Android Analysis Report



Demo app com.spotify.music

Date 2018-06-14

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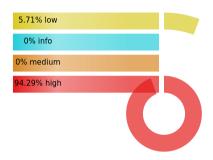
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1 PERMISSIONS

| Type | List |
|---------------------------|-----------------------------|
| Normal | ACCESS_NETWORK_STATE |
| | ACCESS_WIFI_STATE |
| | INTERNET |
| Dangerous Overprivileged | VIBRATE |
| Dangerous | ACCESS_COARSE_LOCATION |
| Normal Dangerous | ACCESS_FINE_LOCATION |
| | RECORD_AUDIO |
| | READ_EXTERNAL_STORAGE |
| Overprivileged | C |
| | MANAGE_ACCOUNTS |
| | WAKELOCK |
| | CHANGE_WIFI_MULTICAST_STATE |
| | RECEIVE_BOOT_COMPLETED |
| | BILLING |
| | NFC |
| | BLUETOOTH |
| | USE_CREDENTIALS |
| | WRITE_EXTERNAL_STORAGE |
| | DUID_READ_PROVIDER |
| | SECURED_BROADCAST |
| | BROADCAST_STICKY |
| | MODIFY_AUDIO_SETTINGS |
| | BLUETOOTH_ADMIN |
| | GET_ACCOUNTS |
| | RECEIVE |
| | INTERNAL_BROADCAST |
| | INSTALL_SHORTCUT |
| | READ_PHONE_STATE |
| Underprivileged | ACCESS_FINE_LOCATION |
| - | RECORD_AUDIO |
| | ACCESS_COARSE_LOCATION |

| | VIBRATE |
|---|---|
| Automatically granted dangerous permissions | READ_CONTACTS |
| | WRITE_CONTACTS |
| | ANSWER_PHONE_CALLSREAD_PHONE_NUMBERS |
| | CALL_PHONE |
| | READ_CALL_LOG |
| | WRITE_CALL_LOG |
| | $\mathrm{ADD}_{\text{-}}\mathrm{VOICEMAIL}$ |
| | USE_SIP |
| | PROCESS_OUTGOING_CALLS |

2 FINDINGS SUMMARY



| Index | Title | Impact |
|-------|----------------------|--------|
| A1 | MixedContentAnalyser | High |

| A2 | Load cleartext content | High |
|-----|--|------|
| A3 | | Low |
| A4 | Electronic Codebook (ECB) used for encryption | High |
| A5 | Launch Mode of Activity (com. spotify. music. MainActivity) is not standard. | High |
| A6 | Launch Mode of Activity (com. spotify. mobile. android. service. LoginActivity) is not standard. | High |
| A7 | Launch Mode of Activity (com. spotify. mobile. android. arsenal. ArsenalActivity) is not standard. | High |
| A8 | Launch Mode of Activity (com. spotify. mobile. android. ui. activity. DevicePickerActivity) is not standard. | High |
| A9 | Launch Mode of Activity (com. spotify. mobile. android. ui. activity. DeviceContextMenuActivity) is not standard. | High |
| A10 | Activity (com. spotify. mobile. android. spotlets. waze. WazeReturnActivity) is not Protected. [android:exported=true] | High |
| A11 | Launch Mode of Activity (com. spotify. mobile. android. ui. activity. VolumeWidgetActivity) is not standard. | High |
| A12 | Launch Mode of Activity (com. spotify. mobile. android. service. ResetPasswordActivity) is not standard. | High |

| A13 | Activity (com. sony. snei. np. android. account. oauth. BrowserRedirectReceiverActivity) is not Protected. [android:exported=true] | High |
|-----|---|------|
| A14 | Activity (com. spotify. mobile. android. spotlets. share. messenger. MessengerShareActivity) is not Protected. [android:exported=true] | High |
| A15 | Launch Mode of Activity (com. spotify. mobile. android. spotlets. myspin. MySpinActivity) is not standard. | High |
| A16 | Activity (com. spotify. mobile. android. spotlets. myspin. MySpinBoot-strapActivity) is not Protected. [android:exported=true] | High |
| A17 | Activity (com. spotify. music. spotlets. magiclink. MagicLinkActivity) is not Protected. [android:exported=true] | High |
| A18 | Service (com. spotify. mobile. android. spotlets. androidauto. Spotify-MediaBrowserService) is not Protected. [android:exported=true] | High |
| A19 | Broadcast Receiver (com. spotify. music. internal. receiver. MediaButtonReceiver) is not Protected. An intent-filter exists. | High |
| A20 | Service (com. spotify. mobile. android. wear. WearableCommunication-Service) is not Protected. An intent-filter exists. | High |
| A21 | Service (com. spotify. mobile. android. spotlets. appprotocol. service. AppProtocolRemoteService) is not Protected. [android:exported=true] | High |
| A22 | Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. BmwConnectedReceiver) is not Protected. [android:exported=true] | High |

| A23 | Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. DisconnectedReceiver) is not Protected. [android:exported=true] | High |
|-----|--|------|
| A24 | Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. BmwConnectInstallReceiver) is not Protected. [android:exported=true] | High |
| A25 | Broadcast Receiver (com. spotify. music. spotlets. widget. SpotifyWidget) is not Protected. An intent-filter exists. | High |
| A26 | Broadcast Receiver (com. spotify. music. spotlets. tracker. InstallReferrerReceiver) is not Protected. [android:exported=true] | High |
| A27 | Broadcast Receiver (com. spotify. mobile. android. service. bluetooth. Bluetooth-BroadcastReceiver) is not Protected. [android:exported=true] | High |
| A28 | Content Provider (com. spotify. mobile. android. service. media. provider. MediaProvider) is not Protected. [android:exported=true] | High |
| A29 | Content Provider (com. bmwgroup. connected. car. contentprovider. Asset-sProvider) is not Protected. [android:exported=true] | High |
| A30 | Activity (com. spotify. music. features. friendsweekly. findfriends. ui. FindFriendsActivity) is not Protected. [android:exported=true] | High |
| A31 | Activity (com. spotify. music. features. friendsweekly. search. ui. Search-FriendsActivity) is not Protected. [android:exported=true] | High |

| A32 | Activity (com. spotify. music. features. friendsactivity. friendslist. ui. AvatarListContainerActivity) is not Protected. [android:exported=true] | High |
|-----|---|------|
| A33 | Activity (com. spotify. music. features. friendsactivity. storydetails. ui. StoryDetailsActivity) is not Protected. [android:exported=true] | High |
| A34 | Activity (com. spotify. mobile. android. sso. AuthorizationActivity) is not Protected. [android:exported=true] | High |
| A35 | | Low |

3 DETAILED FINDINGS

3.1 A1: MixedContentAnalyser

Description

Evidence

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/bkd.smali

Recommendation

3.2 A2: Load cleartext content

Description

Evidence

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/bdv.smaliloadUrl

 $/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/com/spotify/music/podcast/transcripts/TranscriptActivity.smaliloadUrl$

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/com/spotify/music/podcast/transcripts/TranscriptActivity.smaliloadUrl

Recommendation

3.3 A3:

Description

© Evidence

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/bdv\$5.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/bwb.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blv\$1.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smaliLandroid/util/Log->e(Ljava/lang/String;Ljava/lang/String;Ljava/lang/Throwable;)

snip

For the full list view /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/report

Recommendation

3.4 A4: Electronic Codebook (ECB) used for encryption

Description

Using the same encryption key, in ECB mode data blocks are enciphered individually from each other and cause identical message blocks to be transformed to identical ciphertext blocks. The independency of encrypted blocks also implies that the malicious substitution of a block has no impact on adjacent blocks. As a consequence, data patterns are not well hidden and message confidentiality may be compromised.

On Android, the Cipher API provides access to implementations of cryptographic schemes for the encryption and decryption of arbitrary data. To request an instance of a particular cipher, an application has to invoke the method getInstance, passing a suitable transformation string as parameter. Typically, this value is composed of the desired algorithm name, a mode of operation, and the padding scheme to apply. For example, to request an object instance that provides AES in ECB mode with PKCS5 padding, the transformation AES/ECB/PKCS5Padding has to be specified.

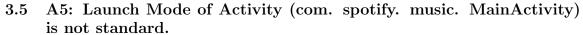
While it is indispensable to declare the algorithm to use, explicitly setting the mode and padding may be omitted. To fill the gap, the underlying Cryptographic Service Provider (CSP) relies on predefined values that do not necessarily reflect the recommended practice. Precisely, if the transformation indicates no operation mode, ECB mode is put in place. Moreover, the initially described problem with ECB is not limited to a specific cipher, such as AES but affects all symmetric block ciphers. Stream ciphers and asymmetric cryptosystems are not concerned since they do not involve an operation mode to repeatedly encipher blocks of contiguous data.

Evidence

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/com/nielsen/app/sdk/c.smali

Recommendation

It is recommended not to use ECB for encryption. Use an asymmetric encryption algorithm instead



An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.6 A6: Launch Mode of Activity (com. spotify. mobile. android. service. LoginActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.7 A7: Launch Mode of Activity (com. spotify. mobile. android. arsenal. ArsenalActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.8 A8: Launch Mode of Activity (com. spotify. mobile. android. ui. activity. DevicePickerActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.9 A9: Launch Mode of Activity (com. spotify. mobile. android. ui. activity. DeviceContextMenuActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.10 A10: Activity (com. spotify. mobile. android. spotlets. waze. WazeReturnActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.11 A11: Launch Mode of Activity (com. spotify. mobile. android. ui. activity. VolumeWidgetActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

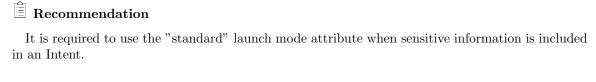
Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.

3.12 A12: Launch Mode of Activity (com. spotify. mobile. android. service. ResetPasswordActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling



3.13 A13: Activity (com. sony. snei. np. android. account. oauth. BrowserRedirectReceiverActivity) is not Protected. [android:exported=true]

Description

Intent.

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.14 A14: Activity (com. spotify. mobile. android. spotlets. share. messenger. MessengerShareActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

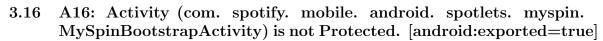
3.15 A15: Launch Mode of Activity (com. spotify. mobile. android. spotlets. myspin. MySpinActivity) is not standard.

Description

An Activity should not be having the launch mode attribute set to "singleTask/singleInstance" as it becomes root Activity and it is possible for other applications to read the contents of the calling Intent.

Recommendation

It is required to use the "standard" launch mode attribute when sensitive information is included in an Intent.



A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.17 A17: Activity (com. spotify. music. spotlets. magiclink. MagicLinkActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.18 A18: Service (com. spotify. mobile. android. spotlets. androidauto. SpotifyMediaBrowserService) is not Protected. [android:exported=true]

Description

A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

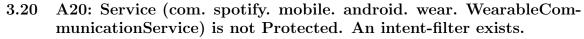
3.19 A19: Broadcast Receiver (com. spotify. music. internal. receiver. MediaButtonReceiver) is not Protected. An intent-filter exists.

Description

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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.



A Service 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 Service is explicitly exported.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.21 A21: Service (com. spotify. mobile. android. spotlets. appprotocol. service. AppProtocolRemoteService) is not Protected. [android:exported=true]

Description

A Service is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.22 A22: Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. BmwConnectedReceiver) is not Protected. [android:exported=true]

Description

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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.23 A23: Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. DisconnectedReceiver) is not Protected. [android:exported=true]

Description

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 recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.24 A24: Broadcast Receiver (com. spotify. mobile. android. spotlets. bmw. registration. BmwConnectInstallReceiver) is not Protected. [android:exported=true]

Description

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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.25 A25: Broadcast Receiver (com. spotify. music. spotlets. widget. SpotifyWidget) is not Protected. An intent-filter exists.

Description

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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

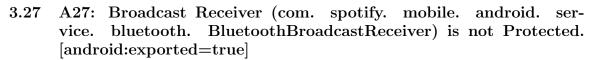
3.26 A26: Broadcast Receiver (com. spotify. music. spotlets. tracker. InstallReferrerReceiver) is not Protected. [android:exported=true]

Description

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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.



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.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.28 A28: Content Provider (com. spotify. mobile. android. service. media. provider. MediaProvider) is not Protected. [android:exported=true]

Description

A Content Provider is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.29 A29: Content Provider (com. bmwgroup. connected. car. content-provider. AssetsProvider) is not Protected. [android:exported=true]

Description

A Content Provider is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.30 A30: Activity (com. spotify. music. features. friendsweekly. find-friends. ui. FindFriendsActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.31 A31: Activity (com. spotify. music. features. friendsweekly. search. ui. SearchFriendsActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.32 A32: Activity (com. spotify. music. features. friendsactivity. friendslist. ui. AvatarListContainerActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.33 A33: Activity (com. spotify. music. features. friendsactivity. story-details. ui. StoryDetailsActivity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

Recommendation

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

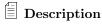
3.34 A34: Activity (com. spotify. mobile. android. sso. Authorization-Activity) is not Protected. [android:exported=true]

Description

A Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

It is recommended to set the protection level to signature, so only applications signed with the same certificate can obtain the permission.

3.35 A35:



Evidence

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/aco.smaliinvoke

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/aeg.smaliinvoke

 $/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/bti.smaliforName$

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/avj.smaliforName

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/avj.smaliforName

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/avj.smaliforName

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/avj.smaligetSuperclass

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/avj.smaligetSuperclass

 $/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/aza.smaliforName$

/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/acr.smaliinvoke

snip

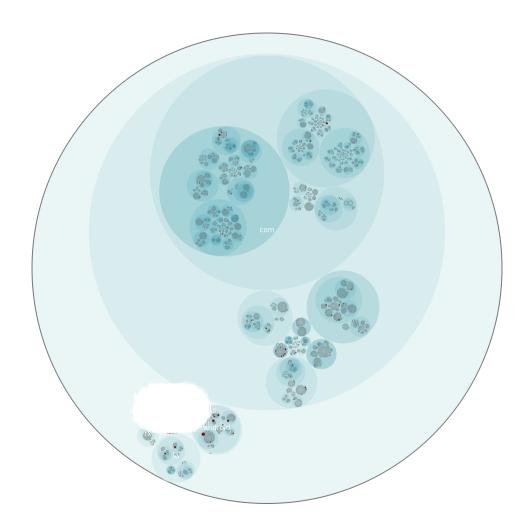
For the full list view /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/report

Recommendation

4 VISUALIZATIONS

4.1 Chord Diagram - Class Relations

4.2 Hot Spot - System Overview



| Index | Class |
|-------|---|
| 1 | <pre>/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_ apps/com_spotify_music/app/smali/com/nielsen/app/sdk/AppSdk.smali</pre> |
| 2 | <pre>/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_ apps/com_spotify_music/app/smali/com/nielsen/app/sdk/ AppLaunchMeasurementManager.smali</pre> |
| 3 | <pre>/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_ apps/com_spotify_music/app/smali/azm.smali</pre> |
| 4 | <pre>/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_ apps/com_spotify_music/app/smali/com/spotify/android/slf4j/ SpotifyLoggerAdapter.smali</pre> |
| 5 | <pre>/home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_ apps/com_spotify_music/app/smali/com/nielsen/app/sdk/j.smali</pre> |

- 6 /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/aaf.smali
- 7 /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/android/support/v7/widget/RecyclerView.smali
- 8 /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/blw.smali
- 9 /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/com/nielsen/app/sdk/f.smali
- /home/miki/Documents/GITHUB/AndroidPermissions/apks/playstore_apps/com_spotify_music/app/smali/com/fasterxml/jackson/databind/util/ClassUtil.smali