

How to install Discover in Ubuntu 20.04?

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Problem:

You compiled Discover DE NOVO using `make all`, you get this error:

```
make: *** [Makefile:288: install-recursive] Error 1
```

Solution:

Compile using `gcc 4.x` version.

Step by step:

1. Install requirements:

```
$ sudo apt-get install libjemalloc-dev  
$ sudo apt-get install zlib1g-dev  
$ sudo apt install build-essential
```

2. Install samtools (required if using bam files)

```
$ sudo apt-get install samtools
```

3. Add a repository. Open the file:

```
$ sudo gedit /etc/apt/sources.list
```

4. Add these lines, preferably at the end of the file.

```
#RPA ADDED  
deb http://us.archive.ubuntu.com/ubuntu bionic main universe
```

5. Install gcc and g++ 4.8 version. Open a Terminal and execute:

```
$ sudo apt upgrade && apt install gcc-4.8 g++-4.8
```

6. Configure multiple gcc versions.

```
$ sudo update-alternatives --install /usr/bin/gcc gcc /usr/bin/gcc-4.8 40 \  
--slave /usr/bin/g++ g++ /usr/bin/g++-4.8
```

```
$ sudo update-alternatives --install /usr/bin/gcc gcc /usr/bin/gcc-9 90 \
--slave /usr/bin/g++ g++ /usr/bin/g++-9
```

7. Choose gcc-4.8 version. Type in Terminal:

```
$ sudo update-alternatives --config gcc
```

8. Install the libieee library.

```
$ sudo ln -sv /usr/lib/x86_64-linux-gnu/libieee1284.so.3.2.2 \
/usr/lib/x86_64-linux-gnu/libieee.so
$ sudo ln -sv /usr/lib/x86_64-linux-gnu/libieee1284.so.3.2.2 \
/usr/lib/x86_64-linux-gnu/libieee1284.so.3
$ sudo ldconfig
```

9. Install Discovar. Open the INSTALLfile and follow the instructions. A short way:

```
$ tar xzf discovardenovo-NNNNN.tar.gz
$ cd discovardenovo-52488/
$ ./configure
$ make all
$ make install
```

where NNNNN is the Discovar version, in this example 52488 is the version.

10. Delete the repository url. Open the file and delete the last two lines added previously.

```
$ sudo gedit /etc/apt/sources.list
```

This step is necessary for stopping using a previous Ubuntu repository version.

Source:

- I solved this problem based in Discovar forum user group:

<https://groups.google.com/a/broadinstitute.org/g/discovar-user-forum>

searching this: *Makefile:288 install-recursive*

<https://groups.google.com/u/1/a/broadinstitute.org/g/discovar-user-forum/c/RWFyF11-cjc/m/VLwHBQqeCAAJ>

- Install gcc in Ubuntu 20.04

<https://linuxize.com/post/how-to-install-gcc-on-ubuntu-20-04/>

- Discovar - manual and faq

https://software.broadinstitute.org/software/discovar/blog/?page_id=19

- How to compile with gcc

<https://stackoverflow.com/questions/27390078/gcc-compiling-c-code-undefined-reference-to-operator-newunsigned-long-lon/27390293>

- Linux: C/C++ Libraries

<http://chenweixiang.github.io/2015/12/18/linux-series-05-libraries.html>

- Discover de novo manual

https://banana-slug.soe.ucsc.edu/contributors/team_5:discover_de_novo_manual