

ANDROID STATIC ANALYSIS REPORT



SudoQ (1.0.11c)

| File Name: | installer3858.apk |
|---------------------|-------------------------|
| Package Name: | de.sudoq |
| Scan Date: | May 31, 2022, 6:43 p.m. |
| App Security Score: | 54/100 (MEDIUM RISK) |
| Grade: | |
| | |

FINDINGS SEVERITY

| 派 HIGH | ▲ MEDIUM | i INFO | ✓ SECURE | ≪ HOTSPOT |
|---------------|----------|---------------|----------|-----------|
| 1 | 3 | 1 | 1 | 0 |

FILE INFORMATION

File Name: installer3858.apk

Size: 2.81MB

MD5: 795a1deaf241c37de696b54b8043da85

SHA1: 914d2a0f408c91ba3d29a6058d848740921daf68

SHA256: a785878187d2ee4185b6c212cd8ee130024552df7cb17bbbca3c07e282947640

i APP INFORMATION

App Name: SudoQ

Package Name: de.sudoq

Main Activity: de.sudoq.controller.menus.SplashActivity

Target SDK: 23 Min SDK: 8 Max SDK:

Android Version Name: 1.0.11c Android Version Code: 21

B APP COMPONENTS

Activities: 14 Services: 0 Receivers: 0 Providers: 0

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

***** CERTIFICATE INFORMATION

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

Found 1 unique certificates

Subject: C=DE, ST=Baden-Württemberg, L=Karlsruhe, O=Unknown, OU=Unknown, CN=Jonathan Kieling

Signature Algorithm: rsassa_pkcs1v15 Valid From: 2012-03-23 10:05:08+00:00 Valid To: 2039-08-09 10:05:08+00:00

Issuer: C=DE, ST=Baden-Württemberg, L=Karlsruhe, O=Unknown, OU=Unknown, CN=Jonathan Kieling

Serial Number: 0x4f6c4ad4 Hash Algorithm: sha1

md5: c71b26f01c41269b940bc7d1b98a0c45

sha1: 913a136add2a05e82ab1ad7fe6e22dc728a0b761

sha256: 338331f29dedcdb505ea66eab75794116d420cbc8d7d6d0f7585a9283fea1e0e

sha512: 9158f5fe6c13a1cd7cf9620d1a8e5933ae43e56347a0405ba330728e4ae25d680fc8ebf3ed62cb48272ae21824aa7e85bf6615a5555ec18196130777b6eadd76

PublicKey Algorithm: rsa

Bit Size: 2048

Fingerprint: 4b098754cdc8623b7750f9a209057f12d77ef04946129b381510339c49a6dc73

| TITLE | SEVERITY | DESCRIPTION | |
|---|----------|---|--|
| Signed Application | info | Application is signed with a code signing certificate | |
| Application vulnerable to Janus Vulnerability | warning | 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. | |
| Certificate algorithm might be vulnerable to hash collision | high | Application is signed with SHA1withRSA. SHA1 hash algorithm is known to have collision issues. | |

M APKID ANALYSIS

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

△ NETWORK SECURITY

| | NO | SCOPE | SEVERITY | DESCRIPTION |
|--|----|-------|----------|-------------|
|--|----|-------|----------|-------------|

Q MANIFEST ANALYSIS

| NO | ISSUE | SEVERITY | DESCRIPTION | |
|----|---|----------|---|--|
| 1 | Application Data can be Backed up [android:allowBackup] flag is missing. | warning | The flag [android:allowBackup] should be set to false. By default it is set to true and 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 |
|----|-------|----------|-----------|-------|
|----|-------|----------|-----------|-------|

| 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 | de/sudoq/controller/menus/SudokuLoadingAdap ter.java de/sudoq/controller/menus/ProfileListActivity.java de/sudoq/controller/menus/ProfileListActivity.java de/sudoq/controller/menus/SplashActivity.java de/sudoq/model/solvingAssistant/SolvingAssistant.java de/sudoq/view/FullScrollLayout.java de/sudoq/controller/menus/preferences/Restrict TypesAdapter.java de/sudoq/controller/sudoku/hints/HintFormulat or.java de/sudoq/controller/sudoku/sudokuTypes/test4.java de/sudoq/controller/menus/preferences/Restrict TypesActivity.java de/sudoq/controller/menus/SudokuLoadingActivi ty.java de/sudoq/controller/menus/NewSudokuActivity.java de/sudoq/controller/menus/NewSudokuActivity.java de/sudoq/controller/sudoku/ActionTreeControlle r.java de/sudoq/controller/sudoku/SudokuActivity.java de/sudoq/model/solverGenerator/Generator.java de/sudoq/model/solverGenerator/solver/Solver.java de/sudoq/model/solverGenerator/solver/Solver.java de/sudoq/model/sudoku/sudokuTypes/SudokuT ype.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 | de/sudoq/model/files/FileManager.java de/sudoq/model/game/Game.java de/sudoq/model/solverGenerator/transformatio ns/Transformer.java de/sudoq/model/solverGenerator/Generator.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 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 not encrypt any data in traffic or does not transmit any data between itself and another trusted IT product. |

Q DOMAIN MALWARE CHECK

| DOMAIN | STATUS | GEOLOCATION |
|------------|--------|--|
| 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 |
| 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 |

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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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