

# Configuration

If you already have cross-compilers available, you may define yours in configuration files, see [here](#).

## Get the sources

You will need gnu binutils, gcc and gdb. They are available on <ftp.gnu.org> or any gnu mirror.

?<http://ftp.gnu.org/gnu/binutils>, ?<http://ftp.gnu.org/gnu/gcc>, ?<http://ftp.gnu.org/gnu/gdb> Let's unpack sources:

```
$ mkdir src  
$ cd src  
$ tar xjf .... /binutils-2.xx.tar.bz2  
$ tar xjf .... /gcc-x.x.x.tar.bz2  
$ tar xjf .... /gdb-x.x.x.tar.bz2  
$
```

## Compilation

Now lets compile. I assume we'll need to compile more toolchains later, so let's share the sources and compile in a separate directory:

```
$ cd ..  
$ mkdir build build/mipsel build/mipsel/binutils build/mipsel/gcc
```

First, binutils

```
$ cd build/mipsel/binutils  
$ ../../src/binutils-2.x/configure --prefix=/where/to/put/it --target=mipsel-unknown-elf \  
--program-prefix=mipsel-unknown-elf- --disable-nls  
$ make  
$ make install  
$ make -C bfd install_bfd  
$ make -C libiberty install_to_libdir  
$
```

Export the `bin` directory of your installation path, if not already in it. You should make this permanent by setting the `PATH` variable in a shell's startup script.

```
$ export PATH=$PATH:/where/to/put/it/bin  
$
```

Now gcc

```
$ cd ../gcc  
$ ../../src/gcc-x.x.x/configure --program-prefix=mipsel-unknown-elf- --prefix=/where/to/put/it \  
--enable-languages=c --target=mipsel-unknown-elf --disable-nls --disable-werror --disable-libs  
--disable-threads --without-headers  
$ make  
$ make install  
$
```

Now gdb

```
$ cd ../gdb  
$ ../../src/gdb-x.x.x/configure --program-prefix=mipsel-unknown-elf- --prefix=/where/to/put/it \  
--target=mipsel-unknown-elf  
$ make
```

Get the sources

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```
$ make install  
$
```

We're done !

You may compile PowerPC toolchain as well, with the same lines, replacing mipsel by powerpc.