How to install and optimize Minecraft on Linux

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Minecraft is arguably one of the most popular games out there. But running the game properly can be a challenge. For Linux users, optimizing Minecraft can be an easy task, if you are not sure what to do.

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Optimizing Minecraft on Linux

1. Analysis of PC system hardware

Minecraft works on all the most modest computer systems. There is also a version for the Raspberry Pi, which is enough for you to see how flexible it is.

So, to get Linux PC ready for Minecraft, take a moment to evaluate CPU, RAM and graphics card. Instructions: Which upgrade will improve your computer performance the most? will help you make the right decisions.

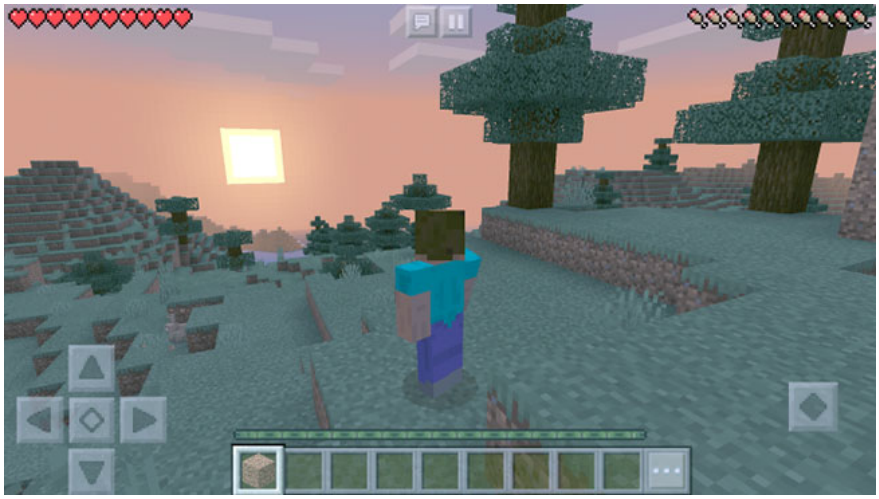
2. Prepare the computer to play the game

Next, make sure your computer is ready.

Start by upgrading the operating system. Make sure you are using the latest version of Ubuntu, Arch Linux, or whatever operating system you rely on.

Next, before launching Minecraft, make sure all software updates are completed and no other applications are running. Additional activity in the background will affect game performance, so it's best to make sure your computer is focused solely on Minecraft.

3. Download the latest graphics driver



Download the latest graphic driver
Like any other game, it's important to make sure you're running the latest graphics drivers.

Graphics drivers for Linux can be installed from AMD and Nvidia. Intel graphics drivers are also provided. If you prefer open source drivers, install them using Oibaf and X-Edgers PPA repositories.

4. Update the Linux kernel

To get the best performance from Minecraft on Linux, you should take some time to evaluate the kernel. The newer the kernel, the better the performance.

Ubuntu users can easily get the latest version from the Ubuntu Mainline Kernel repository. However, upgrading the kernel only when you use Intel or open source drivers is a smart choice. Exclusive drivers from AMD and Nvidia often take time to add support for new kernels.

In short, stick with the current kernel, if you use AMD or Nvidia graphics card drivers.

5. Use the latest Java Runtime Environment

Although Minecraft and Windows versions of Minecraft have grown beyond Java, the Linux version doesn't.

Therefore, it is important that you run the latest version of the Java Runtime Environment (JRE). The latest version of JRE can be downloaded from the Oracle Java website, although this version is installed in the latest

Minecraft installer, but you should monitor the JRE to ensure updates.

6. How to add OptiFine mod to Minecraft

Mods for Minecraft often add or enhance existing functionality. OptiFine Mod can be installed on Minecraft to make various changes to the game. But what does Optifine really do?

Optifine supplements things like:

1. FPS (frames per second) improved
2. Texture (textured surface in 3D game design) high definition
3. Shader and dynamic light
4. Anti-aliasing (Anti-aliasing)

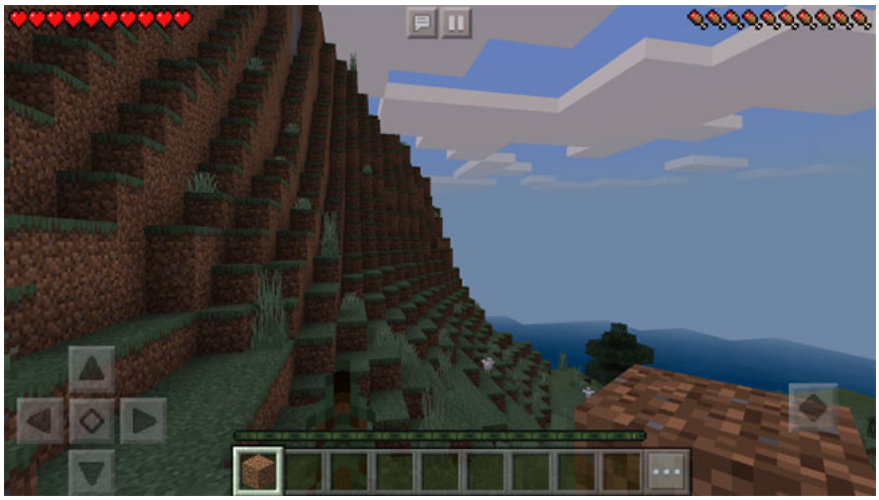
You will also find configurable animations for things like water, explosion effects, etc. Check out the Optifine homepage for full details of what this mod does at:

`https://www.optifine.net/home`

If you want to get the best out of Minecraft on Linux, you need the Optifine mod.

Download Optifine Ultra (Free)
https://www.optifine.net/downloads

7. Force the CPU into Performance mode



Force the CPU into Performance mode
While the difference will most likely be minimal, you can also change the CPU governor to **Performance** mode .

In most cases, the CPU frequency is reduced to save energy. However, it is also necessary to increase the CPU frequency again when gaming and performing other processor-intensive tasks.

Setting the regulator to Performance mode forces the CPU to run at maximum full-time frequency.

Note that this will consume more power, so it won't be suitable if you run Minecraft on battery power. Using this mode if you are trying to reduce your electricity bill is also not a smart job.

To do this, all you need to do is run the following command in Terminal before launching the game:

```
cpupower frequency-set -g performance
```

Once done, just run the same command but replace **performance** with **ondemand** or simply restart the computer.

Performance mode is not the same as overclocking. The performance adjuster is very safe and will not cause damage as long as the PC's cooling fan works properly.

8. Use the debug menu to track Minecraft performance

Minecraft has a hidden overlay that can be activated to maintain performance.

If you have problems with playing games in Minecraft, clicking `F3`will show overlay debug menu. This overlay reveals information such as your location on the map, used memory, allocation level, FPS and chunk updates.

FPS and chunk updates are the key to monitoring Minecraft performance. With low FPS (below 30), the game will be jerky.

The chunk update speed is based on the speed you move in the Minecraft world. The chunk size is 16 x 16 x 256 blocks. On faster computers, you'll see how the map expands quickly around. But on a slow computer, this process will take longer and the distance field is also much shorter (maybe only 4 blocks).

As long as chunk updates are high and FPS is above 50, you will enjoy a smooth Minecraft session.

9. Optimize Minecraft video settings

But what if the FPS and chunk ratios are low? What else can you do to optimize Minecraft for PC?

The **Video Settings** menu includes a variety of options that can be used to adjust Minecraft for hardware. In the game, press **Esc> Options> Video Settings** , then adjust **Graphics, Smooth Lighting, Render Distance** (chunk) and **FPS** . Adjust these settings to find the right balance.