



Build Applications For La Fonera

Prerequisites

In order to build (i.e cross-compile) applications for **La Fonera** you must have La Fonera's sources and toolchain on **YOUR** machine (not La Fonera itself).

If you don't want to build these, we have already done it and you can download the tarball from :


- x86 processors : <http://mirrors.itimeteo.com/fon/toolchains/lafonera-x86-toolchain.tar.gz> 
- x86_64 processors : <http://mirrors.itimeteo.com/fon/toolchains/lafonera-x86-64-toolchain.tar.gz> 

If you have downloaded one of these toolchains, you can now jump to [Build your first application!](#)

Build La Fonera's Toolchain

If your processor is not listed or if you want to setup your own toolchain, there are 3 steps to follow :

Step 1 : Prepare your environment


1. # Make a new directory for La Fonera's sources :
2. \$ mkdir /some/where/fonera-sources
- 3.
4. # Go to your newly created directory :
5. \$ cd /some/where/fonera-sources
- 6.
7. # Retrieve the La Fonera's sources :
8. \$ wget <http://download.fon.com/firmware/fonera/latest/fonera.tar.bz2> 
- 9.
10. # Extract the downloaded file :
11. \$ tar jxvf fonera.tar.bz2 ./

Note :

La Fonera's sources are available from :

- <http://download.fon.com/firmware/fonera/latest/fonera.tar.bz2>  (**Original Location**)

OR

- <http://mirrors.itimeteo.com/fon/sources/lafonera-sources.tar.bz2>  (Itimeteo Mirror Location)

Step 2 : Configure the build process

1. # Configure the build :
2. \$ make menuconfig
- 3.
4. # Select the option "**Build the OpenWrt SDK**" by enabling the row with your **space key**.
- 5.
6. # **Press Esc** key and select the "**Yes**" **button** in order to save the build's configuration

Step 3 : Build the toolchain

1. # Launch the build process :
2. \$ make V=99

Wait for about 30 minutes, or more!

During the build process, two important directories are created :

- **bin** Contains your prepackaged toolchain. **For your arch only!**
- **staging_dir_mips** Contains your own toolchain.

Build your first application!

1. # Setup your PATH environment variable :
2. \$ PATH=\$PATH:/some/where/fonera-sources/staging_dir_mips/bin
3. \$ export PATH
- 4.

Step 1 : Prepare your environment

5. # Make a new directory for your app :
6. \$ mkdir /some/where/my-first-app
- 7.
8. # Go to your app directory :
9. \$ cd /some/where/my-first-app
- 10.
11. # Create a simple hello world app :
12. \$ cat > hello.c << EOF
13. #include
- 14.
15. int main(int argc, char *argv[]) {
16. printf("Hello World!
17. ");
18. }
19. EOF
- 20.
21. # Compile your application :
22. \$ mips-linux-uclibc-gcc hello.c -o hello
- 23.
24. # Send it to La Fonera :
25. \$ scp hello root@192.168.10.1:/tmp
- 26.
27. # Connect to La Fonera :
28. \$ ssh root@192.168.10.1
- 29.
30. # Run your first application :
31. \$ /tmp/test
- 32.
33. # This will display :
34. Hello World!