

# How to install Boost on Ubuntu

Asked 10 years, 3 months ago   Modified 1 year, 4 months ago   Viewed 968k times



I'm on Ubuntu, and I want to install Boost. I tried with

630

```
sudo apt-get install boost
```



But there was no such package. What is the best way to install Boost on Ubuntu?



[ubuntu](#) [boost](#)

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edited Sep 3, 2018 at 14:42



[Peter Mortensen](#)

30.8k 21 104 125

asked Sep 25, 2012 at 7:52



[k53sc](#)

6,680 3 16 21

9 Answers

Sorted by:

Highest score (default)



You can use `apt-get` command (requires `sudo` )

1076

```
sudo apt-get install libboost-all-dev
```



Or you can call



```
aptitude search boost
```



find packages you need and install them using the `apt-get` command.

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answered Sep 25, 2012 at 7:57



[Anton Guryanov](#)

11.7k 1 15 16

3 do you have any past experience with boost? – [k53sc](#) Sep 25, 2012 at 9:09

2 I had programming experience with boost, but not installation experience. I have never tried this myself, so I can't say if it is easy to use (but it seems to me that package manager is the easiest way). I should have posted this suggestion as a comment, but I can't comment questions. – [Anton Guryanov](#) Sep 25,

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- 96 The one disadvantage of using apt-get is that it is usually a couple of version behind the latest boost release. – Ralf Sep 25, 2012 at 11:23
- 6 It is easy to build and install Boost from the sources, for example [anycoder.wordpress.com/2014/04/28/building-boost](http://anycoder.wordpress.com/2014/04/28/building-boost) – Andrew Selivanov Apr 29, 2014 at 11:24
- 7 Do not use the packaged version of boost, right now on Ubuntu 16.04 it's 1.58, and the latest stable version is 1.67.0 ! See the response and my comment below : [stackoverflow.com/a/41272796/2617716](http://stackoverflow.com/a/41272796/2617716) – Jeb Apr 18, 2018 at 11:45



Get the version of Boost that you require. This is for 1.55 but feel free to change or manually download yourself:

242



```
wget -O boost_1_55_0.tar.gz
https://sourceforge.net/projects/boost/files/boost/1.55.0/boost_1_55_0.tar.gz/download
tar xzvf boost_1_55_0.tar.gz
cd boost_1_55_0/
```



Get the required libraries, main ones are icu for boost::regex support:

```
sudo apt-get update
sudo apt-get install build-essential g++ python-dev autotools-dev libicu-dev
libbz2-dev libboost-all-dev
```

Boost's bootstrap setup:

```
./bootstrap.sh --prefix=/usr/
```

Then build it with:

```
./b2
```

and eventually install it:

```
sudo ./b2 install
```

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edited Nov 3, 2020 at 16:54



SAMPro

1,056 1 18 38

answered Jun 6, 2014 at 16:14



user3715812

2,445 1 10 2

3 What will be the difference if we use ./bootstrap.sh --prefix=/usr/include ? I have the boost library in

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- 
- 66 what is libboost-all-dev ? why should I install boost before installing boost? – [Oleg Vazhnev](#) Apr 9, 2015 at 5:34
- 
- 24 @tbc0 Boost is at version 1.59 now, and the latest PPA is at 1.55, so building from source is relevant – [TemplateRex](#) Oct 25, 2015 at 19:30
- 
- 4 sudo ./b2 install builds it as well. You don't have to call ./b2 beforehand. – [Necip Onur Uzun](#) Jan 4, 2019 at 13:57
- 
- 6 this is nice but it screws up cmake – [thang](#) Feb 27, 2019 at 7:56
- 

## Installing Boost on Ubuntu with an example of using `boost::array` :

### 101 Install libboost-all-dev and aptitude:

sudo apt install libboost-all-dev

sudo apt install aptitude

aptitude search boost

Then paste this into a C++ file called `main.cpp` :

```
#include <iostream>
#include <boost/array.hpp>

using namespace std;
int main(){
    boost::array<int, 4> arr = {{1,2,3,4}};
    cout << "hi" << arr[0];
    return 0;
}
```

Compile like this:

```
g++ -o s main.cpp
```

Run it like this:

```
./s
```

Program prints:

```
hi1
```



Gidy

426 6 16



Eric Leschinski

142k 94 406 332

3 There is an error in the line "boost::array<int, 4> arr = {{1,2,3,4}};", it should be "boost::array<int, 4> arr = {1,2,3,4};" – [szulak](#) Nov 1, 2015 at 16:30

59 why do i want to run aptitude search boost ? – [Leedehai](#) Aug 20, 2017 at 1:51

adding "<< endl;" to the "cout" line was required to flush the buffer and make my output show when running in a terminal. – [stegzzz](#) Feb 8, 2021 at 10:35



36



Get the version of Boost that you require. This is for 1.55 but feel free to change or manually download yourself ([Boost download page](#)):

```
wget -O boost_1_55_0.tar.gz
https://sourceforge.net/projects/boost/files/boost/1.55.0/boost_1_55_0.tar.gz/download
tar xzvf boost_1_55_0.tar.gz
cd boost_1_55_0/
```

Get the required libraries, main ones are icu for boost::regex support:

```
sudo apt-get update
sudo apt-get install build-essential g++ python-dev autotools-dev libicu-dev libbz2-dev
```

Boost's bootstrap setup:

```
./bootstrap.sh --prefix=/usr/local
```

If we want MPI then we need to set the flag in the user-config.jam file:

```
user_configFile=`find $PWD -name user-config.jam`
echo "using mpi ;" >> $user_configFile
```

Find the maximum number of physical cores:

```
n=`cat /proc/cpuinfo | grep "cpu cores" | uniq | awk '{print $NF}'`
```

Install boost in parallel:

```
sudo ./b2 --with=all -j $n install
```

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```
sudo sh -c 'echo "/usr/local/lib" >> /etc/ld.so.conf.d/local.conf'
```

Reset the ldconfig:

```
sudo ldconfig
```

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edited Feb 23, 2020 at 7:38



Coronon

297 5 12

answered Dec 21, 2016 at 22:13



Ahmed Elcheikh

516 4 5

- 1 Some things such as PO Edit 2.0 require boost 1.6, which is not available at this time via apt-get you can get this from [boost.org/users/history/version\\_1\\_60\\_0.html](http://boost.org/users/history/version_1_60_0.html) and then expand it. Follow the excellent instructions above, remembering that LD Library Path is not the same as \$PATH – [Andrew Killen](#) May 2, 2017 at 10:51

Please change the link to HTTPS; HTTP isn't safe for binary downloads :) – [Clément](#) Jan 23, 2018 at 21:12

- 1 Comment from a recent installation, to get the latest version : - Go to [boost.org](http://boost.org) and "Current release" downloads to get the last one (currently 1.67.0 : [dl.bintray.com/boostorg/release/1.67.0/source/...](http://dl.bintray.com/boostorg/release/1.67.0/source/...)) Thanks ! – [Jeb](#) Apr 18, 2018 at 11:45

- 1 haha this screws up my system for good. i think it's the last 2 items. – [thang](#) Feb 27, 2019 at 8:03

old link to sourceforge is not working. use [dl.bintray.com/boostorg/release/1.72.0/source/...](http://dl.bintray.com/boostorg/release/1.72.0/source/...) (with needed version) – [Victor Gavro](#) Dec 19, 2019 at 13:05



An update for Windows 10 Ubuntu Application via Subsystem (also works on standard Ubuntu):

20

You might have problems finding the package. If you do, never fear! PPA is here!



```
sudo add-apt-repository ppa:boost-latest/ppa
sudo apt-get update
```



Then run:

```
sudo apt-get install libboost-all-dev
```

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edited Sep 3, 2018 at 14:46



Peter Mortensen

30.8k 21 104 125

answered Jun 14, 2018 at 21:49



x4g0tt3nSou1x


315 2 6

- 1 OP didn't ask for Win10. – [Adrian W](#) Jun 14, 2018 at 22:13

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- 10 @AdrianW this answer isn't about Windows 10. It's about [Ubuntu that happens to be running on a Windows 10 kernel](#), so it's a valid solution to those running Ubuntu in some way. Since the question didn't limit it to Ubuntu running on a Linux kernel specifically, this solution is fine. – [Chai T. Rex](#) Aug 30, 2018 at 16:19 
- 2 The repository '[ppa.launchpad.net/boost-latest/ppa/ubuntu](http://ppa.launchpad.net/boost-latest/ppa/ubuntu) xenial Release' does not have a Release file. – [user239558](#) Dec 16, 2019 at 21:45
- 1 I am having following erro: E: The repository 'http://ppa.launchpad.net/boost-latest/ppa/ubuntu focal Release' does not have a Release file. – [alper](#) Nov 25, 2021 at 0:42

 You can install boost on ubuntu by using the following commands:

9

```
sudo apt update
```



```
sudo apt install libboost-all-dev
```

[Share](#) [Follow](#)[edited Nov 1, 2020 at 11:44](#)

answered Nov 1, 2020 at 11:37

[Aashish Bhandari](#)

91 1 2

First try the following:

6

```
$ sudo apt-get install libboost*
```

You may get an error message similar to the following, like I did:

```
E: Unable to correct problems, you have held broken packages.
```

Then try install below package:

```
$ sudo apt-get install libboost-all-dev
```

Now you can create a a sample project utilizing Boost:

```
$ mkdir boost
$ cd boost/
$ cat > main.cpp &
```

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answered Sep 6, 2021 at 21:10



[Arash Foroughi](#)

101 2 5

Actually you don't need "install" or "compile" anything before using Boost in your project. You can just download and extract the Boost library to any location on your machine, which is usually like /usr/local/.

When you compile your code, you can just indicate the compiler where to find the libraries by -I. For example, g++ -I /usr/local/boost\_1\_59\_0 xxx.hpp.

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edited Sep 3, 2018 at 14:45



[Peter Mortensen](#)

30.8k 21 104 125

answered Nov 23, 2015 at 2:56



[jimmy.zhao](#)

77 1

12 This would only work for header libraries of boost. The rest of them would need to be built or installed using a package manager as described in the above answers. The boost libraries that require separate building and installation are the following: atomic, chrono, container, context, coroutine, coroutine2, date\_time, exception, filesystem, graph, graph\_parallel, iostreams, locale, log, math, mpi, program\_options, python, random, regex, serialization, signals, system, test, thread, timer, type\_erasure, wave.

– [Elias Kouskoumvekakis](#) Jan 8, 2016 at 15:03


Even repairing this solution by following [Elias Kouskoumvekakis's](#) further instructions would be a bad idea

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very easily delete Boost from the system if you want to. The manual approach makes those tasks harder, so you need a good reason to skip out on the benefits of a package manager. – [Chai T. Rex](#) Aug 30, 2018 at 16:35

- 1 Also, installing without a package manager is better covered in [an earlier answer](#), which includes necessary building instructions. – [Chai T. Rex](#) Aug 30, 2018 at 16:38 



Install libboost-all-dev by entering the following commands in the terminal

3

Step 1



Update package repositories and get latest package information.



```
sudo apt update -y
```



Step 2

Install the packages and dependencies with -y flag .

```
sudo apt install -y libboost-all-dev
```

Now that you have your libboost-all-dev installed source:

<https://linuxtutorial.me/ubuntu/focal/libboost-all-dev/>

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answered Sep 14, 2020 at 14:59



[nana](#)

31 1