Linux Mint running in software rendering mode on VirtualBox - Never Too Old To Learn

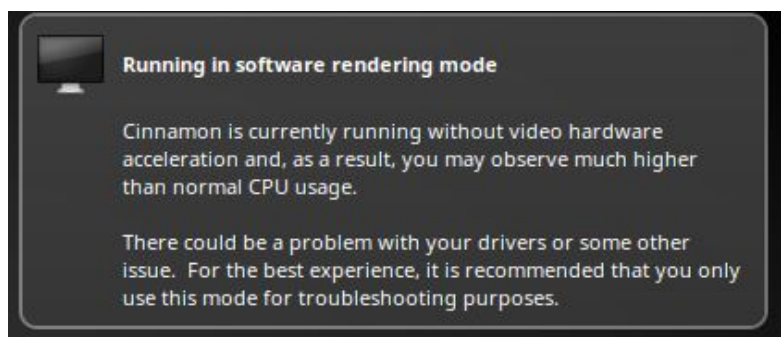In my previous posts, I introduced two Linux distros for new users: **Zorin OS** and **elementary OS**. Zorin OS provides a Windows-like interface and elementary OS provides a macOS-like interface, with the hope of making both Windows users and macOS users feel less intimidated when switching to Linux. According to the Linux distro watch, both Zorin OS and elementary OS are getting popular. In 2016, **Zorin was ranked No. 7** while **elementary was ranked No. 8**, and in last 3 months (at the time of writing this post) both them are still in the top 10 ranking. However, if you are like me who have used Linux for a while, then you might want to try **Linux Mint** which is currently **the most popular Linux distro**. Linux Mint is Ubuntu-based and has an elegant desktop environment and user interface. The installation is very straight-forward like the installation of any other Ubuntu-based distro and I had no trouble installing it on my VirtualBox, so I will not talk about the installation today, but I will discuss a common issue if you run Linux Mint on VirtualBox.

When you install Linux Mint on VirtualBox with the default settings, then when you launch Linux Mint you will most likely encounter this notification on the screen:

Running in software rendering mode

Cinnamon is currently running without video hardware acceleration and, as a result, you may observe much higher than normal CPU usage.

There could be a problem with your drivers or some other issue. For the best experience, it is recommended that you only use this mode for troubleshooting purposes.

It seems that this notification only appears in Linux Mint because my installation of Zorin OS and elementary OS went well without any issues on VirtualBox. The first thing I tried to solve this issue was to upgrade the graphic driver as suggested in the notification "there could be a problem with your drivers". Unfortunately, there is no update for my graphic driver, so there could be "some other issue".
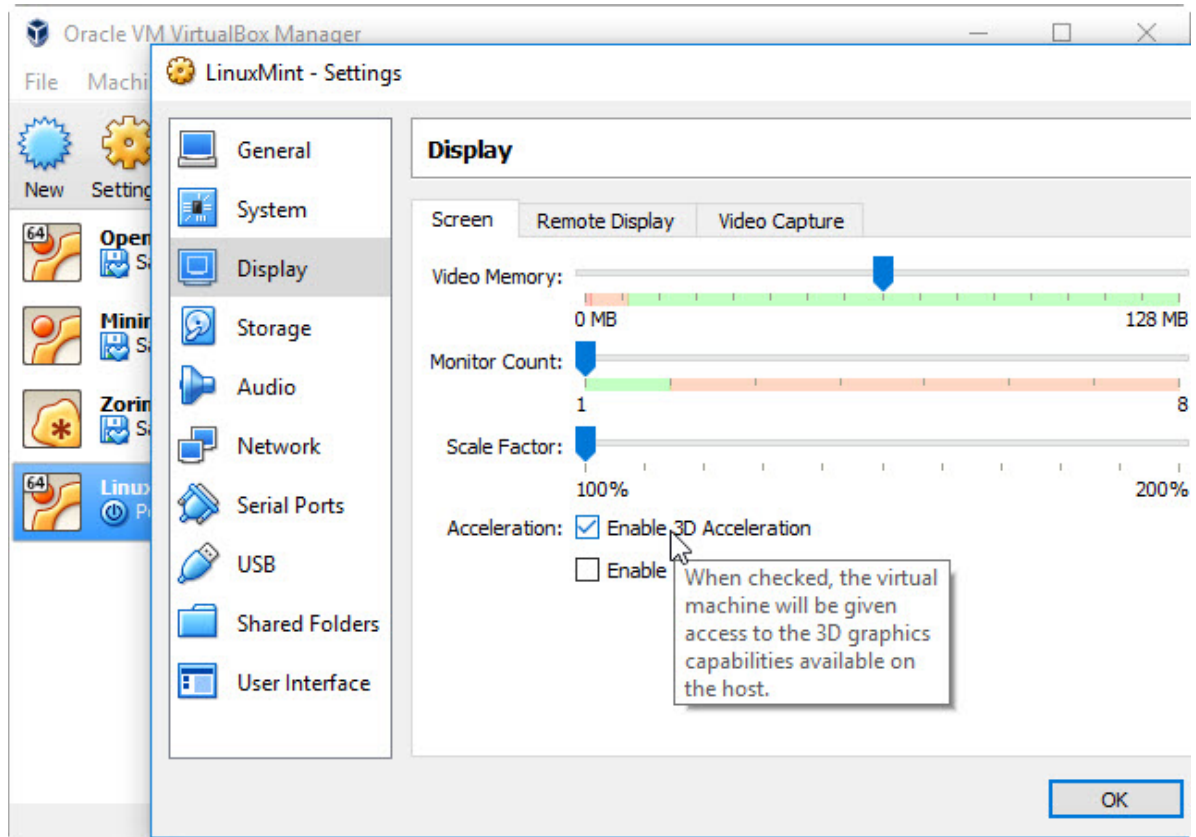
After some more trial and error, I found out that there are two things you must to fix the issue.

1. You must install VirtualBox Guest Additions

2. You must enable 3D acceleration for Linux Mint virtual machine

The installation of VirtualBox Guest Additions is simple and easy. After you launch Linux Mint VM, click Device menu in VirtualBox, then choose Insert Guest Additions Disk, then follow the instructions to finish the installation.

To enable 3D acceleration, you need to first shut down (power off) Linux Mint VM, then highlight Linux Mint VM and go to Settings->Display, then check Enable 3D Acceleration. Now restart Linux Mint VM, you will not see the notification of "Running in software

rendering mode" any longer.

Hope this helps.