

# SCALA ON ANDROID

THE COMPREHENSIVE DOCUMENTATION



usage does not come without **issues**. *MultiDex* is intended for large codebases. You should always make sure to strip out the unused *Scala* library code. This also has the benefit of keeping your **.apk** as slim as possible.

## CONFIGURATION



By default, the *Android SDK Plugin for SBT* runs *ProGuard* with a reasonable **default configuration** whenever you deploy or package your app. If you need to manually enable or disable it, you can use the `useProguard in Android := true` *sbt* option. It is automatically enabled when your app contains *Scala* sources.

When you pull in external dependencies, *ProGuard* will likely cause issues, report warnings and abort the build process. This is where you have to step in to add additional configuration rules. When *ProGuard* raises a warning this usually happens because it detects a reference to a class which does not exist. The *Android SDK* comes with its own implementation of the *Java API* which misses out on some classes (e.g. the `java.rmi.*` package) so this is not a surprise. A library that supports *Android* will never call such a missing class when running in this context. It is therefore safe to ignore the warning.

*ProGuard* may also miss out on classes that are referenced within a library via runtime reflection and remove them too eagerly. If the tool has no chance to detect the usage of a class, it will strip it out and you will encounter `ClassDefNotFound` exceptions at runtime. You then have to manually instruct *ProGuard* to keep this class.

Below is a briefly documented sample *ProGuard* configuration as it may be added to the *sbt* build file.



```
proguardOptions in Android +=  
  // Don't remove anything from your app's code. This is especially useful during development!  
  "-keep class com.example.** { *; }" ::  
  // Keep certain library packages  
  "-keep class com.squareup.okhttp.** { *; }" ::  
  "-keep interface com.squareup.okhttp.** { *; }" ::  
  // Ignore warnings raised from this class  
  "-dontwarn okio.Okio" ::  
  // Keep all test class  
  "-keep class * extends org.scalatest.FunSuite" ::  
  // Keep a certain field; being as specific as possible is good practice because it allows  
  // ProGuard to remove as much unused code as possible which increases your distance to the  
  // 65K barrier  
  "-keepclassmembernames class com.some.library.Class { int someField; }" ::
```

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  " ::  
  // I've read and understood all notes that are issued by this package  
  "-dontnote org.scalatest.**" ::
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