

Installing Centurial on Linux using CrossOver

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Overview

Centurial runs pretty well on Linux using [CrossOver](#) by [CodeWeavers](#). CrossOver is a commercial version of [Wine](#), a re-implementation of the Windows APIs on top of Linux and MacOS. CrossOver has a 14-day free trial period and then has a [3-tier pricing system](#). If you don't want to pay for CrossOver, you can try using Wine, but that is more complicated and not covered in these instructions.

As CrossOver is not actually Windows, some things are a bit different and the installation is a bit more complicated. This document goes through the installation process step by step.

These instructions also show how to run Centurial on [Crostini](#), the Linux virtual machine on Chrome OS. In some sections there are Crostini-specific instructions, so be sure to read the whole section before starting.

Note that it is highly likely that, with a bit of experimenting, you can use these instructions on MacOS as well.

Prerequisites

Linux

You should have some familiarity with the Linux command line. You should have at least 2 GB free with 1.6 GB free on `/opt` and 400 MB free in `$HOME`. To find out how much space is left on the device holding a given directory, use the `df` command:

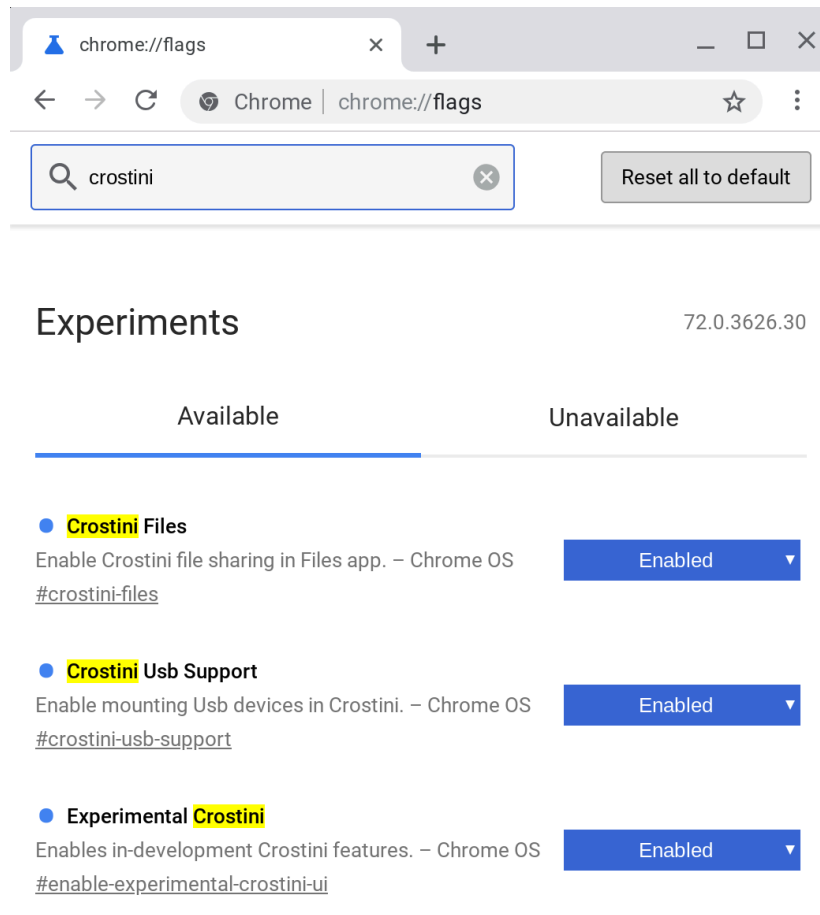
```
$ df -h /opt
Filesystem      Size  Used Avail Use% Mounted on
/dev/vdb        392G   19G  372G   5% /
$ df -h $HOME
Filesystem      Size  Used Avail Use% Mounted on
/dev/vdb        392G   19G  372G   5% /
```

CrossOver itself is about 160 MB to download and expands to about 525 MB in `/opt` when installed. Various Windows support libraries that need to be downloaded will take additional space in `$HOME`.

Crostini

Besides the Linux requirements, ensure that your Chrome OS device has an Intel processor. If your device has an ARM-based or other processor, CrossOver will not work.

These instructions assume that some Crostini-specific flags are enabled. To set them, go to `chrome://flags` and then enter “crostini” in the search box, then enable all the flags like this:



Next, ensure that Crostini is enabled by following the instructions in the “Crostini Quickstart” section here: <https://www.reddit.com/r/Crostini/wiki/getstarted/crostini-setup-guide>

Once you have been able to successfully launch the Terminal app, you are all set to follow the instructions below.

Installation

1. Install CrossOver

Linux

Download CrossOver from: <https://codeweavers.com/products/crossover-linux/download>
After filling in the form, the browser should start to download the appropriate package type, most likely a `.deb` package. Follow the instructions on the page to install CrossOver. Do not execute CrossOver yet.

Crostini

Download CrossOver from: <https://codeweavers.com/products/crossover-linux/download>

After filling in the form, the browser should start to download the `.deb` package. When the file is done downloading, open Terminal if you haven't already. You should be able to see the downloaded file using `ls -la /mnt/chromeos/MyFiles/Downloads/`:

```
user@penguin:~$ ls -la /mnt/chromeos/MyFiles/Downloads/
total 160404
-rw-r--r-- 1 user user 164249484 Dec 30 13:40 crossover_18.1.0-1.deb
```

Next, enable 32-bit packages:

```
user@penguin:~$ sudo dpkg --add-architecture i386 ; sudo apt-get update
Get:1 http://security.debian.org/debian-security stretch/updates InRelease [94.3 kB]
Ign:2 http://deb.debian.org/debian stretch InRelease
Get:3 http://deb.debian.org/debian stretch Release [118 kB]
Get:4 http://security.debian.org/debian-security stretch/updates/main amd64 Packages [464 kB]
Get:5 http://deb.debian.org/debian stretch Release.gpg [2,434 B]
Ign:6 https://storage.googleapis.com/cros-packages stretch InRelease
Get:7 http://deb.debian.org/debian stretch/main amd64 Packages [7,089 kB]
Get:8 https://storage.googleapis.com/cros-packages stretch Release [3,096 B]
Get:9 https://storage.googleapis.com/cros-packages stretch Release.gpg [819 B]
Get:10 https://storage.googleapis.com/cros-packages stretch/main i386 Packages [2,507 B]
Get:11 http://security.debian.org/debian-security stretch/updates/main i386 Packages [465 kB]
Get:12 https://storage.googleapis.com/cros-packages stretch/main amd64 Packages [2,507 B]
Get:13 http://security.debian.org/debian-security stretch/updates/main Translation-en [203 kB]
Get:14 http://deb.debian.org/debian stretch/main i386 Packages [7,069 kB]
Get:15 http://deb.debian.org/debian stretch/main Translation-en [5,388 kB]
Fetched 20.9 MB in 45s (464 kB/s)
Reading package lists... Done
```

Now install CrossOver, being sure to enter “Y” when asked to continue, like this:

```
user@penguin:~$ sudo apt install /mnt/chromeos/MyFiles/Downloads/crossover_18.1.0-1.deb
Reading package lists... Done
Building dependency tree
Reading state information... Done
Note, selecting 'crossover:i386' instead of '/mnt/chromeos/MyFiles/Downloads/crossover_18.1.0-1.deb'
The following additional packages will be installed:
  avahi-daemon bind9-host gcc-6-base:i386 geoip-database libavahi-client3:i386
[... many many more packages ...]
```

```
python-numpy python2.7 python2.7-minimal zlib1g:i386
The following packages will be upgraded:
  libgnutls30 liblcms2-2 libpam-systemd libsystemd0 libx11-6 libx11-xcb1
  libxcursor1 systemd
8 upgraded, 104 newly installed, 0 to remove and 20 not upgraded.
Need to get 49.9 MB/214 MB of archives.
After this operation, 814 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://deb.debian.org/debian stretch/main amd64 libpam-systemd amd64
232-25+deb9u6 [188 kB]
Get:2 http://deb.debian.org/debian stretch/main amd64 systemd amd64
232-25+deb9u6 [2,468 kB]
[... many many more packages ...]
Processing triggers for libc-bin (2.24-11+deb9u3) ...
Processing triggers for dbus (1.10.26-0+deb9u1) ...
Processing triggers for systemd (232-25+deb9u6) ...
```

At this point, CrossOver is installed in `/opt/cxoffice`.

There are a few dependencies to install, too. Run `sudo apt-get install libxml2:i386` like:

```
user@penguin:~$ sudo apt-get install libxml2:i386
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libicu57:i386
The following NEW packages will be installed:
  libicu57:i386 libxml2:i386
0 upgraded, 2 newly installed, 0 to remove and 20 not upgraded.
Need to get 8,802 kB of archives.
After this operation, 33.3 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://deb.debian.org/debian stretch/main i386 libicu57 i386 57.1-6+deb9u2
[7,848 kB]
Get:2 http://deb.debian.org/debian stretch/main i386 libxml2 i386
2.9.4+dfsg1-2.2+deb9u2 [954 kB]
Fetched 8,802 kB in 17s (509 kB/s)
Selecting previously unselected package libicu57:i386.
(Reading database ... 44798 files and directories currently installed.)
Preparing to unpack .../libicu57_57.1-6+deb9u2_i386.deb ...
Unpacking libicu57:i386 (57.1-6+deb9u2) ...
Selecting previously unselected package libxml2:i386.
Preparing to unpack .../libxml2_2.9.4+dfsg1-2.2+deb9u2_i386.deb ...
Unpacking libxml2:i386 (2.9.4+dfsg1-2.2+deb9u2) ...
Setting up libicu57:i386 (57.1-6+deb9u2) ...
Setting up libxml2:i386 (2.9.4+dfsg1-2.2+deb9u2) ...
Processing triggers for libc-bin (2.24-11+deb9u3) ...
```

2. Download Centurial

Linux

Download `centurial-client-1.X.X-win32.msi` from <https://www.centurial.net/download> into your Downloads folder. Be sure to choose the **Windows 32-bit** version as the 64-bit version will not work with CrossOver.

Crosthini

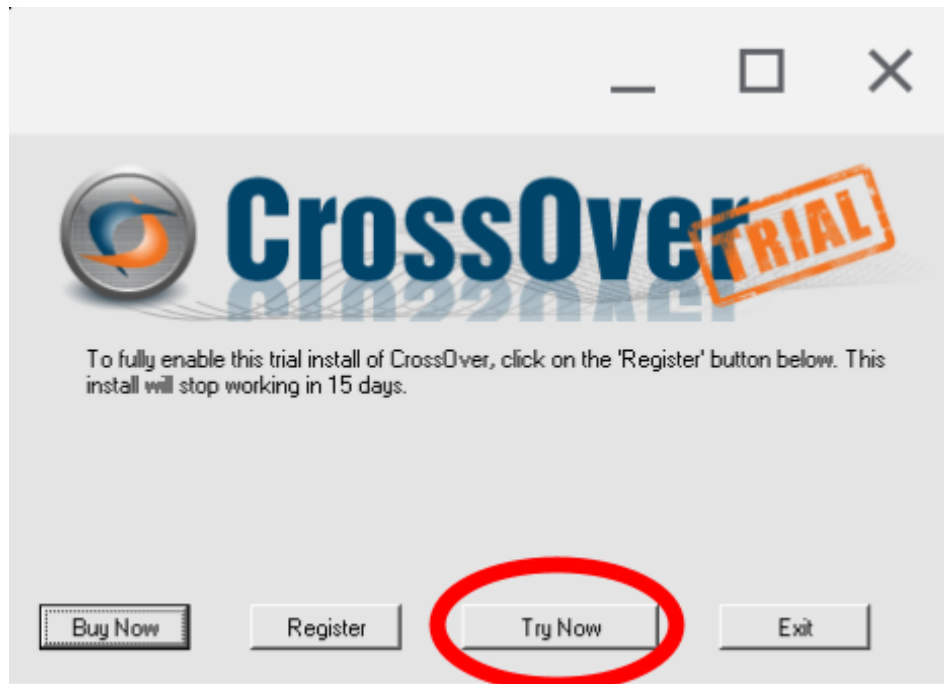
From <https://www.centurial.net/download>, right click on the **Windows 32-bit** version of CrossOver and copy the URL. In the Terminal window, run `curl -O -J` followed by Control-Shift-V to paste the URL, like this:

```
user@penguin:~$ curl -O -J https://www.centurial.net/download/files/559049c9ea8a
a3878ff7e5ba8cc2b39eab667fae
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 4374k  100 4374k    0     0  447k      0  0:00:09  0:00:09 --:--:--  514k
curl: Saved to filename 'centurial-client-1.7.0-win32.msi'
```

3. Create an empty Bottle for Centurial

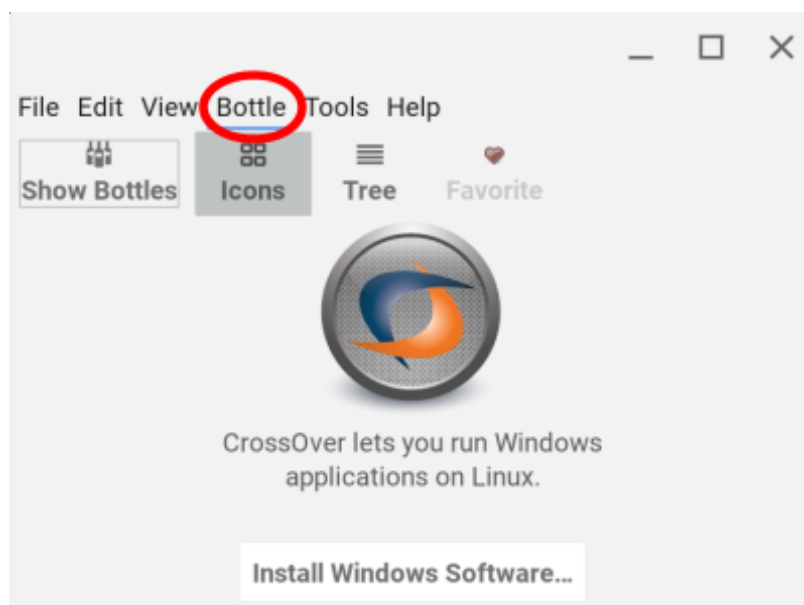
“Bottles” are virtual environments that act like separate Windows installations. This means that a program installed in one bottle can not interact with programs in another bottle. For Centurial, we need to create a bottle into which we can install the necessary dependencies and then Centurial.

If, at any future point, CrossOver shows a window like this:

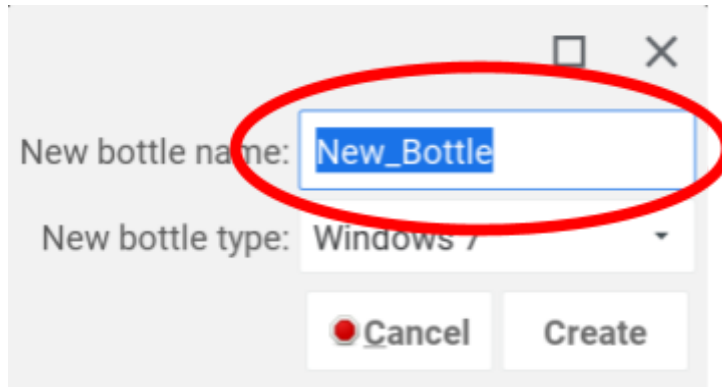


select the “Try Now” option. This will give you time to try out Centurial on CrossOver before you are required to register your copy.

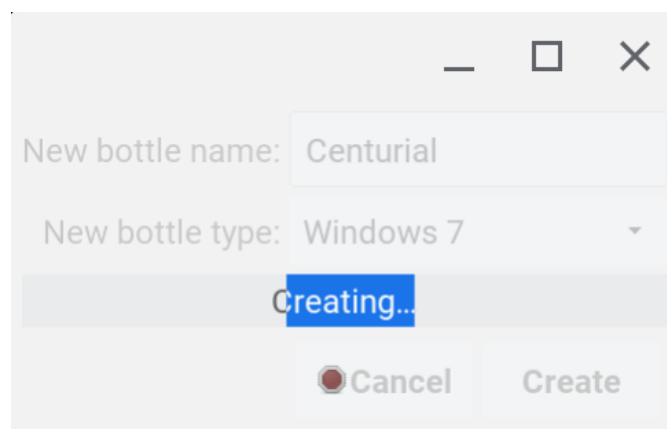
From the command line, run `/opt/cxoffice/bin/crossover`, then select the bottle menu.



From the bottle menu, select “New Bottle...”, which should show the following:



Replace “New_Bottle” with “Centurial” and then click “Create”. (Do not change the bottle type.) The window should change to have a progress bar:



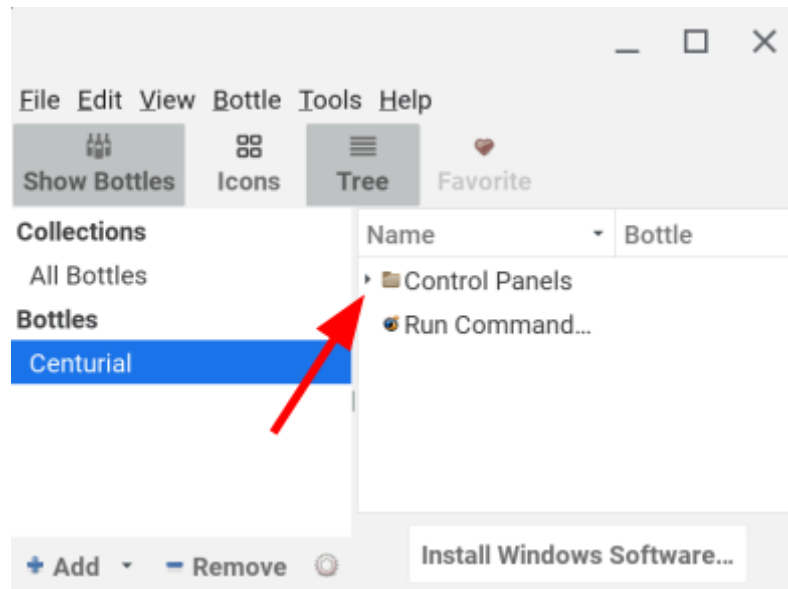
When this is done, you should be back at the original window.

4. Configure CrossOver

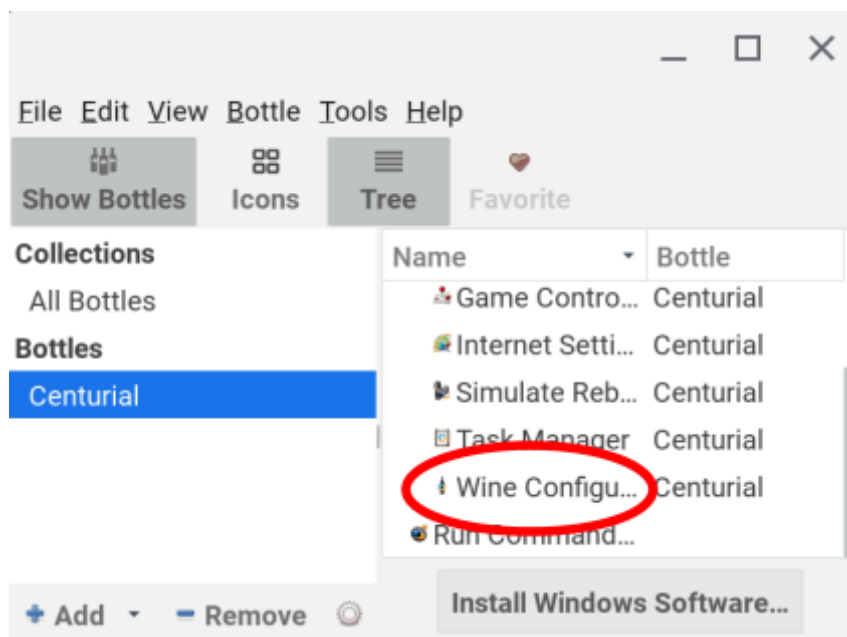
Display

If you have a high-definition (retina) display, CrossOver needs to know its resolution so that it can display Windows programs the right size. Consult your hardware’s documentation for the resolution or “pitch” of the screen. For the Google Pixelbook, for example, has 235 pixels per inch instead of the Windows default of 96.

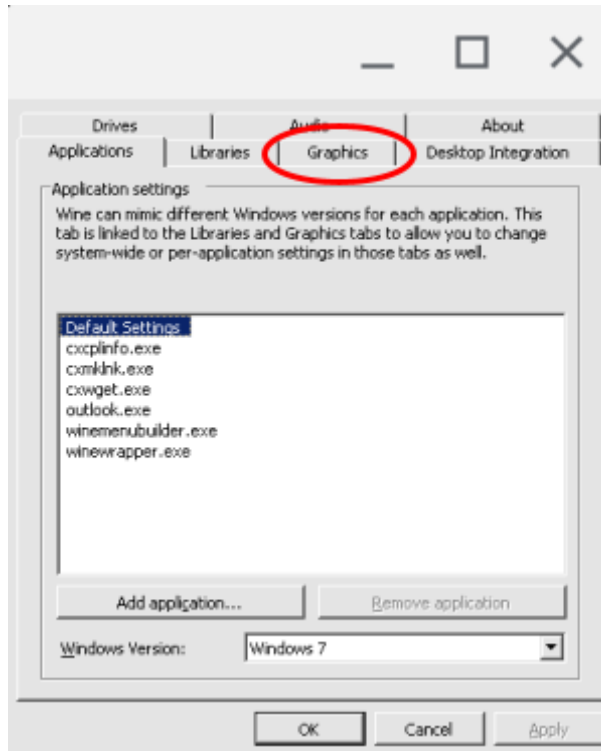
To configure the screen, click on the “Show Bottles” icon and the “Tree” icon so that the window looks like this:



Next, click on the triangle next to “Control Panels”. This will display many more items. Scroll down and click on “Wine Configuration”:

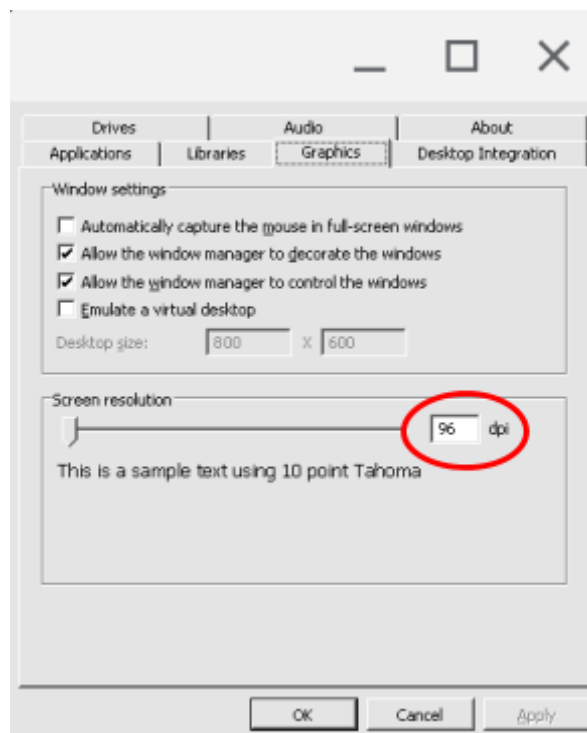


This should open up a window like this:



On a high-resolution display, this window may be very, very small. Pick the “Graphics” tab, which is the third one on the second row as shown above.

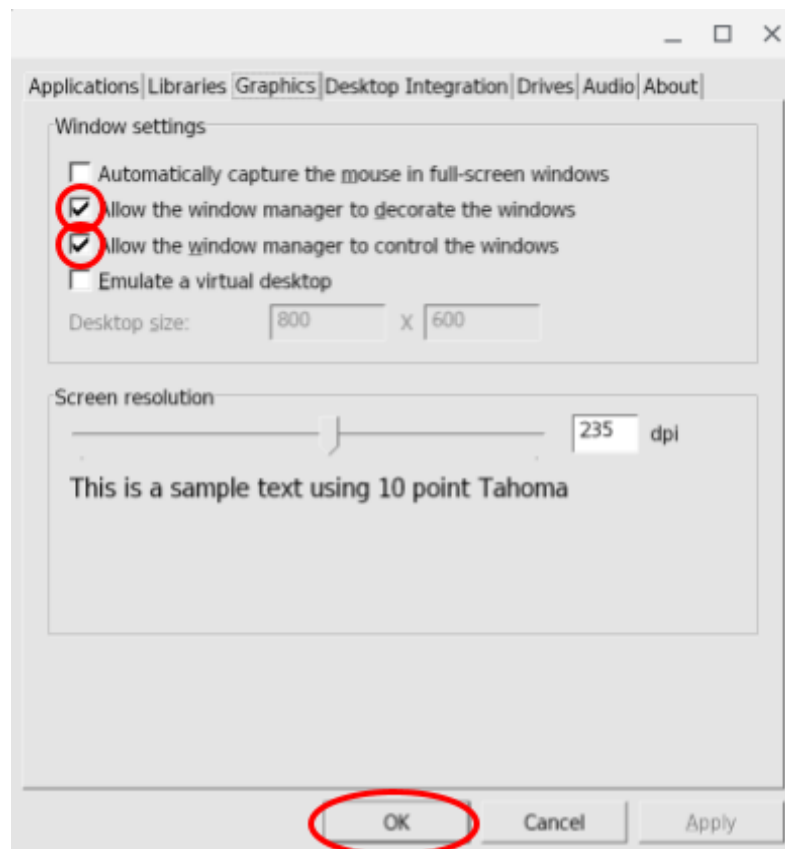
This tab should look like this:



In the box next to the slider, type **Control-A** (to select all the text), then the resolution of your screen. At this point the sample text in the box should be readable. Finally click on the OK button.

Window Manager integration

Re-open the Wine Configuration control panel again. (This time it should be a reasonable size.)



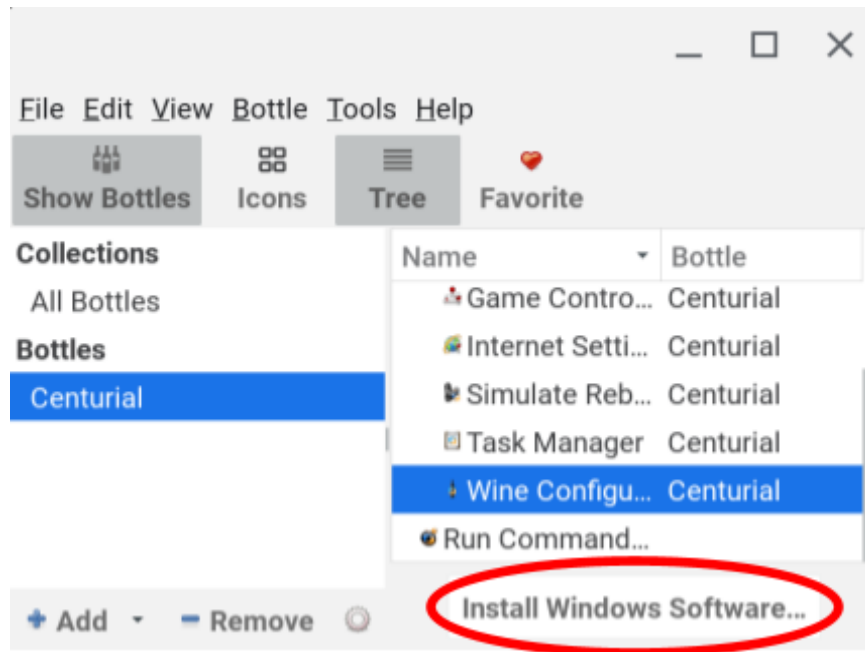
Uncheck the circled checkboxes, “Allow the window manager to decorate the windows” and “Allow the window manager to control the windows”. Then click “OK”.

5. Install .NET 4.6.2

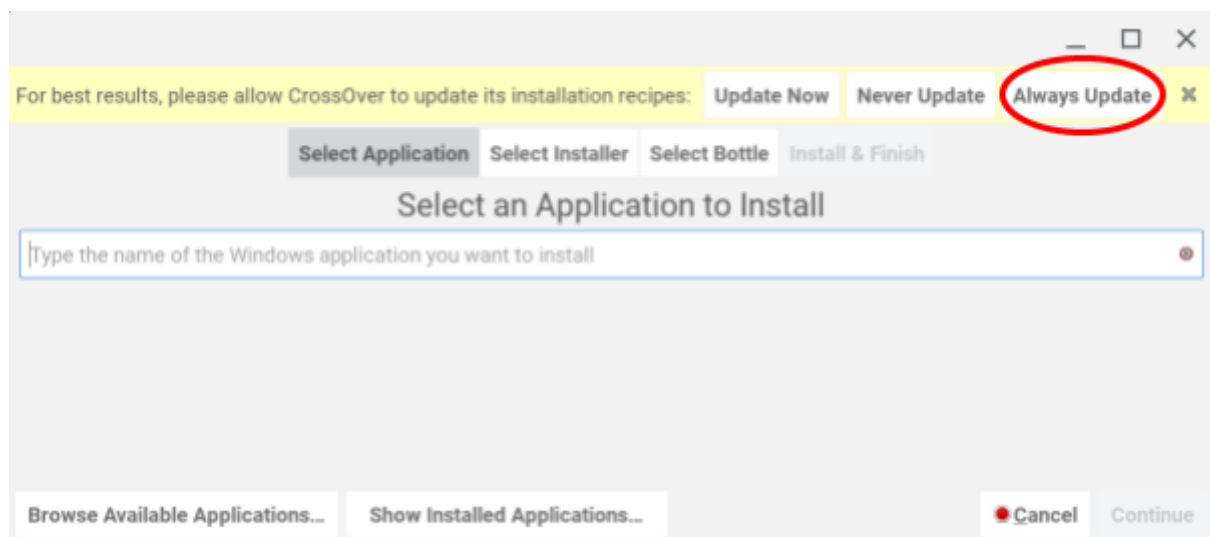
Centurial requires .NET 4.6.2 to run, but CrossOver does not emulate the .NET environment, just the most basic Windows functionality. This means that we need to install .NET 4.6.2 into the Centurial bottle.

Setup

From the main CrossOver window, select “Install Windows Software...”:

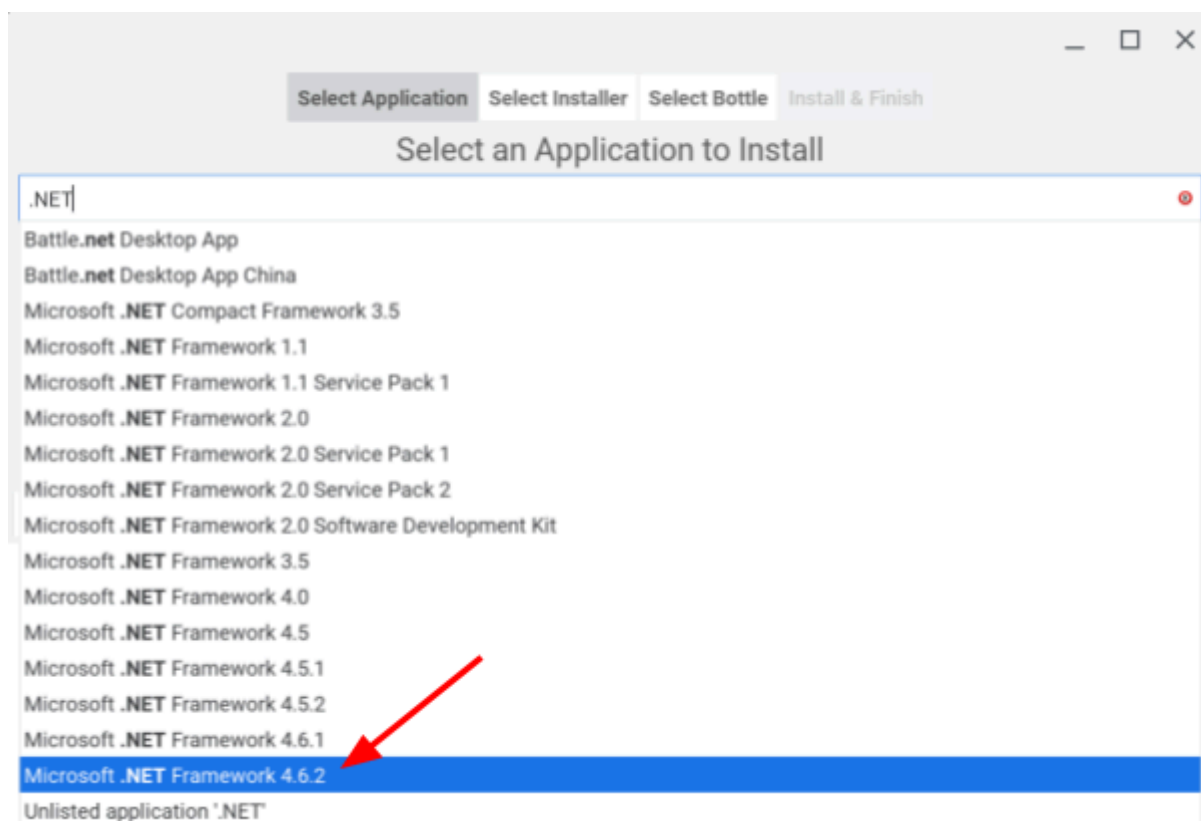


This will open up a window like this:

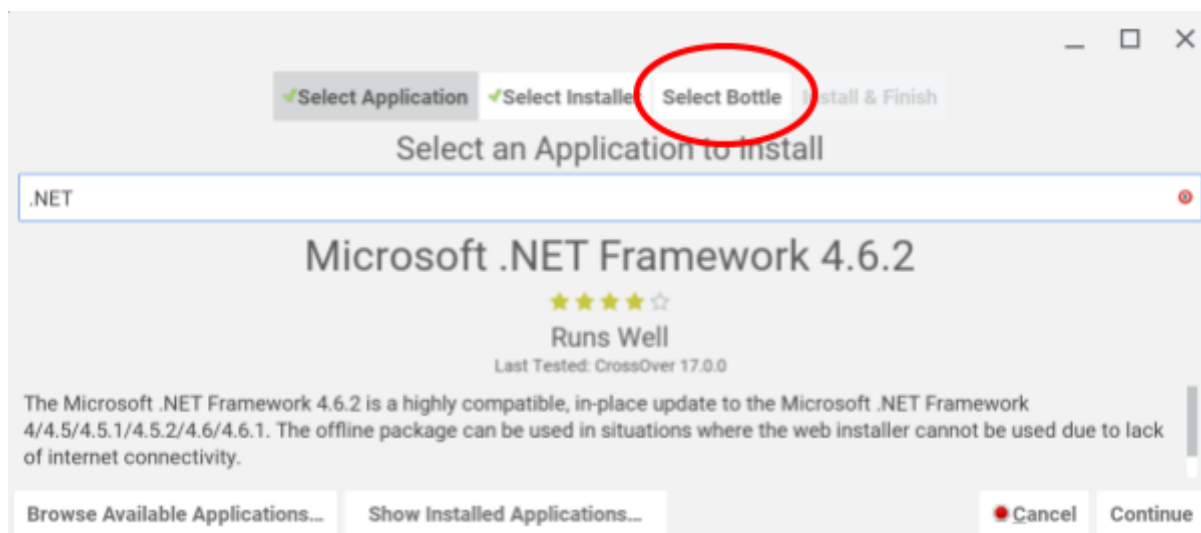


The first time you open this window, it will ask whether you want to update the installation recipes. Select "Always Update".

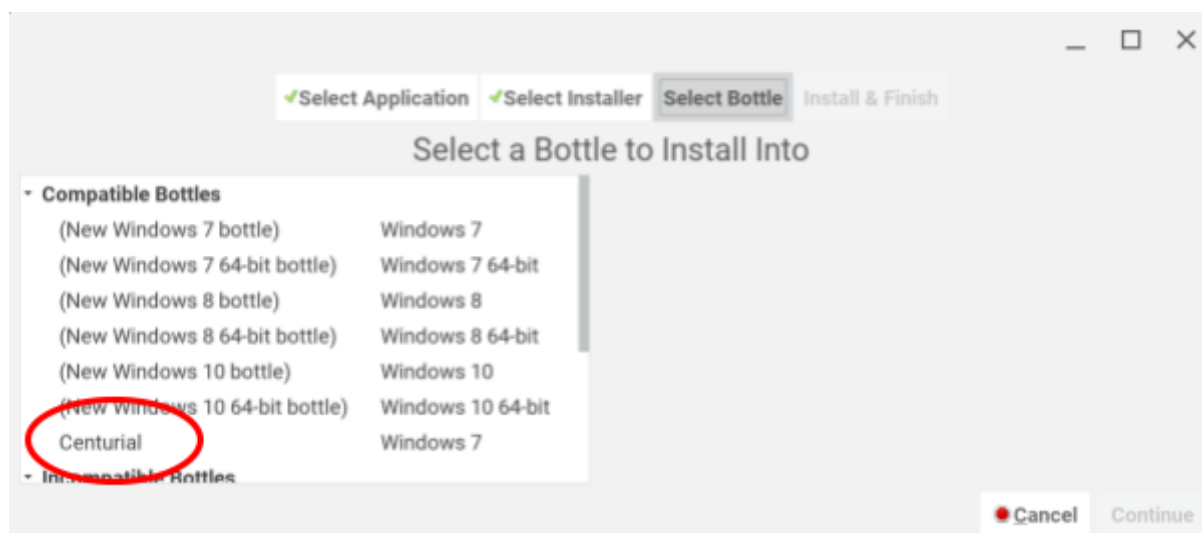
When CrossOver is done updating, type ".Net" into the text box. This should give you a list like:



Select .NET 4.6.2 as shown. Next click on the “Select Bottle” button:

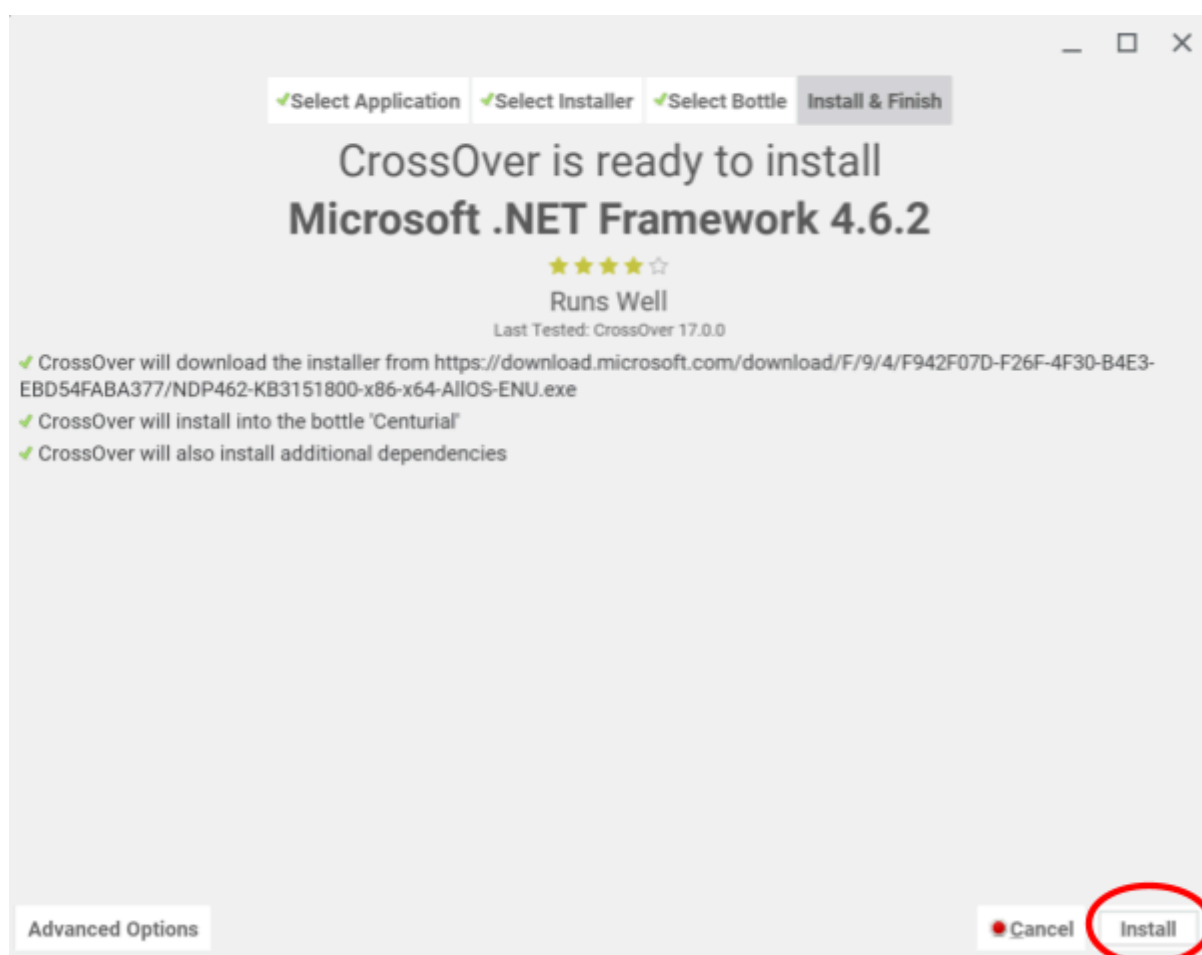


This will allow you to select the Centurial bottle that you created earlier:

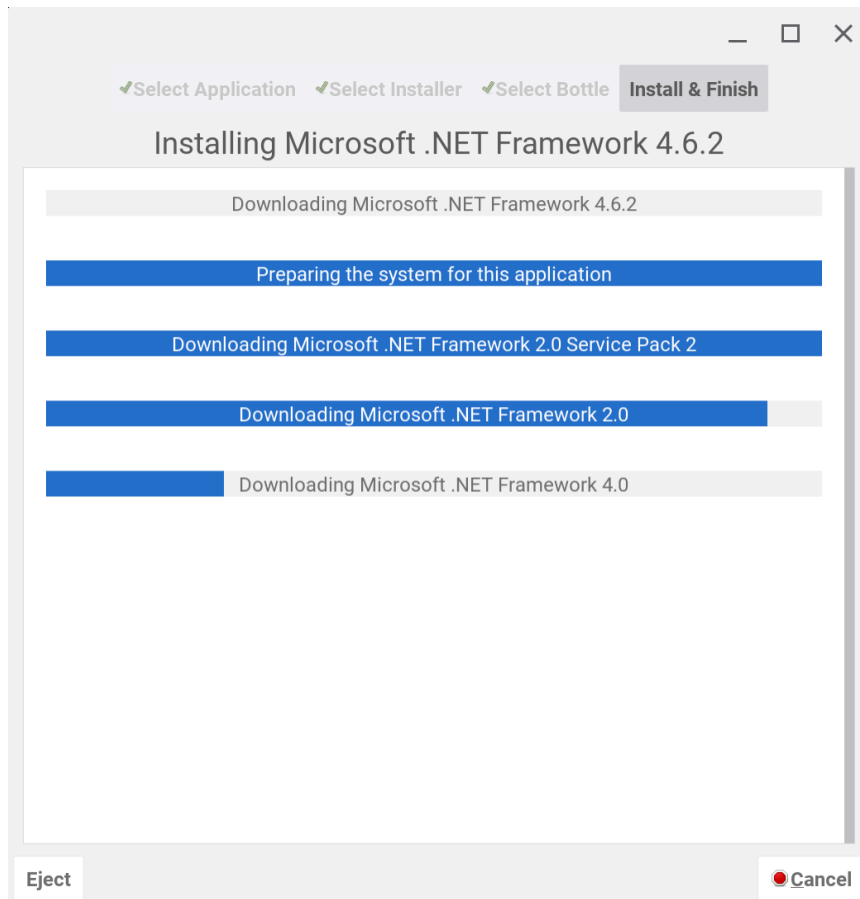


After selecting the Centurial bottle, click the “Continue” button.

Finally, you should be looking at a window like this:



Click on the “Install” button. You should see a screen like:

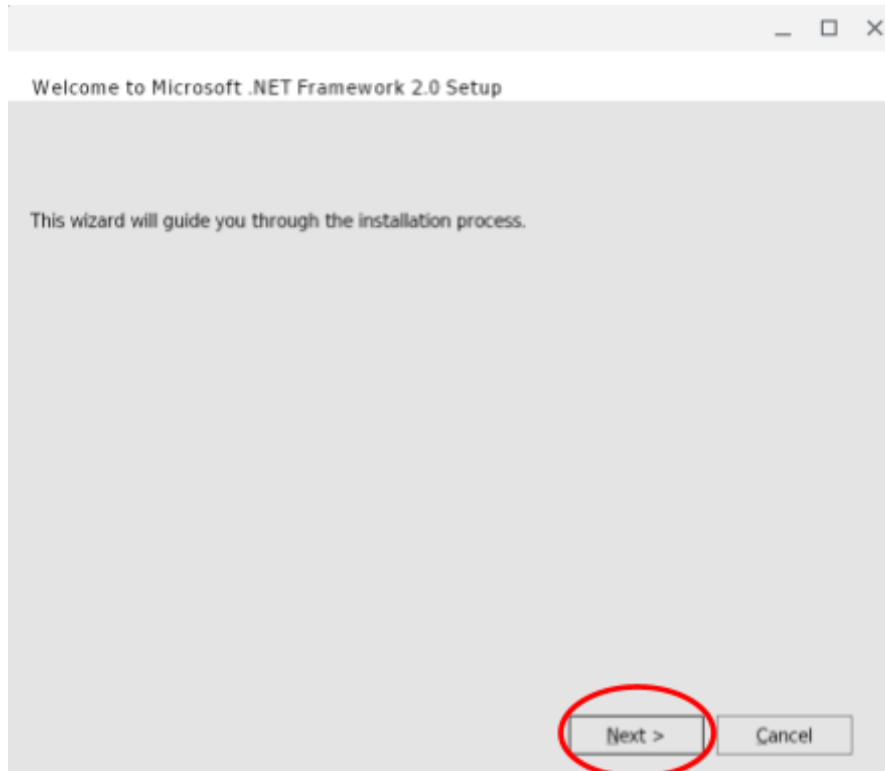


This will kick off the installation of .NET 2.0, followed by .NET 2.0 Service Pack 2, followed by .NET 4.0, followed by .NET 4.6.2. Each package will be downloaded by CrossOver and then launched like a regular Windows install program.

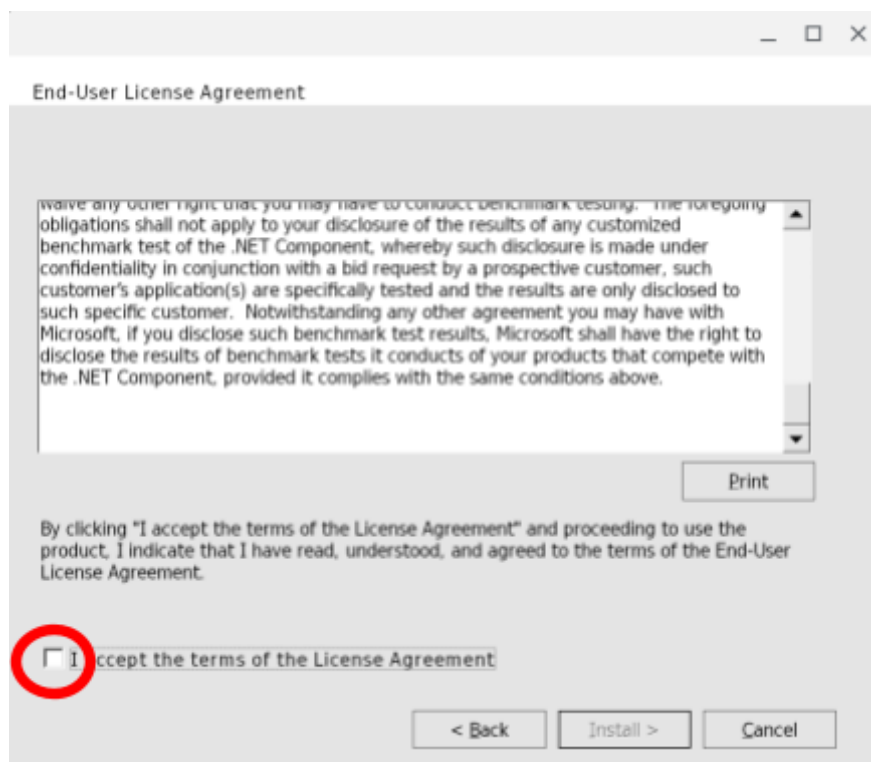
Like all Windows installations, you will have to read and accept the license agreements. However, when you are asked if you want to reboot now, only the bottle will be rebooted, not the whole computer, so it is safe to choose the reboot option.

.NET 2.0

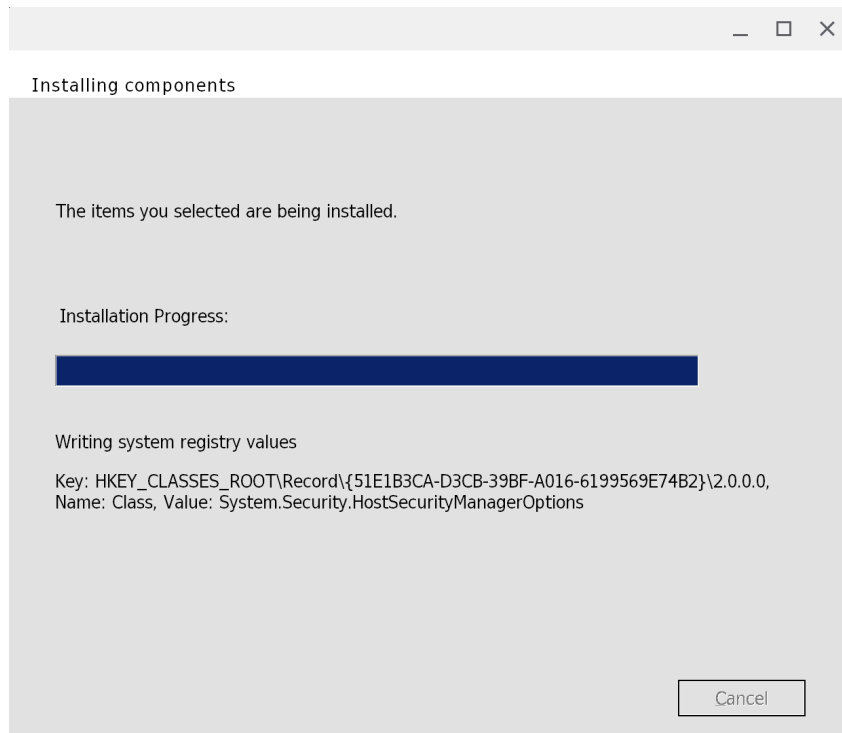
The .NET 2.0 installer will show an initial window like:



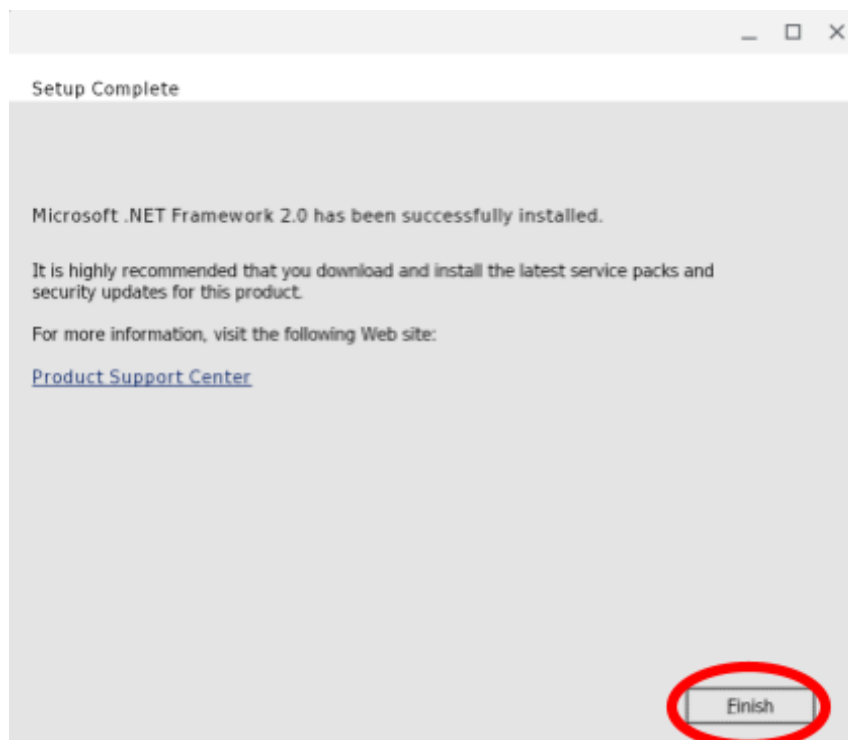
Click on "Next".



Read and accept the terms of the license agreement, then "Install".

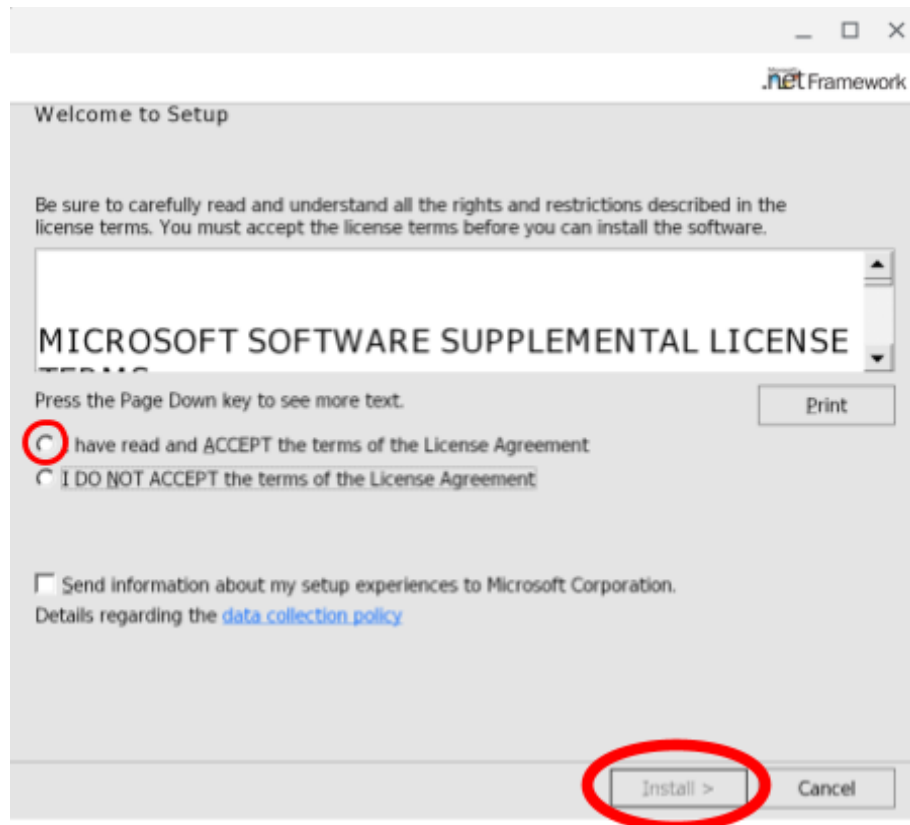


When all of the components are done installing, click "Finish":

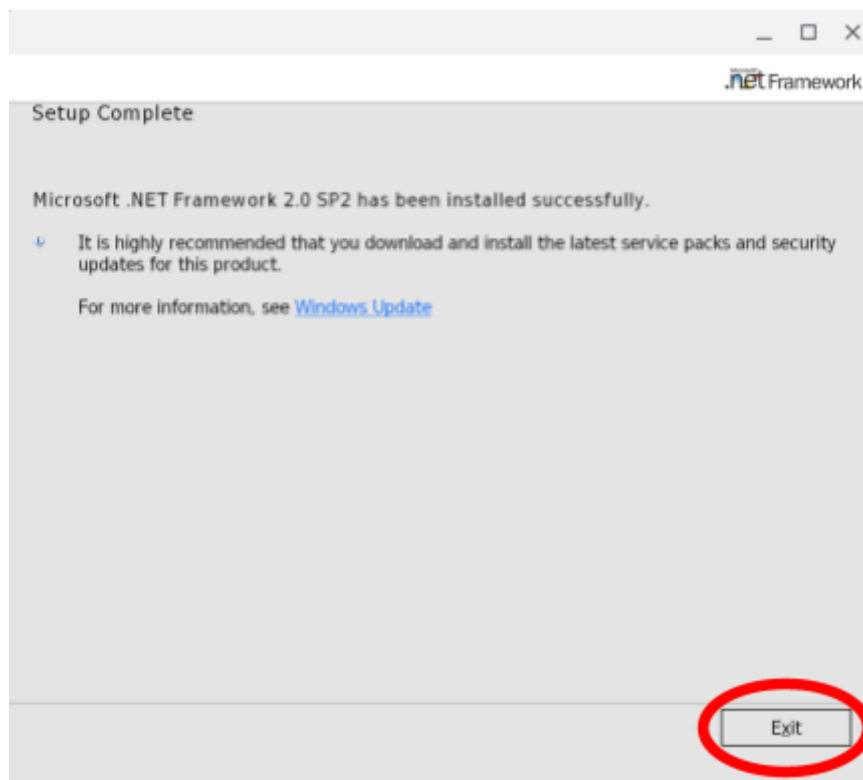


.NET 2.0 Service Pack 2

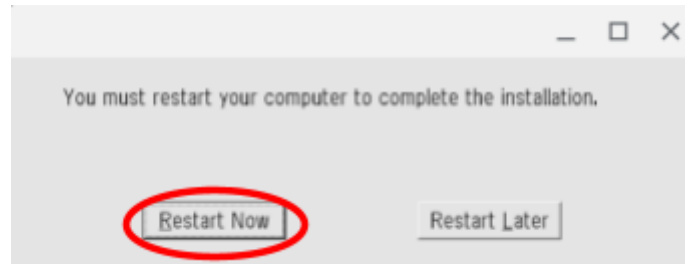
At the installation screen, read and accept the license agreement, then click "Install":



After the installation is finished, click “Exit”:

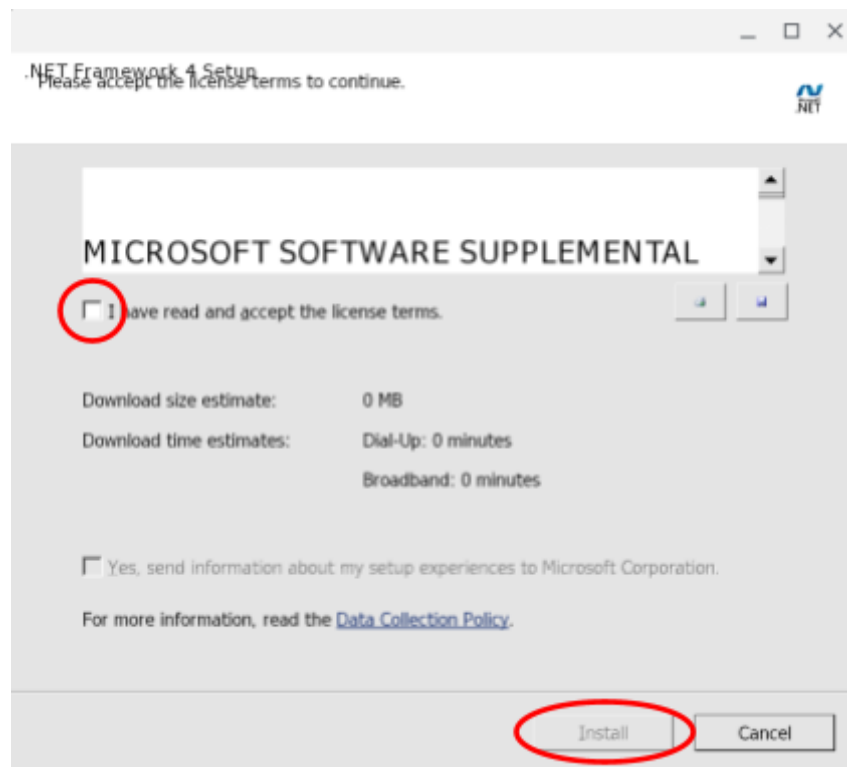


If you are asked, choose “Restart Now”:

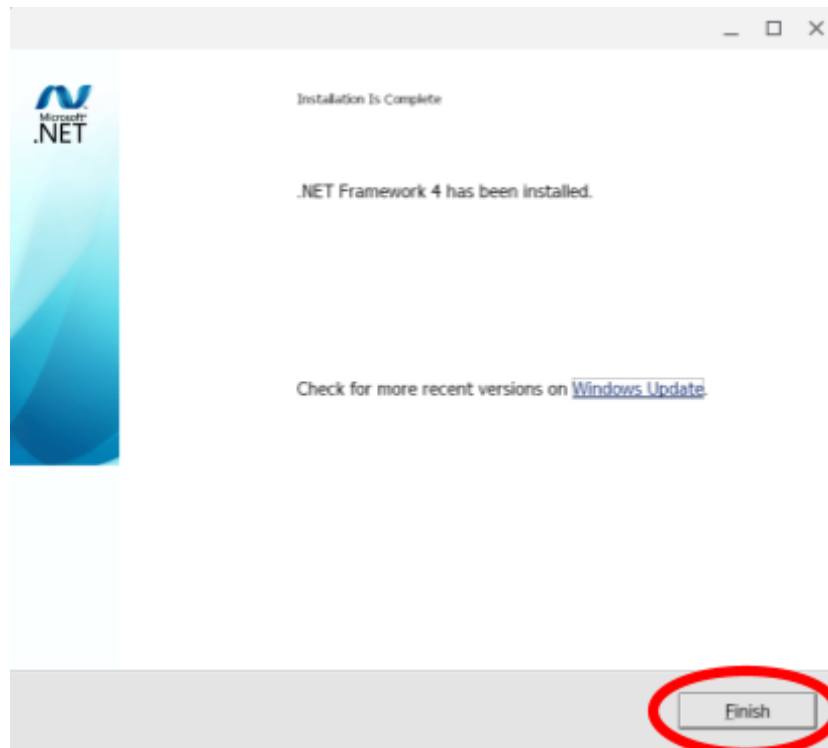


.NET 4.0

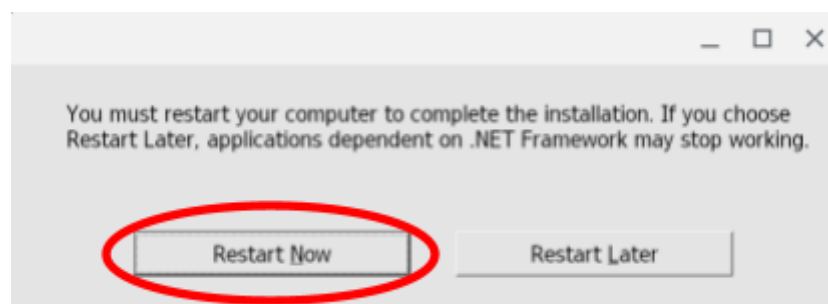
At the installation screen, read and accept the license agreement, then click “Install”:



When installation is complete, click “Finish”:

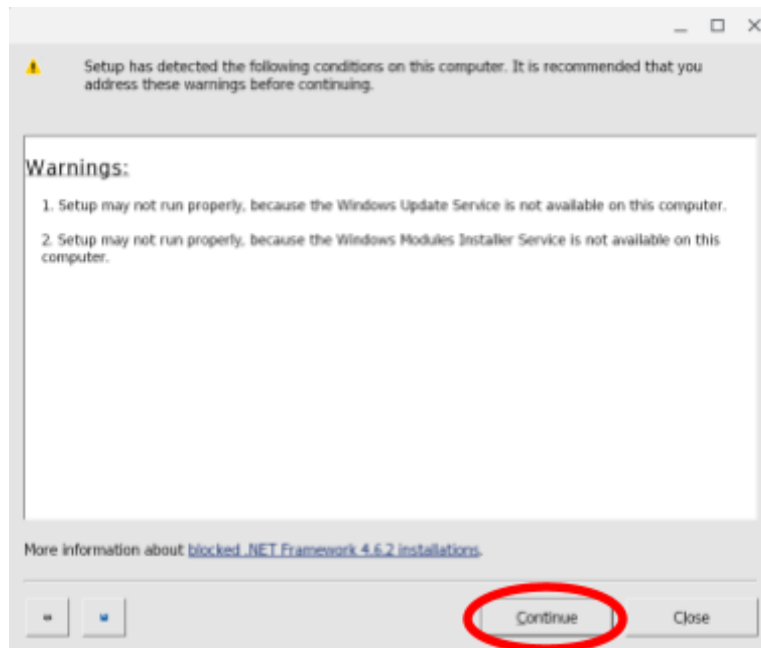


Finally, if you are asked, choose “Restart Now”:



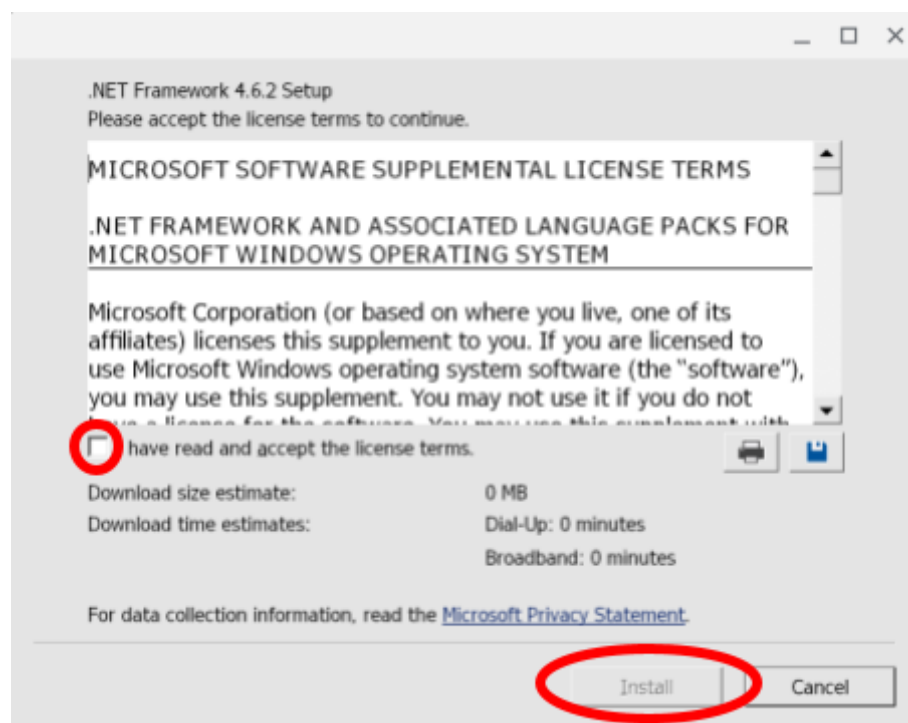
.NET 4.6.2

On starting, the .NET 4.6.2 installer gives a warning:

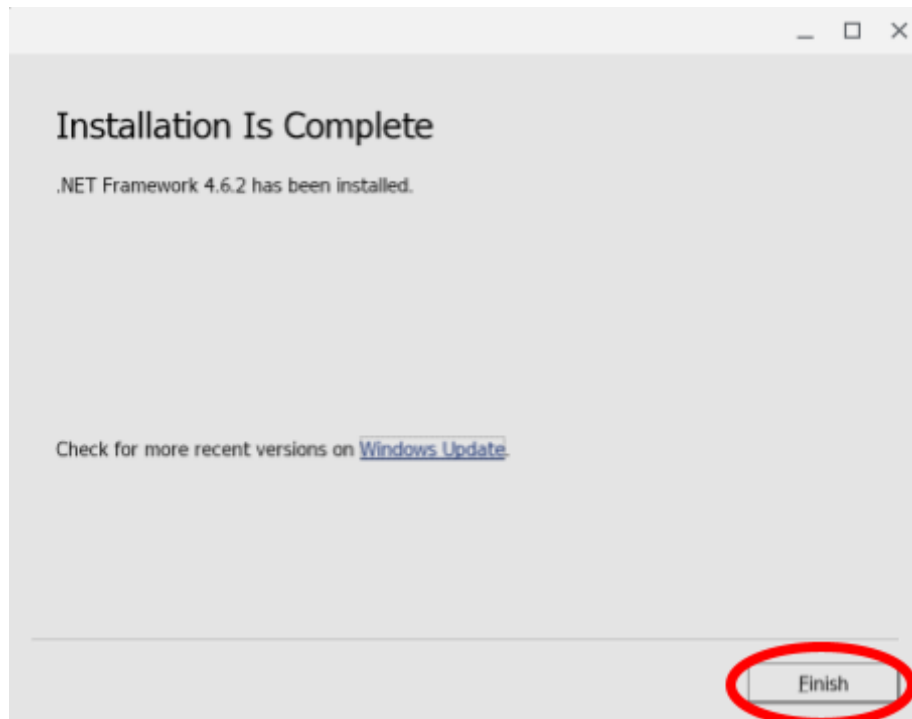


This is normal because the installer is running on CrossOver instead of Windows. Even so, the installer will run just fine. Click on "Continue".

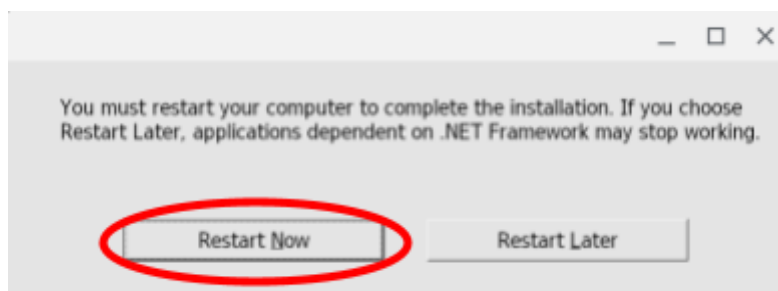
On the main installer screen, read and accept the license agreement, then "Install":



When the installation is done, click "Finish":

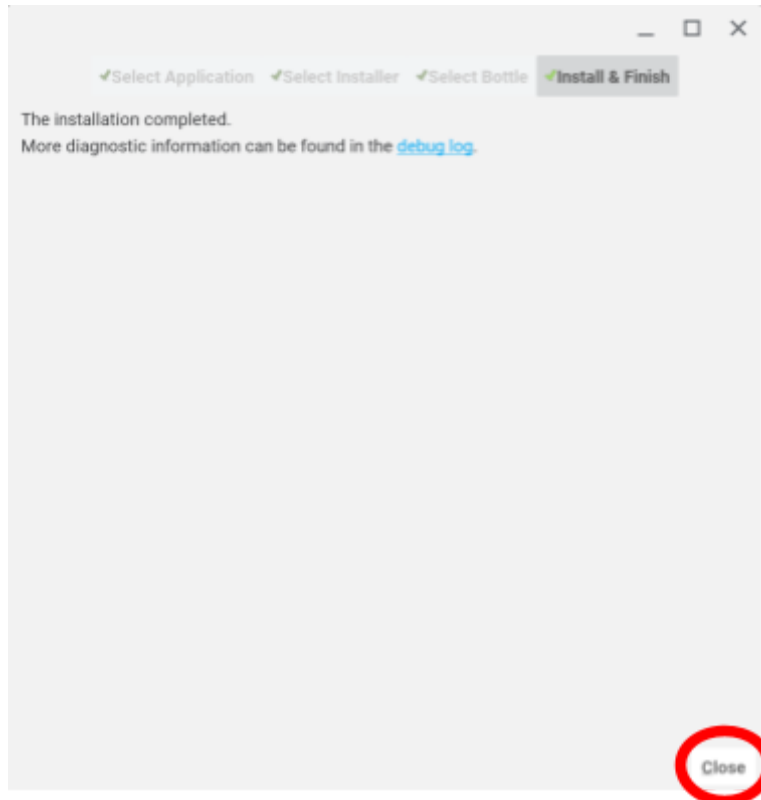


If you are asked, choose “Restart Now”:



End of Installation

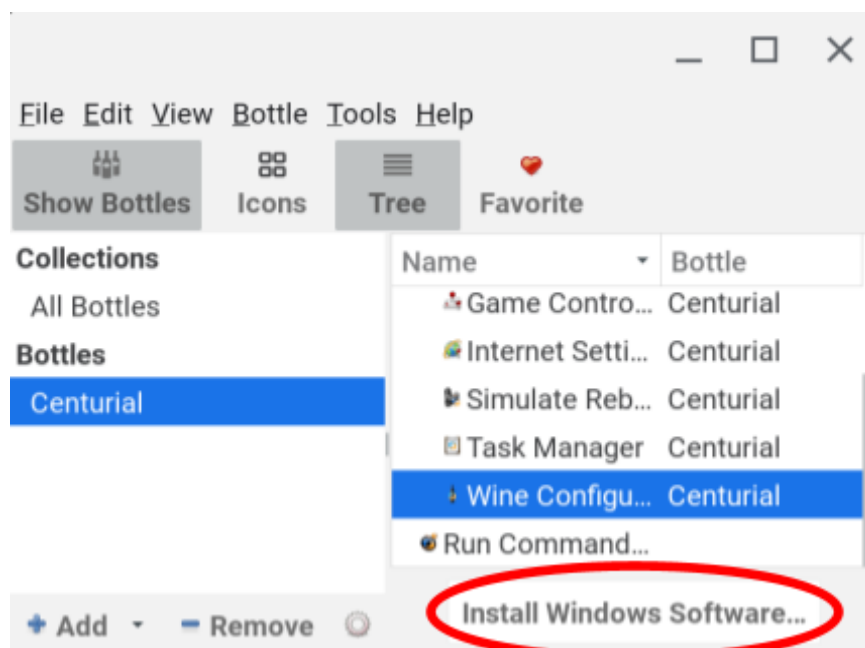
When all of the .NET components are installed, you should be back at a CrossOver window that looks like:



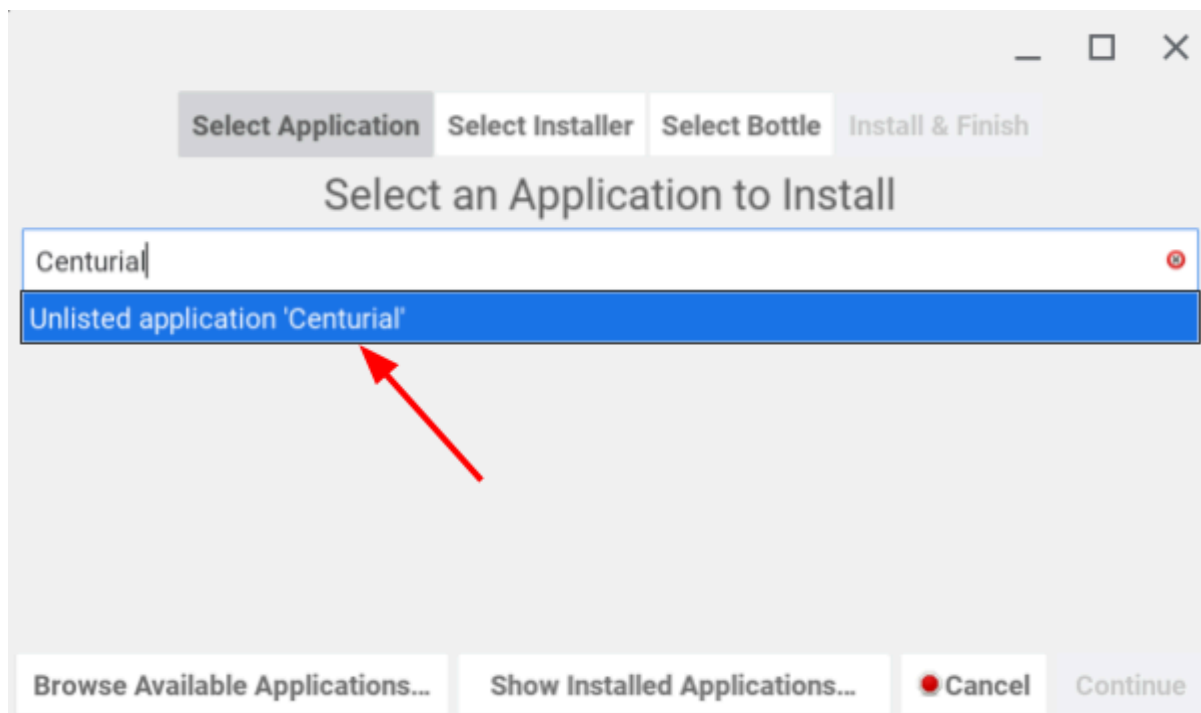
Click the “Close” button.

6. Install Centurial

From the main CrossOver window, select “Install Windows Software...”:

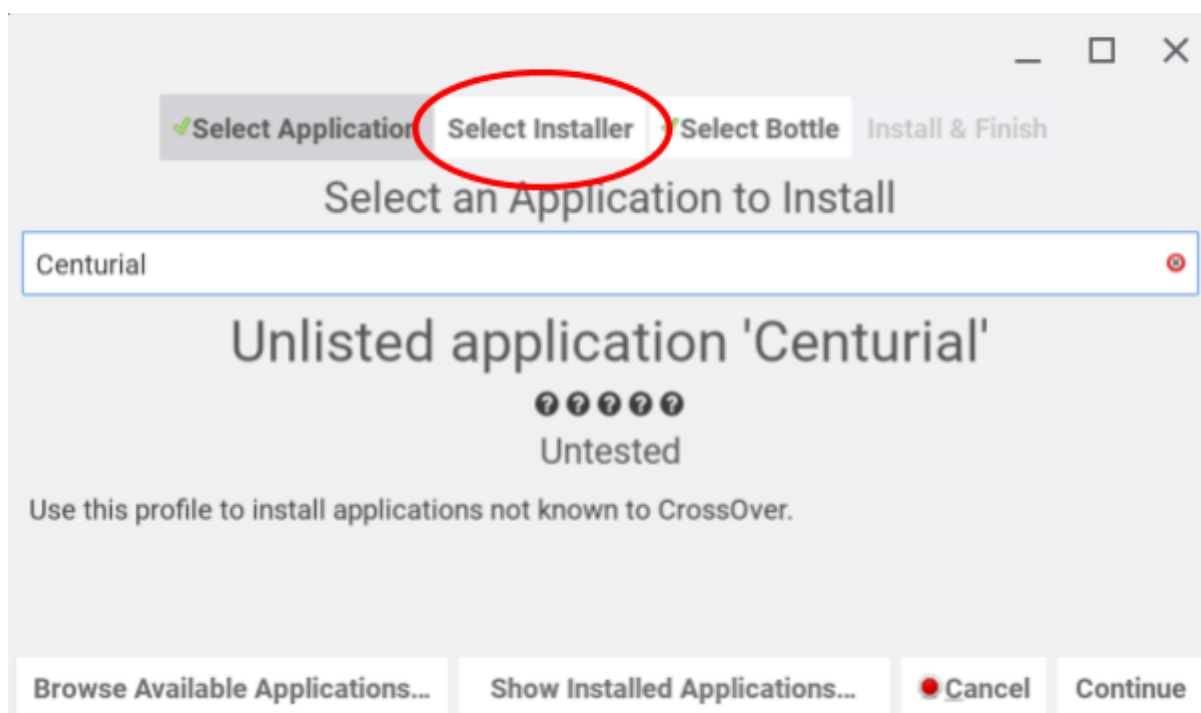


This will open up a window like this:

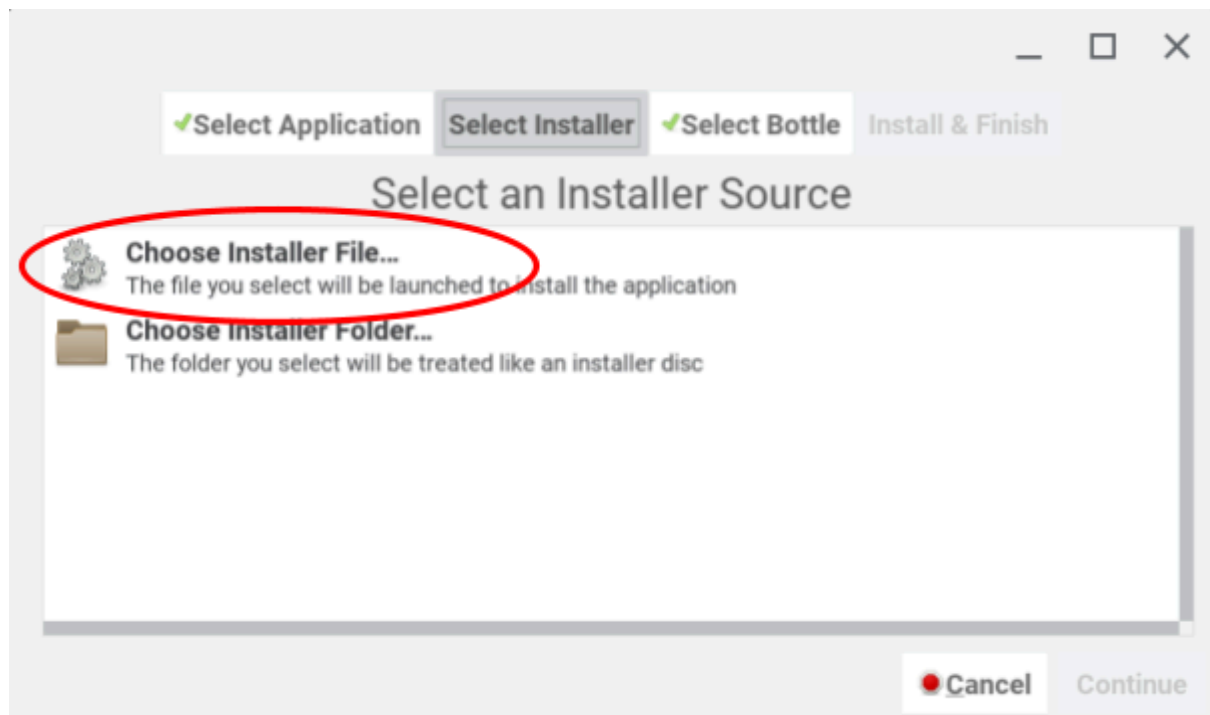


In the text box, type “Centurial” and then click on “Unlisted application ‘Centurial’” as shown by the arrow in the image above.

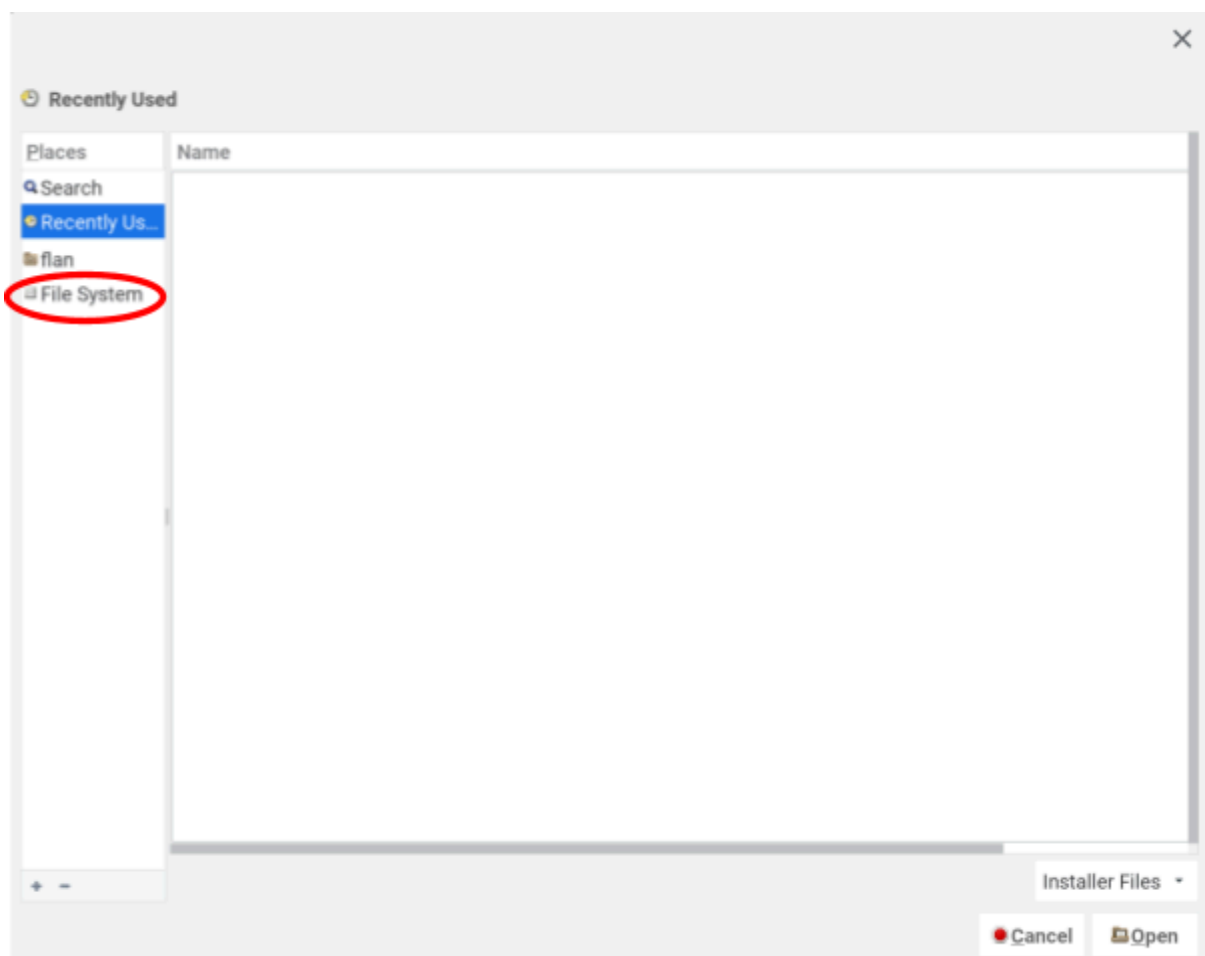
The window should now look like:



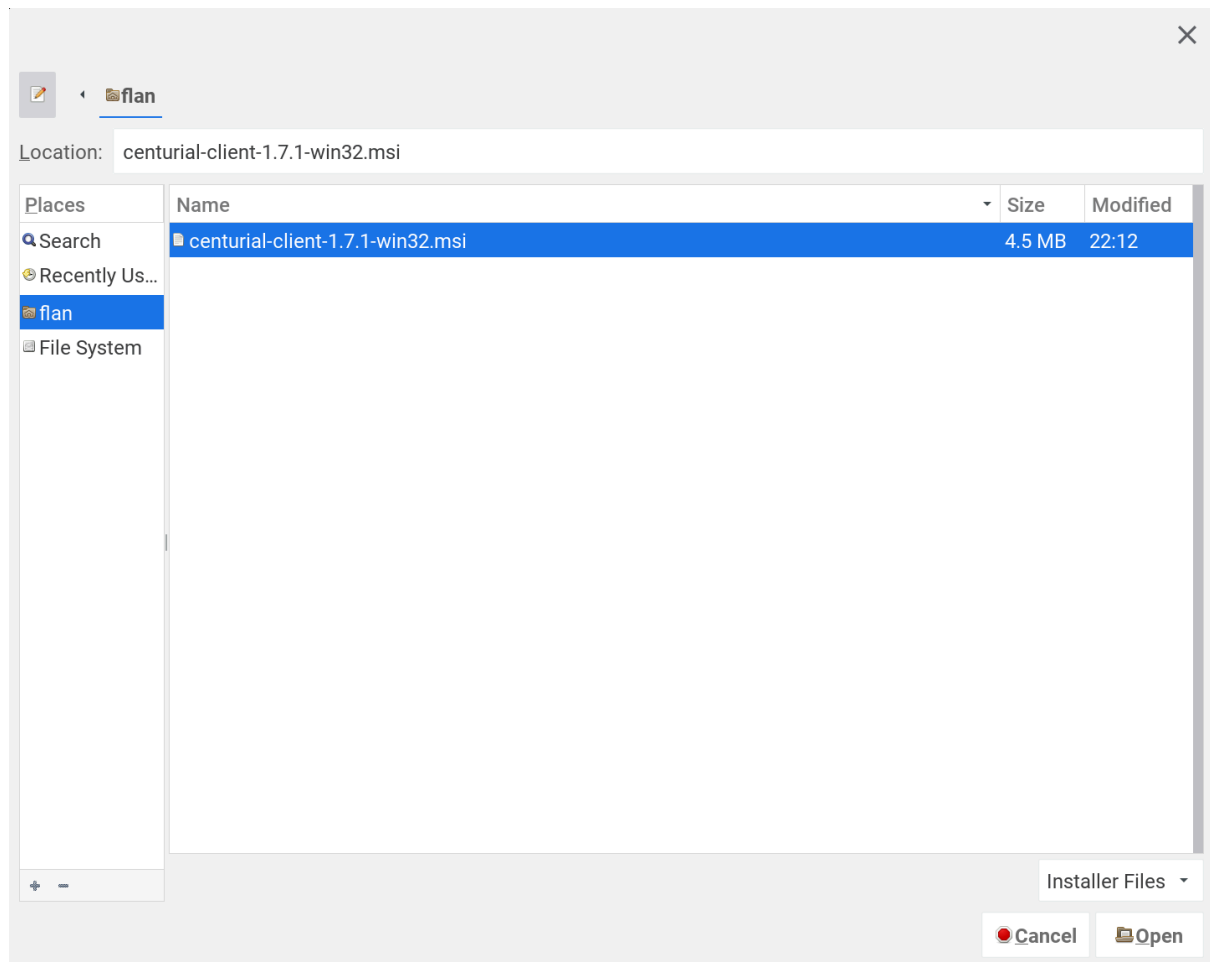
Click on “Select Installer” as shown. The window should now show:



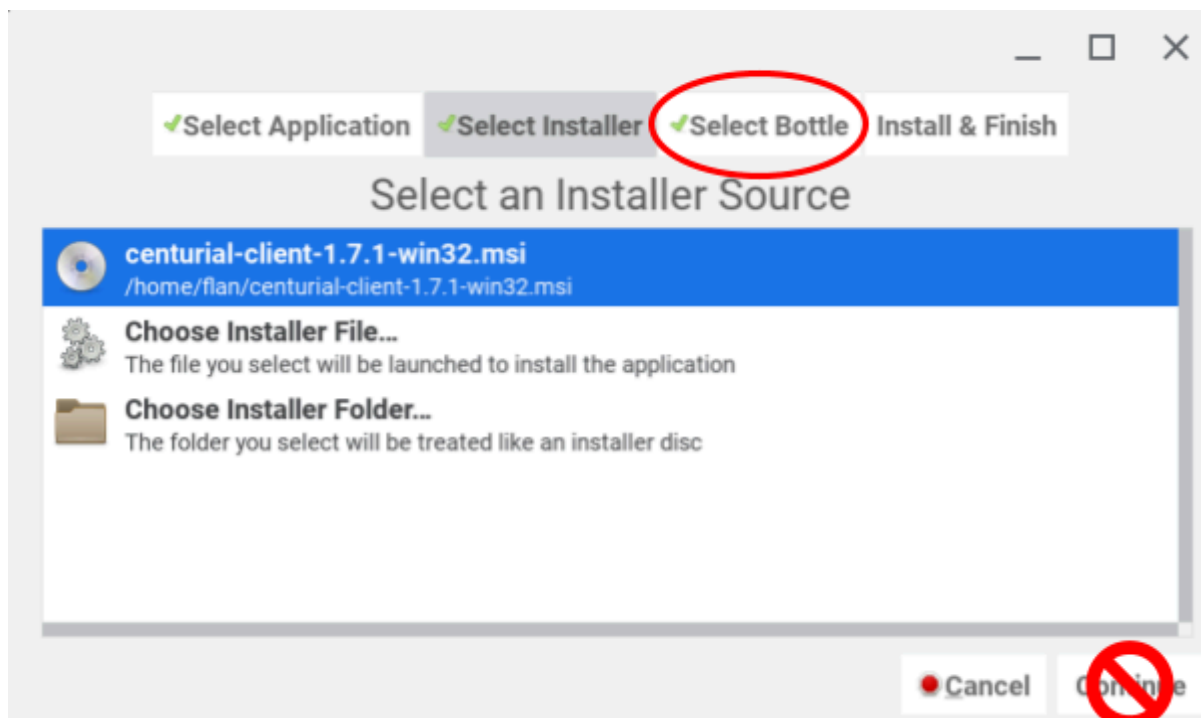
Click on “Choose Installer File”. This should open a file chooser like:



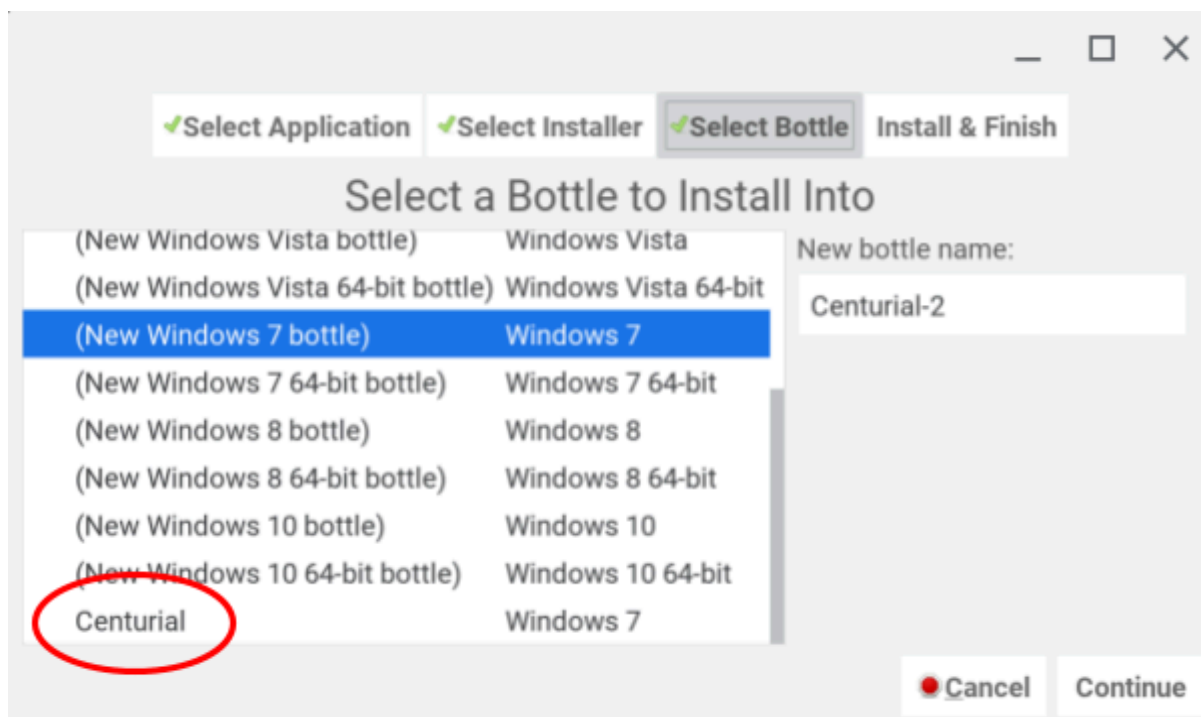
Choose “user” (or whatever your username is). The screen should look like:



The most important part is that the Centurial client installer is selected. Then choose “Open”. Now the CrossOver install Window will look like:

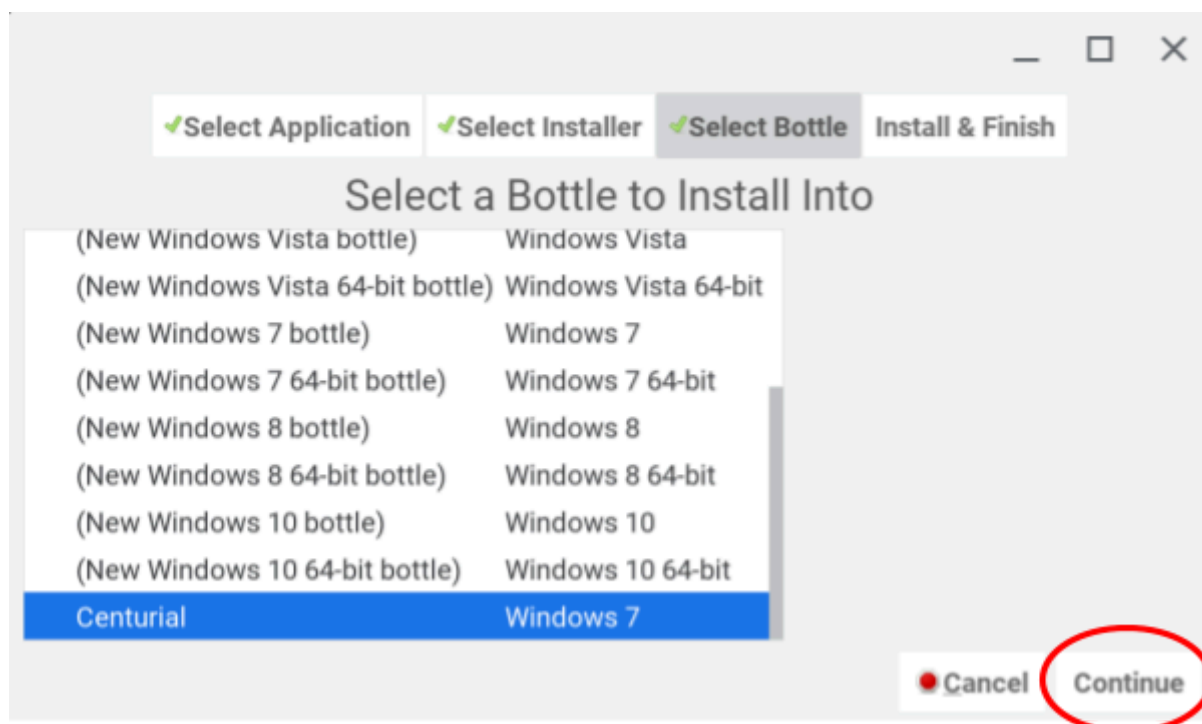


Now choose "Select Bottle". Do not click on "Continue". The window should now look like:

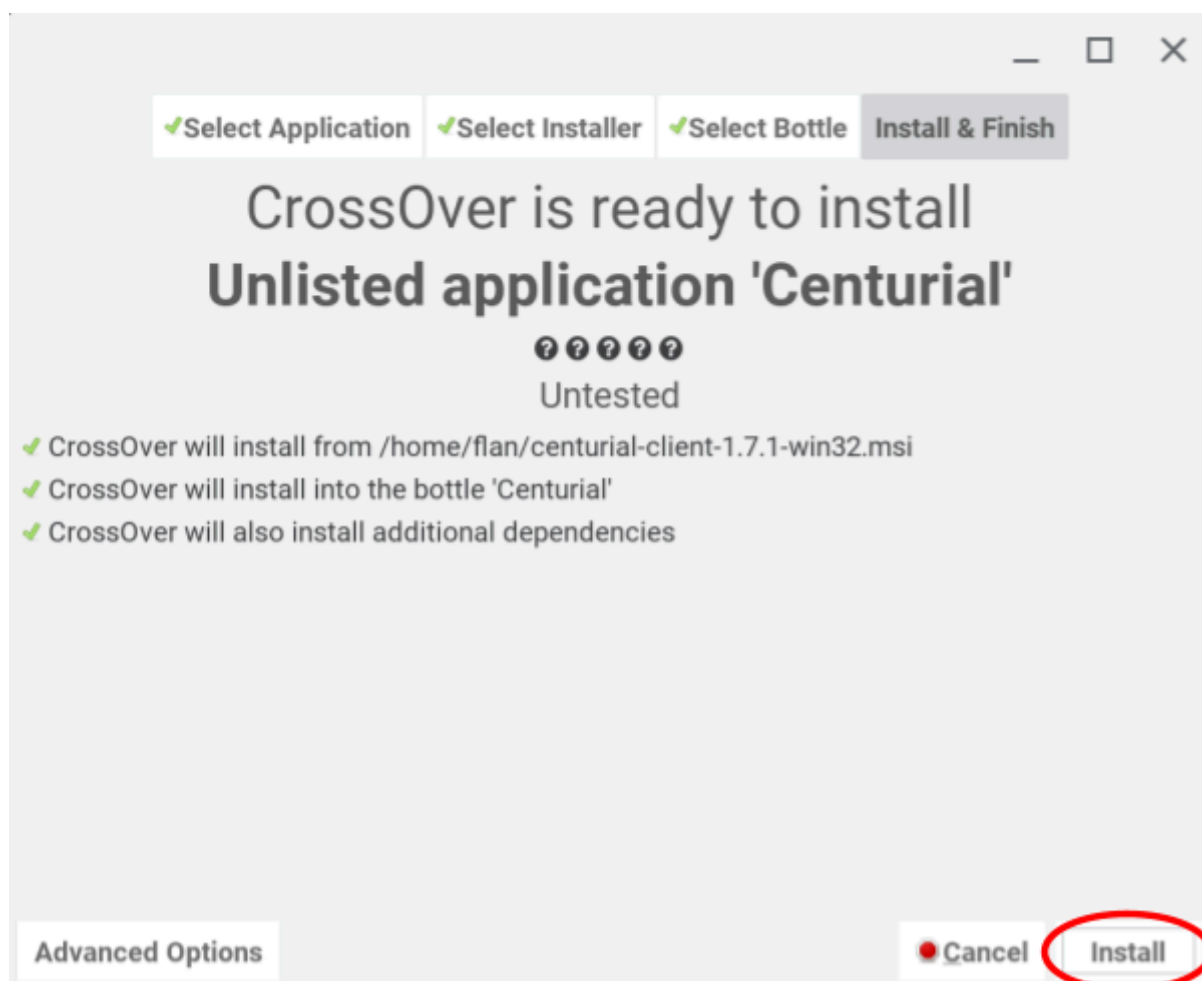


Find and click on the "Centurial" bottle. (You may have to scroll down to find it.)

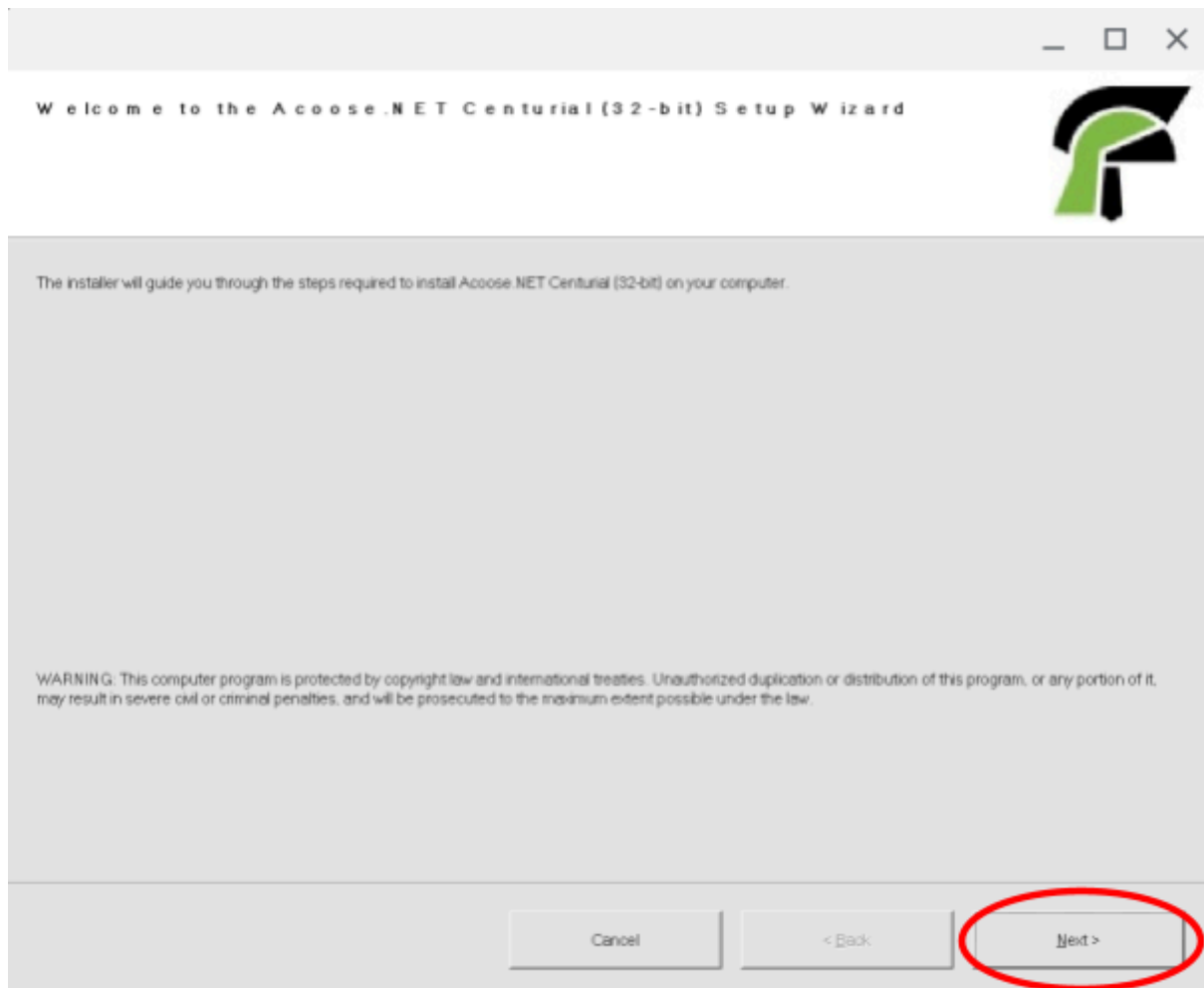
Verify that the window looks like:



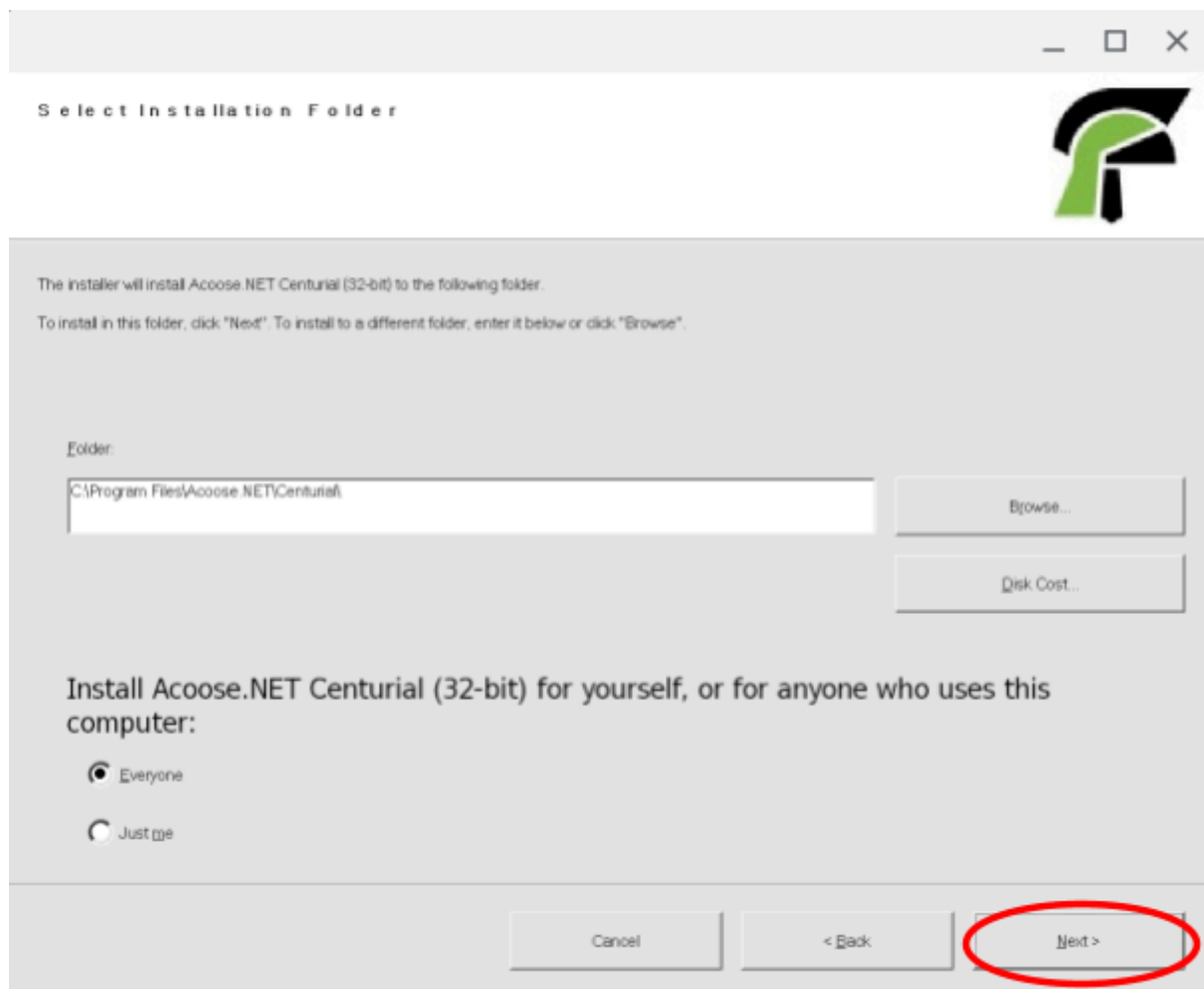
If it does, click “Continue”. Again, verify that the window looks similar to this:



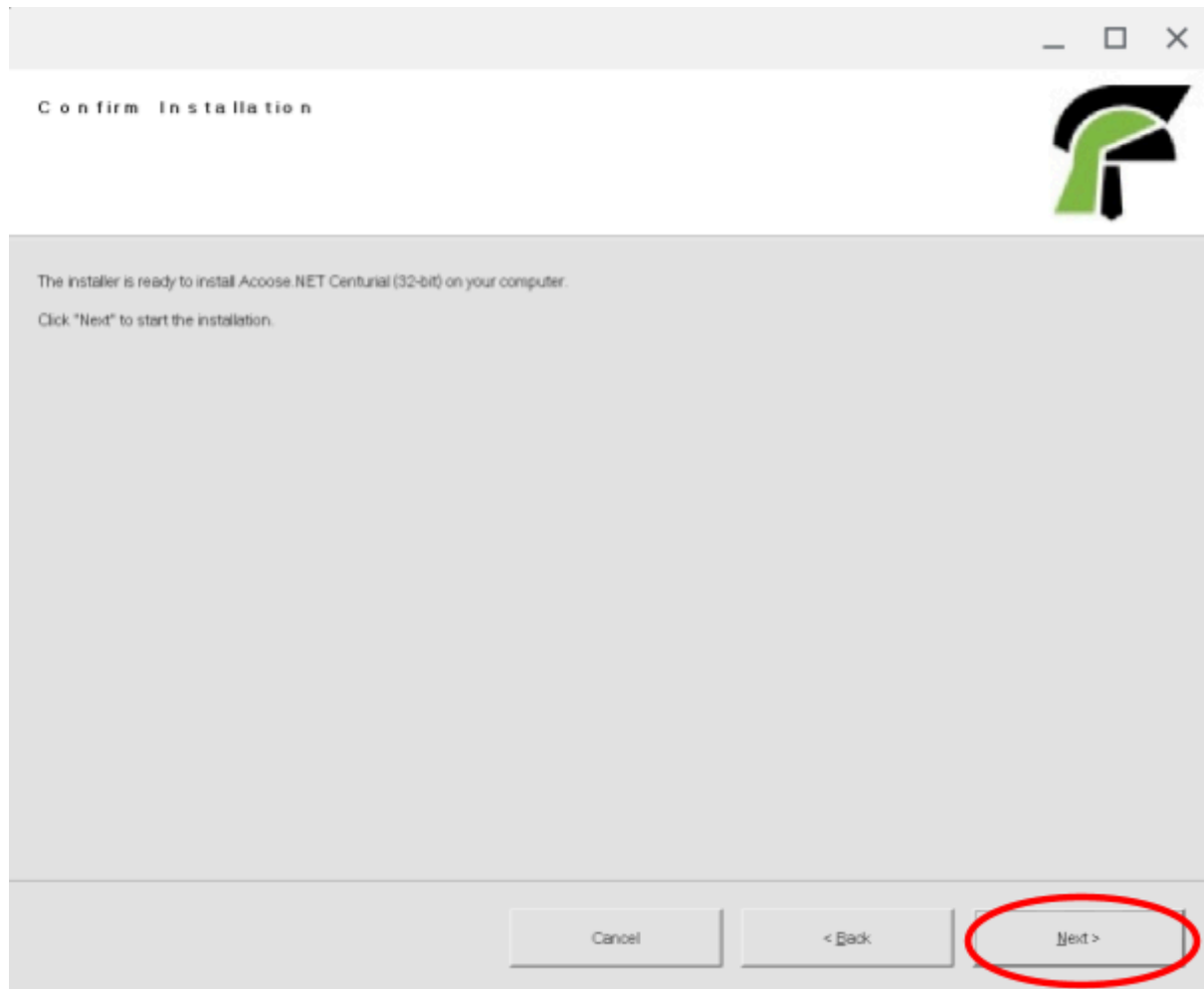
Then click "Install". This will start the Centurial installer:



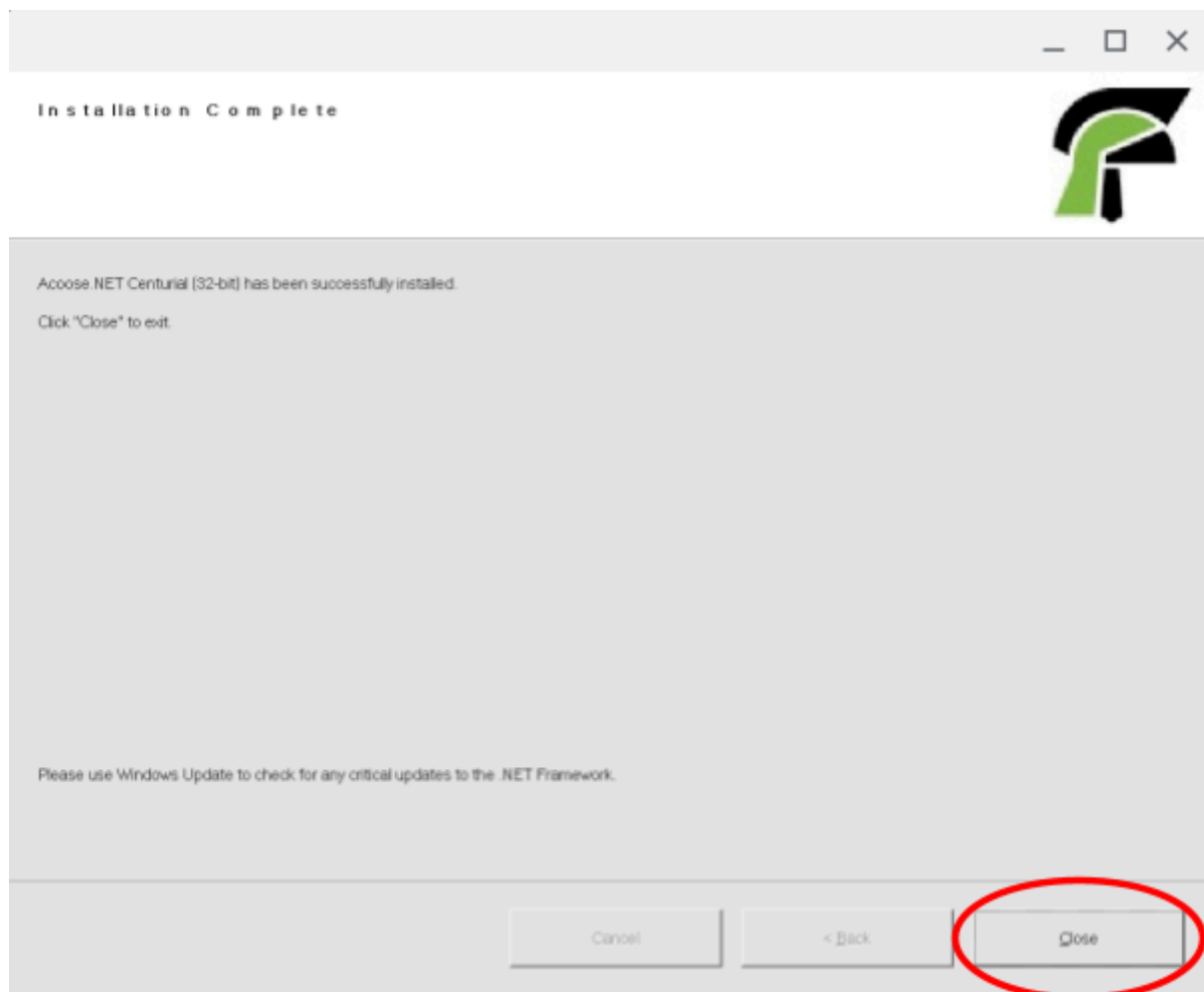
If you are on a high-definition screen, it is normal for the text to look tiny, as shown above. Centurial will function with the appropriate font size. Click "Next".



Accept the defaults and click "Next".

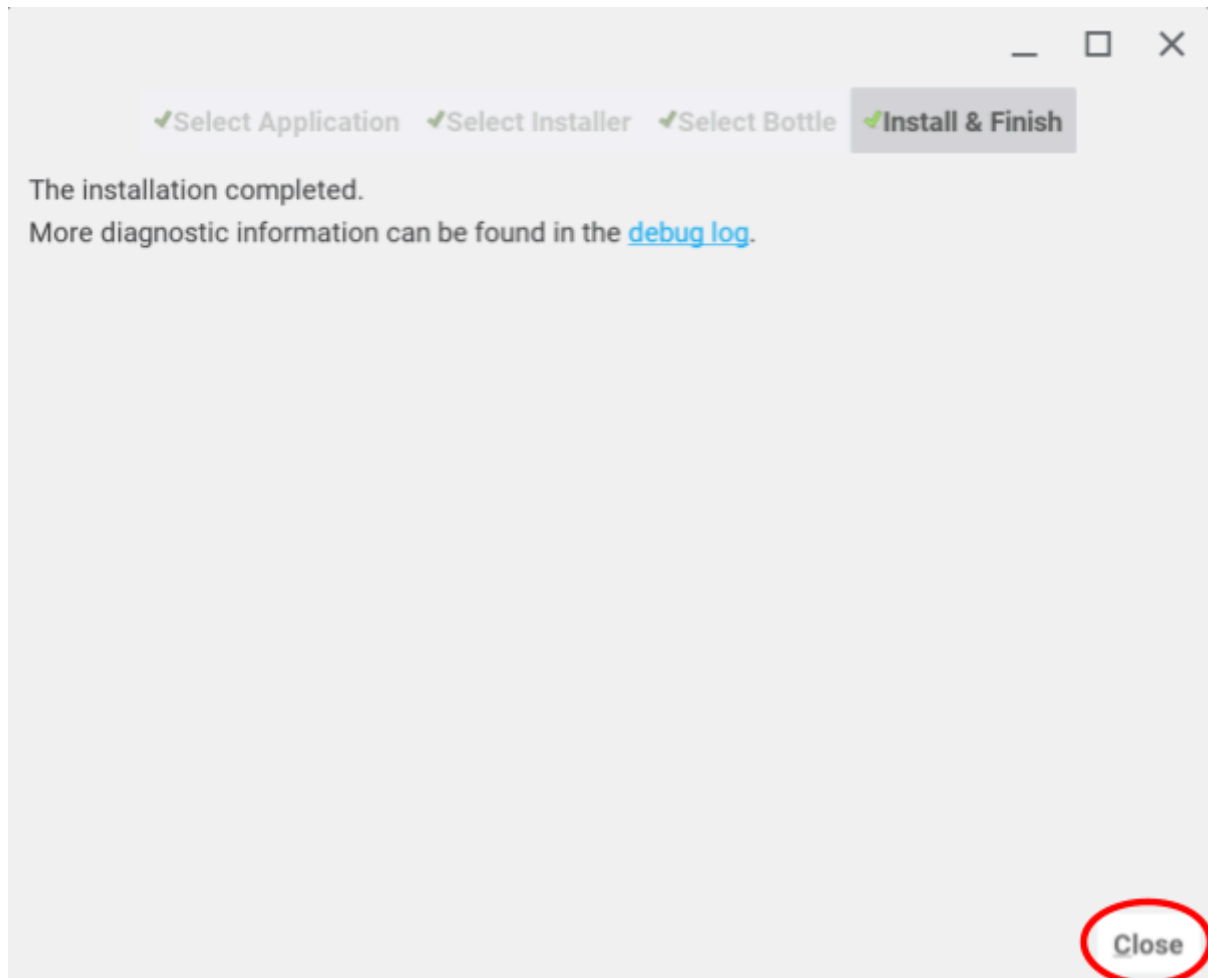


Again, click "Next". Centurial should finish installing fairly quickly:

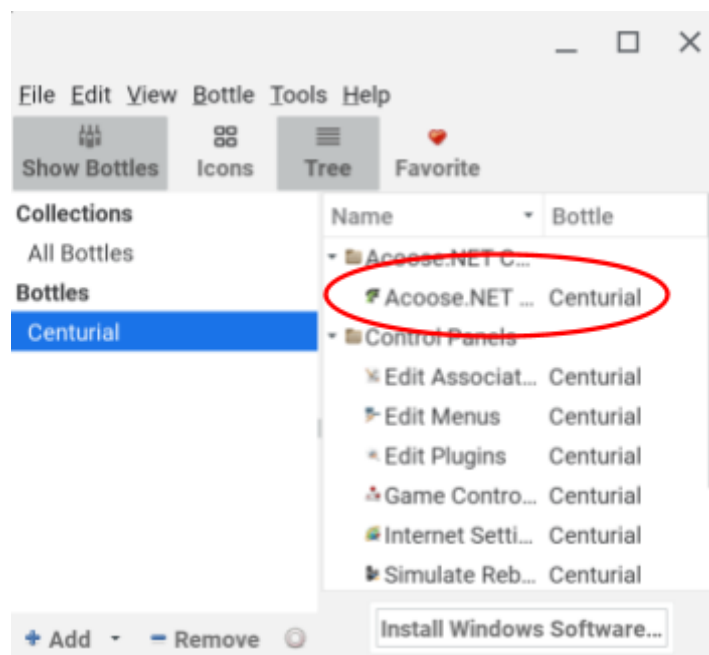


Click "Close" to finish the installation.

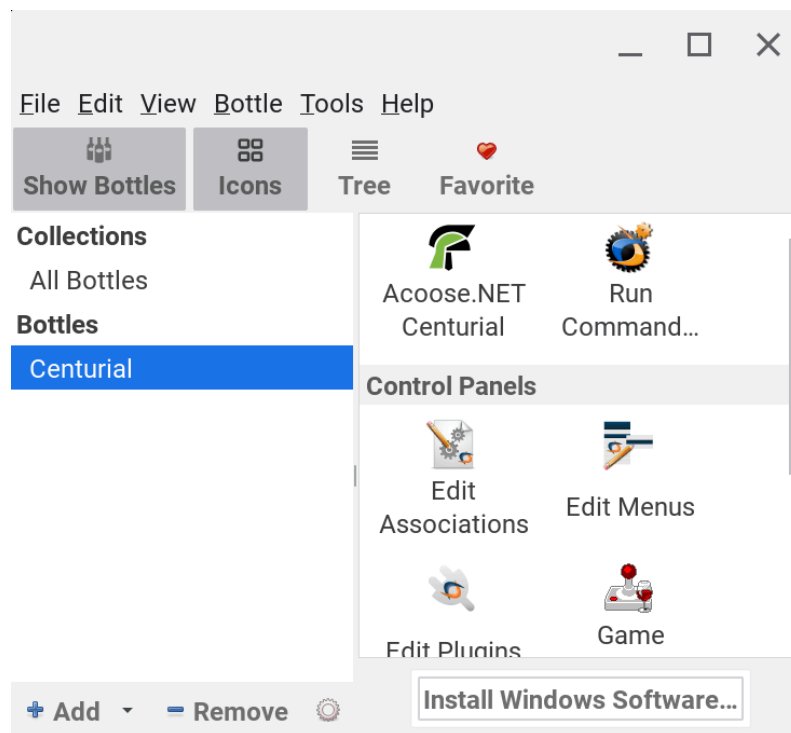
The CrossOver installation window should now look like:



Click "Close". Now in the main CrossOver window, if you scroll up on the right side, you should see an entry for Centurial:



If you would like, click on the “Icons” button to get a view that looks like:



Double-click on Centurial to launch it:

