



(ysko77@hanmir.com)

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(..)

1.

1. ?
가 .
, 8051 C 8051
8051 가 .
(host platform), 8051 (target platform)

X86 C 386ex

* --> ()
* --> 가 가
(8051)

2.
가 binutils, gcc, glibc, kernel .
gnu ,
<ftp://ftp.gnu.org/gnu>
gcc kernel .
<ftp://ftp.arm.linux.org.uk/pub/linux/arm/>

가 .



/tmp/gz

가 .

/tmp/gz

/tmp/armbuild

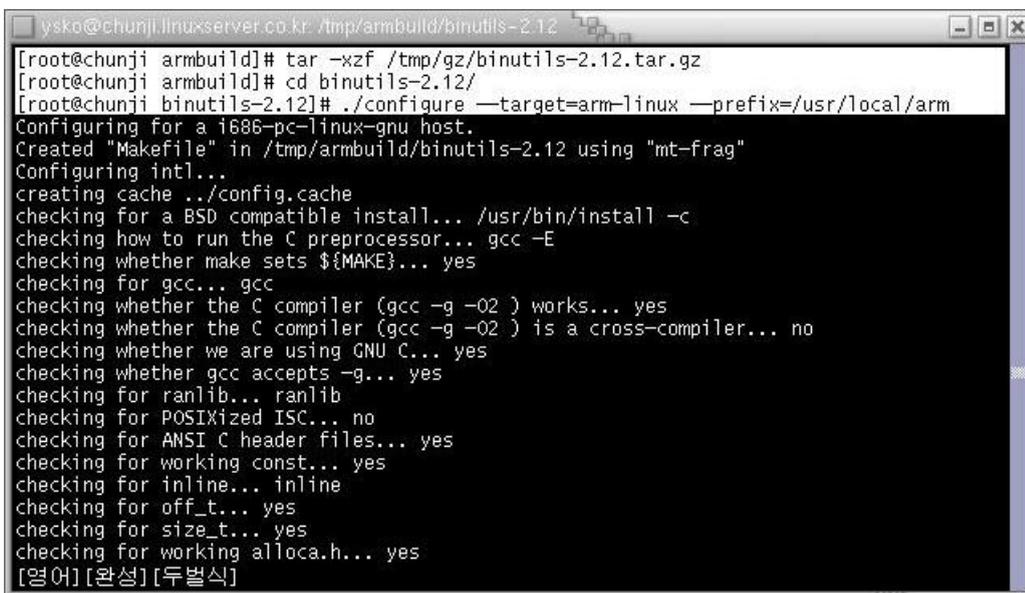
가

/usr/local/arm .

3.

3-1. binutils

```
      /tmp          armbuild          binutil          .
# mkdir /tmp/armbuild          -----> armbuild
# cd /tmp/armbuild
# tar -xzf /tmp/gz/binutils-2.12.tar.gz          -----> binutils
#./configure --target=arm-linux --prefix=/usr/local/arm          -----> make
(          arm-linux          /usr/local/arm          .)
```



```
# make          ----->          .o          .
# make install ----->

binutils
# PATH=/usr/local/arm/bin:$PATH
          /root/.bash_profile PATH
```

3-2. GCC

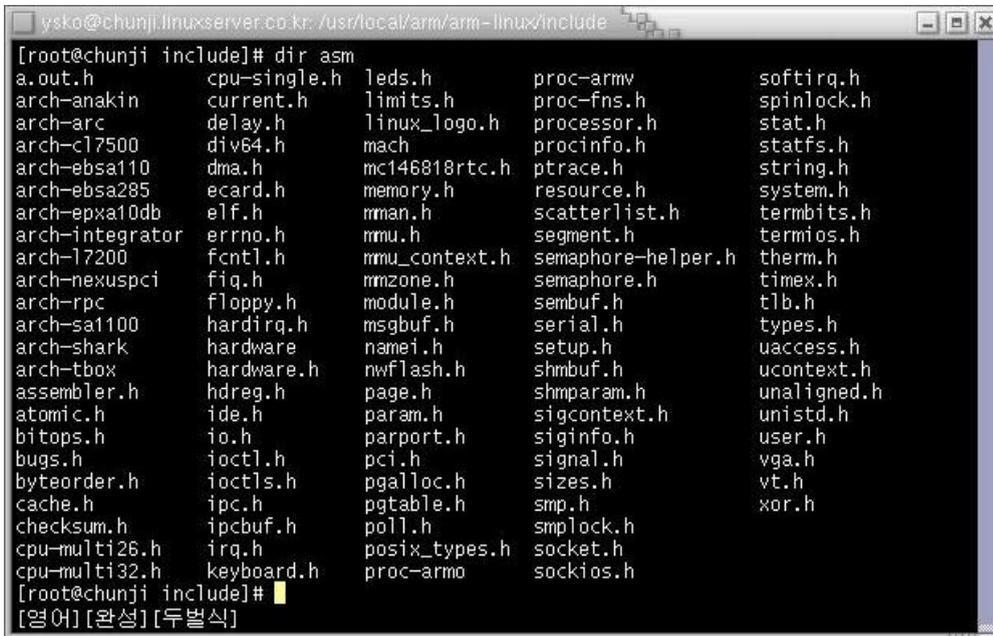
```
linux-2.4.18( ,          .)
# cd /usr/src
```

```

# mkdir linux-2.4.18
# cd linux-2.4.18
# tar -xzf /tmp/gz/linux-2.4.18.tar.gz
# cd /usr/local/arm/arm-linux/
# mkdir include ----> /usr/local/arm/arm-linux include

# cd include/
# ln -s /usr/src/linux-2.4.18/linux/include/asm-arm/ asm ---> asm
2.4.18 asm-arm
# ln -s /usr/src/linux-2.4.18/linux/include/linux/ linux
# dir asm --->dir asm

```



gcc

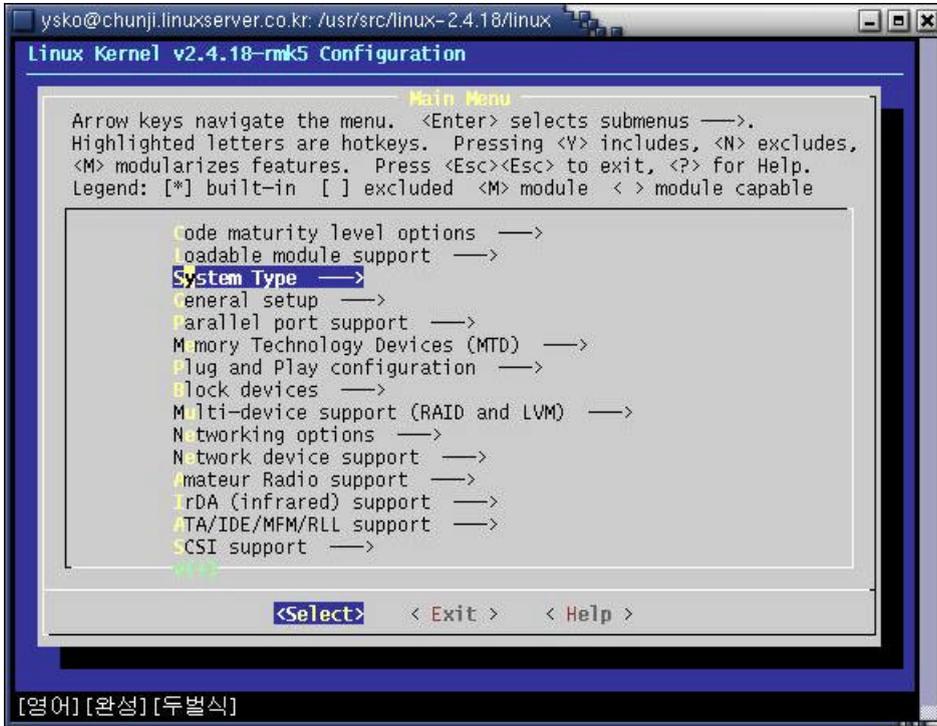
```

# cd /tmp/armbuild/
# tar -xzf /tmp/gz/gcc-2.95.3.tar.gz
# cd gcc-2.95.3/
# bzcat /tmp/gz/gcc-2.95.3.diff.bz2 | patch -p1 ---> gcc arm
# ./configure --target=arm-linux --prefix=/usr/local/arm \
--with-headers=/usr/include/ -->with-headers=/usr/include/ 가
가
/usr/include/ 가
make error
gcc gcc 가
가
가 ( .)

```

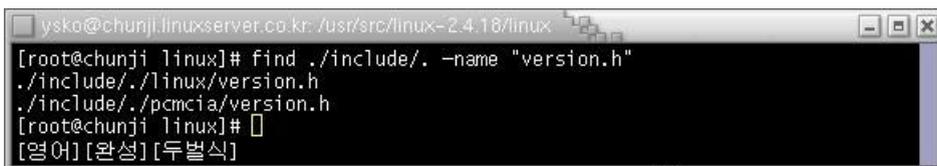


```
# make menuconfig - - -> , make menuconfig
exit
```



가

```
# make dep - - ->
# find . -name "version.h"
version.h가 include/linux error!!!
```



```
# cd /usr/local/arm
# mkdir glibc - - -> glibc가
# mkdir glibc/arm-linux-glibc
# cd /tmp/armbuild/
# tar -xzf /tmp/gz/glibc-2.2.3.tar.gz
# cd glibc-2.2.3/
# gzip -dc /tmp/gz/glibc-linuxthreads-2.2.3.tar.gz | tar xvf -
- - ->
```

```
# CC=arm-linux-gcc ./configure arm-linux --build=i686-pc-linux-gnu \
> --prefix=/usr/local/arm/glibc/arm-linux-glibc/ --enable-add-ons \
> --with-headers=/usr/src/linux-2.4.18/linux/include/ ---> ( )
```

```
yoko@chunji.linuxserver.co.kr: /tmp/armbuild/glibc-2.2.3
[root@chunji glibc-2.2.3]# CC=arm-linux-gcc ./configure arm-linux --build=i686-pc-linux-gnu --
prefix=/usr/local/arm/glibc/arm-linux-glibc/ --enable-add-ons --with-headers=/usr/src/linux-2.
4.18/linux/include/
creating cache ./config.cache
checking host system type... arm-unknown-linux-gnu
checking sysdep dirs... sysdeps/arm/elf linuxthreads/sysdeps/unix/sysv/linux linuxthreads/sysd
eps/pthread linuxthreads/sysdeps/unix/sysv linuxthreads/sysdeps/unix linuxthreads/sysdeps/arm
sysdeps/unix/sysv/linux/arm sysdeps/unix/sysv/linux sysdeps/gnu sysdeps/unix/common sysdeps/un
ix/mman sysdeps/unix/inet sysdeps/unix/sysv sysdeps/unix/arm sysdeps/unix sysdeps/posix sysdep
s/arm/fpu sysdeps/arm sysdeps/wordsize-32 sysdeps/ieee754/flt-32 sysdeps/ieee754/dbl-64 sysdep
s/ieee754 sysdeps/generic/elf sysdeps/generic
checking for a BSD compatible install... /usr/bin/install -c
checking whether ln -s works... yes
checking for pwd... /bin/pwd
checking build system type... i686-pc-linux-gnu
checking for arm-linux-gcc... arm-linux-gcc
checking version of arm-linux-gcc... 2.95.3, ok
checking for gnumake... no
checking for gmake... gmake
checking version of gmake... 3.79.1, ok
checking for gnumsgfmt... no
checking for gmsgfmt... no
[영어] [완성] [두벌식]
```

```
# make
# make install
```

3-4. gcc C++ Compiler

```
# cd /tmp/armbuild/gcc-2.95.3
# ./configure --target=arm-linux --prefix=/usr/local/arm \
> --with-headers=/usr/local/arm/glibc/arm-linux-glibc/include \
> --with-libs=/usr/local/arm/glibc/arm-linux-glibc/lib
# make LANGUAGES="c c++"
# make LANGUAGES="c c++" install
```

가

3-5.

가

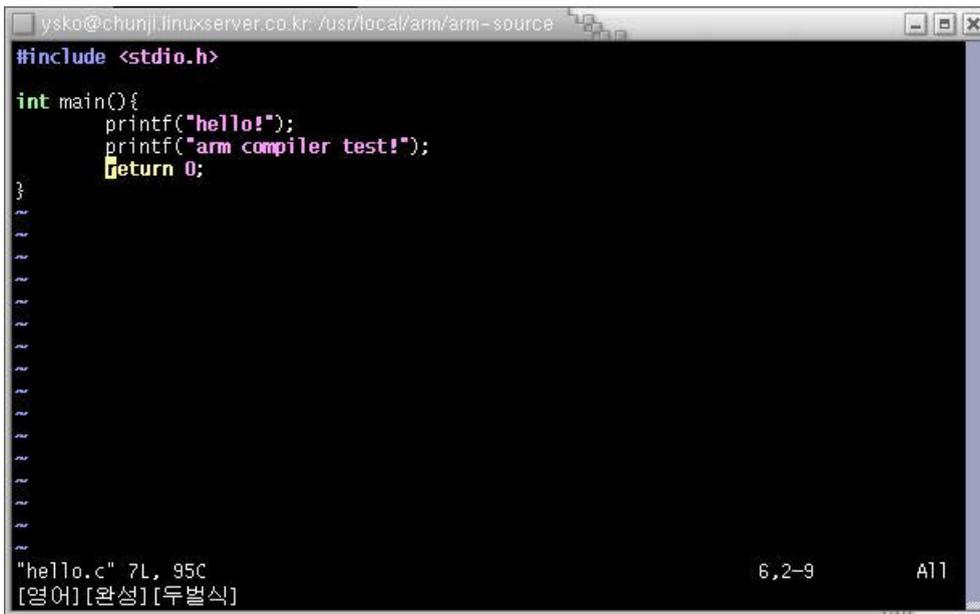
```
# cd /usr/local/arm
```

```
# mkdir arm-source --> 가
```

```
# cd arm-source
```

```
# vi hello.c ---> ..
```

```
vi
```



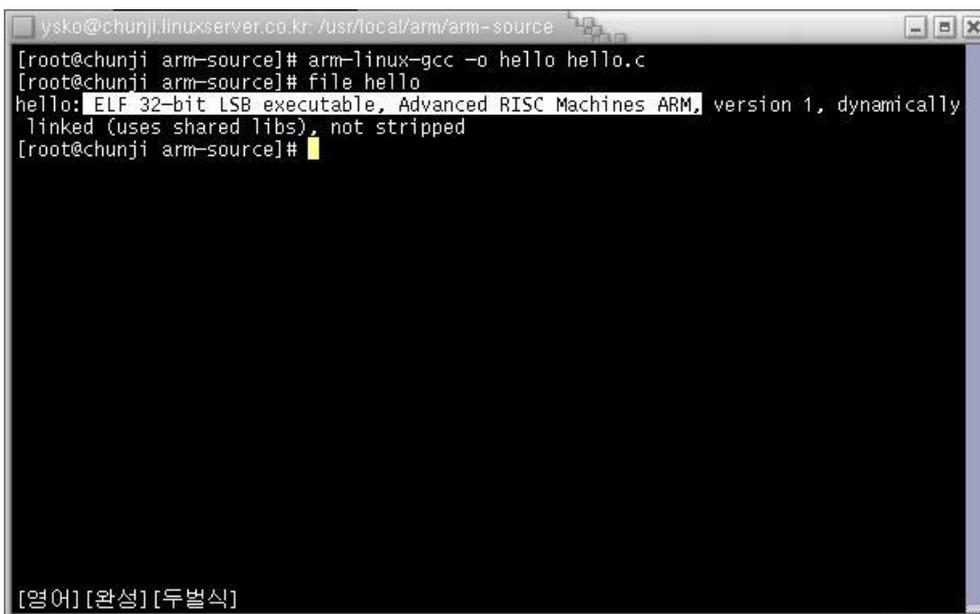
```
ysko@chunji.linuxserver.co.kr: /usr/local/arm/arm-source
#include <stdio.h>

int main(){
    printf("hello!");
    printf("arm compiler test!");
    return 0;
}

"hello.c" 7L, 95C          6,2-9      A11
[영어] [완성] [두벌식]
```

```
# arm-linux-gcc -o hello hello.c ---> PATH가
```

```
# file hello --> ELF 32-bit ... ARM
```



```
ysko@chunji.linuxserver.co.kr: /usr/local/arm/arm-source
[root@chunji arm-source]# arm-linux-gcc -o hello hello.c
[root@chunji arm-source]# file hello
hello: ELF 32-bit LSB executable, Advanced RISC Machines ARM, version 1, dynamically
linked (uses shared libs), not stripped
[root@chunji arm-source]#

[영어] [완성] [두벌식]
```

가

가 cross-3.0.tar.bz2

<ftp://ftp.arm.linux.org.uk/pub/linux/arm/toolchain/>

```
# cd /usr/local
# mkdir arm      --->
# cd arm
# bzip2 /tmp/cross-3.0.tar.bz2 | tar xvf -
# PATH=/usr/local/arm/bin:$PATH  --->
    /root/.bash_profile  PATH
# mkdir arm-source  --->   가
# cd arm-source
# vi hello.c
```

RPM

http://www.t-b.co.kr/html/pro_li03.htm

가 가 RPM RPM

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GPL

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(2002 5 11)