# Rockchip RK3358 Linux4.19 SDK Release Note

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**Preface**

**Overview**

The document presents Rockchip RK3358 Linux4.19 SDK release notes, aiming to help engineers get started with RK3358 Linux4.19 SDK development and debugging faster.

**Intended Audience**

This document (this guide) is mainly intended for:

Technical support engineers

Software development engineers

**Chipset and System Support**

| Chipset | Buildroot Version | Debian Version | Yocto Version |
| --- | --- | --- | --- |
| RK3358M/RK3358J | 2018.02-rc3 | N/A | N/A |

**Revision History**

| Date | Version | Author | Revision History |
| --- | --- | --- | --- |
| 2021-12-30 | V1.0.0 | WJL | Initial version |
| 2022-06-20 | V1.1.0 | WJL | update to V1.1.0 |

## Contents

# 1. Overview

This SDK is based on Buildroot 2018.02-rc3 with kernel 4.19 and U-boot v2017.09. It is suitable for RK3358 EVB development boards and all other Linux products developed based on it.

# 2. How to Get the SDK

The SDK is released by Rockchip server. Please refer to Chapter 3 Software Development Guide to build a development environment.

## 2.1 General RK3358 Linux4.19 SDK Obtain

### 2.1.1 Get Source Code from Rockchip Code Server

To get RK3358 Linux4.19 software package, customers need an account to access the source code repository provided by Rockchip. In order to be able to obtain code synchronization, please provide SSH public key for server authentication and authorization when apply for SDK from Rockchip technical window. About Rockchip server SSH public key authorization, please refer to Chapter 5 SSH Public Key Operation Introduction.

RK3358_Linux4.19_SDK download command is as follows:

```
repo init --repo-url ssh://git@www.rockchip.com.cn/repo/rk/tools/repo -u \
ssh://git@www.rockchip.com.cn/linux/rockchip/platform/manifests -b linux -m \
rk3358_linux4.19_release.xml
```

Repo, a tool built on Python script by Google to help manage git repositories, is mainly used to download and manage software repository of projects. The download address is as follows:

```
git clone ssh://git@www.rockchip.com.cn/repo/rk/tools/repo
```

### 2.1.2 Get Source Code from Local Compression Package

For quick access to SDK source code, Rockchip Technical Window usually provides corresponding version of SDK initial compression package. In this way, developers can get SDK source code through decompressing the initial compression package, which is the same as the one downloaded by repo.
Take RK3358_LINUX4.19_SDK_RELEASE_V1.1.0_20220620.tgz as an example. After geting a initialization package, you can get source code by running the following command:

```
mkdir rk3358
tar xvf RK3358_LINUX4.19_SDK_RELEASE_V1.1.0_20220620.tgz -C rk3358
cd rk3358
.repo/repo/repo sync -l
.repo/repo/repo sync -c
```

Developers can update via `.repo/repo/repo sync -c` command according to update instructions that are regularly released by FAE window.

# 3. Software Development Guide

```
<SDK>/docs/RK3358/Quick-start/Rockchip_RK3358_Quick_Start_Linux_EN.pdf
```

# 4. Hardware Development Guide

```
<SDK>/docs/RK3358/Hardware/Rockchip_RK3358J_Hardware_Design_Guide_V1.0_EN.pdf
<SDK>/docs/RK3358/Hardware/Rockchip_RK3358J_User_Manual_EVB_V1.0_EN.pdf
```

# 5. SSH Public Key Operation Introduction

Please follow the introduction in the "/docs/Others/Rockchip_User_Guide_SDK_Application_And_Synchronization_CN.pdf" to generate an SSH public key and send the email to fae@rock-chips.com, to get the SDK code.

This document will be released to customers during the process of applying for permission.

## 5.1 Multiple Machines Use the Same SSH Public Key

If the same SSH public key should be used in different machines, you can copy the SSH private key file id_rsa to "~/.ssh/id_rsa" of the machine you want to use.

The following prompt will appear when using a wrong private key, please be careful to replace it with the correct private key.


After adding the correct private key, you can use git to clone code, as shown below.

```
~$ cd tmp/
~/tmp$ git clone git@172.16.10.211:rk292x/mid/4.1.1_r1
Initialized empty Git repository in /home/cody/tmp/4.1.1_r1/.git/
The authenticity of host '172.16.10.211 (172.16.10.211)' can't be established.
RSA key fingerprint is fe:36:dd:30:bb:83:73:e1:0b:df:90:e2:73:e4:61:46.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.16.10.211' (RSA) to the list of known hosts.
remote: Counting objects: 237923, done.
remote: Compressing objects: 100% (168382/168382), done.
Receiving objects:   9% (21570/237923), 61.52 MiB | 11.14 MiB/s
```

Adding ssh private key may result in the following error.

```
Agent admitted failture to sign using the key
```

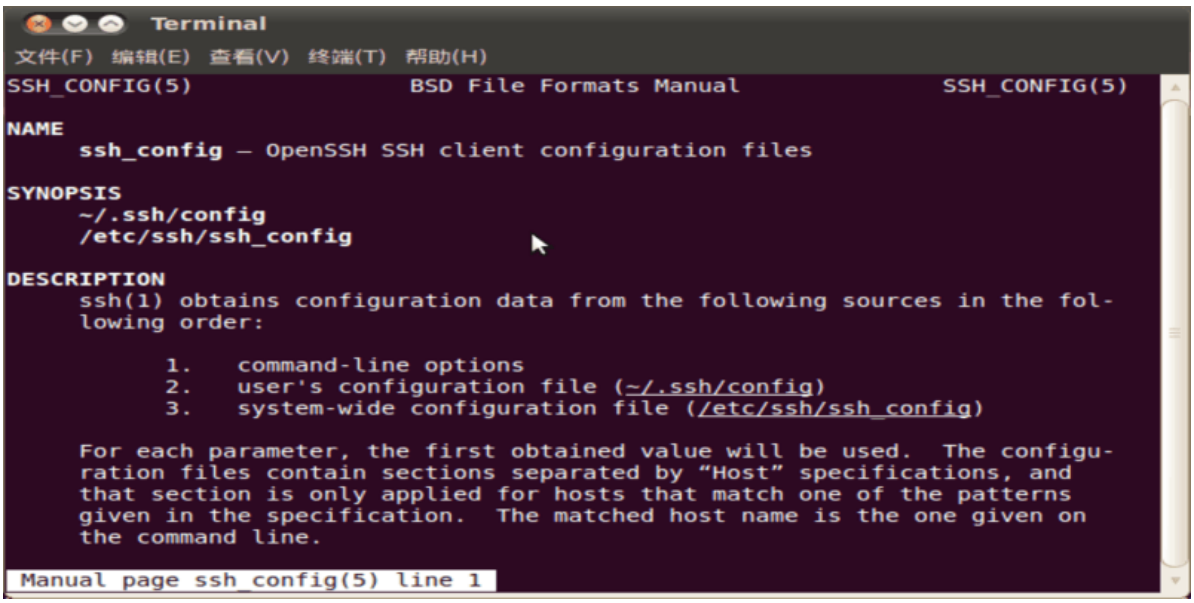
Enter the following command in console to solve:

```
ssh-add ~/.ssh/id_rsa
```

## 5.2 One Machine Switches Different SSH Public Keys

You can configure SSH by referring to ssh_config documentation.

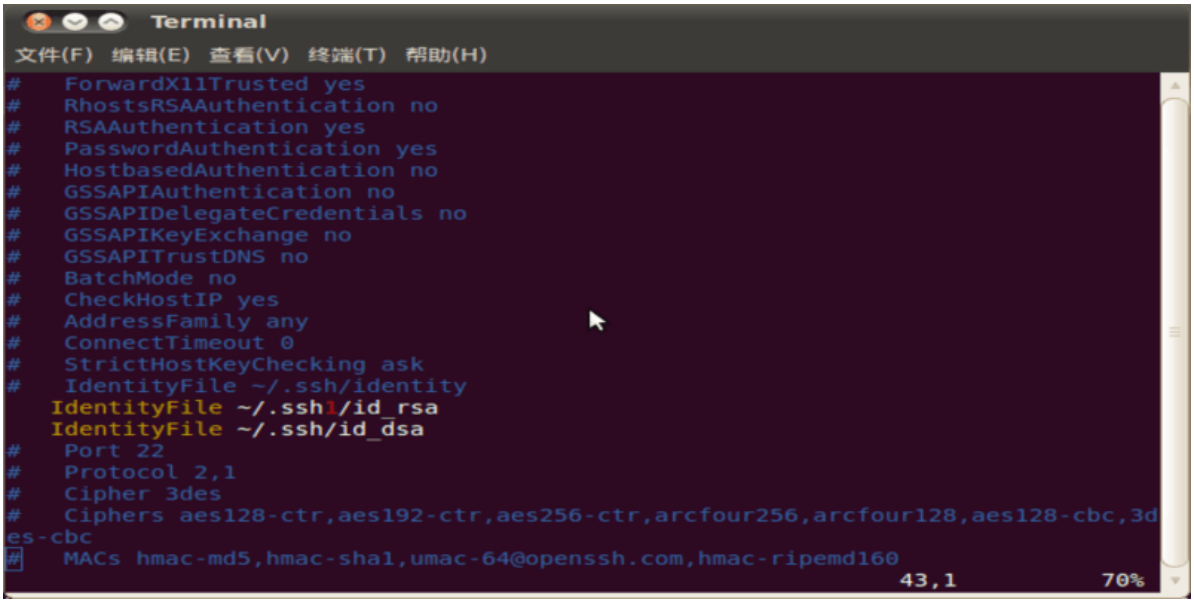
```
~$ man ssh_config
```




Run the following command to configure SSH configuration of current user.

```
~$ cp /etc/ssh/ssh_config ~/.ssh/config
~$ vi .ssh/config
```

As shown in the figure, SSH uses the file "~/.ssh1/id_rsa" of another directory as an authentication private key. In this way, different keys can be switched.




## 5.3 Key Authority Management

Server can monitor download times and IP information of a key in real time. If an abnormality is found, download permission of the corresponding key will be disabled.

Keep the private key file properly. Do not grant second authorization to third parties.

## 5.4 Reference Documents

For more details, please refer to document “/docs/Others/Rockchip_User_Guide_SDK_Application_And_Synchronization_CN.pdf".