

nextnano.QCL on Linux

nextnano.QCL can be executed on Linux using the Wine compatibility layer.

Ubuntu 19.10

On Ubuntu 19.10, the following commands will install the stable branch of Wine.

```
sudo dpkg --add-architecture i386
wget -nc https://dl.winehq.org/wine-builds/winehq.key
sudo apt-key add winehq.key
sudo apt-add-repository 'deb https://dl.winehq.org/wine-builds/ubuntu/ eoan
main'
sudo apt update
sudo apt install --install-recommends winehq-stable
```

Ubuntu 18.04

On Ubuntu 18.04, following commands are instead used:

```
sudo dpkg --add-architecture i386
wget -nc https://dl.winehq.org/wine-builds/winehq.key
sudo apt-key add winehq.key
sudo apt-add-repository 'deb
https://download.opensuse.org/repositories/Emulators:/Wine:/Debian/xUbuntu_1
8.04/ .'
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys
DFA175A75104960E
sudo apt update
sudo apt install --install-recommends winehq-stable
```

Using nextnano.QCL with Wine

After having downloaded the nextnano.QCL zip file from <https://www.nextnano.com/nextnano3/restricted/download/update/nextnano.QCL.zip>, please extract it to your preferred path and copy (not just move!) the Native.dll file from the folder Bin64.1.0.0.74 to the parent folder including nextnano.QCL.exe. Having access to the material database Material_Database.xml and the license file License_nnQCL.lic, one can run an input file as follows:

```
wine /your_directory/nextnano.QCL.exe /your_directory/your_input_file.xml
/your_directory/Material_Database.xml /your_directory/License_nnQCL.lic >
test_input.log &
```

Debian 10

On Debian 10, following commands will install Wine:

```
sudo dpkg --add-architecture i386
sudo apt update
sudo apt -y install gnupg2 software-properties-common
wget -qO - https://dl.winehq.org/wine-builds/winehq.key | sudo apt-key add -
sudo apt-add-repository https://dl.winehq.org/wine-builds/debian/
wget -O- -q
https://download.opensuse.org/repositories/Emulators:/Wine:/Debian/Debian_10
/Release.key | sudo apt-key add -
echo "deb
http://download.opensuse.org/repositories/Emulators:/Wine:/Debian/Debian_10
./" | sudo tee /etc/apt/sources.list.d/wine-obs.list
sudo apt update
sudo apt install --install-recommends winehq-stable
```

RHEL/CentOS 8

We have successfully installed Wine 5 on RHEL 8 using the following commands:

(These build Wine from source, hence the installation takes considerably longer.)

```
sudo -i
dnf clean all
dnf update
dnf groupinstall 'Development Tools'
dnf install libX11-devel freetype-devel zlib-devel libxcb-devel libxslt-
devel libgcrypt-devel libxml2-devel gnutls-devel libpng-devel libjpeg-turbo-
devel libtiff-devel gstreamer1-devel dbus-devel fontconfig-devel
cd /opt
wget https://dl.winehq.org/wine/source/5.0/wine-5.0.tar.xz
tar -Jxf wine-5.0.tar.xz
cd wine-5.0
##For 32-Bit Systems:
./configure
##For 64-Bit Systems:
./configure --enable-win64
make
make install
```

Configuring Wine

After installing Wine, if you encounter problems about Mono, a useful trick is to delete the folder **.Wine** and force Wine to download and install Gecko and Mono automatically. Normally, Wine will suggest installing these the first time it is used. Furthermore opening the wine uninstaller and

removing interfering applications might solve some problems. In the end, we are able to use Wine without installing Winetricks or dotnet manually. If you are working on a remote machine, you might need to enable X11 forwarding to see the windows created during the Wine configuration. This is done by connecting via **ssh -X** and modifying the **ssh.config** file under **etc/ssh** accordingly. On RHEL/CentOS 8 some dependencies might need to be installed by the following command

```
# dnf install xorg-x11-server-Xorg xorg-x11-xauth xorg-x11-apps -y
```

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