



How to Install LLVM

1. Visit <https://llvm.org>

The LLVM Compiler Infrastructure

Site Map:	LLVM Overview	Latest LLVM Release!
Overview Features Documentation Command Guide FAQ Publications LLVM Projects Open Projects LLVM Users Bug Database LLVM Logo Blog Meetings LLVM Foundation	<p>The LLVM Project is a collection of modular and reusable compiler and toolchain technologies. Despite its name, LLVM has little to do with traditional virtual machines. The name "LLVM" itself is not an acronym; it is the full name of the project.</p> <p>LLVM began as a research project at the University of Illinois, with the goal of providing a modern, SSA-based compilation strategy capable of supporting both static and dynamic compilation of arbitrary programming languages. Since then, LLVM has grown to be an umbrella project consisting of a number of subprojects, many of which are being used in production by a wide variety of commercial and open source projects as well as being widely used in academic research. Code in the LLVM project is licensed under the "Apache 2.0 License with LLVM exceptions"</p> <p>The primary sub-projects of LLVM are:</p> <ol style="list-style-type: none">1. The LLVM Core libraries provide a modern source- and target-independent optimizer, along with code generation support for many popular CPUs (as well as some less common ones!) These libraries are built around a well specified code representation known as the LLVM intermediate representation ("LLVM IR"). The LLVM Core	<p>24 March 2020: LLVM 10.0.0 is now available for download! LLVM is publicly available under an open source License. Also, you might want to check out the new features in Git that will appear in the next LLVM release. If you want them early, download LLVM through anonymous Git.</p> <p>ACM Software System Award!</p> <p>LLVM has been awarded the 2012 ACM Software System Award! This award is given by ACM to <i>one</i> software system worldwide every year. LLVM is in highly distinguished company! Click on any of the individual recipients' names on that page for the detailed</p>
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How to Install LLVM

2. Download LLVM and Clang source codes

Download LLVM 10.0.0

Sources:

- [llvm-project monorepo source code \(.sig\)](#)
- [LLVM source code \(.sig\)](#)
- [Clang source code \(.sig\)](#)
- [compiler-rt source code \(.sig\)](#)
- [libc++ source code \(.sig\)](#)
- [libc++abi source code \(.sig\)](#)
- [libunwind source code \(.sig\)](#)
- [LLD Source code \(.sig\)](#)
- [LLDB Source code \(.sig\)](#)
- [OpenMP Source code \(.sig\)](#)
- [Polly Source code \(.sig\)](#)
- [clang-tools-extra \(.sig\)](#)
- [LLVM Test Suite \(.sig\)](#)



How to Install LLVM

3. Extract the LLVM source code

```
$ tar xf llvm-10.0.0.src.tar.xz  
$ mv llvm-10.0.0.src llvm
```

4. Extract the Clang source code at **tools**

```
$ cd llvm/tools  
$ tar xf cfe-10.0.0.src.tar.xz  
$ mv cfe-10.0.0.src clang
```



How to Install LLVM

5. Build LLVM at **llvm-objects**

```
$ cd ../../..
$ mkdir llvm-objects
$ cmake ../llvm && make
```

make -j4 for
multi-threading

6. Install LLVM at **llvm-install**

```
$ mkdir ../llvm-install
$ cmake -DCMAKE_INSTALL_PREFIX=../llvm-install -P
cmake_install.cmake
```



How to Install LLVM

7. Add the install path to \$PATH

```
$ export PATH=$PATH:$PATH_TO_LLVM_INSTALL/bin
```