

LAB - 10

Aim :- Application signing by using the apksigner.

Definition:

Application Signing using apksigner refers to the process of digitally signing an Android APK file using the apksigner tool provided by the Android SDK. Signing an APK is mandatory for installation on Android devices, as it verifies the authenticity and integrity of the app. Without signing, the system will reject the installation.

The apksigner tool ensures that the APK is signed using v1 (Jar Signature), v2, v3, or v4 schemes for compatibility with various Android versions.

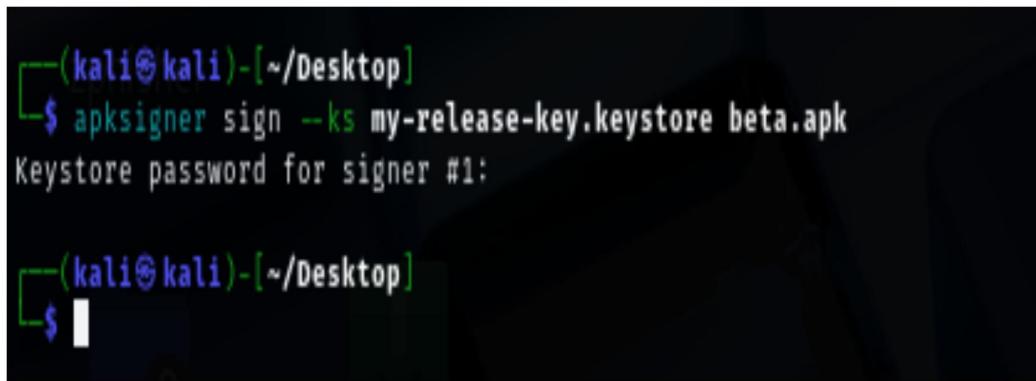
```
(kali㉿kali)-[~/Desktop]
$ sudo apt install apksigner
The following packages were automatically installed and are no longer required:
crackmapexec          libfreerdp2-2t64      libniparser1        libpythontimezone0
firebird3.0-common     libgdal34t64       libjim0.82t64       python3-pathspec
firebird3.0-common-doc libgeos3.12.1t64    libjsoncpp25       python3-pendulum
fonts-liberation2      libgeos3.13.0      liblbfsgsbo         python3-pluggy
freerdp2-x11           libgfapi0          libmbcrypto7t64    python3-ptzdata
hydra-gtk              libgfrpc0          libimfxf1          python3-rsa
ibusverbs-providers   libgfrxdr0         libmimalloc3       python3-setproctitle
icu-devtools            libgl1-mesa-dev     libmsgraph-0-1     python3-setup-tools-scm
libarmadillo12          libglapi-mesa      libndctl6          python3-time-machine
libassuan0              libgles-dev         libnetcdf19t64    python3-trove-classifiers
libavfilter9             libgles1           libpaper1          python3.11
libffio1                libglusterfs0     libperl5.38t64     python3.11-dev
libboost-iostreams1.83.0 libglvnd-core-dev  libplacebo038     python3.11-minimal
libboost-thread1.83.0   libglvnd-dev       libplists          python3.12-tk
libcapstone4             libgspell-1-2     libpmem1           ruby-zeitwerk
libcephfs2               libgtksourceview-3.0-1 libpoppler134     ruby3.1
libconfig++9v5           libgtksourceview-3.0-common libpoppler145     ruby3.1-dev
libconfig9               libgtksourceviewmm-3.0-0v5 libpostproc57     ruby3.1-doc
libdaxctl1               libgumbo2          libpython3.11-dev  rwho
libdirectfb-1.7-7t64    libhdf5-103-1t64   libpython3.11-minimal python3-diskcache
libegl-dev                libhdf5-hl-100t64   libpython3.11-stdlib python3-hatch-vcs
libflac12t64              libibverbs1        libpython3.11t64   python3-hatching
libfmt9                  libicu-dev         libpython3.12-minimal python3-jose
libfreerdp-client2-2t64  libimobiledevice6 libpython3.12-stdlib python3-lib2to3
Use 'sudo apt autoremove' to remove them.

Installing:
  apksigner

Installing dependencies:
  libapksig-java

Summary:
  Upgrading: 0, Installing: 2, Removing: 0, Not Upgrading: 124
  Download size: 949 kB
  Space needed: 1085 kB / 10.2 GB available

Continue? [y/n] y
Get:1 http://kali.download/kali kali-rolling/main amd64 libapksig-java all 35.0.2-1 [452 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 apksigner all 35.0.2-1 [496 kB]
Fetched 949 kB in 3s (328 kB/s)
Selecting previously unselected package libapksig-java.
(Reading database ... 463861 files and directories currently installed.)
Preparing to unpack .../libapksig-java_35.0.2-1_all.deb ...
Unpacking libapksig-java (35.0.2-1) ...
Selecting previously unselected package apksigner.
Preparing to unpack .../apksigner_35.0.2-1_all.deb ...
Unpacking apksigner (35.0.2-1) ...
Setting up libapksig-java (35.0.2-1) ...
Setting up apksigner (35.0.2-1) ...
Processing triggers for kali-menu (2025.1.1) ...
Processing triggers for man-db (2.13.0-1) ...
```



```
(kali㉿kali)-[~/Desktop]
└─$ apksigner sign --ks my-release-key.keystore beta.apk
Keystore password for signer #1:

(kali㉿kali)-[~/Desktop]
└─$
```

Conclusion :-

Signing an APK with apksigner is a crucial step to ensure your Android application is recognized as trustworthy and installable. It authenticates the source of the app and protects it from tampering. By generating a keystore and using apksigner, developers can securely distribute their apps to users or publish them to the Play Store. Always keep your keystore and credentials safe, as they're essential for updating and maintaining your app.