

Neo_N1 Smart Module Compiling Environment Setup Guide

Version 1.0



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Notice

This document provides guide for users to use the N1.

This document is intended for system engineers (SEs), development engineers, and test engineers.

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Change History		
Issue	Changes	Date
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1 Configuring Compiling Server

The following configurations are recommended for a computer used to compile N1 SDK:

- Multicore and multithreading CPU, quad-core quad-threading or better CPU
- 64-bit Linux OS, ubuntu 64-bit OS is preferred
- Memory: 4GB or above.

If the memory is lower than 4GB, errors may occur during compiling.

- Storage: more than 50 GB.

After compiling, N1 SDK occupies 50GB storage.

- Internet connection

You need to download and update software.

- Root permission

2 Setting Up N1 SDK Compiling Environment

This chapter describes how to set up N1 SDK compiling environment on ubuntu 64-bit OS.

2.1 Installing OS

Step 1 Install the ubuntu 64-bit OS.

Step 2 Update source: `sudo apt-get update`

Step 3 Update software package: `sudo apt-get upgrade`

2.2 Installing Software

2.2.1 ubuntu12.04

Ensure that the network is accessible, and input the following information on your terminal device:

```
sudo apt-get install git-core gnupg flex bison gperf build-essential zip
curl zlib1g-dev libc6-dev lib32ncurses5-dev ia32-libs x11proto-core-dev
libx11-dev lib32readline-gplv2-dev lib32z1-dev libgl1-mesa-dev
g++-multilib mingw32 tofrodos python-markdown libxml2-utils xsltproc
```

2.2.2 ubuntu14.04

Ensure that the network is accessible, and input the following information on your terminal device:

```
sudo apt-get install git-core gnupg flex bison gperf libstdc++2.7-dev
libesd0-dev libwxgtk2.8-dev squashfs-tools build-essential zip curl
libncurses5-dev zlib1g-dev pngcrush schedtool libxml2 libxml2-utils
xsltproc lzip libc6-dev schedtool g++-multilib lib32z1-dev
lib32ncurses5-dev lib32readline-gplv2-dev gcc-multilib libswitch-perl
libssl1.0.0 libssl-dev
```



CAUTION

- If any prompt information asks to replace some of the software package, just replace them as required.
 - Ensure that the version of gcc and g++ are same. Otherwise, you will encounter errors during compiling.
-

2.3 Installing openjdk-7-jdk

Android 5.0 and later versions use openjdk rather than jdk from Oracle. N1 runs Android5.1, so you need to install openjdk-7-jdk.

Step 1 Install `openjdk-7-jdk`.

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

Step 2 Check the javac and java versions

After the installation, the system is switched to java1.7 by default:

```
~$ javac -version
```

```
javac 1.7.0_79
```

```
~$ java -version
```

```
java version "1.7.0_79"
```

```
OpenJDK Runtime Environment (IcedTea 2.5.5) (7u79-2.5.5-0ubuntu0.12.04.1)
```

```
OpenJDK 64-Bit Server VM (build 24.79-b02, mixed mode)
```

Step 3 Switch Java and Javac.

- If java1.6 was installed on your system by default, you can run the following command to switch two versions: **sudo update-alternatives --config java**.

Then, select according to the prompt information.

Check the java -version to determine whether the java version is switched successfully.

- Switch javac versions: **sudo update-alternatives --config javac**

Then, select according to the prompt information.

Check the javac -version to determine whether the javac version is switched successfully.

3 Compiling N1 SDK

After decompressing the N1 SDK package, run the `./build.sh N1` script under the root directory of N1 SDK.

```
Loading radio filesmap...
Loading radio target...
warning radio-update: no radio images in input target_files
  running: java -Xmx2048m -jar out/host/linux-x86/framework/signapk.jar -
et/product/security/testkey.pk8 /tmp/tmpPgi0Rv out/target/product/N1/N1-ot
done.
#####Generate OTA Target Files start...#####
#####Generate OTA Target Files end...#####
#####Generate OTA Binary Packs start...#####
#####Generate OTA Binary Packs end!#####

### make completed successfully (11:21 (mm:ss)) ###

=====
Build finished !
=====
```



4 Installation Issues

Issue 1

When I updated the ubuntu server source, I got the following message:

```
W: GPG error: http://extras.ubuntu.com precise Release: The following
signatures couldn't be verified because the public key is not available:
NO_PUBKEY 16126D3A3E5C1192
```

Solution:

1. Download the installation key: **sudo apt-key adv --recv-keys --keyserver keyserver.ubuntu.com 16126D3A3E5C1192**
2. Update the source again: **sudo apt-get update**

Issue 2

During N1 SDK compiling, the following error occurs:

```
/bin/bash: mkisofs: command not found
```

Solution:

1. Install again: **sudo apt-get install genisoimage**
2. Compile N1 SDK again.