Annotation Summary

4 annotations on 1 page by 章敏 Myron

这里改为/usr/lib/jvm/java-1.7.0-open...

Android Build Environment on Ubuntu 12.04 64 bit Installation SOP

这里改为/usr/lib/jvm/java-1.7.0-open...

```
export JAVA_HOME=/opt/java/jdk1.6.0_45
export JRE_HOME=$JAVA_HOME/jre
export CLASSPATH=$CLASSPATH:$JAVA_HOME/lib:$JRE_HOME/lib
```

#1   *p.12*

5. `source /etc/bash.bashrc`

3.3.3   Install open JDK 1.7

1. Run below `apt-get` command to install the package

apt-get install icedtea-7-plugin

```
$ sudo apt-get -y install openjdk-7-jdk
```

2. Run below **update-java-alternatives** command to set open JDK 1.7 environment

```
$ update-java-alternatives -s java-1.7.0-openjdk-amd64
```

#2   *p.12*

Android Build Environment on Ubuntu 12.04 64 bit Installation SOP

Revision	Date (mm/dd/yyyy)	Comments
1.0	07/23/2014	Create initial version 1.0

Context

1 Environment Requirement

1.1 Operating System

1.1.1 Linux Ubuntu12.04(LTS, long term support version) 64bit
1.1.2 Windows/ Mac are NOT supported

1.2 Memory & Disk Space

1.2.1 12G physical memory
    a. Avoid "JVM run out of memory"
    b. Speed up build performance
1.2.2 100G or more disk space is needed (to build Android tree)

1.3 Make Utility

1.3.1 GNU Make v3.81 or above

1.4 Perl, Python, Interpreter

1.4.1 Perl 5.14.2
1.4.2 Python 2.7.3

1.5 Compilation Tools

1.5.1 arm-eabi-4.x for GingerBread, arm-linux-androideabi-4.x for ICS & afterwards versions (this setting will be taken care by Android codebase & be transparent to users)
1.5.2 GCC 4.6
1.5.3 Oracle JDK1.6.045 for KitKat & old Android versions & OPEN JDK 1.7 for L & afterwards Android versions

1.6 Others

1.6.1 Wine 1.1 or above

Notes: Please make sure you use MediaTek recommended environment to avoid potential issues happened in development stage.

e.g. Please make sure you use GCC **4.6.3** as native GCC compiler, otherwise you may meet nvram_auto_gen error when compiling modem SW!

(We already found it will meet problem if you use GCC 4.4.5 or 4.4.7)

2 O.S. Installation

2.1 Download Ubuntu 12.04 x64 DVD Desktop version

http://cdimage.ubuntu.com/releases/12.04/release/ubuntu-12.04.4-dvd-amd64.iso

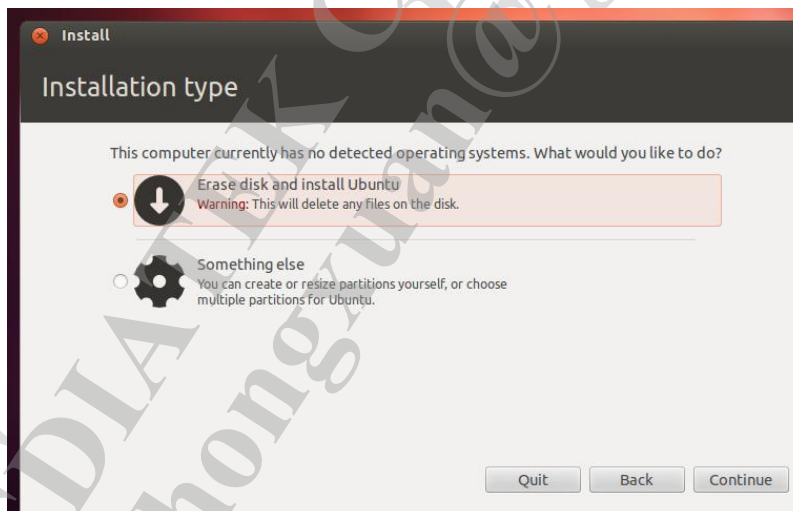## 2.2 Start the installation

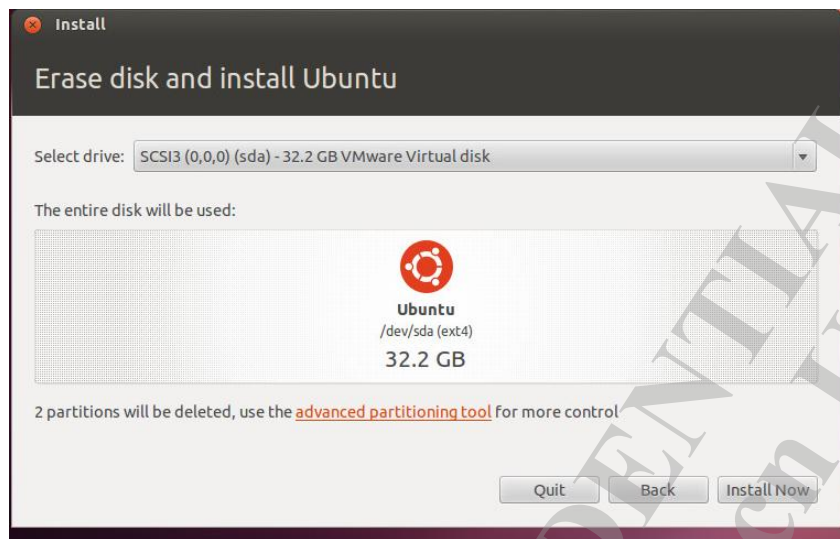### 2.2.1 Install menu language: English

2.2.2 Install Ubuntu

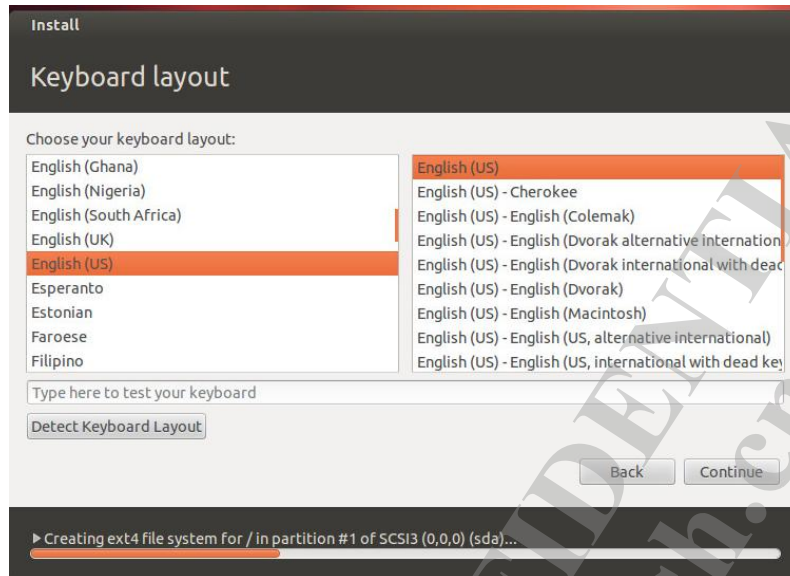### 2.2.3 Prepare disk space: Erase and use the entire disk
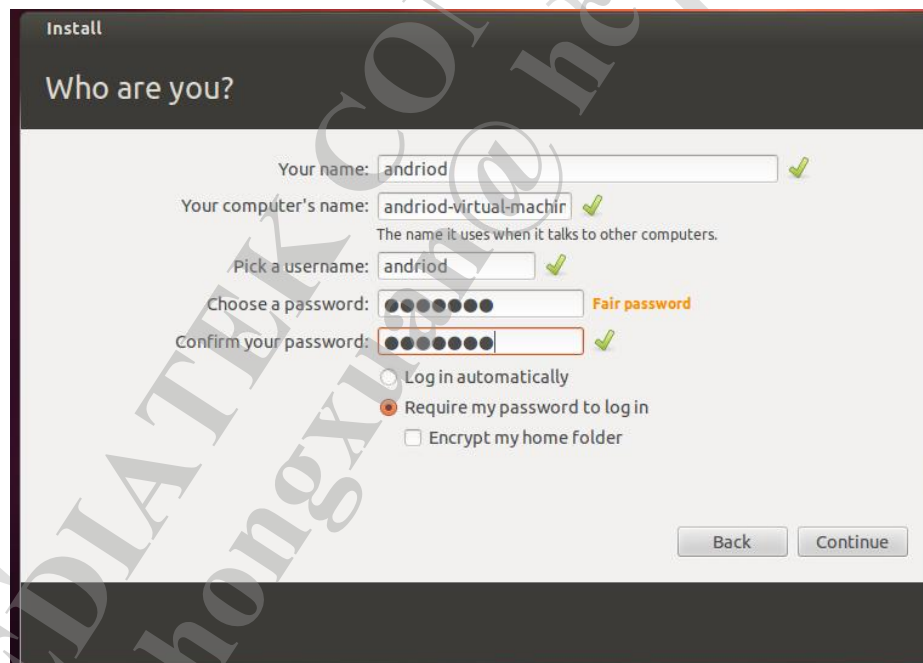
2.2.4 Timezone & Coventions: Asia (China)

2.2.5 KeyBoard Layout: USA

2.2.6 Who are you?

2.2.7 Press Install and Start to install

3   Install Software and Compilation Tool Chain

3.1   Modify /etc/apt/sources.list

```
$ sudo vi /etc/apt/sources.list

deb http://archive.ubuntu.com /ubuntu/ precise main restricted universe
multiverse

deb http://archive.ubuntu.com /ubuntu/ precise-updates main restricted
universe multiverse

deb http://archive.ubuntu.com /ubuntu/ precise-security main restricted
universe multiverse
```

3.2   Required Packages

1. Login As your account name

2. Make your Ubuntu has ability to go on internet

3. Applications → Accessories → Terminal → Run sudo su → apt-get update

4. Update apt information

```
$ sudo su -

[sudo] password for android:******

root@android-machine:~$ apt-get update
```

5. Install google recommended packages

```
$ apt-get install -y git gnupg flex bison gperf build-essential \

zip curl libc6-dev libncurses5-dev:i386 x11proto-core-dev \

libx11-dev:i386 libreadline6-dev:i386 libgl1-mesa-glx:i386 \

g++-multilib mingw32 tofrodos libgl1-mesa-dev \

python-markdown libxml2-utils xsltproc zlib1g-dev:i386

$ ln -s /usr/lib/i386-linux-gnu/mesa/libGL.so.1 /usr/lib/i386-linux-
gnu/libGL.so
```

3.3 Install oracle JDK 1.6 & open JDK 1.7

3.3.1 Download oracle JDK 1.6

http://www.oracle.com/technetwork/java/javase/downloads/java-archive-downloads-javase6-419409.html#jdk-6u45-oth-JPR

Java SE Development Kit 6u45

You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux x86	65.46 MB	jdk-6u45-linux-i586-rpm.bin
Linux x86	68.47 MB	jdk-6u45-linux-i586.bin
Linux x64	65.69 MB	jdk-6u45-linux-x64-rpm.bin
Linux x64	68.75 MB	jdk-6u45-linux-x64.bin
Solaris x86	68.38 MB	jdk-6u45-solaris-i586.sh
Solaris x86 (SVR4 package)	120 MB	jdk-6u45-solaris-i586.tar.Z
Solaris x64	8.5 MB	jdk-6u45-solaris-x64.sh
Solaris x64 (SVR4 package)	12.23 MB	jdk-6u45-solaris-x64.tar.Z
Solaris SPARC	73.41 MB	jdk-6u45-solaris-sparc.sh
Solaris SPARC (SVR4 package)	124.74 MB	jdk-6u45-solaris-sparc.tar.Z
Solaris SPARC 64-bit	12.19 MB	jdk-6u45-solaris-sparcv9.sh
Solaris SPARC 64-bit (SVR4 package)	15.49 MB	jdk-6u45-solaris-sparcv9.tar.Z
Windows x86	69.85 MB	jdk-6u45-windows-i586.exe
Windows x64	59.96 MB	jdk-6u45-windows-x64.exe
Linux Intel Itanium	53.89 MB	jdk-6u45-linux-ia64-rpm.bin
Linux Intel Itanium	56 MB	jdk-6u45-linux-ia64.bin
Windows Intel Itanium	51.72 MB	jdk-6u45-windows-ia64.exe
Back to top		

3.3.2 Install oracle JDK 1.6

1. `mkdir /opt/java`

2. copy `jdk-6u45-linux-x64.bin` to `/opt/java/`

3. `cd /opt/java/`

```
$ chmod a+x jdk-6u45-linux-x64.bin

$ ./jdk-6u45-linux-x64.bin
```

4. set oracle JDK 1.6 environment in `/etc/bash.bashrc`:

这里改为/usr/lib/jvm/java-1.7.0-open...

```
export JAVA_HOME=/opt/java/jdk1.6.0_45
export JRE_HOME=$JAVA_HOME/jre
export CLASSPATH=$CLASSPATH:$JAVA_HOME/lib:$JRE_HOME/lib
export PATH=$PATH:$JAVA_HOME/bin:$JRE_HOME/bin:$JAVA_HOME/lib:$JAVA_HOME
```

5. `source /etc/bash.bashrc`

3.3.3 Install open JDK 1.7

1. Run below `apt-get` command to install the package

   ```
   $ sudo apt-get -y install openjdk-7-jdk
   ```
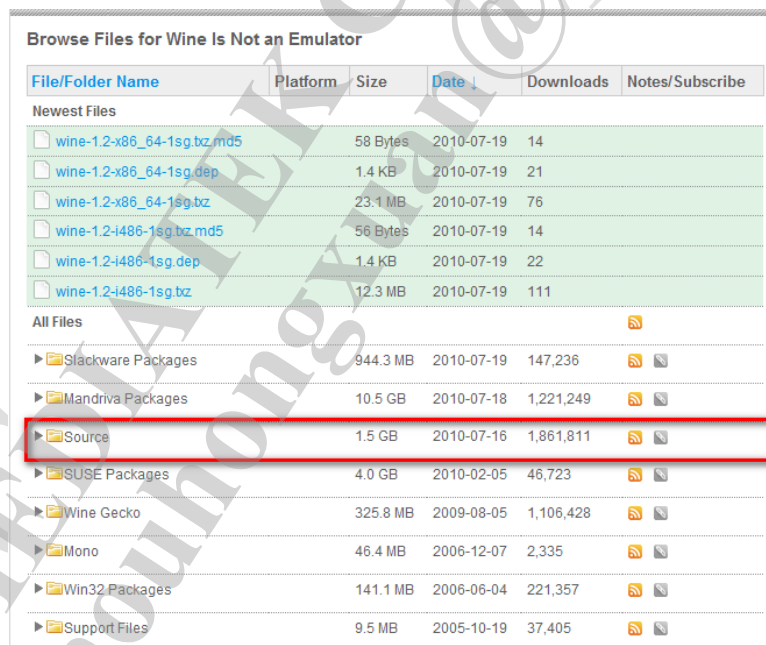
apt-get install icedtea-7-plugin

2. Run below **update-java-alternatives** command to set open JDK 1.7 environment

   ```
   $ update-java-alternatives -s java-1.7.0-openjdk-amd64
   ```

3.4 Install wine-1.1.33 (optional, ONLY for JB MR0, ICS, GB)

3.4.1 Download wine 1.1.33 source code

Go to http://sourceforge.net/projects/wine/files/

File/Folder Name	Platform	Size	Date ↓	Downloads	Notes/Subscribe
Newest Files					
wine-1.2-x86_64-1sg.txz.md5		58 Bytes	2010-07-19	14	
wine-1.2-x86_64-1sg.dep		1.4 KB	2010-07-19	21	
wine-1.2-x86_64-1sg.txz		23.1 MB	2010-07-19	76	
wine-1.2-i486-1sg.txz.md5		56 Bytes	2010-07-19	14	
wine-1.2-i486-1sg.dep		1.4 KB	2010-07-19	22	
wine-1.2-i486-1sg.txz		12.3 MB	2010-07-19	111	
All Files					
▶ Slackware Packages		944.3 MB	2010-07-19	147,236	
▶ Mandriva Packages		10.5 GB	2010-07-18	1,221,249	
▶ Source		1.5 GB	2010-07-16	1,861,811	
▶ SUSE Packages		4.0 GB	2010-02-05	46,723	
▶ Wine Gecko		325.8 MB	2009-08-05	1,106,428	
▶ Mono		46.4 MB	2006-12-07	2,335	
▶ Win32 Packages		141.1 MB	2006-06-04	221,357	
▶ Support Files		9.5 MB	2005-10-19	37,405	

Figure 1：wine source code download url

3.4.2 Install wine 1.1.33

1. Extract wine-1.1.33.tar.bz2 to /tmp directory

```
$ tar jxvf wine-1.1.33.tar.bz2  -C /tmp
```

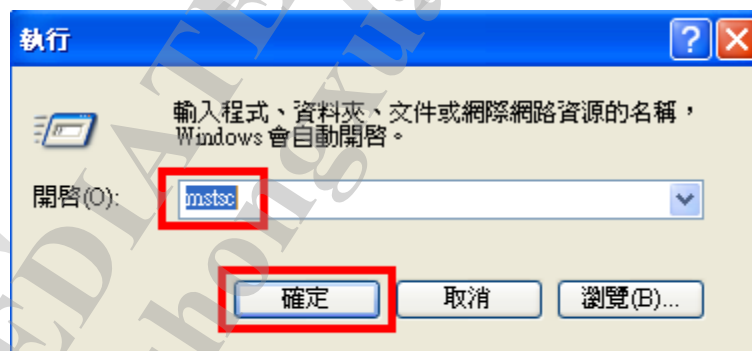2. Make and install wine-1.1.33

```
$ cd /tmp/wine-1.1.33

$ ./configure --prefix=/opt/wine-1.1.33

$ make depend && make

$ make install
```
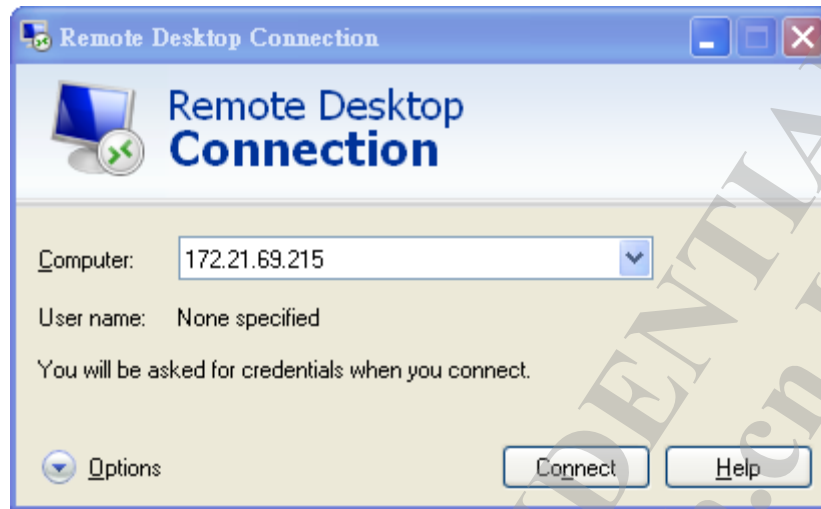
3.5 Install xrdp (Optional)

3.5.1 Install and verify xrdp

```
$ apt-get install xrdp

$ dpkg -l | grep xrdp

ii  xrdp          0.5.0-2               Remote Desktop Protocol (RDP) server
```
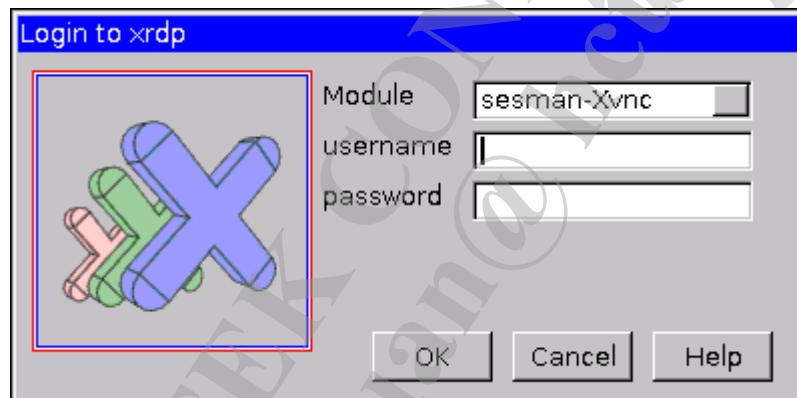
3.5.2 Press "Windows+R" on keyboard, and enter "mstsc" command.

3.5.3 The RDP Connection will start. Enter the host name and connect.

3.5.4 Use your username and password to login.

4 Configure Build Profile

4.1 Configure android build profile

Modify android build profile 'mbldenv.sh' which located in codebase(alps/mbldenv.sh) according to the SW installation path(e.g. JDK)

```
# android profile

JAVA_HOME=/opt/java/jdk1.6.0_45

export JAVA_HOME



ANDROID_JAVA_HOME=/opt/java/jdk1.6.0_45

export ANDROID_JAVA_HOME



PATH=/opt/java/jdk1.6.0_45/bin:$PWD/prebuilts/gcc/linux-x86/arm/arm-
linux-androideabi-4.7/bin:$PATH

export PATH
```