

Android9.0 Unlock Bootloader Guideline

版本：V1.0

日期：2018-12-11

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版本历史

版本	日期	作者	备注
V1.0	2018.12.11		初始版本

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1. Introduction

This document is to present guideline of unlock bootloader in secure boot mode for UNISOC platform.

1.1. Request & Purpose

The secure boot in Unisoc platform should support unlock bootloader feature. According to Android Verified boot requirement, We upgrade the unlock bootloader feature. If you want to find more, please find documents in Android Verified BOOT website.

1.2. Definitions & Abbreviations

Name	Description
CA	Certificate authority
PUK	Public key
OEM	Original Equipment Manufacture
SB	Secure Boot

1.3. Reference

[1] http://en.wikipedia.org/wiki/Digital_signature

[2] Android8.1_Secure_Boot_Integration_Guide

2. Unlock Bootloader In Linux Environment

If you hope that device may be flashed freely and is not intended to be verified, please firstly unlock bootloader. The following steps should be executed :

you need enter fastboot mode, so execute:

```
adb reboot bootloader
```

The step 2.2 is only a demo. It is better for OEM to provide website to generate certificate.

2.1. Get Device identifier

Use <fastboot oem get_identifier_token> command to get device identifier:

Run `sudo ./fastboot oem get_identifier_token`.

The terminal will display (for example):

Identifier token:

30313233343536373839414243444546

343339

The Command Prompt will spit out a token in the form of a very long string of characters.

Select it, copy it, and paste it into a identifier token string—make sure there are no spaces!

2.2. Generate Identifier Signature

Use `signidentifier_unlockbootloader.sh` to generate signature with `rsa4096_vbmeta.pem`

for device identifier:

Enter

vendor/sprd/proprieties-source/packimage_scripts

Run `./signidentifier_unlockbootloader.sh identifier_token rsa4096_vbmeta.pem signature_file`.

The script will generate file to save signature for device identifier.

For example:

```
./signidentifier_unlockbootloader.sh      30313233343536373839414243444546343339  
rsa4096_vbmeta.pem  sign.bin
```

Note:

The `signidentifier_unlockbootloader.sh` is in

vendor/sprd/proprieties-source/packimage_scripts directory.

The `rsa4096_vbmeta.pem` is private key signed vbmeta image in

vendor/sprd/proprieties-source/packimage_scripts/signimage/sprd/config directory.

2.3. Unlock Bootloader

Use `<sudo fastboot flashing unlock_bootloader signature_file>` command to unlock device.

Run `sudo fastboot flashing unlock_bootloader signature_file`.

For example:

```
sudo ./fastboot flashing unlock_bootloader sign.bin
```

The terminal will display(for example):

downloading 'unlock_message'...

OKAY [0.042s]

unlocking bootloader...

At the same time, The lcd screen will display:

Warning: Unlock device may erase user data.

Press volume down button to confirm that.

Press volume up button to cancel.

You can press 'volume down' key to confirm that unlock operation, and user data will be erased, of course, you also may press 'volume up' key to cancel this operation.

At the unlocked state, device may be flashed freely and is not intended to be verified.

You also can use <fastboot flashing lock_bootloader> command to lock device when device is in unlocked state.

For example:

```
sudo ./fastboot flashing lock_bootloader
```

Note : The fastboot is from "out/host/linux-x86/bin/" directory in this board.

3. Unlock Bootloader In Windows Environment

Enter lock-unlock-windows/fastboot/, follow steps of readme.txt.

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