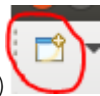


1. **Download** VM from -> <https://git.njit.edu/palisade/PALISADE/wikis/How-To-Setup-The-PALISADE-Build-Environment> -> under the “Downloading a preconfigured Linux VM”
2. **Unzip** the tarball, open the PALISADE-student-edition folder, open the VirtualBox Machine Definition
3. **Start the VM** from VirtualBox
4. **Wait** for login screen, the password is: “palisade”
5. In the terminal, **do**
 - a. \$ git clone <https://git.njit.edu/palisade/PALISADE.git>
6. **Run** eclipse
 - a. \$ cd eclipse/cpp-oxygen/eclipse/
 - b. \$./eclipse
7. **[In Eclipse] Create** a New (top left corner button with a +)  -> C/C++->Makefile Project with Existing Code
 - a. Project Name = PALISADE
 - b. Existing code location (should be: /home/palisade/PALISADE)
 - c. Uncheck C box
 - d. Select Linux GCC as toolchain
 - e. Finish
8. **Wait** for indexer to run (check progress on the bottom bar to the right) [continue up until the Build step]
9. Run the following commands on the terminal: (**optional/for terminal compilation**)
 - a. \$ export PATH="\$PATH:/home/palisade/PALISADE/bin/lib/"
 - b. \$ export PATH="\$PATH:/home/palisade/PALISADE/third-party/distros/ntl-10.5.0/src/.libs/"
 - c. \$ export PATH="\$PATH:/home/palisade/PALISADE/third-party/distros/gmp-6.1.2/.libs/"
 - d. \$ source ~/.profile
 - e. \$ source ~/.bashrc
10. **Install** cmake, doxygen, (**optional**, but if you happen to get an error then do this)
 - a. \$ sudo apt install ...
11. **Change** build directory in Properties->C/C++Build->Builder Settings to \${workspace_loc:/PALISADE} (may already be this, don't change it if so)

12. **Build** (will take a while)

13. **Right click a file** in the Binaries folder (inside the PALISADE folder) that you wish to run/test/etc.

under the project->Run As-> Run Configurations ->C/C++ Application->Environment->New...

- a. Name = LD_LIBRARY_PATH
- b. Value = /home/palisade/PALISADE/bin/lib:/home/palisade/PALISADE/third-party/distros/gmp-6.1.2/./libs:/home/palisade/PALISADE/third-party/distros/ntl-10.5.0/src/.libs
- c. Apply->Run
- d. Console should now output/accept input

14. PALISADE is now installed

15. To copy/create a new file within the library:

- a. In the Eclipse Project Explorer, bring the folder toggle down by PALISADE->src->pke->demo
- b. Right click the demo folder and select add New source file
- c. Name the file
 - i. (for testing purposes: copy the contents of a demo file and place it in the new file)
- d. Finish
- e. Edit the file

16. To run the file:

- a. Build Project (shouldn't take too long, check bar on bottom right for progress)
 - i. File WILL show errors/bugs on text editor but the file is okay (should be, at least)!
- b. Find Binaries folder in Project Explorer, find file name, Run As->(check step 13 is still the same for this run)

17. Done. ☺