


Update documentation: choice of MPI compiler wrappers
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 **INSTALL** 9.22 KB

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How to install ELPA

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First of all, if you do not want to build ELPA yourself, and you run Linux, it is worth having a look at the ELPA webpage <http://elpa.rzg.mpg.de> and/or the repositories of your Linux distribution: there exist pre-build packages for a number of Linux distributions like Fedora, Debian, and OpenSuse. More, will hopefully follow in the future.

If you want to build (or have to since no packages are available) ELPA yourself, please note that ELPA is shipped with a typical "configure" and "make" autotools procedure. This is the only supported way how to build and install ELPA.

If you obtained ELPA from the official git repository, you will not find the needed configure script! Please look at the "INSTALL_FROM_GIT_VERSION" file for the documentation how to proceed.

If --- against our recommendations --- you do not want to install ELPA as library, or you do not want to use the autotools you will have to find a solution by yourself. This approach is NOT supported by us in any way and we strongly discourage this approach.

If you do this, because you want to include ELPA within your code project (i.e. use ELPA not as an external library but "assimilate" it in your projects), please distribute then `_ALL_` files (as obtained from an official release tar-ball) of ELPA with your code. Note, however, that including the ELPA source files in your code projects (and not using ELPA as external library) is only allowed under the terms of the LGPL license if your code is ALSO under LGPL.

(A): Installing ELPA as library with configure

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The configure installation is best done in four steps

1) run configure:

Check the available options with "configure --help".
ELPA is shipped with several different versions of the elpa2-kernel, each is optimized and tuned for a different architecture.

1.1) Choice of MPI compiler (wrappers)

It is mandatory that the C and C++ parts are compiled with the GNU C, C++ compilers. Thus, all ELPA test programs which are written in C must be compiled and linked with the MPI compiler (wrapper) which uses the GNU C compilers.

The Fortran parts of ELPA can be compiled with any Fortran compiler of your choice. It is for example quite common to compile the Fortran part with the Intel Fortran compiler but the C,C++ parts must be compiled with the GNU compilers.

Thus special care has to be taken that the correct MPI compiler (wrappers) are found by the autotools! The configure script tries to find the correct wrappers automatically, but sometimes it will fail.

In these cases it is necessary to set these compilers by hand:

```
../configure FC=fortran_compiler_wrapper_of_your_choice CC=gcc
```

will tell autotools which wrappers to take.

1.2) Choice of ELPA2 kernels

