS

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.ACCESS_NETWORK_STATE	normal	view network status	Allows an application to view the status of all networks.
android.permission.ACCESS_WIFI_STATE	normal	view Wi-Fi status	Allows an application to view the information about the status of Wi-Fi.
android.permission.BLUETOOTH	normal	create Bluetooth connections	Allows applications to connect to paired bluetooth devices.
android.permission.BLUETOOTH_ADMIN	normal	bluetooth administration	Allows applications to discover and pair bluetooth devices.
android.permission.CHANGE_NETWORK_STATE	normal	change network connectivity	Allows applications to change network connectivity state.
android.permission.CHANGE_WIFI_STATE	normal	change Wi-Fi status	Allows an application to connect to and disconnect from Wi-Fi access points and to make changes to configured Wi-Fi networks.
android.permission.FOREGROUND_SERVICE	normal		Allows a regular application to use Service.startForeground.

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.INTERNET	normal	full Internet access	Allows an application to create network sockets.
android.permission.MANAGE_USB	unknown	Unknown permission	Unknown permission from android reference
android.permission.OVERRIDE_WIFI_CONFIG	unknown	Unknown permission	Unknown permission from android reference
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.TETHER_PRIVILEGED	unknown	Unknown permission	Unknown permission from android reference
android.permission.WAKE_LOCK	normal	prevent phone from sleeping	Allows an application to prevent the phone from going to sleep.
android.permission.WRITE_SETTINGS	dangerous	modify global system settings	Allows an application to modify the system's settings data. Malicious applications can corrupt your system's configuration.
com.android.vending.BILLING	unknown	Unknown permission	Unknown permission from android reference

APKID ANALYSIS

<table>
<tr><th>FILE</th><th>DETAILS</th></tr>
<tr><td>classes.dex</td><td><table><tr><th>FINDINGS</th><th>DETAILS</th></tr><tr><td>Anti-VM Code</td><td>Build.MANUFACTURER check</td></tr><tr><td>Compiler</td><td>r8</td></tr></table></td></tr>
<tr><td>classes2.dex</td><td><table><tr><th>FINDINGS</th><th>DETAILS</th></tr><tr><td>Compiler</td><td>r8</td></tr></table></td></tr>
</table>

NETWORK SECURITY

NO	SCOPE	SEVERITY	DESCRIPTION

MANIFEST ANALYSIS

NO	ISSUE	SEVERITY	DESCRIPTION

NO	ISSUE	SEVERITY	DESCRIPTION
1	Service (be.mygod.vpnhotspot.manage.RepeaterTileService) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [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.
2	Service (be.mygod.vpnhotspot.manage.LocalOnlyHotspotTileService) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [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	Service (be.mygod.vpnhotspot.manage.TetheringTileService$Wifi) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [android:exported=true]	warning	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.
4	Service (be.mygod.vpnhotspot.manage.TetheringTileService$Usb) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [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.

NO	ISSUE	SEVERITY	DESCRIPTION
5	Service (be.mygod.vpnhotspot.manage.TetheringTileService$Bluetooth) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [android:exported=true]	warning	A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. It is protected by a permission which is not defined in the analysed application. As a result, the protection level of the permission should be checked where it is defined. If it is set to normal or dangerous, a malicious application can request and obtain the permission and interact with the component. If it is set to signature, only applications signed with the same certificate can obtain the permission.
6	Service (be.mygod.vpnhotspot.manage.TetheringTileService$WifiLegacy) is Protected by a permission, but the protection level of the permission should be checked. Permission: android.permission.BIND_QUICK_SETTINGS_TILE [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.
7	Broadcast Receiver (be.mygod.vpnhotspot.BootReceiver) 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
1	IP Address disclosure	warning	CWE: CWE-200: Information Exposure OWASP MASVS: MSTG-CODE-2	be/mygod/vpnhotspot/preference/UpstreamsPreference.java

NO	ISSUE	SEVERITY	STANDARDS	FILES
2	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/topjohnwu/superuser/internal/InternalUtils.java timber/log/Timber.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	be/mygod/vpnhotspot/net/wifi/configuration/P2pSupplicantConfiguration.java be/mygod/vpnhotspot/SettingsPreferenceFragment.java
4	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	j$/util/concurrent/ThreadLocalRandom.java

NIAP ANALYSIS v1.3

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
1	FCS_RBG_EXT.1.1	Security Functional Requirements	Random Bit Generation Services	The application invoke platform-provided 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.

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
4	FDP_DEC_EXT.1.1	Security Functional Requirements	Access to Platform Resources	The application has access to ['network connectivity', 'bluetooth', 'location'].
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 user/application initiated network communications.
7	FDP_DAR_EXT.1.1	Security Functional Requirements	Encryption Of Sensitive Application Data	The application does not encrypt files 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.
10	FCS_RBG_EXT.2.1,FCS_RBG_EXT.2.2	Selection-Based Security Functional Requirements	Random Bit Generation from Application	The application perform all deterministic random bit generation (DRBG) services in accordance with NIST Special Publication 800-90A using Hash_DRBG. The deterministic RBG is seeded by an entropy source that accumulates entropy from a platform-based DRBG and a software-based noise source, with a minimum of 256 bits of entropy at least equal to the greatest security strength (according to NIST SP 800-57) of the keys and hashes that it will generate.
11	FCS_COP.1.1(2)	Selection-Based Security Functional Requirements	Cryptographic Operation - Hashing	The application perform cryptographic hashing services in accordance with a specified cryptographic algorithm SHA-1/SHA-256/SHA-384/SHA-512 and message digest sizes 160/256/384/512 bits.

DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION
macvendors.co	ok	**IP:** 188.114.97.0 **Country:** Spain **Region:** Madrid, Comunidad de **City:** Madrid **Latitude:** 40.416500 **Longitude:** -3.702560 **View:** Google Map
mygod.be	ok	**IP:** 104.21.59.170 **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
ipinfo.io	ok	**IP:** 34.117.59.81 **Country:** United States of America **Region:** Missouri **City:** Kansas City **Latitude:** 39.099731 **Longitude:** -94.578568 **View:** Google Map

HARDCODED SECRETS

POSSIBLE SECRETS
"wifi_password" : "Password"
"wifi_password" : "Password"
"wifi_password" : "密码"
"wifi_password" : "Пароль"

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.