

密级状态：绝密( ) 秘密( ) 内部资料( ) 公开(√ )

## RK SDK Android4.0 Ota server building and product ota function configuration

文件状态： [ ] 草稿 [√] 正式发布 [ ] 正在修改	文件标识：	Company-Project-RD-UR
	当前版本：	V1.0
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	完成日期：	2012-01-12

## 历史版本

版本	日期	描述	作者	审核
V1.0	2012-01-12	建立文档，主要介绍 RK29 SDK android4.0 以上版本，ota 升级服务器搭建步骤、产品 OTA 功能配置及注意事项。	毛明康	黄心宇
V1.1	2012-09-13	修改文档，使用 apache tomcat 框架搭建服务器	毛明康	黄心宇

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## 1 Server running environment

Ota server will be suggested running under linux system. The demonstration in this document will set the building method under ubuntu system as a example.

## 2 Ubuntu connection value setting optimization

The default max quantity of opening file descriptor in process is 1024(ulimit -n command checking). This is a limitation to the max value of socket connection which can be opened in the server and then will affect the server performance. To realize the optimization, can set as following steps:

1) . open/etc/security/limits.conf and find the following setting(if no setting, insert these command)

```
* soft nofile 65535
```

```
* hard nofile 65535
```

2) . Edit /etc/pam.d/common-session and add a command.

```
session required pam_limits.so
```

3) . After modification completion, reboot ubuntu.

## 3 JDK installment

Ota server requires the JDK1.6 or higher version. Please refer to the link to see how installment. <http://blog.csdn.net/batoom/article/details/6672297>

## 4 Server configuration

1) **Decompression 'apache-tomcat-7.0.29.zip' to any directory**

example: [mmk@hp-PC:~/webdevelop/apache-tomcat-7.0.29](#)

2) **Modify the directory permissions**

mmk@hp-PC:~/webdevelop\$ chmod 775 -R apache-tomcat-7.0.29

### 3) Server applications deployed in webapps/OtaUpdater

```
mmk@hp-PC:~/webdevelop/apache-tomcat-7.0.29/webapps/OtaUpdater/WEB-INF$ ls
classes lib log4j.properties manifest.xml packages web.xml
```

Manifest. XML and packages directory need according to product model and version number, manually configuration.

### 4) manifest.xml configuration file writing explanation

Here is a demonstration with a example of TD8801 model upgrade.

```
<product name="TD8801" full_package_path="null" rkimage_path="null">
  <version name="1.0.0" package_path="packages/ TD8801/1.0.0/1.0.2.zip" />
  <version name="1.0.1" package_path="packages/ TD8801/1.0.1/1.0.2.zip" />
  <version name="1.0.2" package_path="packages/ TD8801/1.0.2/1.0.3.zip" />
</product>
```

**product** tag has defined the product features. And the product name is TD8801. **Full package path** means the latest package route for ota. If there is no this, please set as null. The multiple version of a product was defined by tag and the version number is the name (this version number is matched with the version number set in the firmware coding).

5 ) **The upgrade package can be placed in any place under the packages directory and just fix the relative path.**

## 6 Server monitoring port modification

The default listen port 2300, if the user need to modify, according to the below steps:  
mmk@hp-PC:~/webdevelop/apache-tomcat-7.0.29\$ vim conf/server.xml

Find the following content:

```
<Connector port="2300" protocol="HTTP/1.1"
  connectionTimeout="20000"
  redirectPort="8443" />
```

The 2300 modified into you need to port

## 7 Server startup and stop

- 1) The server should be deployed in the host whose ip can be visited from the outer internet. Server's domain name and IP should be applied from the internet operator.
- 2) after manifest.xml configuration completion and placing the upgrade package under the packages directory, the server can running. Execute the following in the terminal:

```
mmk@hp-PC:~/webdevelop/apache-tomcat-7.0.29$ ./bin/startup.sh
Using CATALINA_BASE:   /home/mmk/webdevelop/apache-tomcat-7.0.29
Using CATALINA_HOME:   /home/mmk/webdevelop/apache-tomcat-7.0.29
Using CATALINA_TMPDIR: /home/mmk/webdevelop/apache-tomcat-7.0.29/temp
Using JRE_HOME:        /home/mmk/jdk1.6.0_33/jre
Using                                                              CLASSPATH:
/home/mmk/webdevelop/apache-tomcat-7.0.29/bin/bootstrap.jar:/home/mmk/webdevelop/
apache-tomcat-7.0.29/bin/tomcat-juli.jar
```

Or execute shutdown.sh to stop the server:

```
mmk@hp-PC:~/webdevelop/apache-tomcat-7.0.29$ ./bin/shutdown.sh
Using CATALINA_BASE:   /home/mmk/webdevelop/apache-tomcat-7.0.29
Using CATALINA_HOME:   /home/mmk/webdevelop/apache-tomcat-7.0.29
Using CATALINA_TMPDIR: /home/mmk/webdevelop/apache-tomcat-7.0.29/temp
Using JRE_HOME:        /home/mmk/jdk1.6.0_33/jre
Using                                                              CLASSPATH:
/home/mmk/webdevelop/apache-tomcat-7.0.29/bin/bootstrap.jar:/home/mmk/webdevelop/
apache-tomcat-7.0.29/bin/tomcat-juli.jar
```

## 8 Server running log

Run log kept in apache-tomcat-7.0.29/mylogs directory, it would produce a log file every day.

## 9 Rk29sdk Android4.0 Compile the matters needing attention

**device/rockchip/rk29sdk/rk29sdk.mk** macro definition::

# Set those variables here to overwrite the inherited values.

PRODUCT\_NAME := rk29sdk

PRODUCT\_DEVICE := rk29sdk

PRODUCT\_BRAND := Android

**PRODUCT\_MODEL := TD8801**

PRODUCT\_CHARACTERISTICS := tablet

```
PRODUCT_PROPERTY_OVERRIDES += \  
    ro.product.version = 1.0.0 \  
    ro.product.ota.host = www.rockchip.com:2300
```

#### 1) product model definition

modify the PRODUCT\_MODEL value to the right product model. Like TD8801, A22, TSB 。 **Please be noted that there should be no space between product model!**

#### 2) Firmware version number definition

ro.product.version' value 1.0.0 is the current firmware system version number. This version number should be same with the number defined in Server manifest.xml file. Once a new version firmware release, the version number must be updated. Please be noted that this modification will only take effective after deleting

**out/target/product/rk29sdk/system/build.prop and then deleting and then make. Or make clean and then make.**

#### 3) ota server address definition

ro.product.ota.host attribute has defined the ota server host address. The macro name need to be applied from operator. 2300 is the port number and should match the server observation port.

## 10 ota package creation

Please refer to another document 《RK SDK OTA 包生成方法》