



Explore the Linux Mint Desktops





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The Cinnamon Desktop Environment version of Linux Mint is the distro's flagship. Cinnamon is designed by the Mint team and presents a modern and stylish desktop. It's quick and stable too and on the right hardware will not only look superb but function marvellously.

If you've chosen Cinnamon as your environment you're in for a treat; but what do the other desktop versions offer?



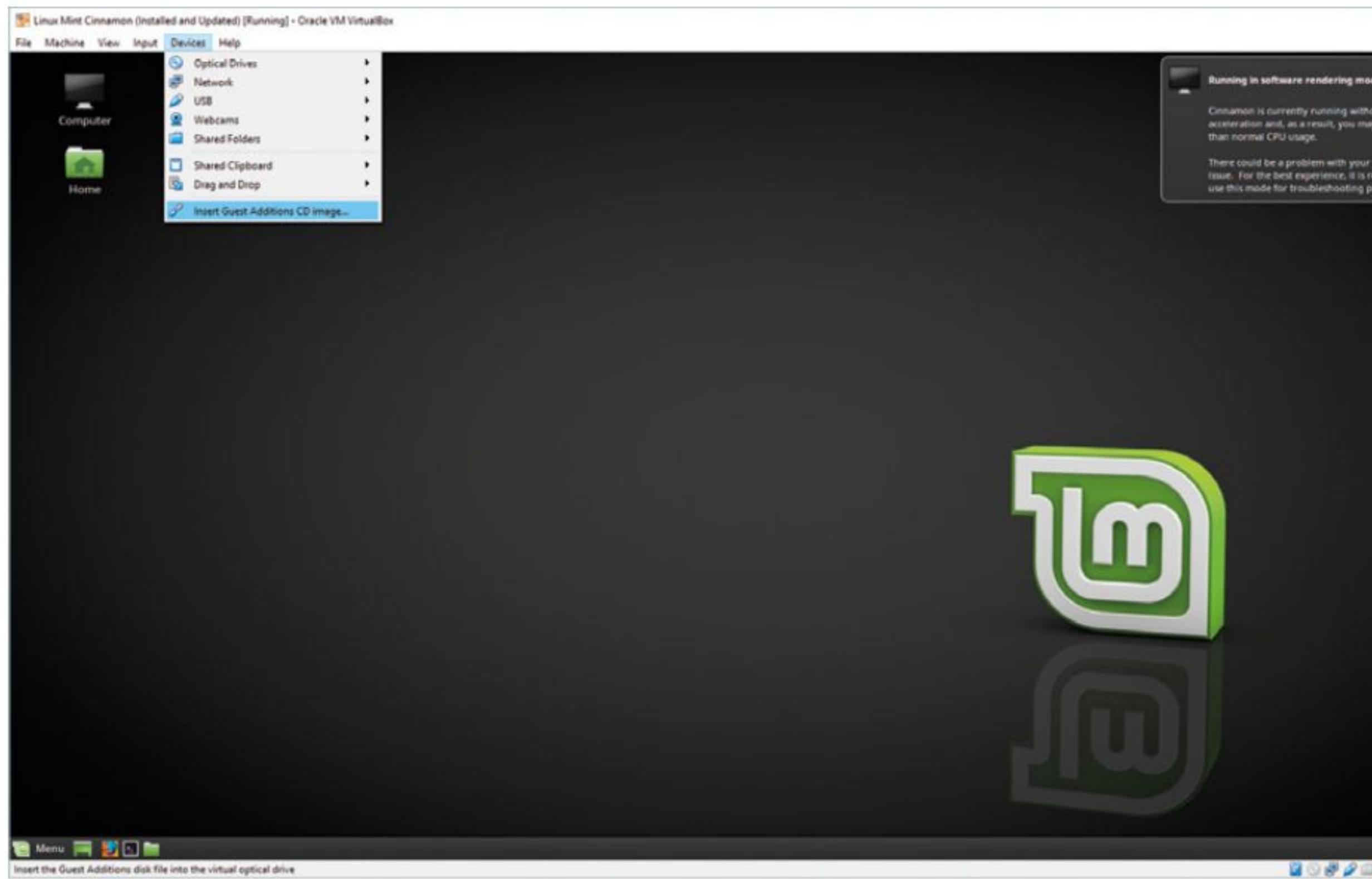
Introduction to the Cinnamon Menu

Now that you have Linux Mint Cinnamon up and running, let's have a look around at what's on offer; in particular Mint's Cinnamon Menu. If you're using Virtualbox you'll see a notification regarding Software Rendering; here's how to fix it.

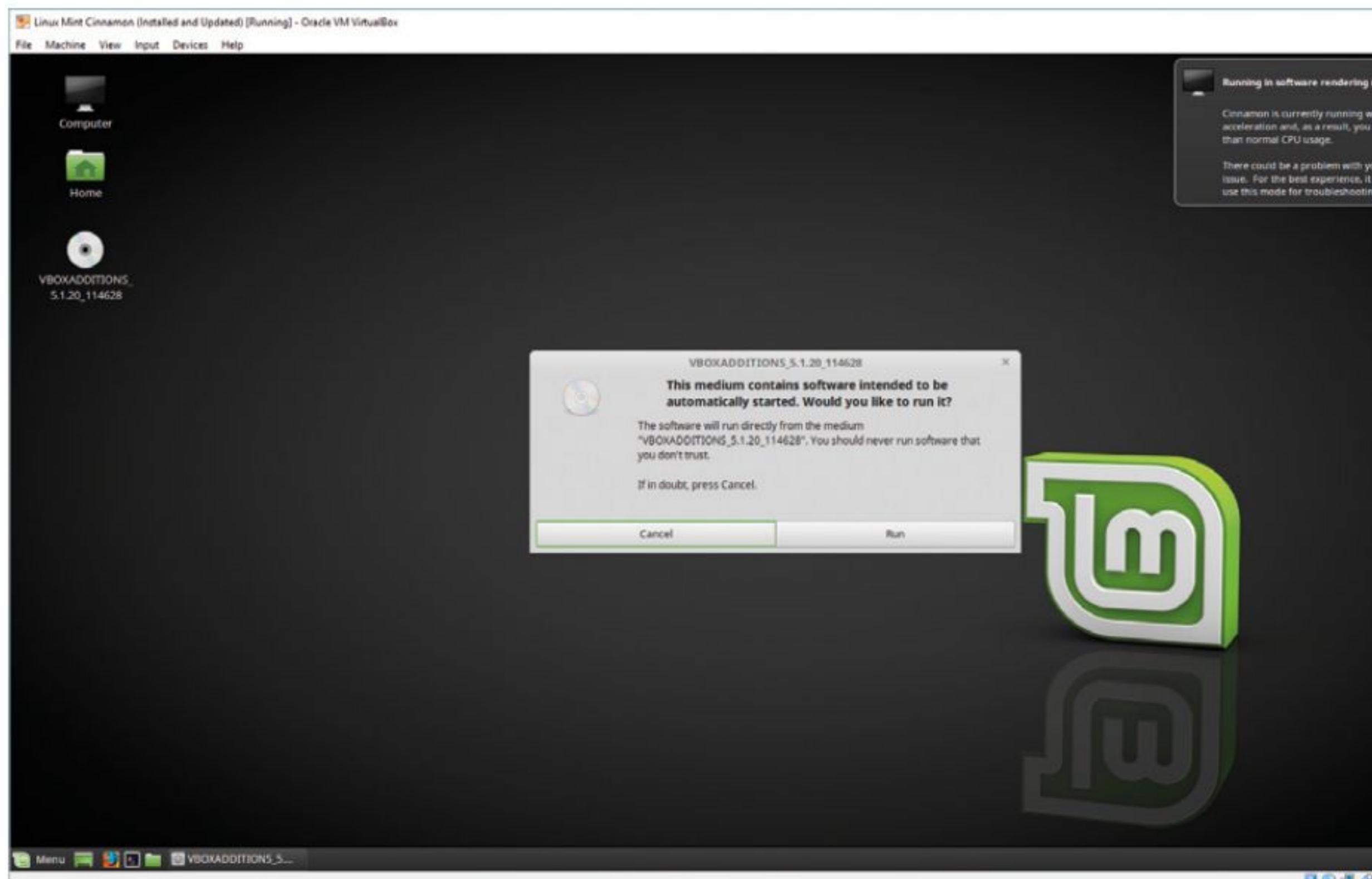
CINNAMON VIRTUALBOX FIX

The Software Rendering Mode is when you run Cinnamon without video hardware acceleration. It's common in Virtualbox but also applies for incorrect graphics card drivers.

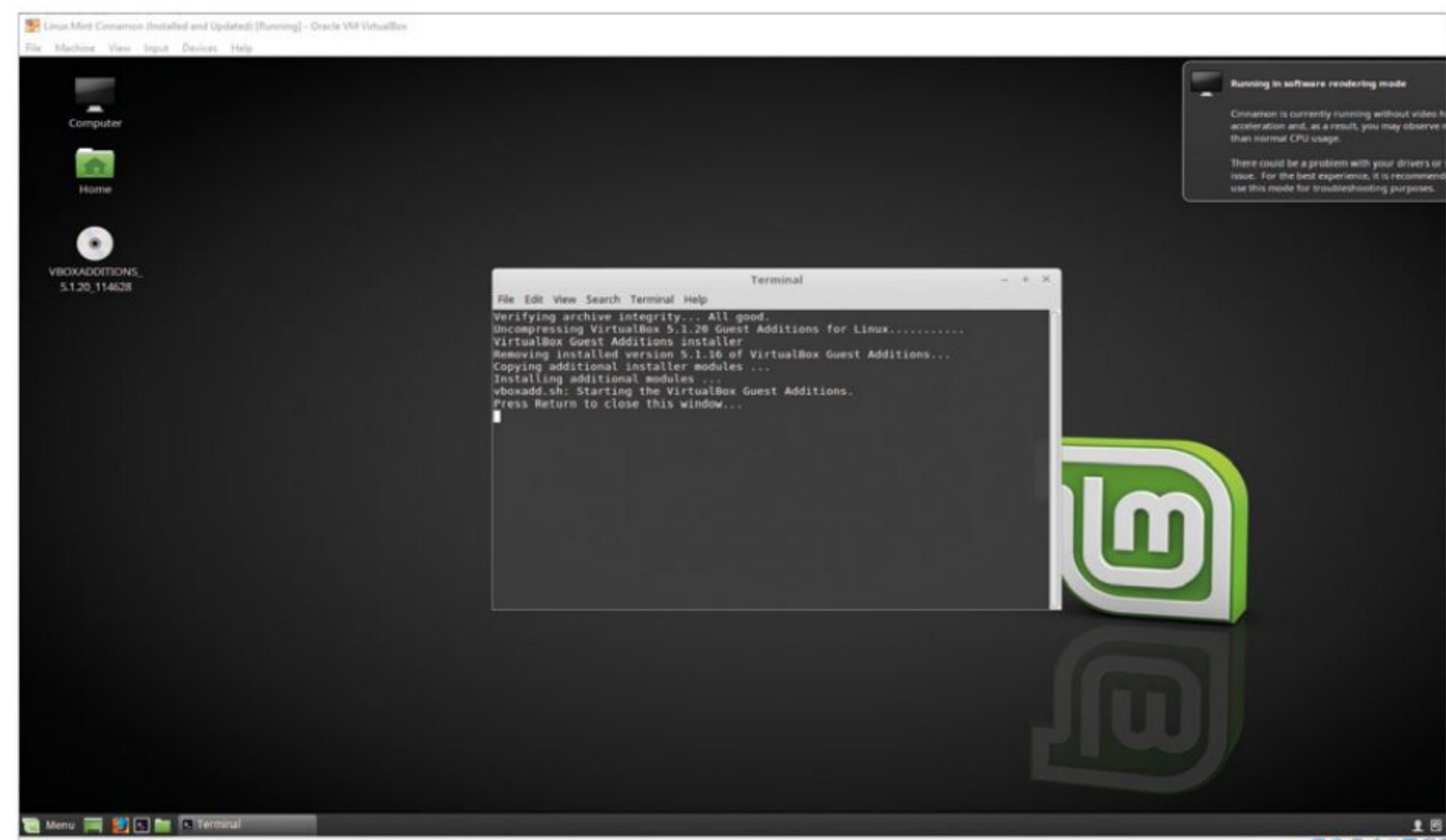
STEP 1 Before we begin, we are assuming you're having this issue within Virtualbox. The Software Rendering message will appear in the top right of the desktop. To fix this, click on Devices in the Virtualbox window, followed by Insert Guest Additions CD Image.



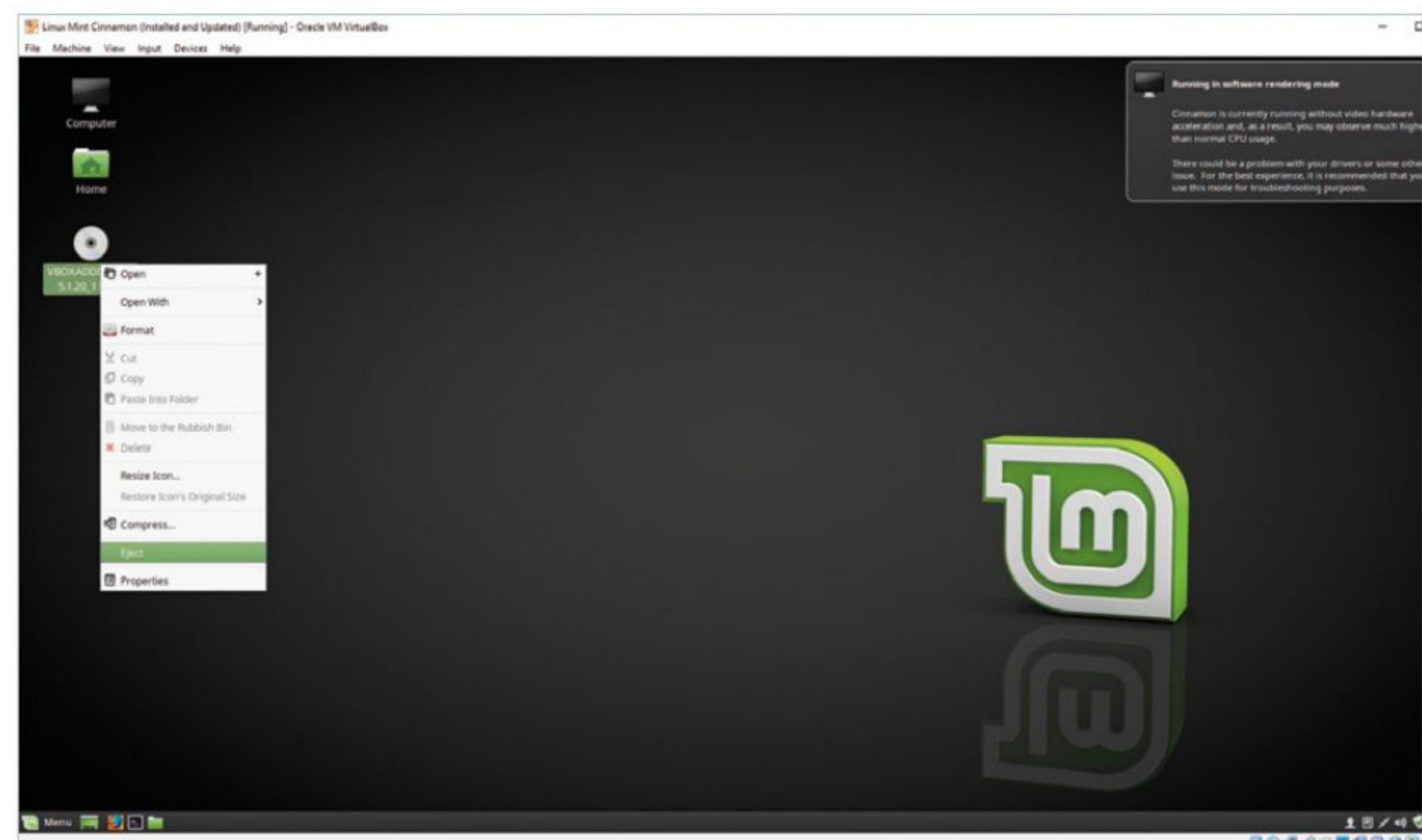
STEP 2 The Guest Additions CD contains drivers for Virtualbox, including the virtual video hardware. When it's loaded in, you get a 'software needs running' notification box with two options: Cancel and Run. Click the Run button and enter your Linux Mint user password.



STEP 3 After a moment or two you can automatically drop into a Terminal command line view, that asks if you want to continue with the installation. There's an older version of the Additions driver installed with Mint but you want the latest version. Type in yes and press Enter to continue. After the installation, press Enter again to close the Terminal window.



STEP 4 The Virtualbox Additions CD icon will be on the desktop, right-click it then scroll down the menu and left-click Eject. You can now restart Linux Mint by clicking the Menu, the bottom icon in the strip to the left, then the Restart button. This will reboot Mint and the problem will be fixed. We'll look at hardware drivers shortly.

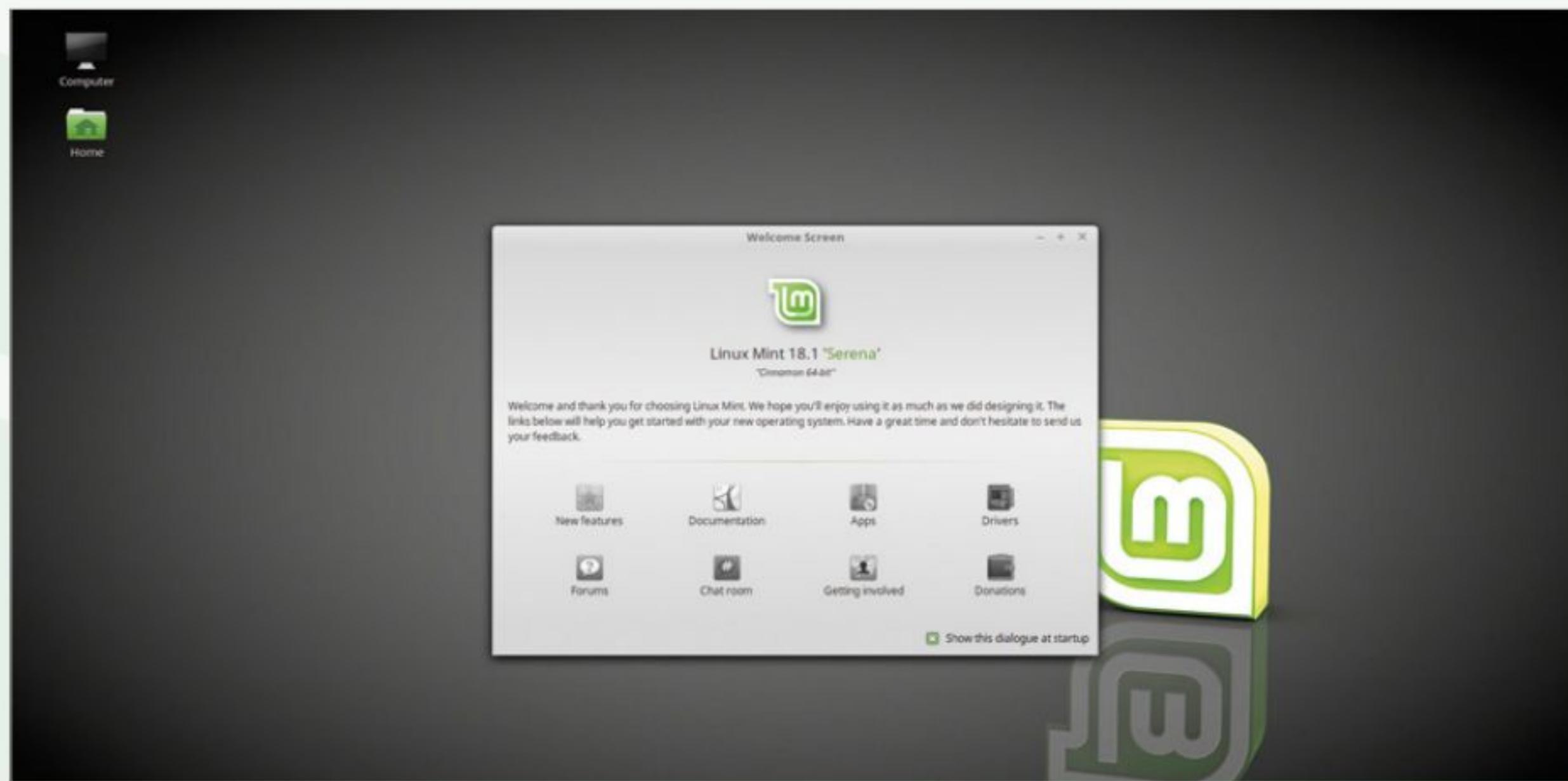




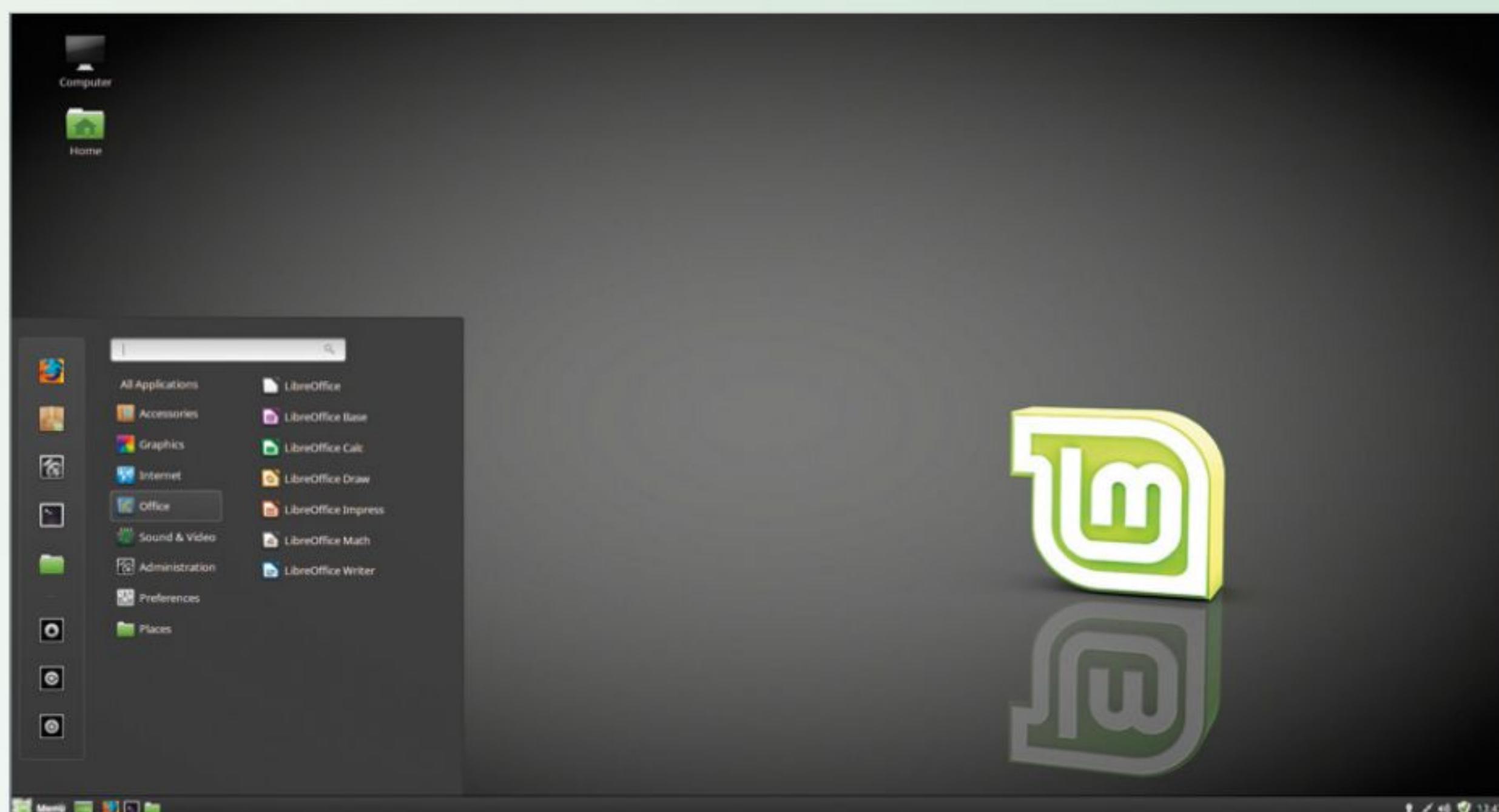
CINNAMON ON THE MENU

Now the Software Rendering issue for Virtualbox users is out of the way (we'll get to other drivers soon), let's take a look at the Mint Menu and how it all works.

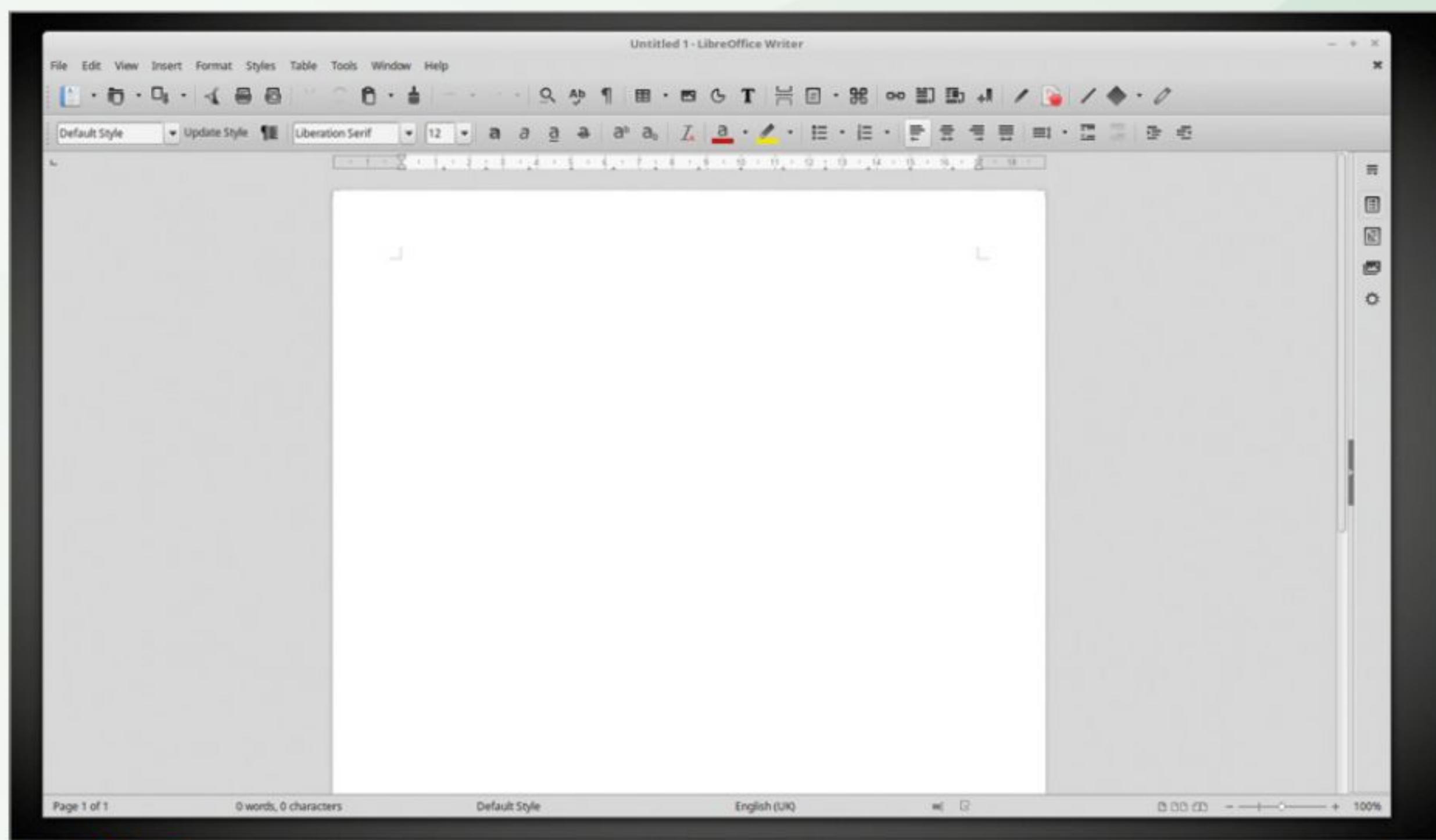
- STEP 1** First, you will have already noticed the Welcome Screen that pops up when you login to Linux Mint. Take a moment to browse through the options, read the new features and so on; leave the Drivers icon alone for the time being. When you're done, click the X in the corner of the window to close it.



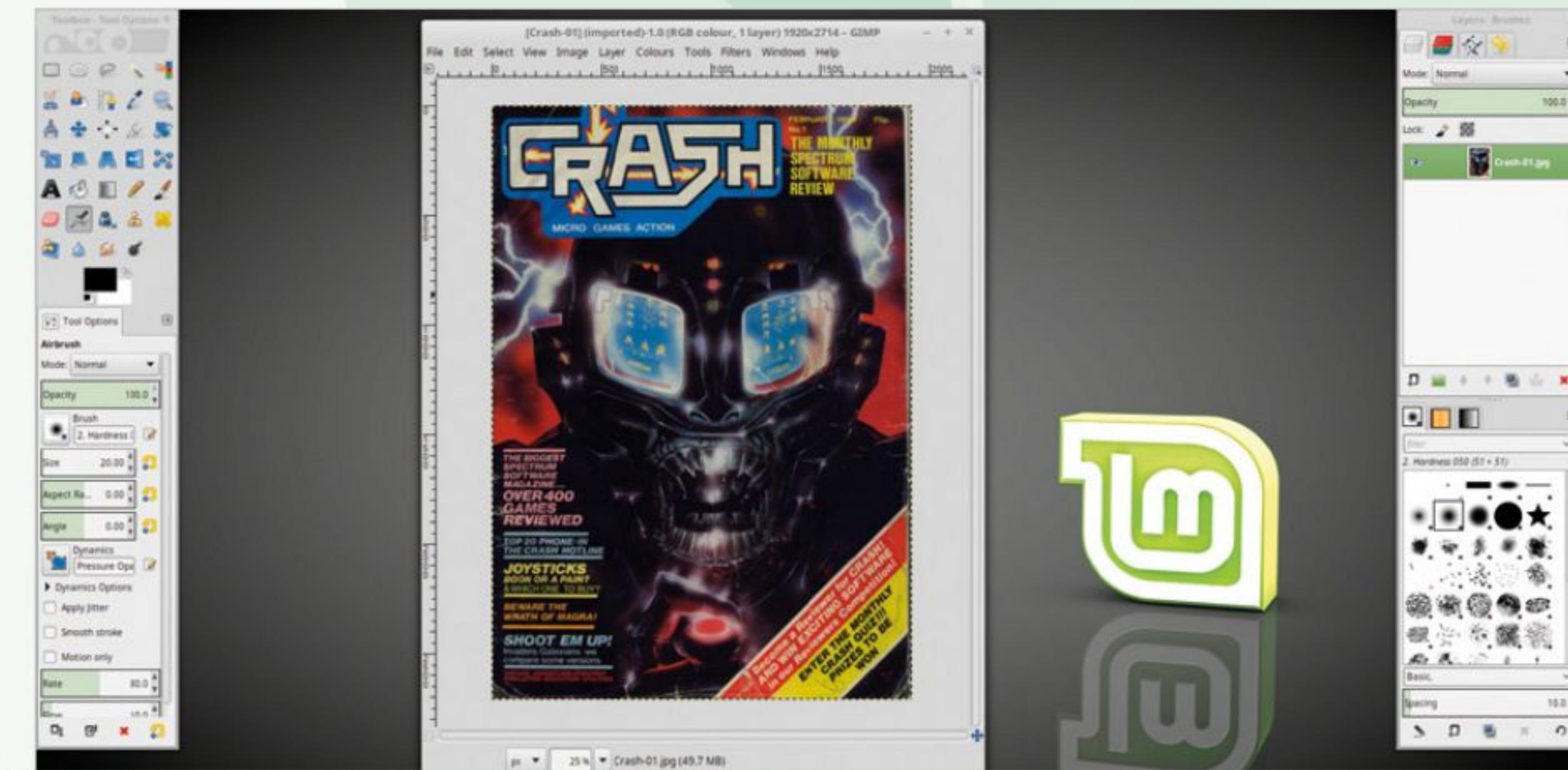
- STEP 2** You've already used the Mint Menu to reboot the system and when you first used the Live Environment. However, this time click the Menu button and hover over the Office entry in the middle column. This will change the icons represented in the right-hand column, detailing what apps are installed under that section.



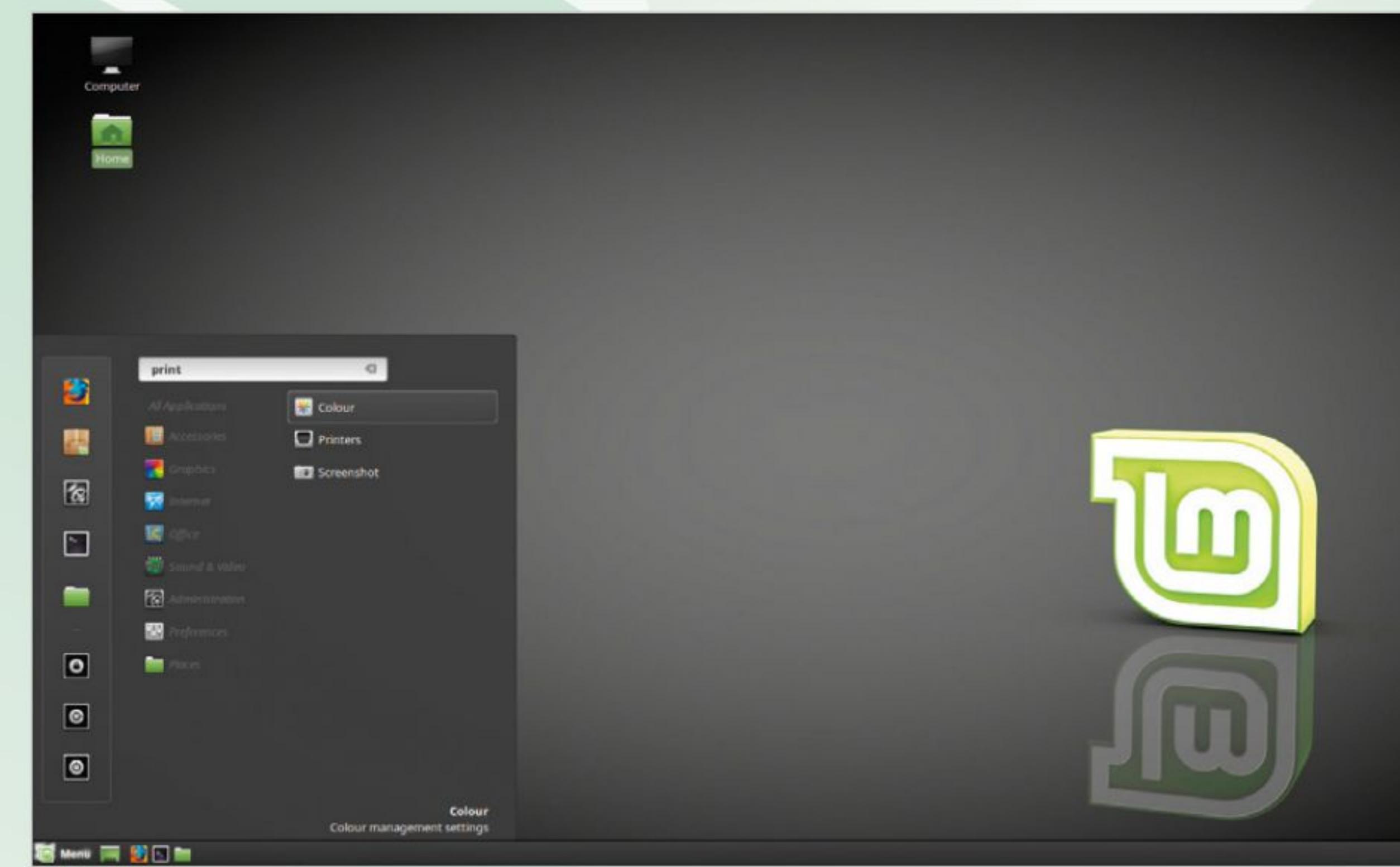
- STEP 3** Launching any of the apps from the Menu is as simple as finding one and clicking it. For example, under the Office section, click on LibreOffice Writer. Writer is the preinstalled word processor for Linux Mint. It opens and saves as Microsoft Word and functions in almost the same way.



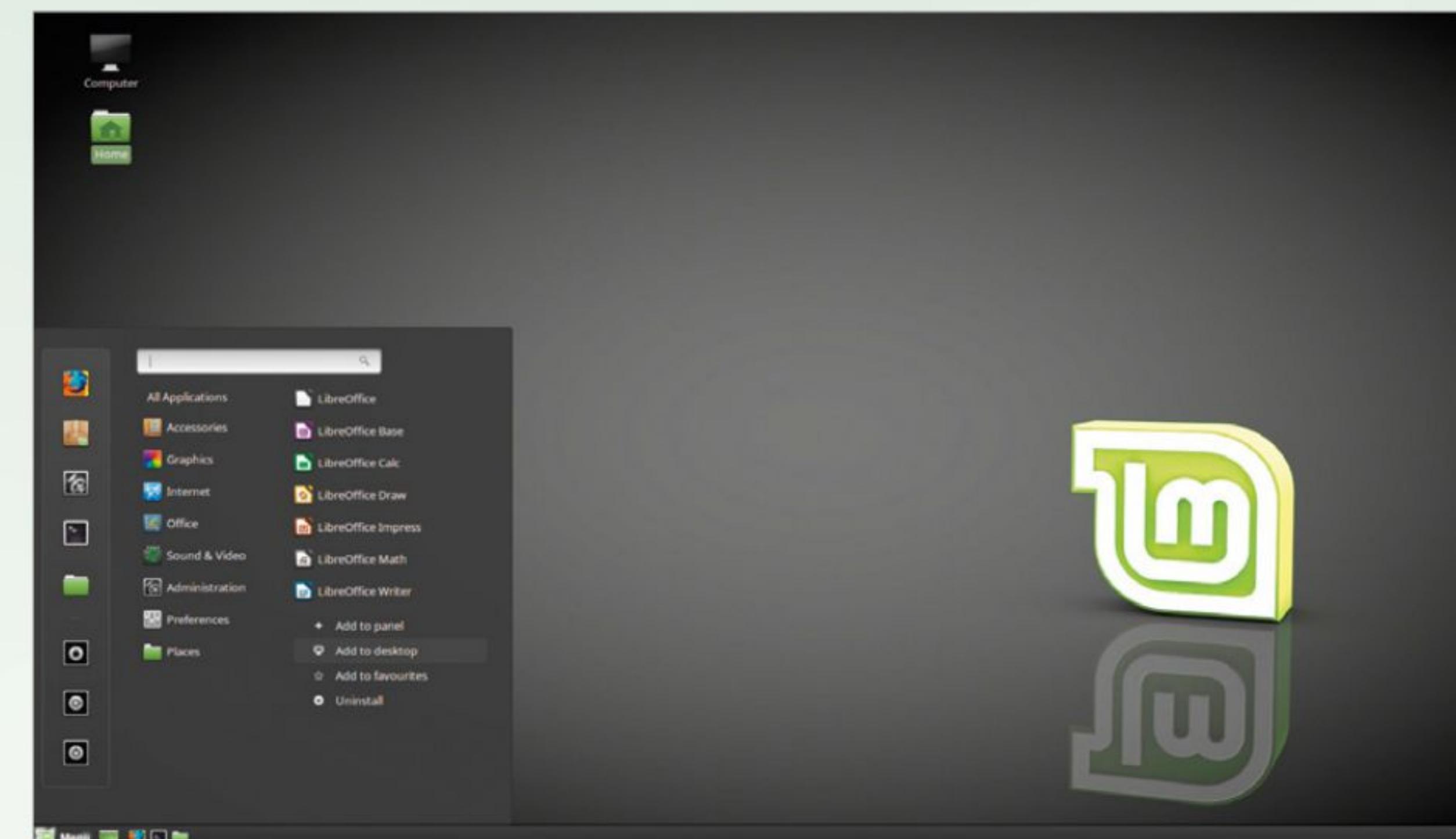
- STEP 4** Open up the Menu again and this time hover the mouse pointer over Graphics, then click on GIMP Image Editor. GIMP is a powerful image manipulation app that's probably as effective as Adobe's Photoshop but it requires a little more work to get the results you want. It's certainly worth taking the time to master though.



- STEP 5** If you're looking for a particular function or app, such as setting up a printer, click on the Search box at the top of the Menu box. Start typing the app or function you want, such as printers, and the Mint Menu will display the relevant options below.



- STEP 6** Hover over any of the apps listed in the right-hand column and right-click; you're presented with a list of options: Add to Panel, Add to Desktop, Add to Favourites and Uninstall. It's obvious how most of these options are used; Add to Favourites though will place the app in the left-hand, quick-access column.





Navigating the Cinnamon Desktop

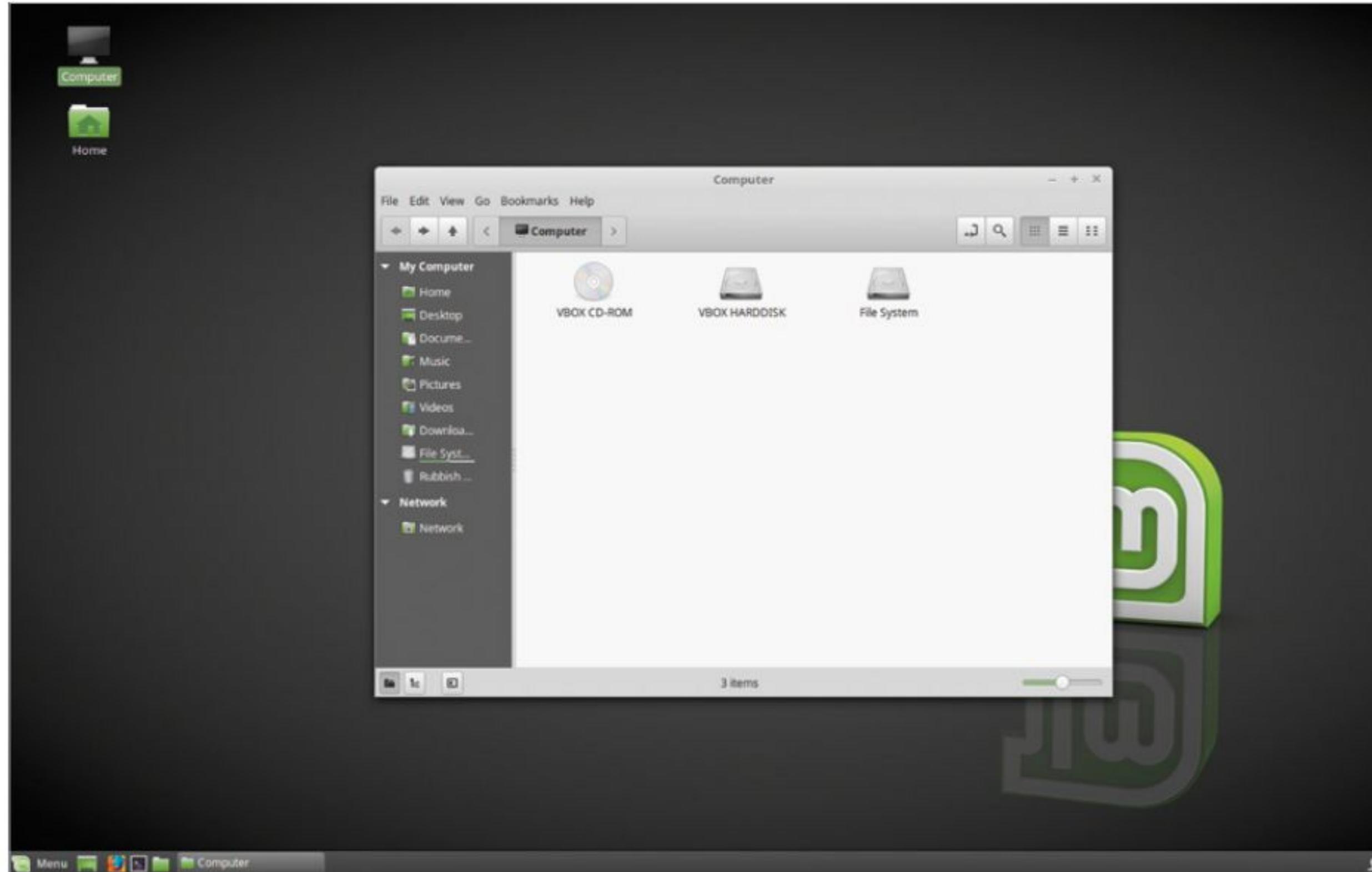
Each desktop environment behaves differently to that of the next. Some offer widgets that can be customised and placed on the desktop, others opt for a sleek look to speed up the interface. Let's see what the Cinnamon desktop offers.

A TOUCH OF SPICE

The Cinnamon desktop environment is a great blend of style and performance. There's lots to like about it and we'll look into it in more detail later on. Here are ten features to start with.

STEP 1

Begin exploring the Cinnamon desktop by double-clicking the Computer icon. This will bring up Nemo, the file manager used in Cinnamon. The Computer icon opens up the root level file system, with access and views to the optical drive, if you have one installed, hard drive and core Linux filesystem.



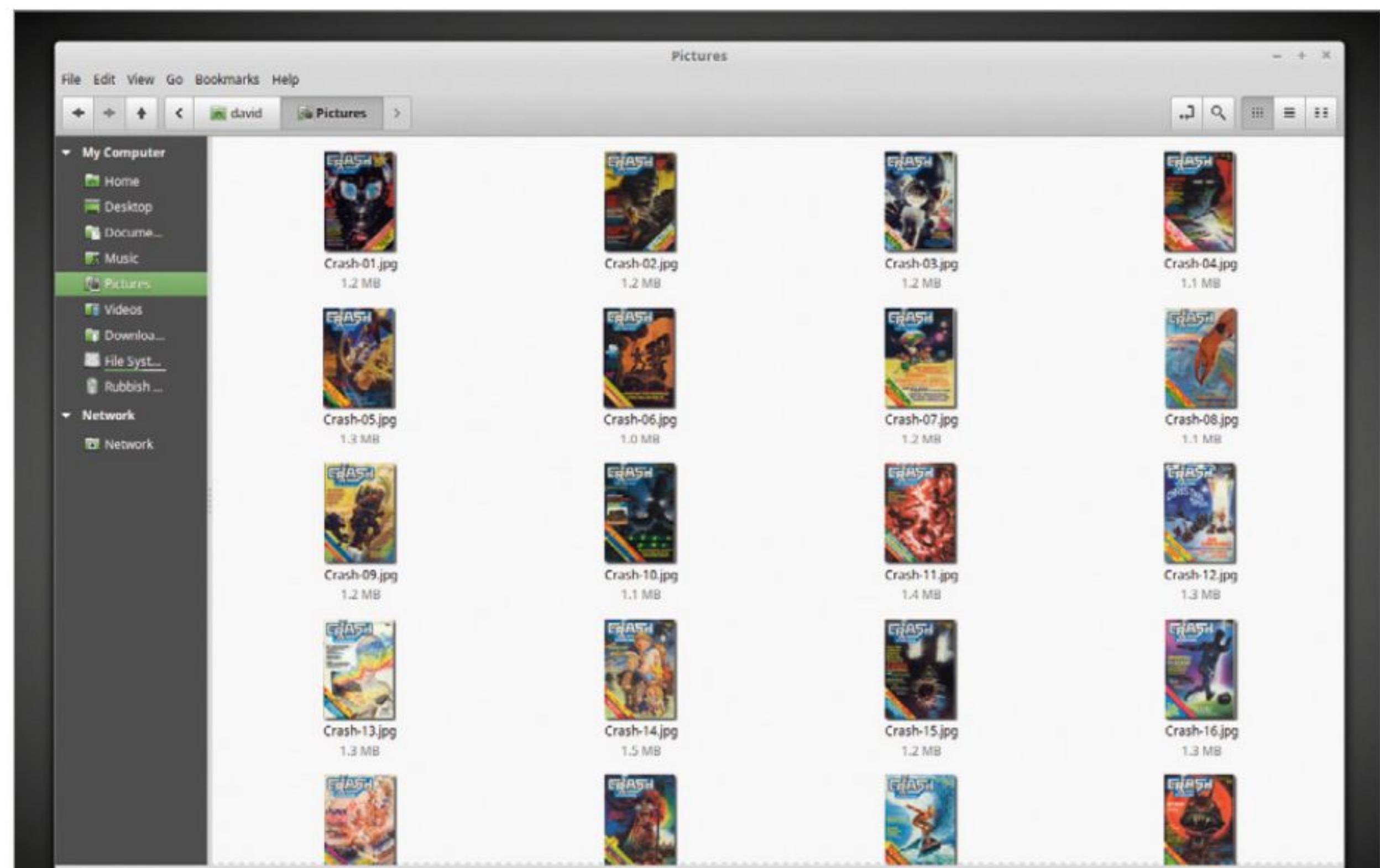
STEP 2

The Linux filesystem can appear confusing to a former Windows user, so until you're a little more knowledgeable in how it all works, we recommend you concentrate on the Home icon on the desktop instead. In here is everything relating to your user account and you can store Pictures, Videos, Music, Documents and Downloaded items.



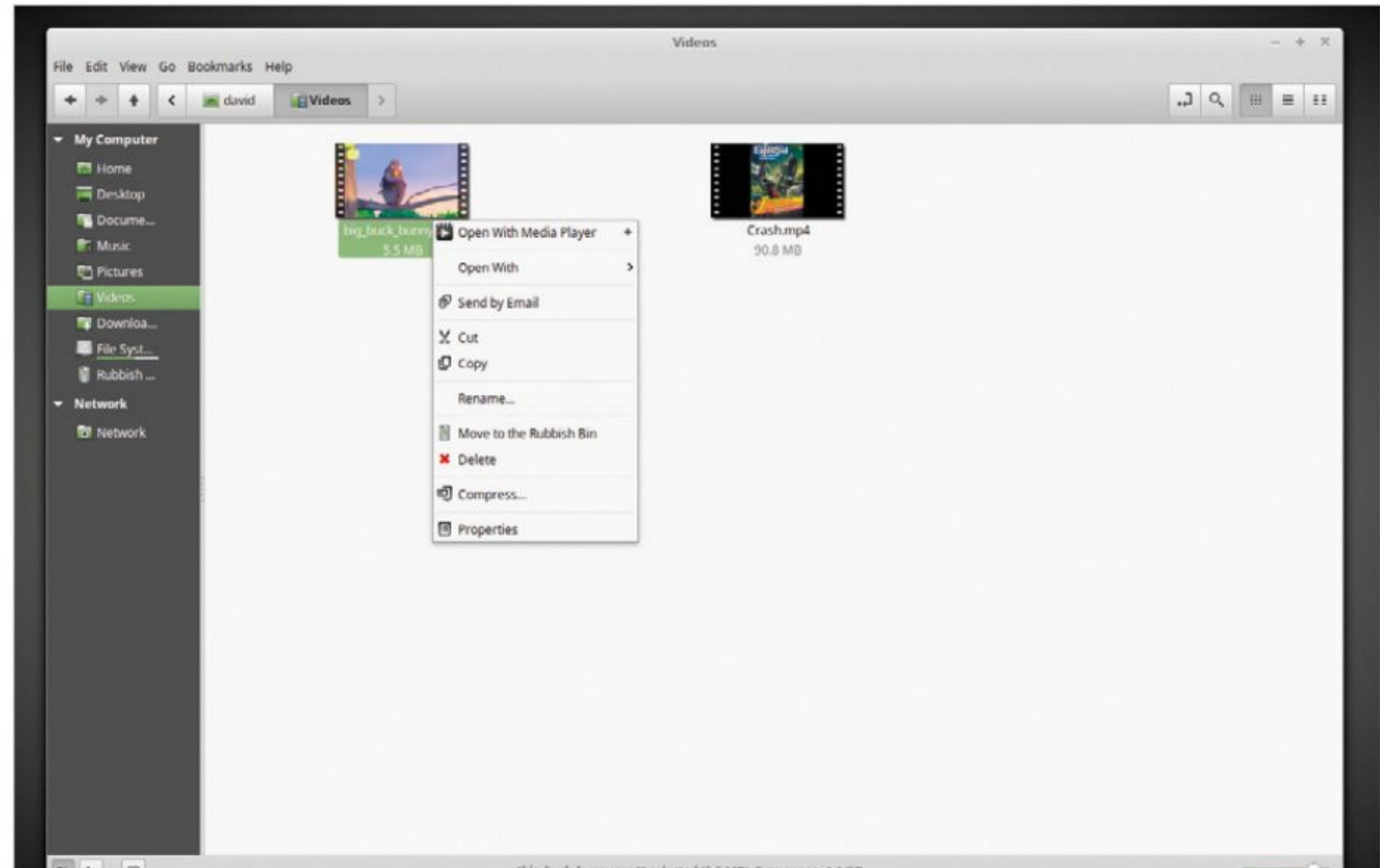
STEP 3

Nemo has many different features, views and ways in which you can view and manipulate files and folders. For example, if you have any images in the Pictures folder, you can select the icon zoom level for the images by using the slider located in the bottom-right of Nemo, labelled Adjust Zoom Level.



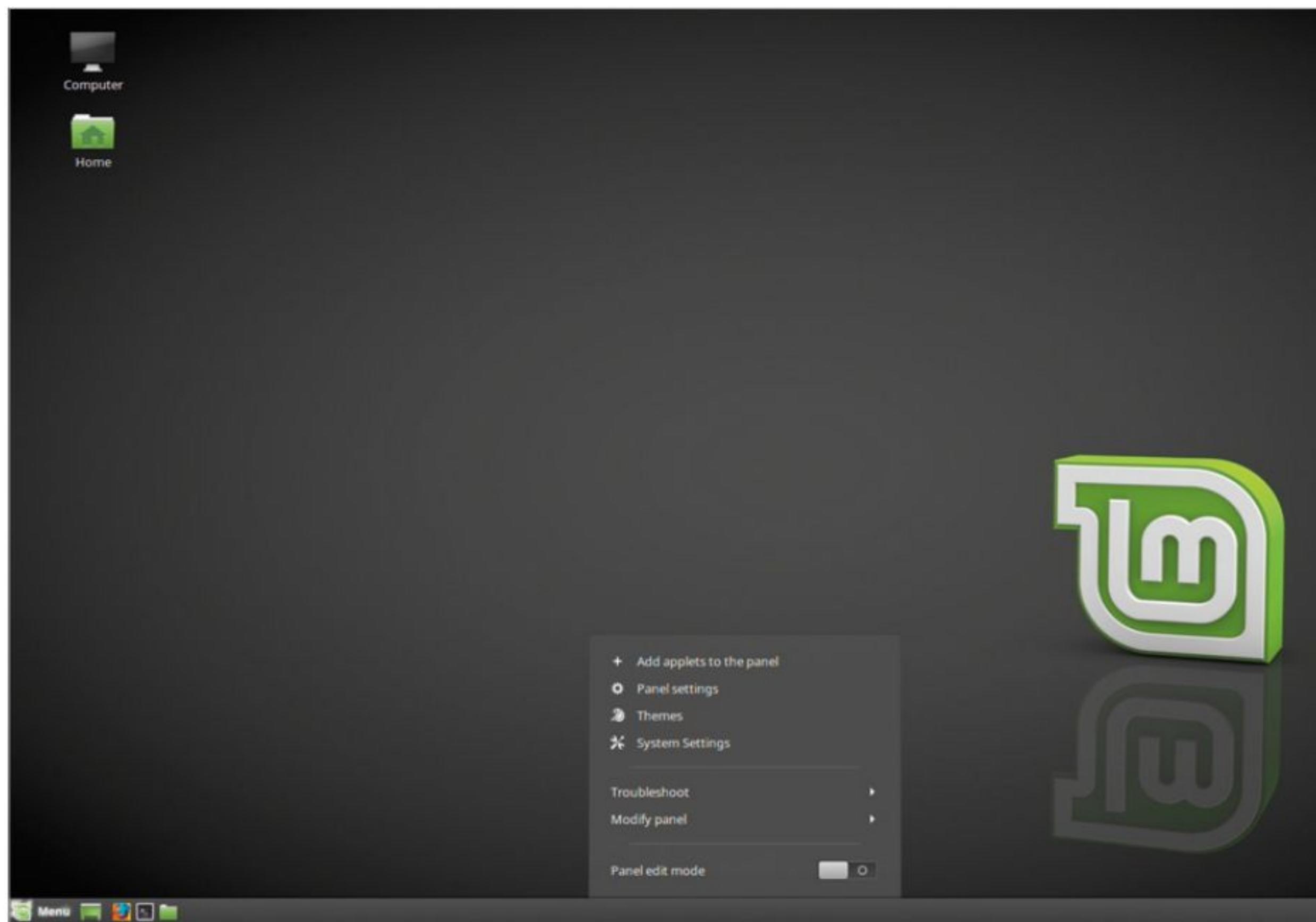
STEP 4

As with any good file manager, if you right-click any of the files or folders within you get a wealth of options. In the case of Cinnamon, the defaults will allow you to play or view a file depending on what type of file it is, copy, cut, delete, compress, rename, send via email and view its properties.

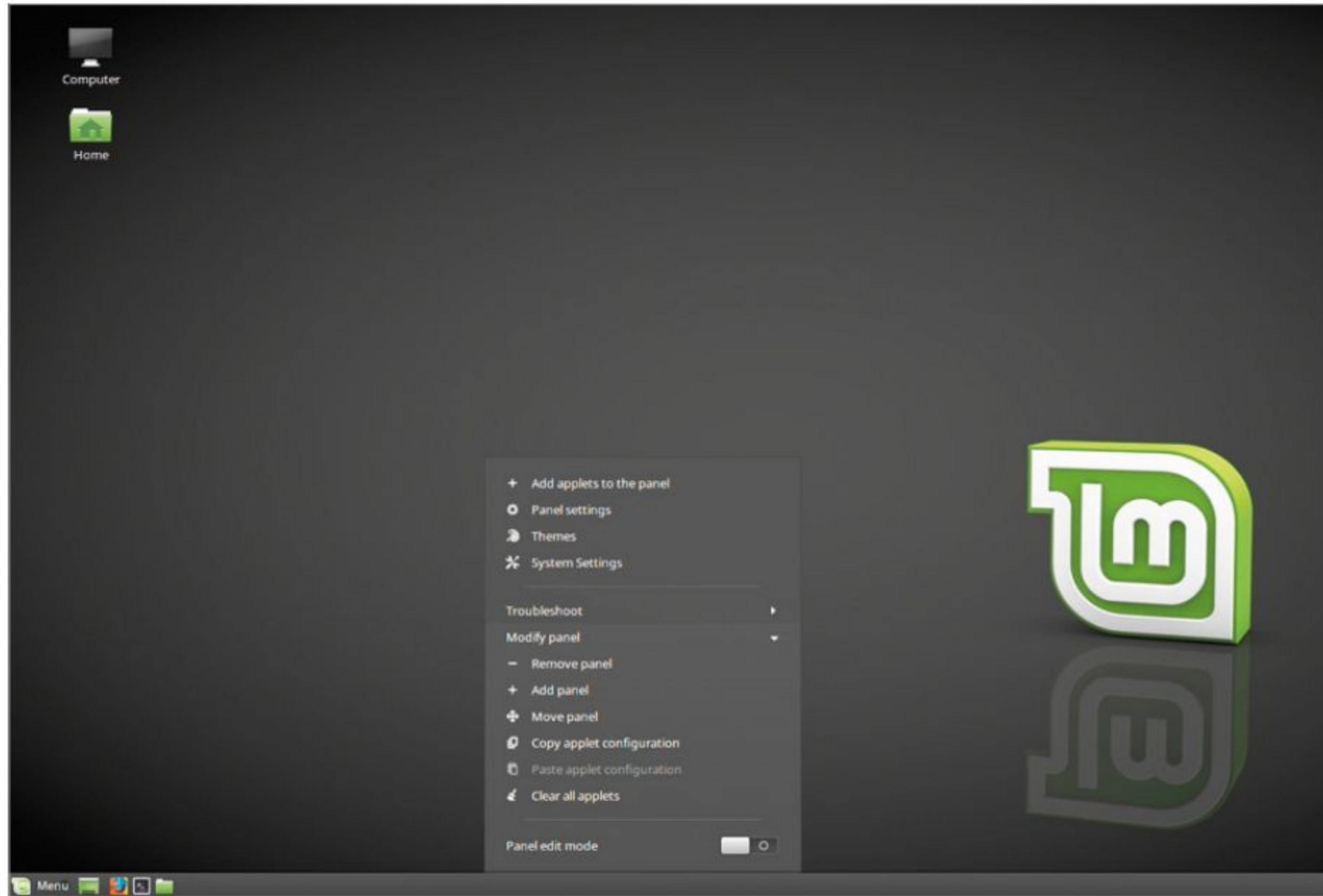


**STEP 5**

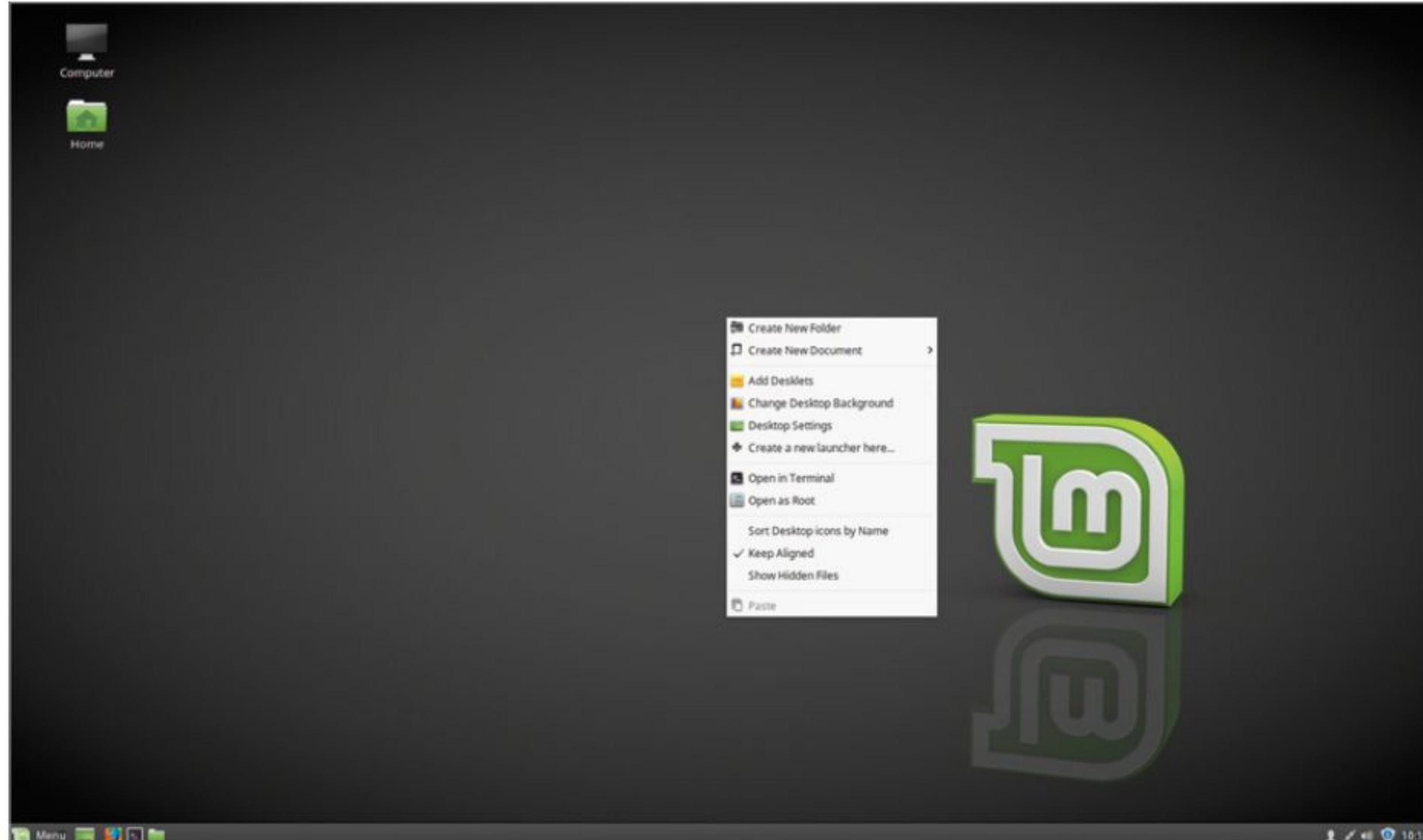
At the bottom of the desktop there's the Panel. You've already looked at one section of the Panel, the Menu. If you right-click anywhere on the Panel, other than on a Panel app, you get a menu allowing you to edit, add and set up the Panel in a different way. More on that later in the book.

**STEP 6**

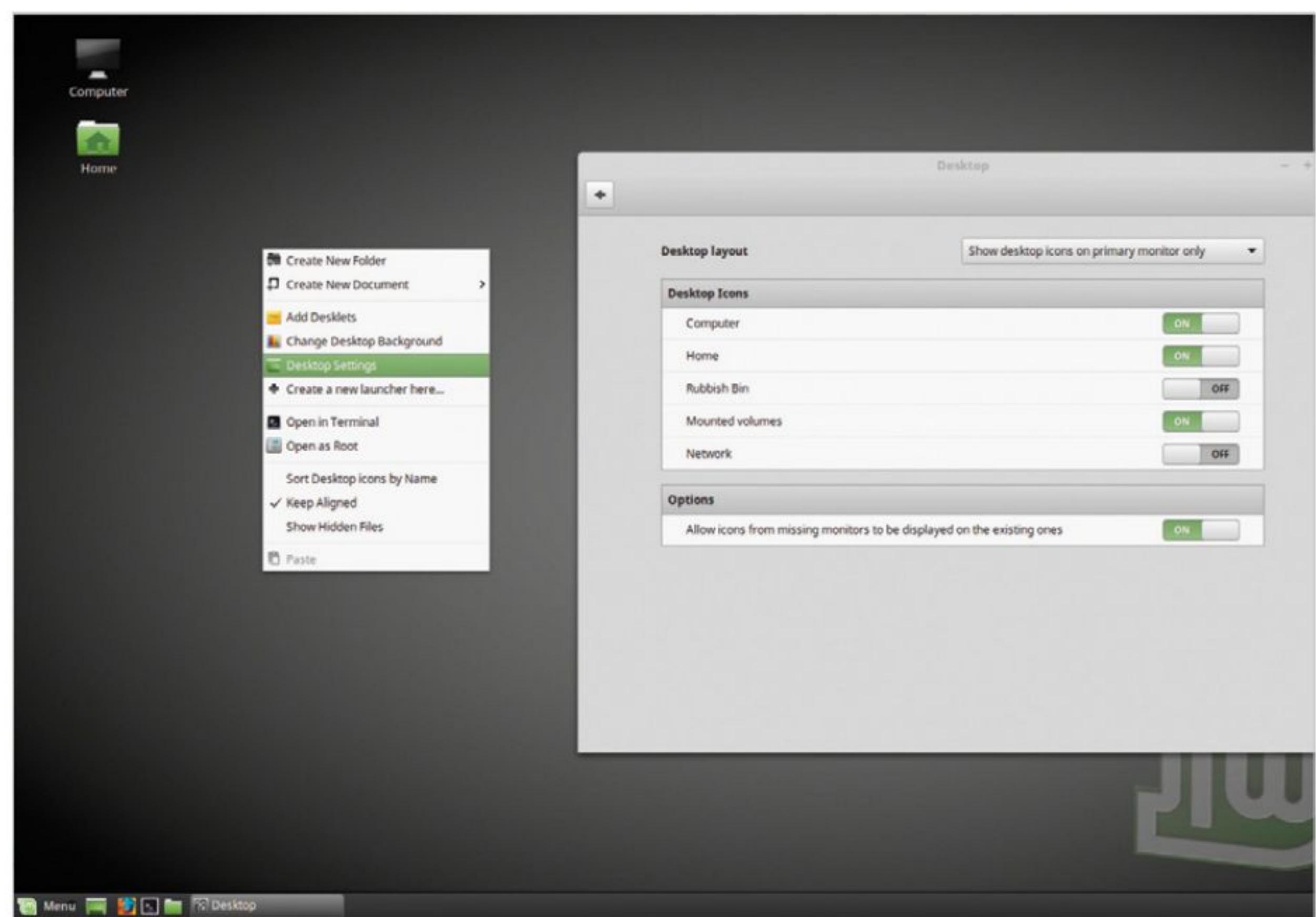
For example, if you click the option Modify Panel, you can remove, move, remove the Panel, add a new one and clear it of any Applets that are currently present. An Applet, by the way, is an app that's designed to work and fit into the Cinnamon Panel.

**STEP 7**

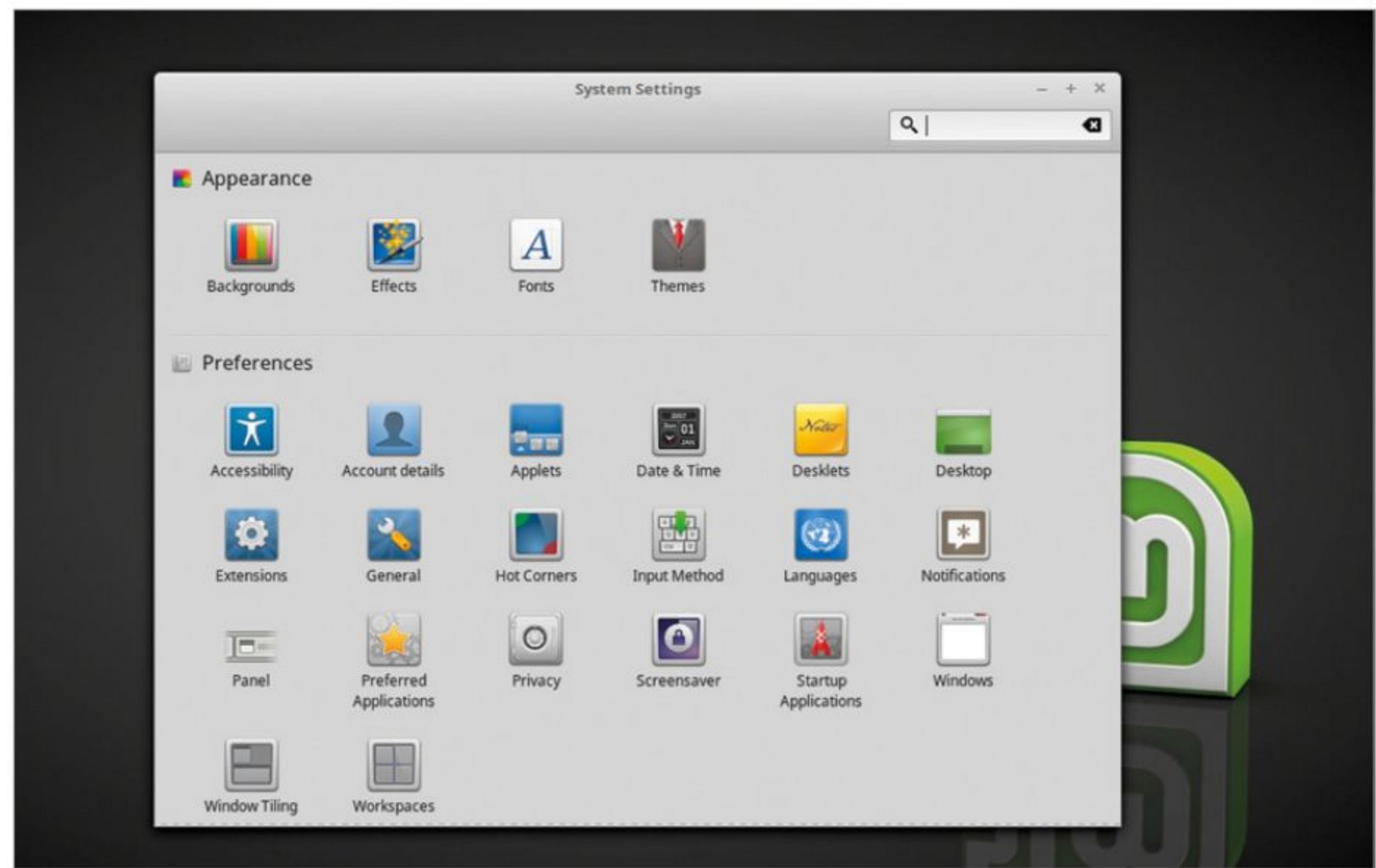
If you right-click anywhere on the Cinnamon desktop you get a set of options that will allow you to further add to, edit or view the desktop content differently. We'll be covering these later on, but for now feel free to have a little play around.

**STEP 8**

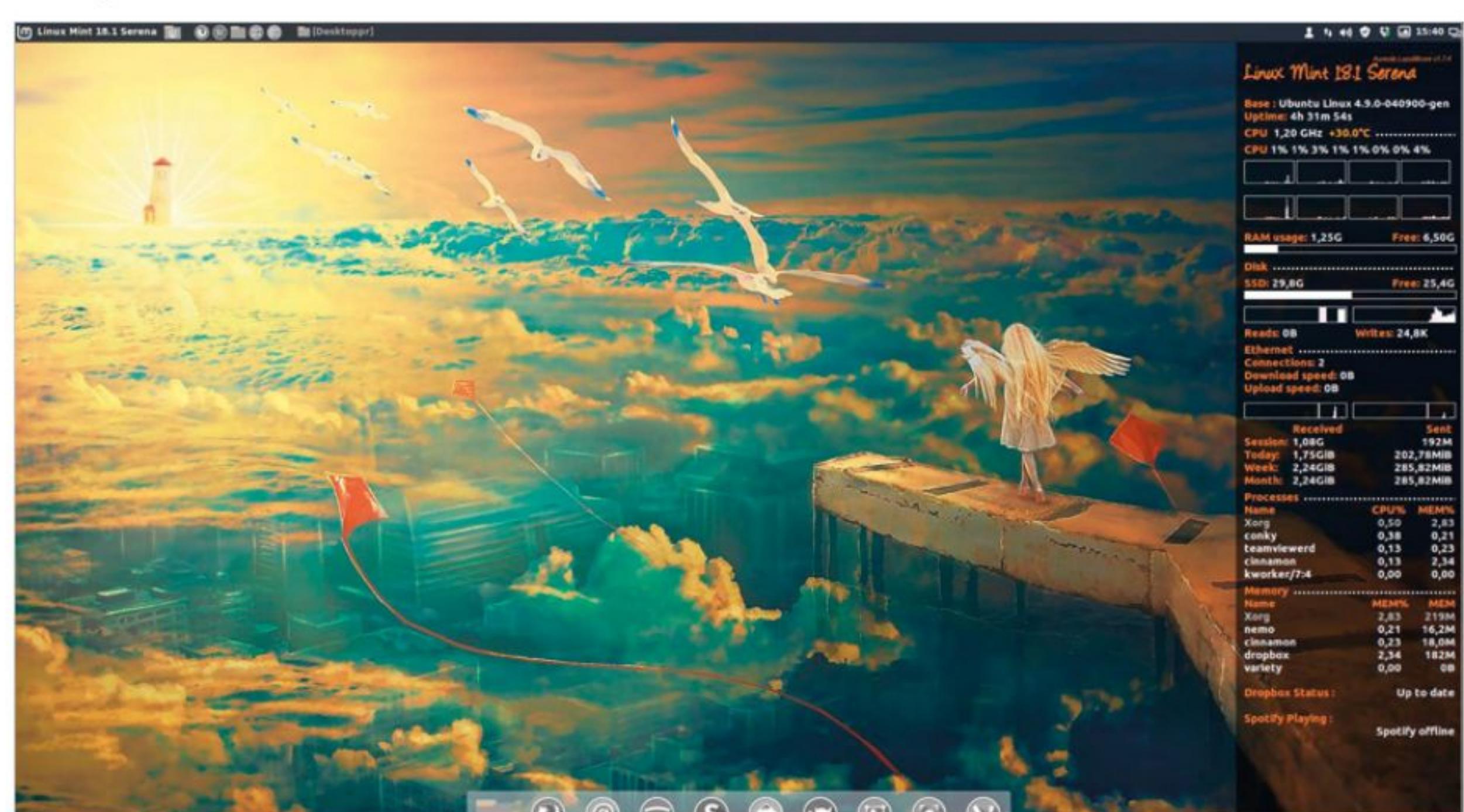
From that desktop right-click, context menu, select Desktop Settings. This will open up a new window where you're able to edit which desktop icons are present; also, if you're using a setup with multiple monitors attached, you can choose which monitor displays which icons.

**STEP 9**

From the Desktop Settings window, click the left-facing arrow located in the upper left. This will take you to the System Settings options. From here you can control and edit the way Linux Mint Cinnamon looks and works, as well add new users, manage the firewall and enable accessibility options.

**STEP 10**

In short, Linux Mint Cinnamon can be configured to look quite extraordinary. There are many examples available of how good it can get and what can be achieved. For example, this desktop setup by Erik Dubois is simply amazing and uses many different customisations.





10 Things to Do After Installing Linux Mint Cinnamon

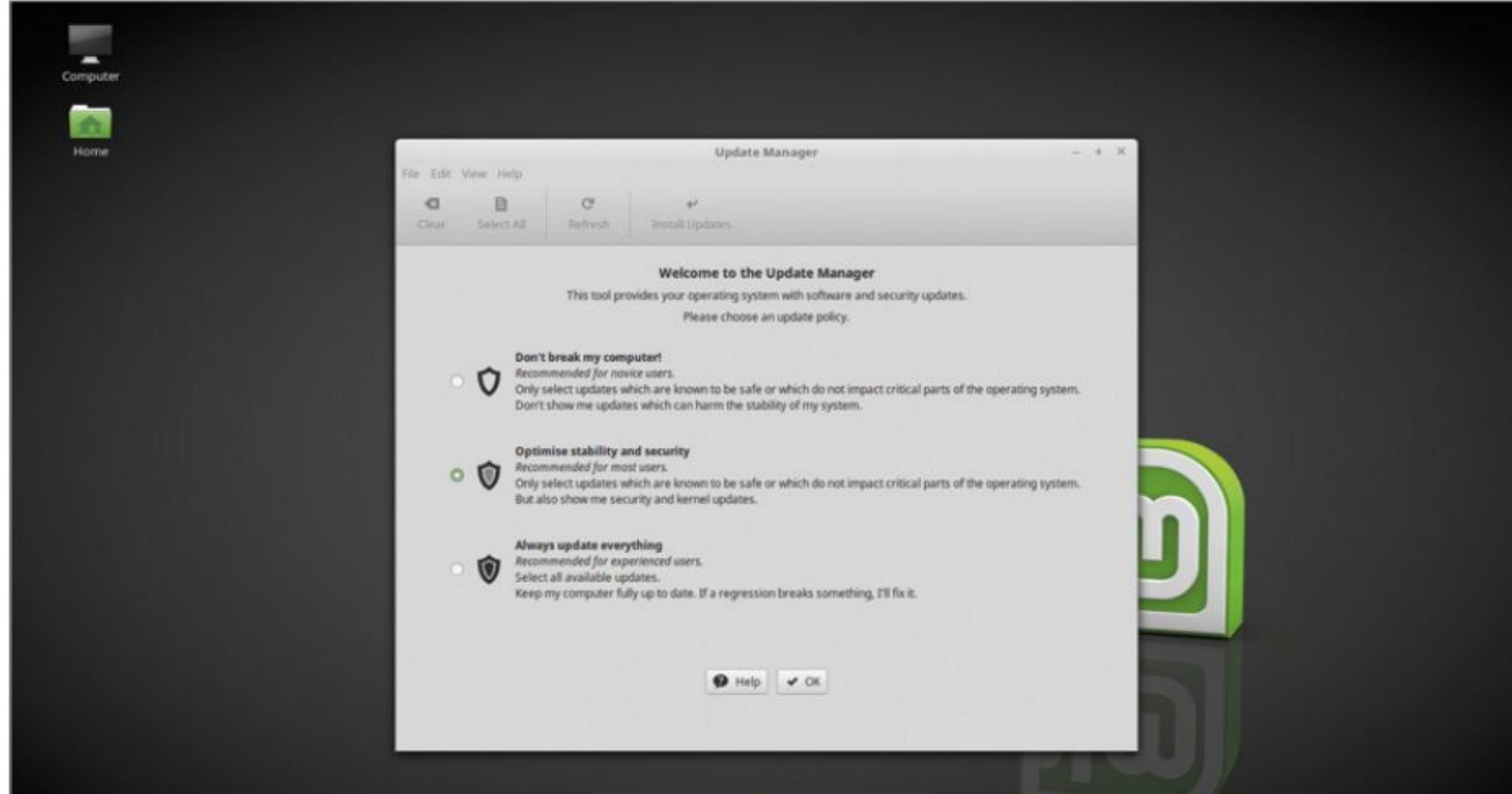
Linux Mint is a polished and excellent example of what can be done with a Linux distro. It works brilliantly out of the box but since Linux, and therefore Mint, is such a versatile operating system, there are always a few tweaks you can apply post-installation.

CINNAMON TWEAKS

Some of these post-installation actions are highly recommended, while others are just handy additions and simply tweak the system or add a customisation.

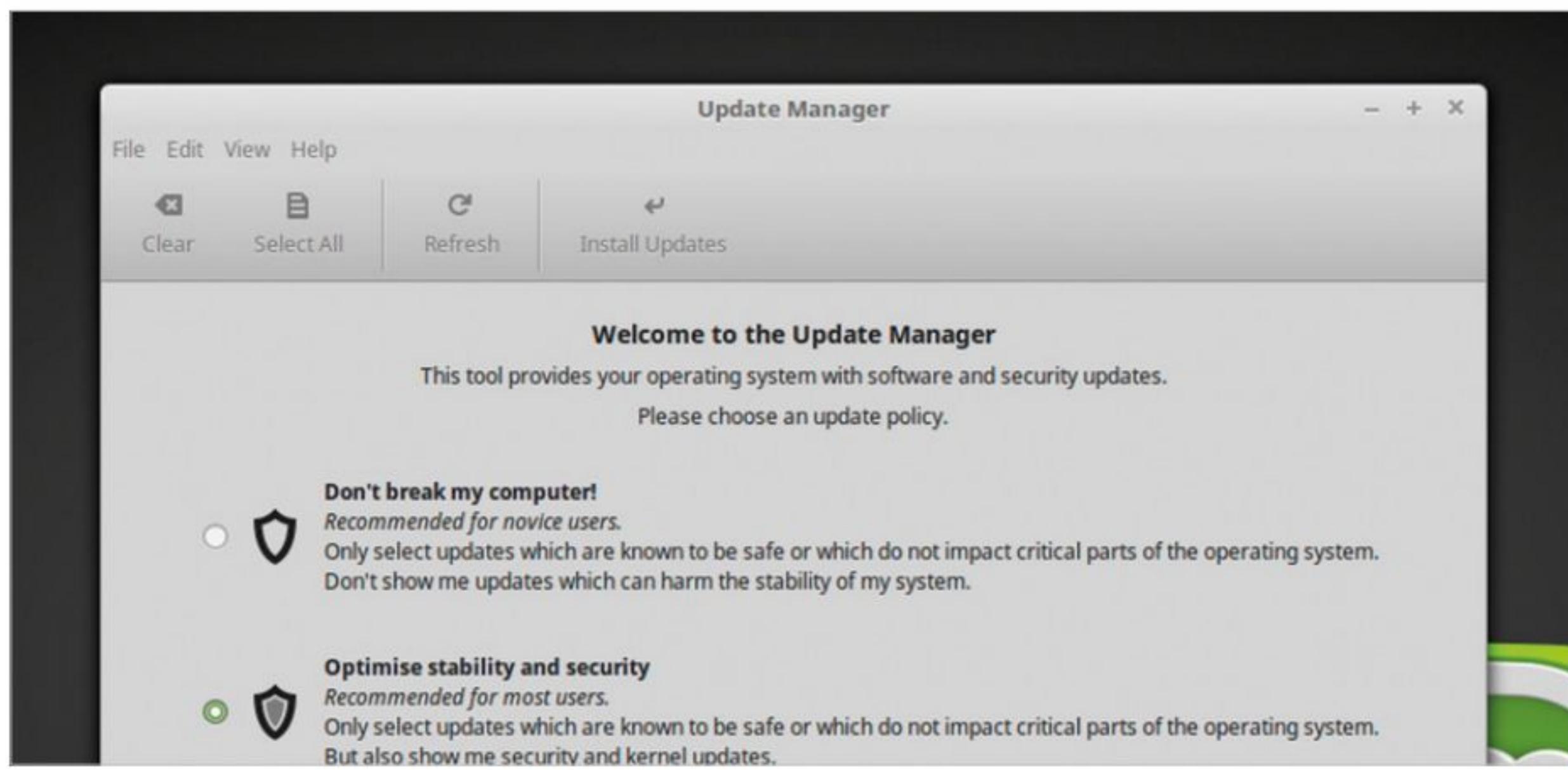
STEP 1

The first, and most important, post-installation action is to update the system. Click on the shield icon in the Panel, found in the bottom-right of the desktop next to the time and date. This will launch the Update Manager.



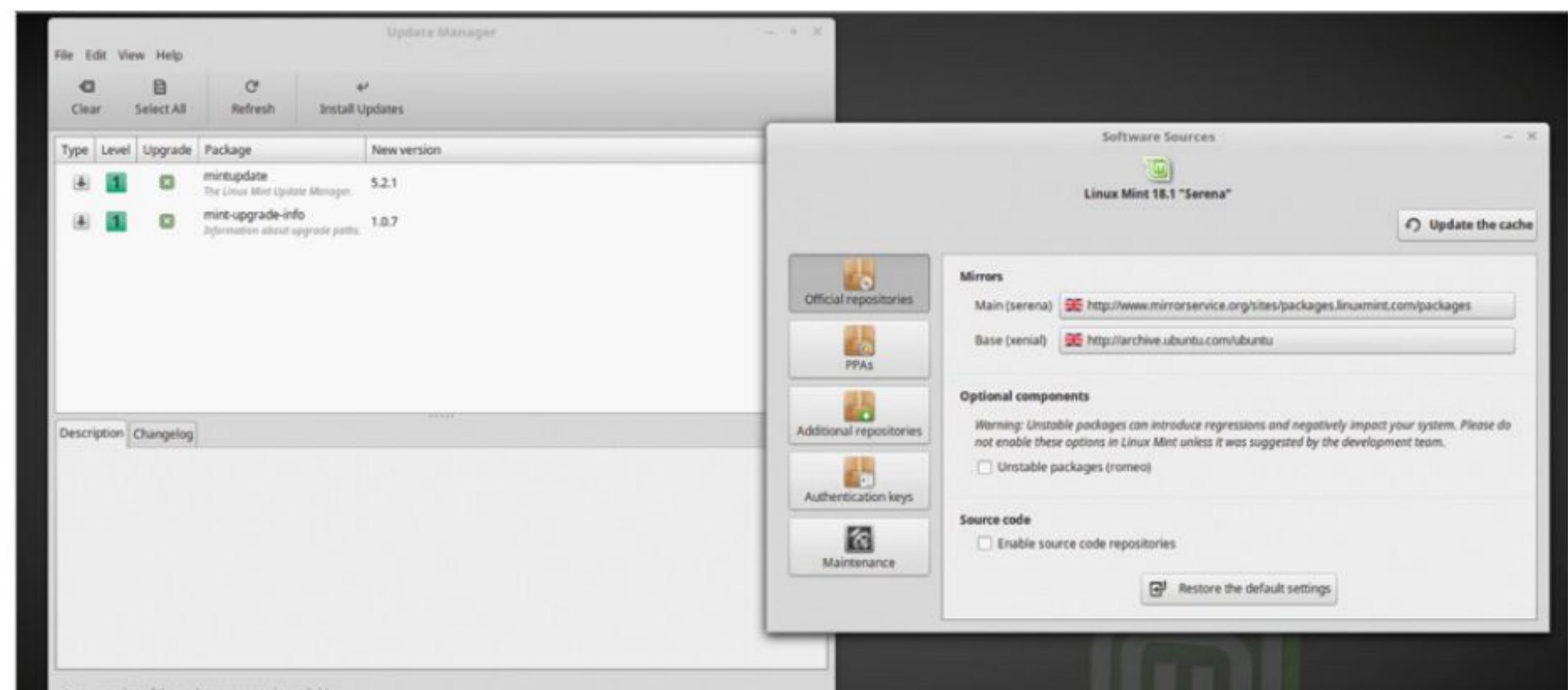
STEP 2

Linux Mint offers the user a three-level policy approach to updates: Don't Break My Computer, Optimise Stability And Security and Always Update Everything. The recommended option is the Optimise Stability and Security and only updates safe, essential patches that won't impact critical elements of the core OS. Read through the descriptions but choose the middle and recommended option.



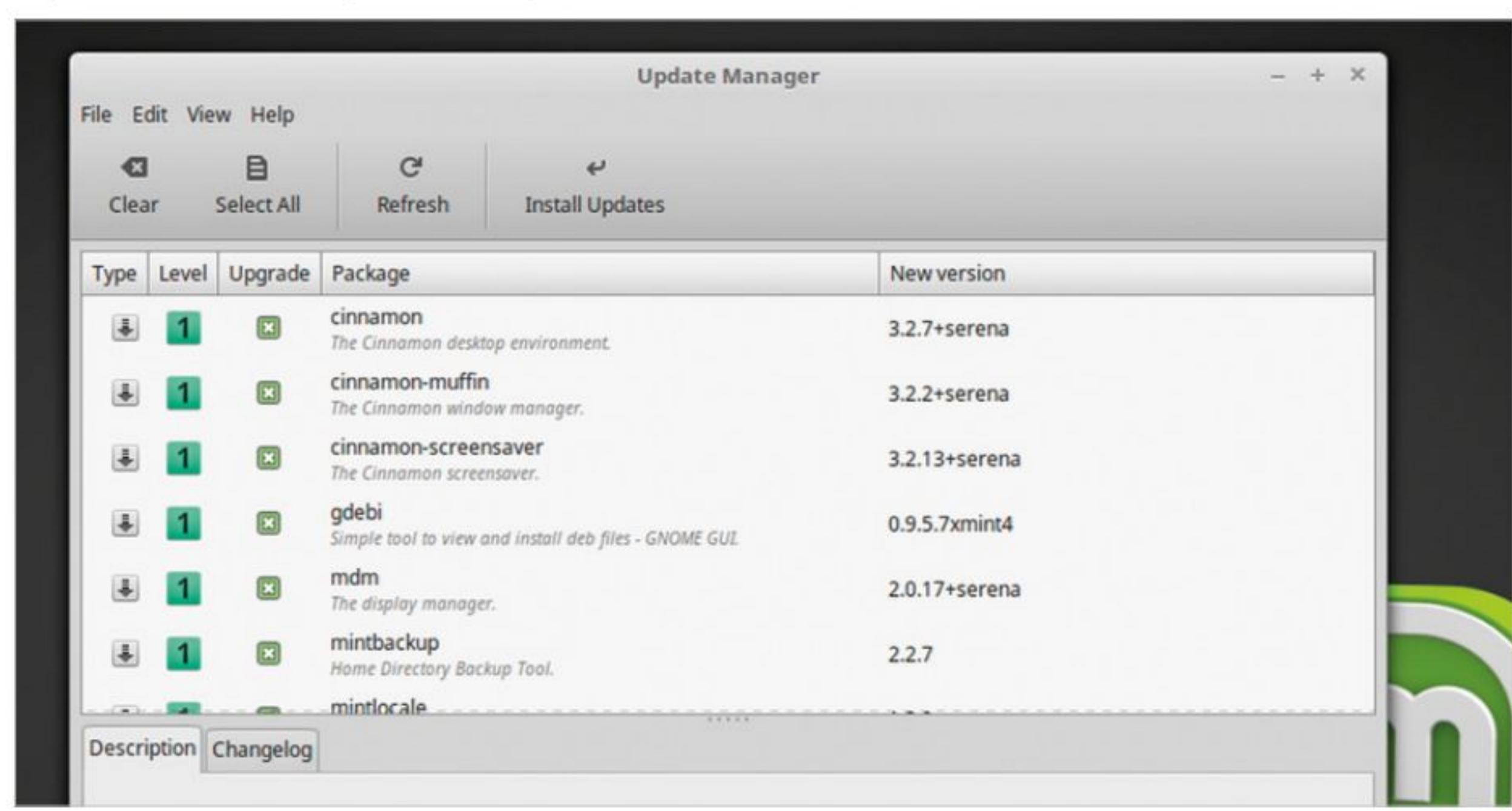
STEP 3

Click the OK button and you can see a couple of updates ready for installation. Before you update though, click on the blue bar OK button to switch to a Local Mirror. This will open the Software Sources option. In the Mirrors section, click on the Main and Base drop-down menus and select a server closest to your current location.



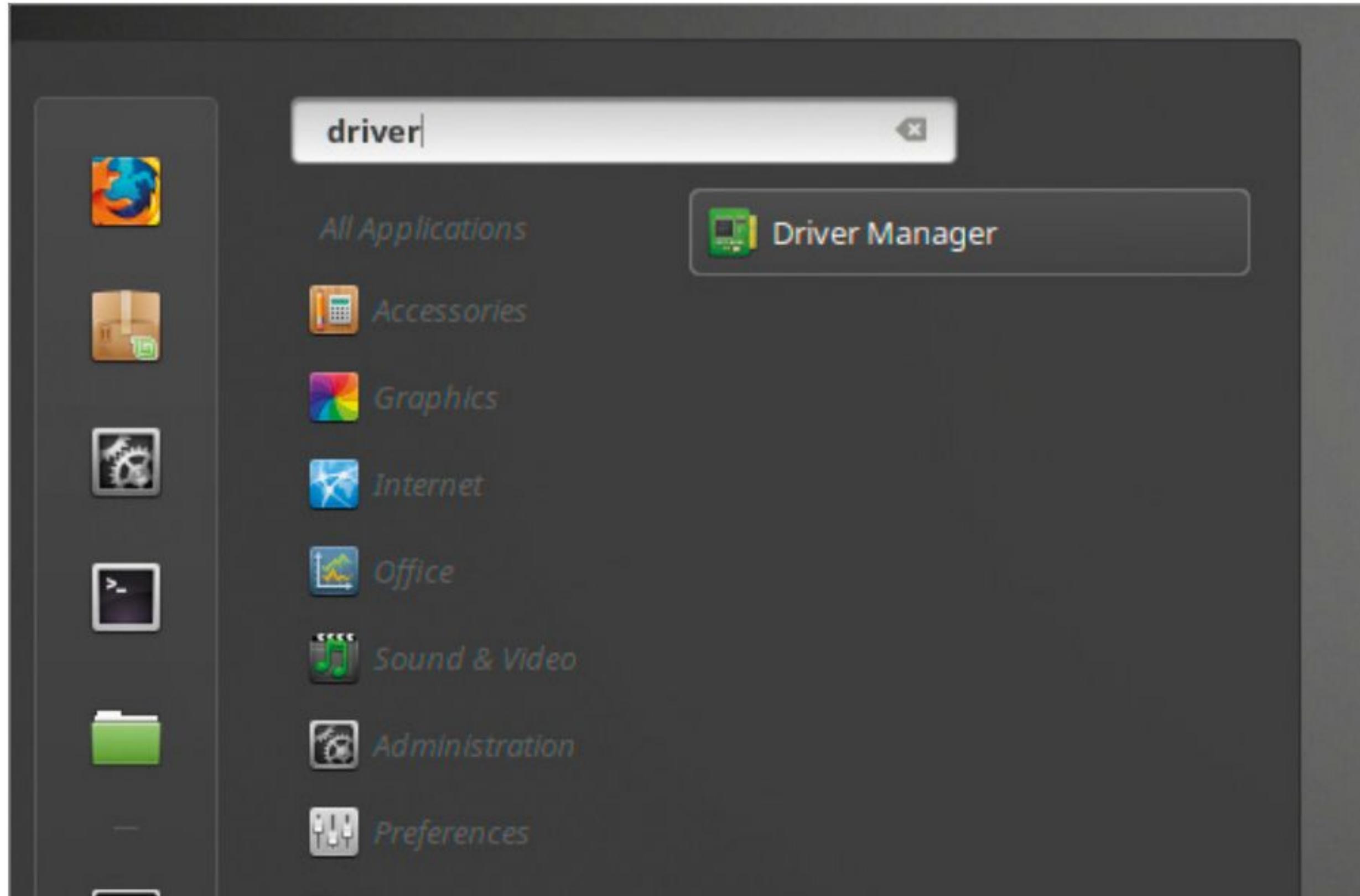
STEP 4

Click the Update The Cache button and close the Software Sources window. Back in the Update Manager, click on the Install Updates icon and enter your password. The updates will automatically apply themselves and relaunch Update Manager, this time with a lot more updates. Again, click Install Updates, OK any messages and wait for them to finish.

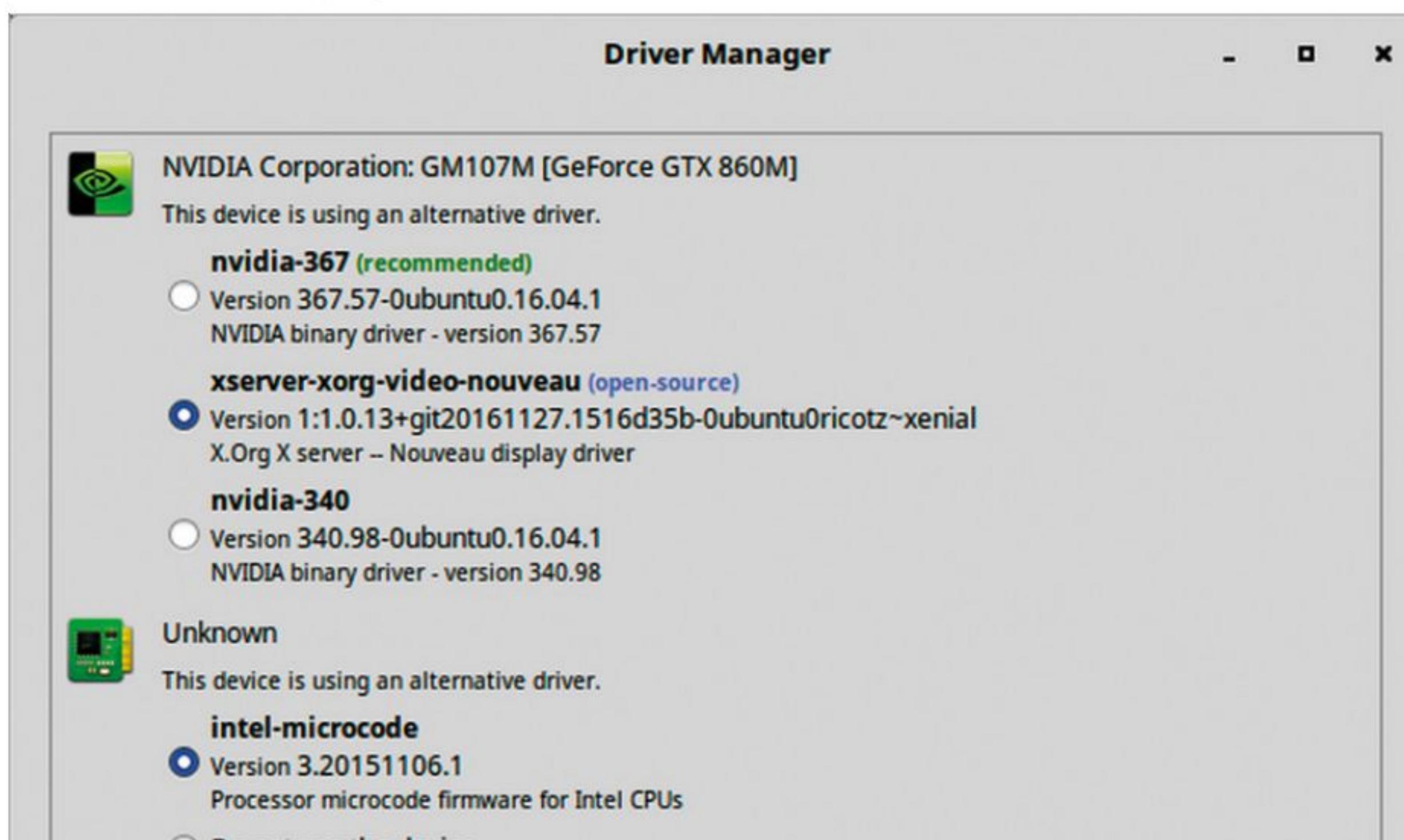


**STEP 5**

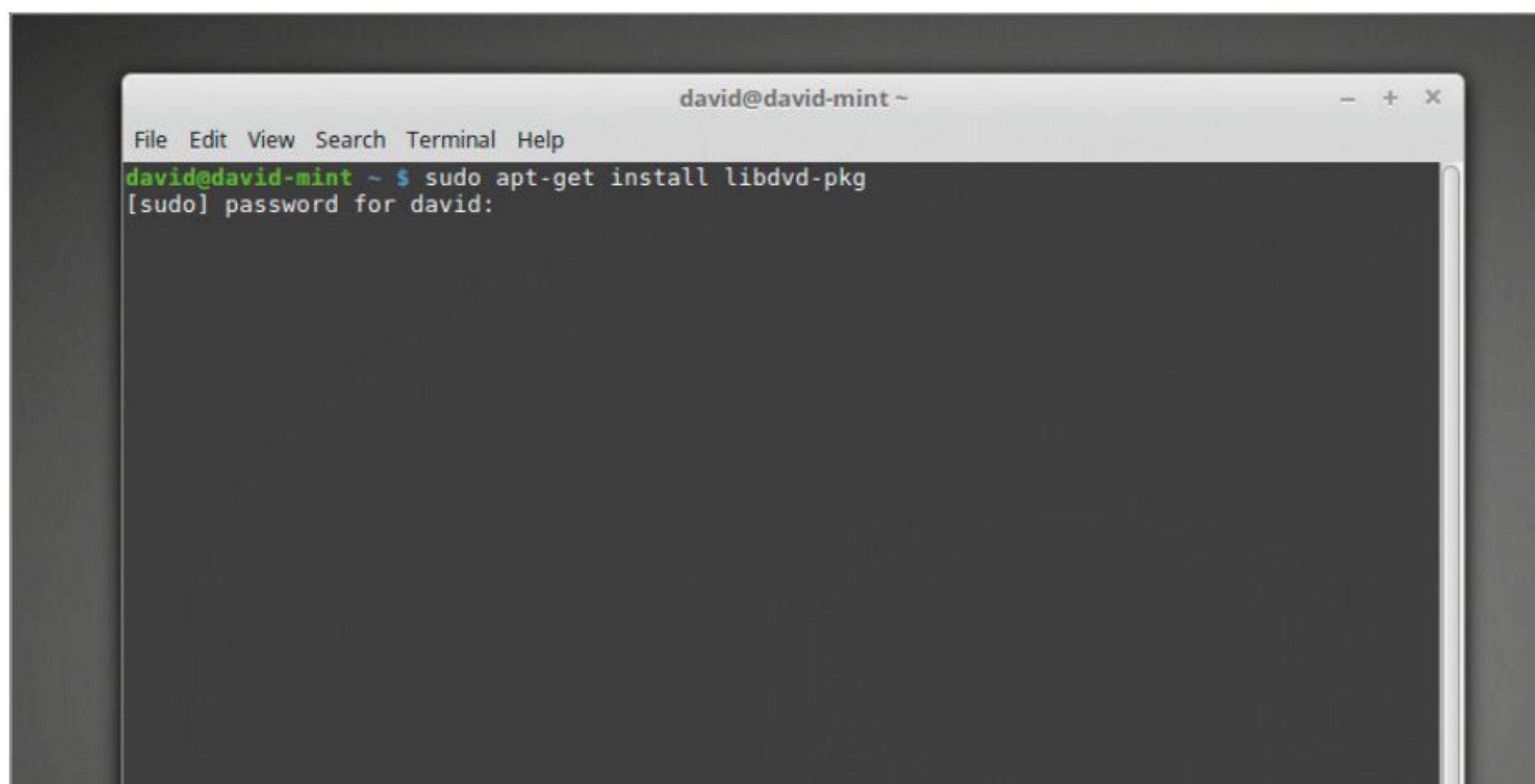
The updates are graded by level, 1 being a low-level update, level 5 being a dangerous update. Stick to level 3 updates, is our advice; and click Replace for any messages regarding overwriting a configuration file. With regards to the Software Rendering issue and lack of drivers for non Virtualbox users, click the Menu and type 'driver' into the search box.

**STEP 6**

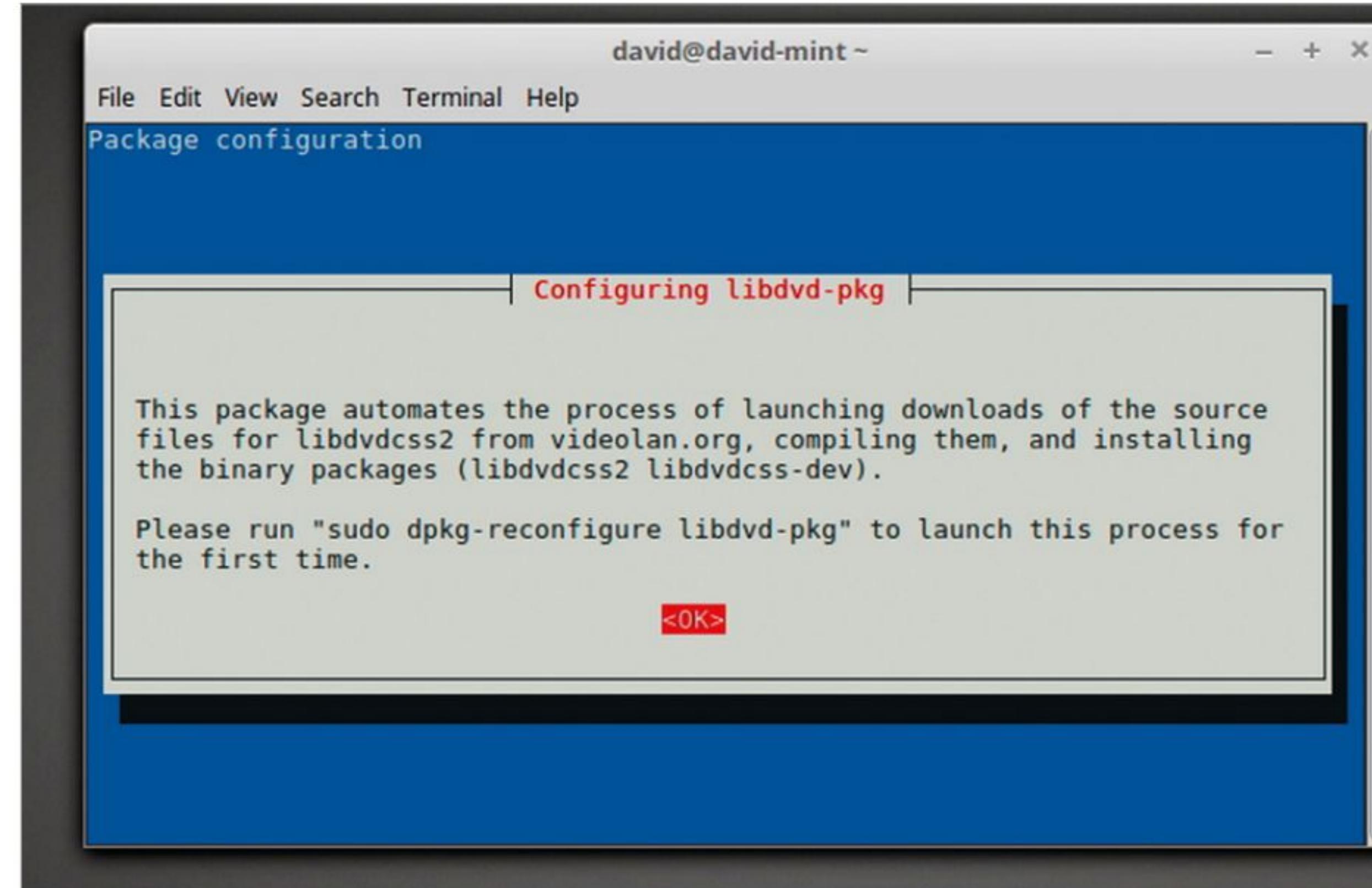
Click the Driver Manager app that appears as a result of the search and enter your password. Mint will take a moment to analyse what's available and present you with a selection of potential drivers based on your detected hardware. Those with graphical problems, such as Software Rendering, should opt to use the latest, recommended graphics driver.

**STEP 7**

At this point you probably need to restart Linux Mint, so do that now. After a reboot, click the Menu button again, followed by the Terminal. The Terminal icon is found in the left-hand column, above the Files icon. With the Terminal open, enter: `sudo apt-get install libdvd-pkg`, press Enter and enter your password. This enables encrypted DVD playback.

**STEP 8**

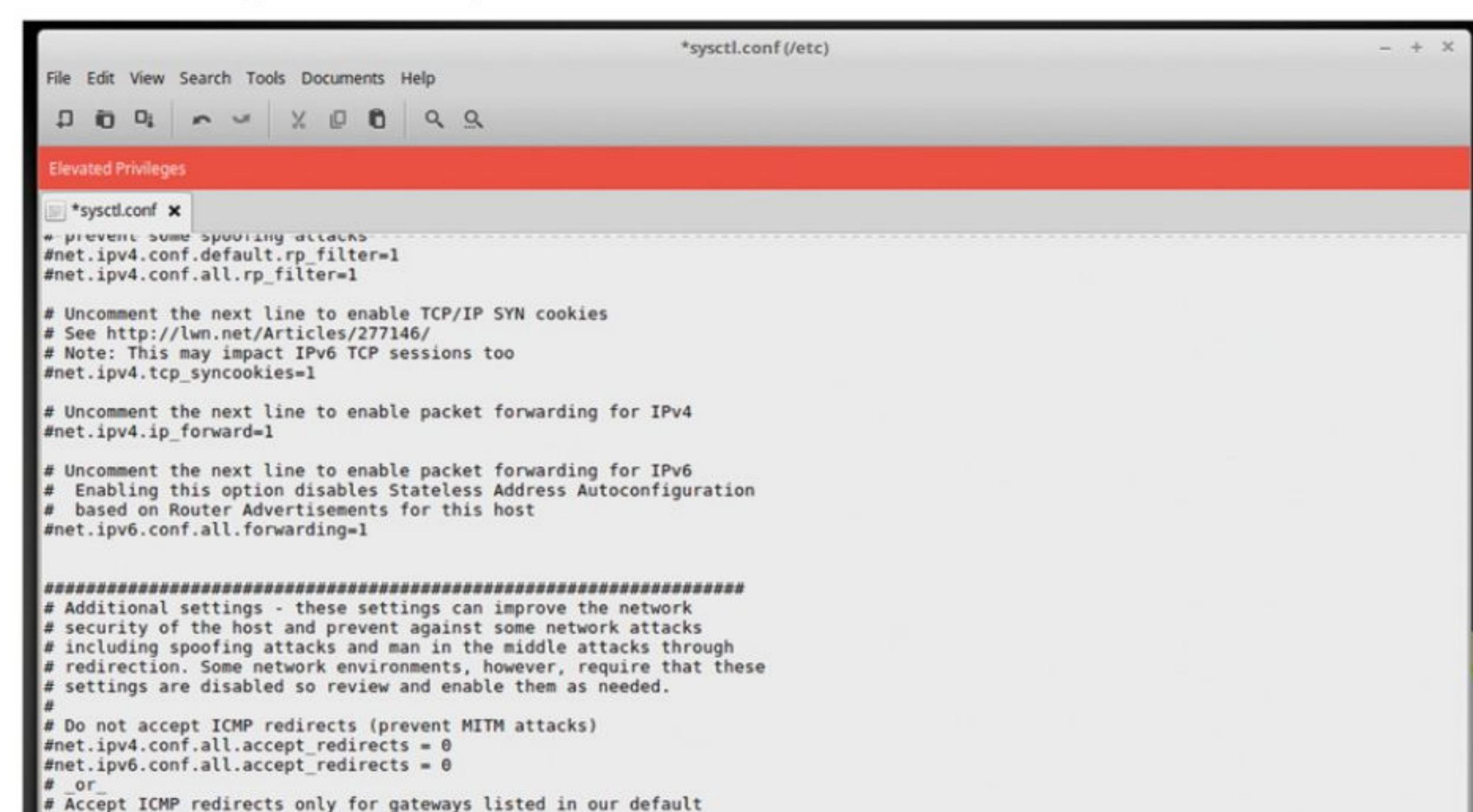
You'll be asked to accept the changes, so Enter Y, and you'll also be asked to configure libdvd. Make sure OK is highlighted and press Enter, then Yes to any further questions. Next up, still in the Terminal, enter: `cat /proc/sys/vm/swappiness`; the result should be 60. If your computer has less than 4GB of memory, enter: `gksudo xed /etc/sysctl.conf`.

**STEP 9**

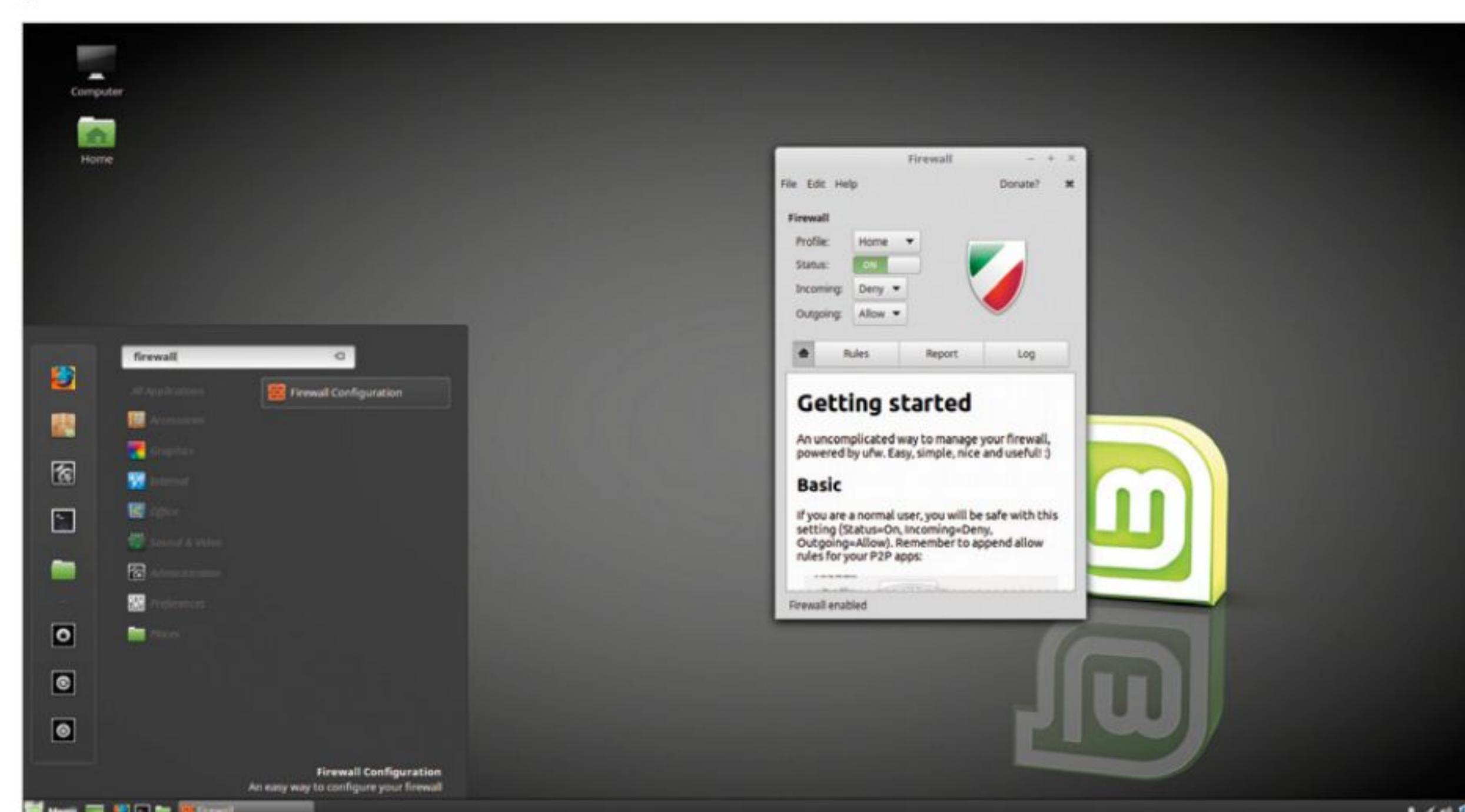
This tweak will help speed up systems with less than 4GB of memory. Scroll down to the bottom of the file you've just opened and add the following new lines:

```
# Decrease swap usage to a more reasonable level
vm.swappiness=10
```

Click File > Save, then File > Quit. Reboot Linux Mint and you should notice a slight hike in performance.

**STEP 10**

Security is always a concern in this modern digital age. While Linux Mint is a secure system, it's advisable to always try and improve it. Click the Menu button and search for Firewall, click the Firewall Configuration icon and enter your password. In the Firewall window, click the Status slider to On.





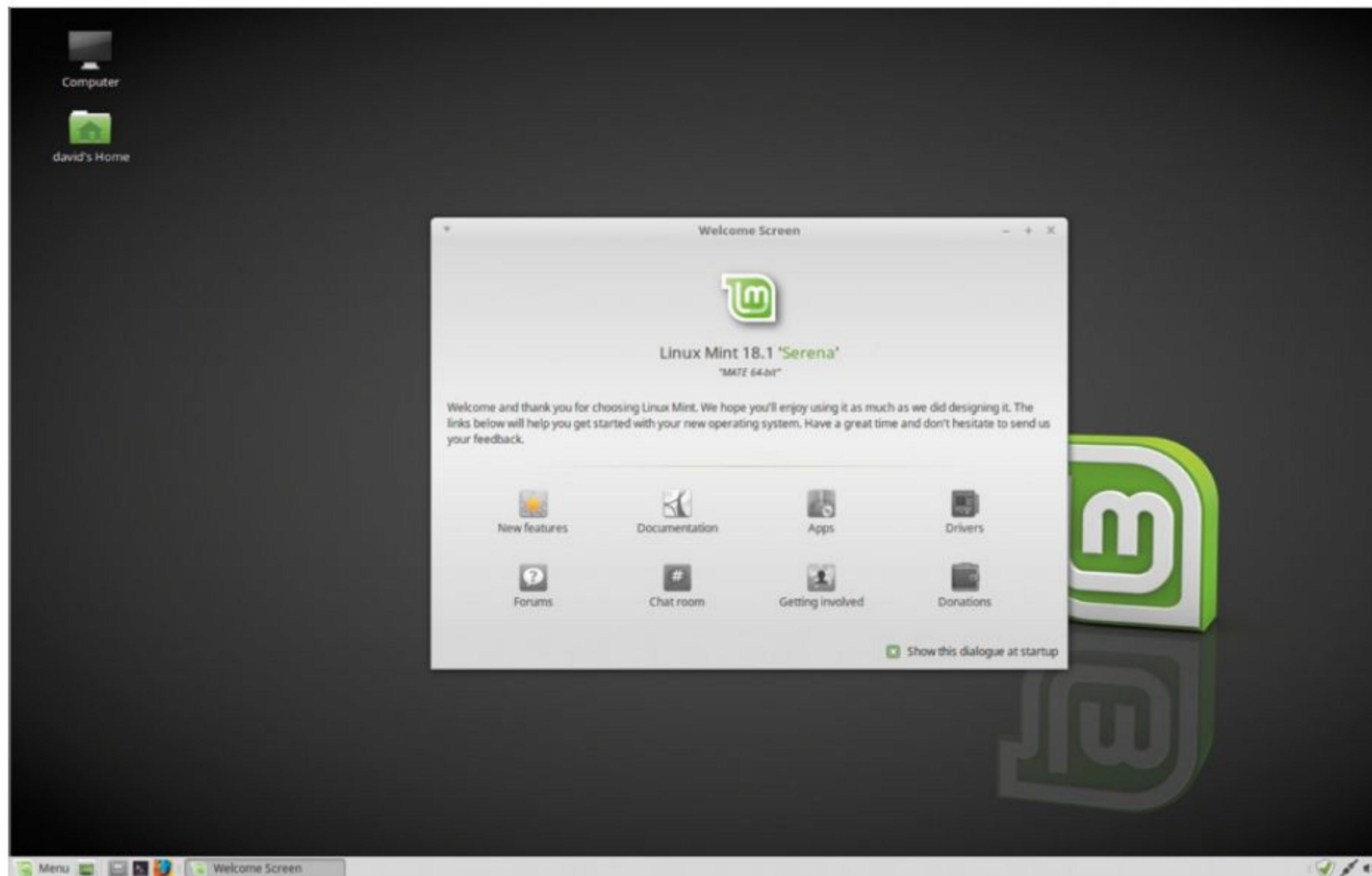
Introduction to the MATE Menu

As we have looked at the Cinnamon desktop environment, let's now turn to have a brief look at what MATE has to offer. MATE is regarded as the failsafe version of Linux Mint, where there's more support for hardware; it's not as demanding on the system resources either.

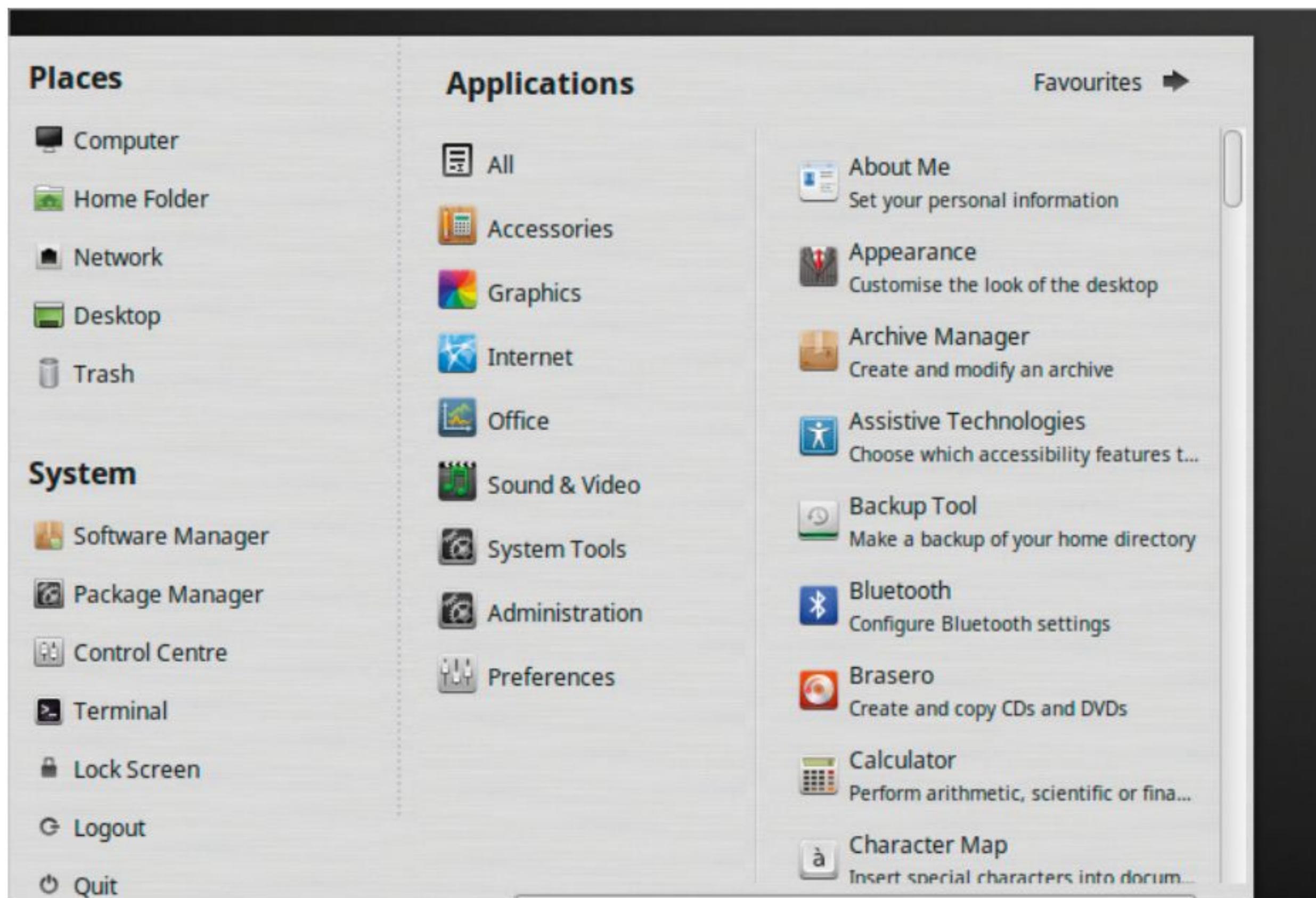
HELLO MA-TAY

Thankfully you won't need to worry too much about Software Rendering with MATE; however you can add the Virtualbox Additions CD as you did with Mint Cinnamon.

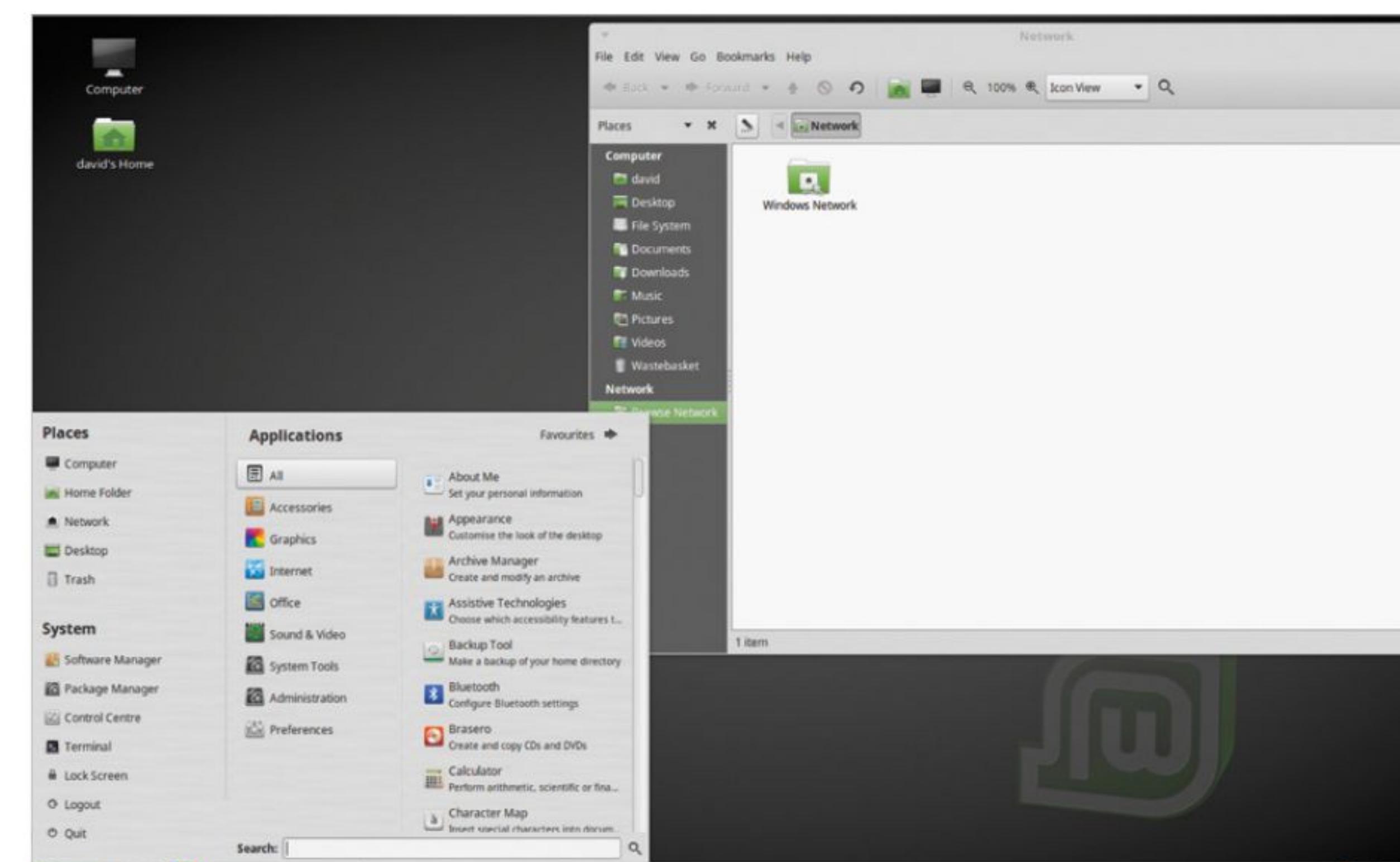
- STEP 1** As with Linux Mint Cinnamon, when you login to MATE you are presented with a Welcome Screen. Again, take a moment to browse through the New Features, Documentation, Forums and Apps icons. If you're feeling brave, click on the Drivers icon to add hardware drivers.



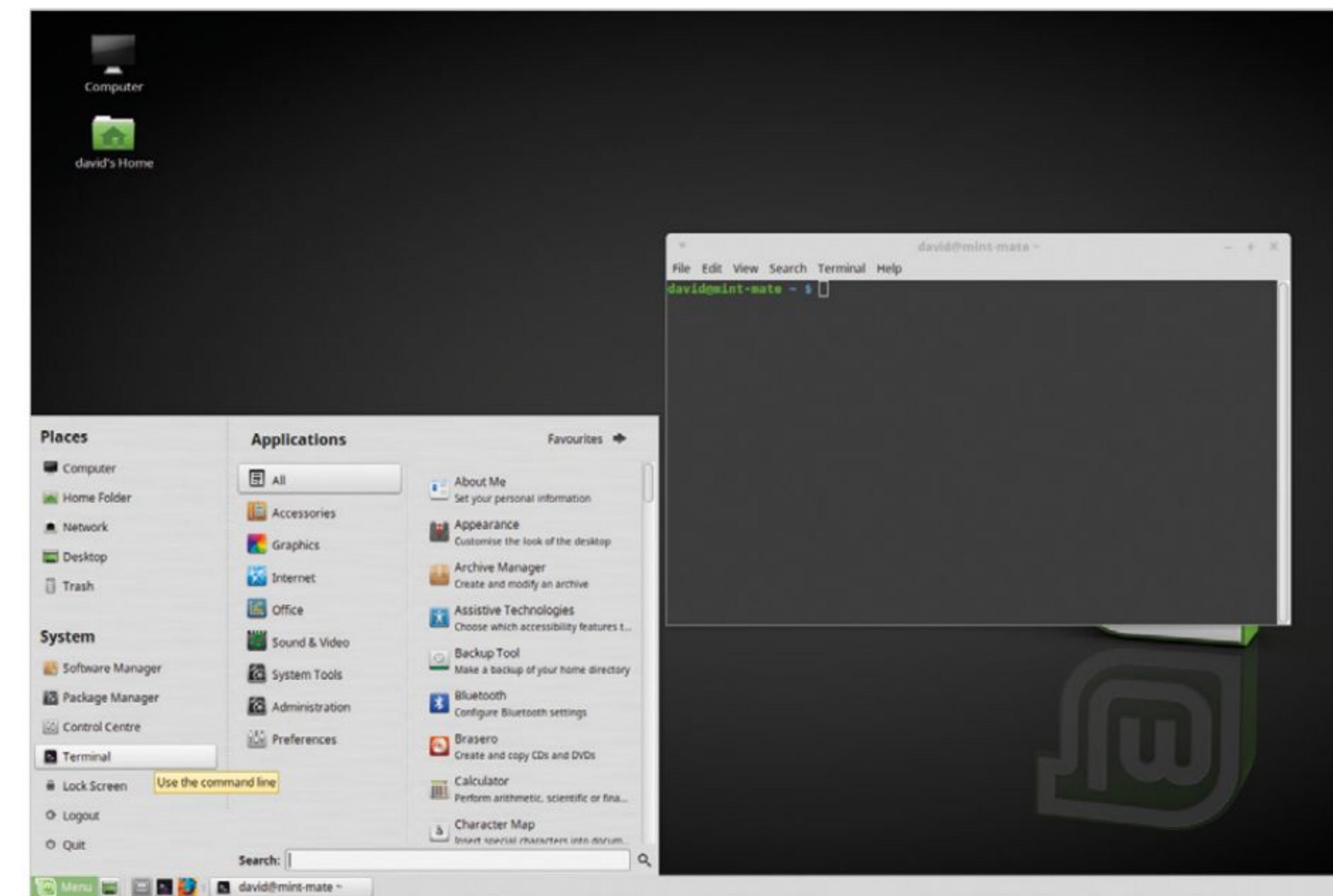
- STEP 2** The MATE menu is a little different to that of Cinnamon but it functions in very much the same way. Click it and you can see that it's split into three sections housing: Places, System and Applications; with Favourites leading off to the upper right.



- STEP 3** The Places section breaks down into: Computer, Home Folder, Network, Desktop and Trash. The Computer and Home Folder options are the same as the ones that the Cinnamon desktop offered. Network will open any bookmarked and network locations, Desktop the desktop folder and Trash is the recycle bin.

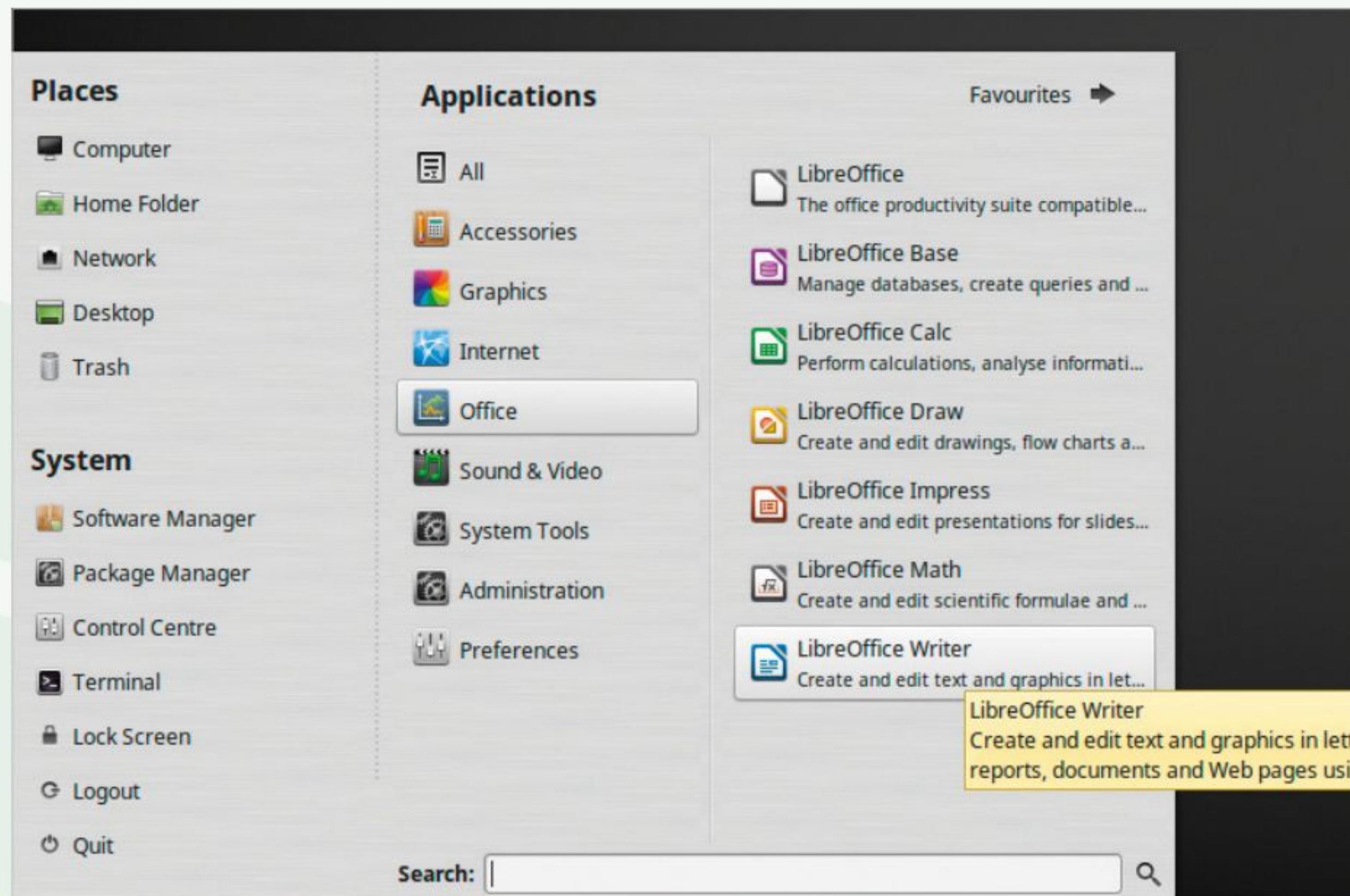


- STEP 4** Under System you can find the necessary tools to configure MATE and the core of Linux Mint 18.1. You can also drop into a Terminal session to enter commands, lock the screen, Logout and Quit the current session.

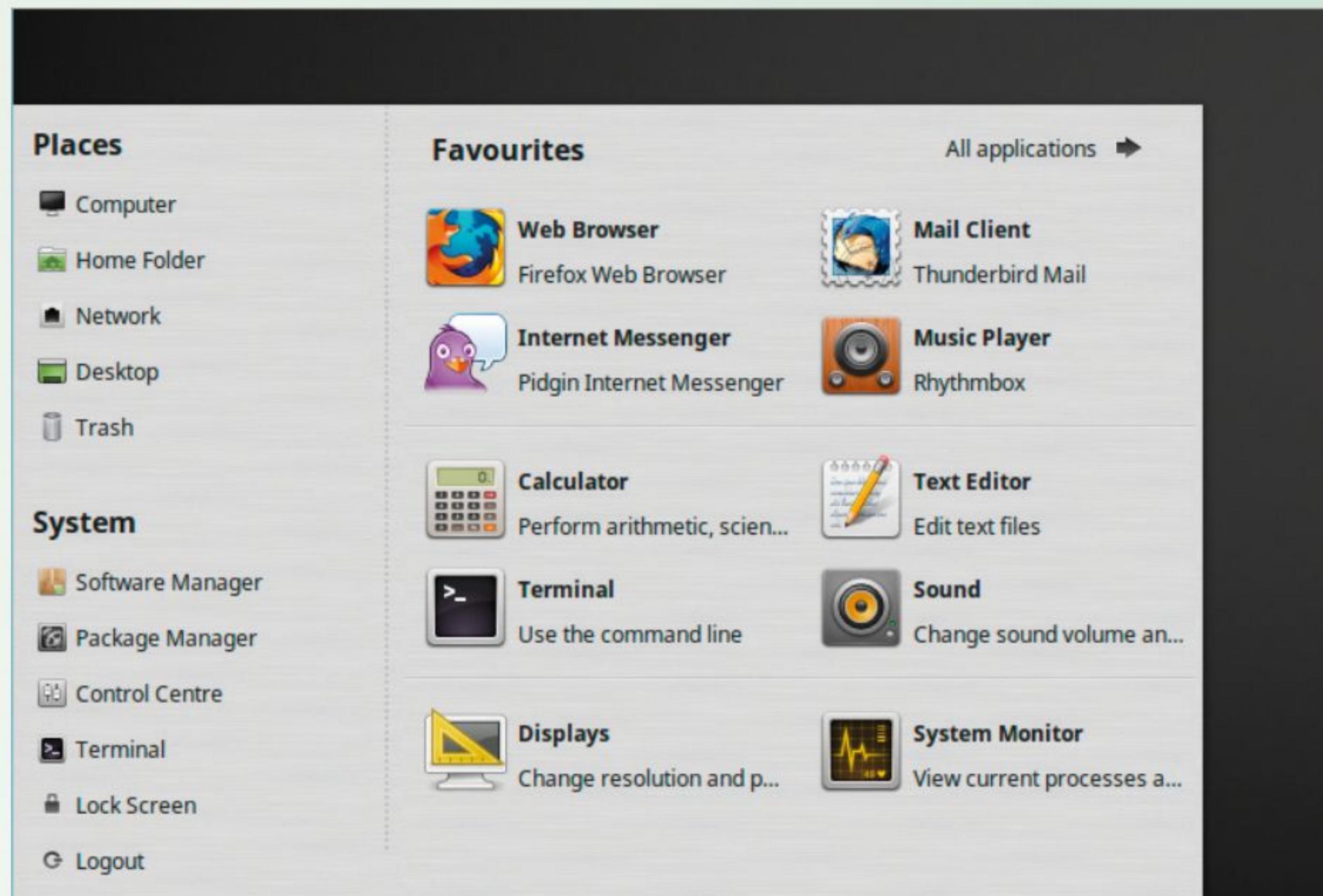


**STEP 5**

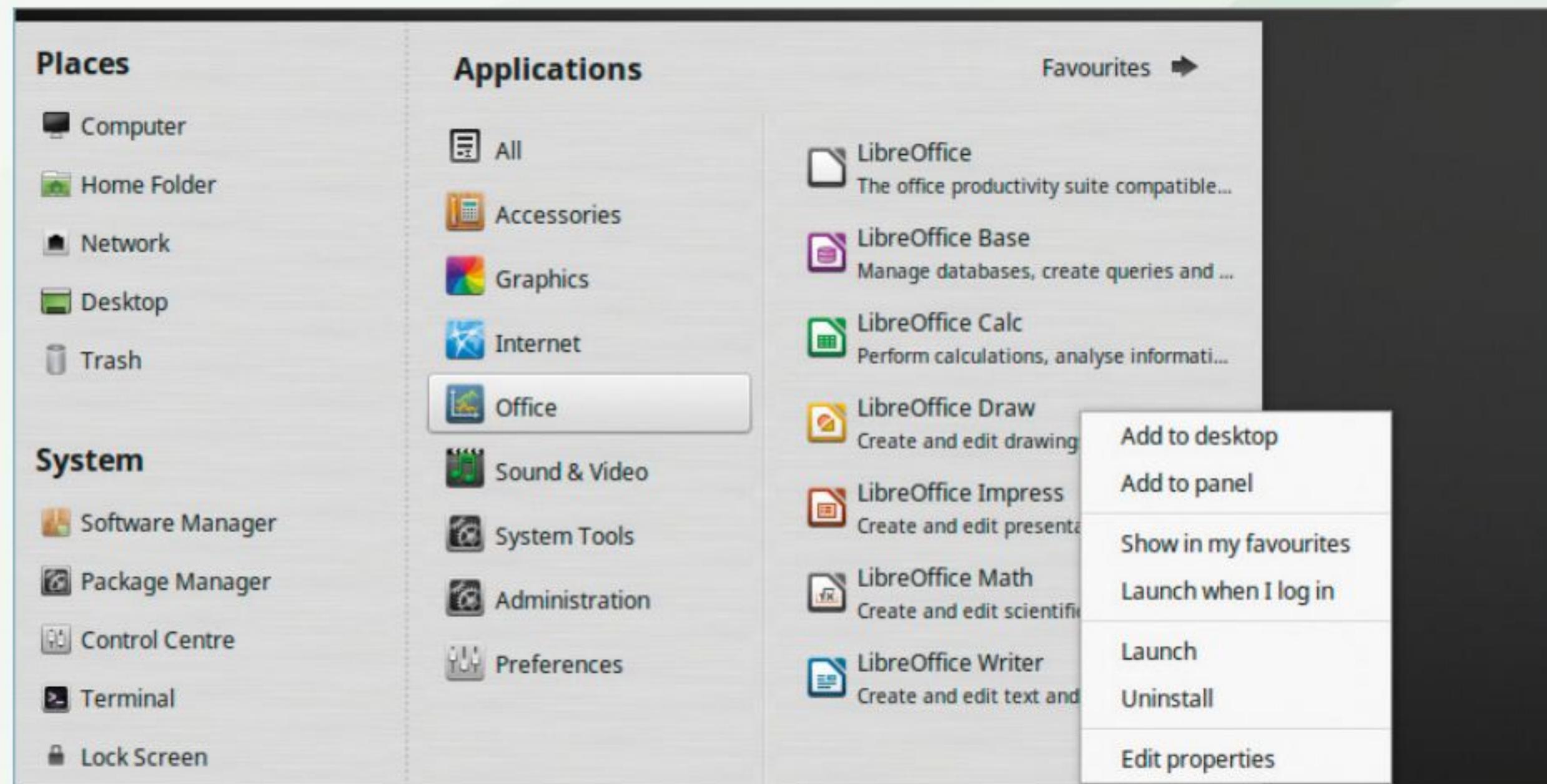
The Applications section is split into two areas, one for the Application headings, such as Graphics, Sound and Video, Internet and so on and the other to display the apps contained within those headings. As before, hover over the Office heading and click on LibreOffice Writer to launch the Mint installed word processor.

**STEP 6**

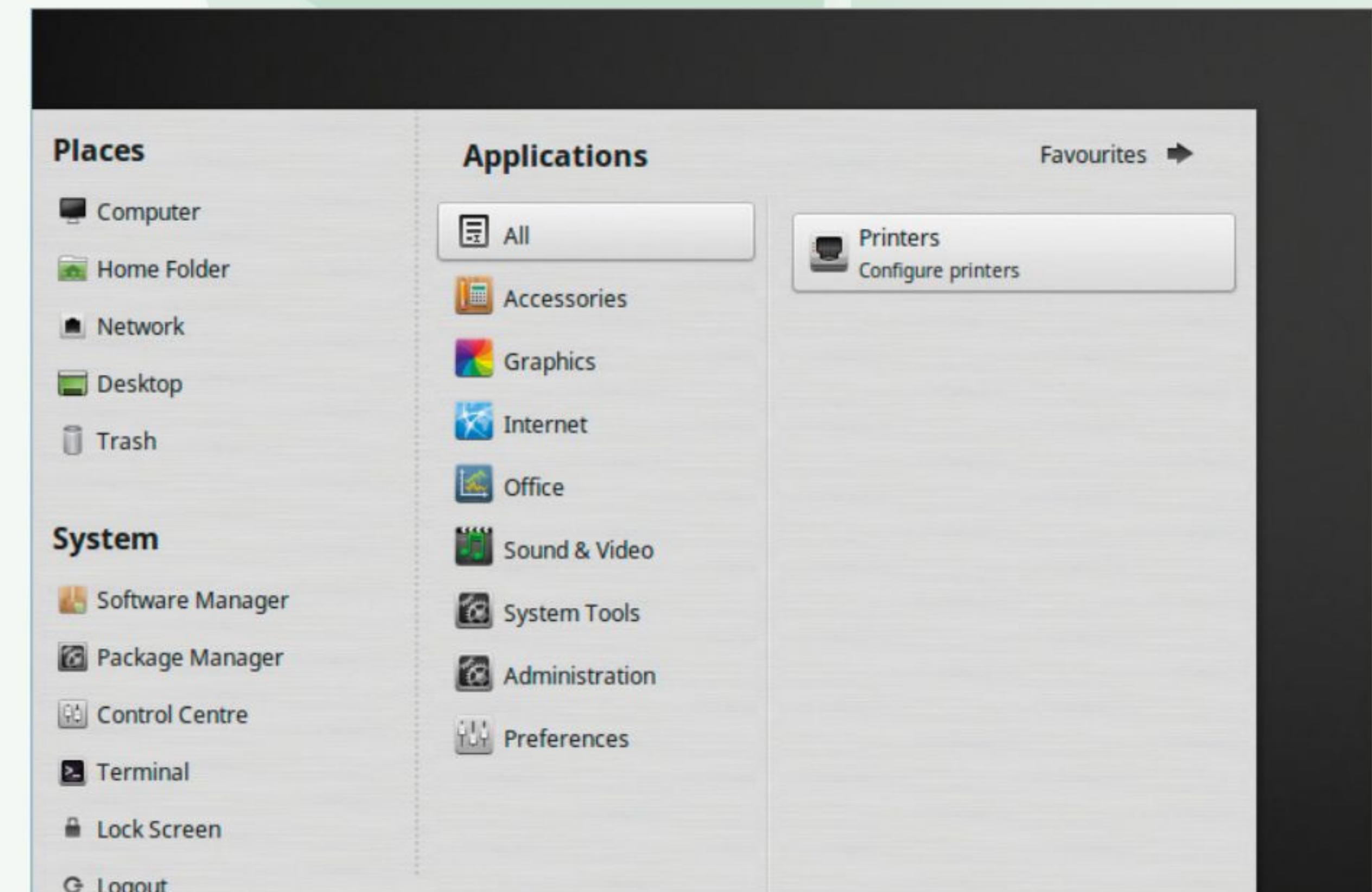
Clicking the Favourites button will replace the Applications section with your most used and favoured apps. By default you get Firefox, Thunderbird Mail, Rhythmbox Music Player, Pidgin Internet Messenger and numerous other apps.

**STEP 7**

As with Cinnamon's Menu, if you want a particular app to appear in the Favourites section, locate it in the Applications section, right-click it and from the context menu choose Show In My Favourites. There are also other options available that are self-explanatory and add the app to various locations, or remove it from the system.

**STEP 8**

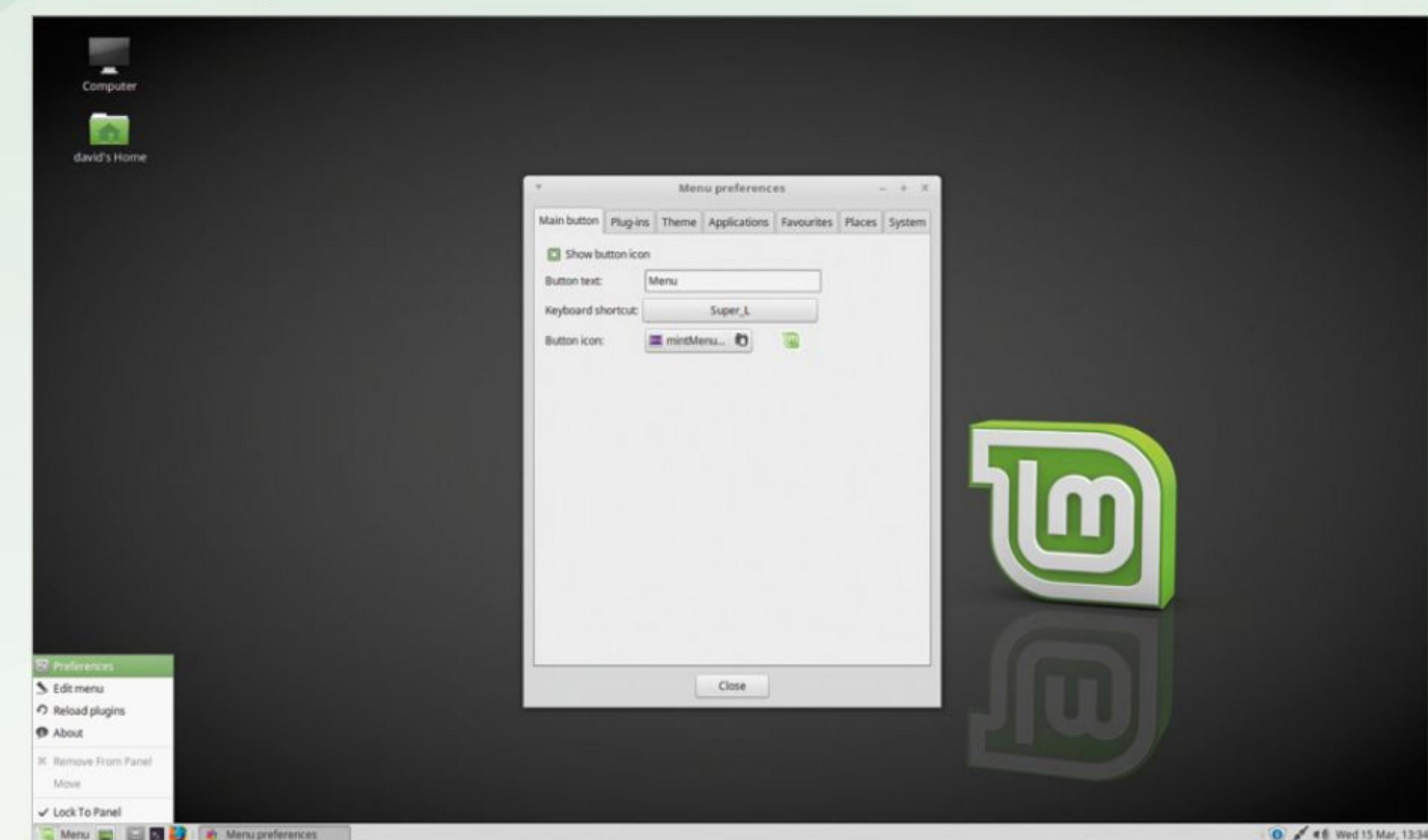
Despite MATE looking a little old-fashioned compared to Cinnamon, it still has the same Menu elements to it. The Search box works exactly the same, in that you can enter a search string, such as printers, and it lists the relevant apps according to your input.

**STEP 9**

If you close the Menu, by clicking anywhere on the desktop, then right-click the Menu button followed by Edit Menu you can configure the contents of the MATE Menu. You can add or remove certain categories, add new items and move current sections up and down the list of available icons.

**STEP 10**

Then, from within the right-click options of the Menu button, select Preferences this time; you can alter the name, icon and keyboard shortcut to launch the MATE Menu. This helps makes the system a far more personalised environment for the user.





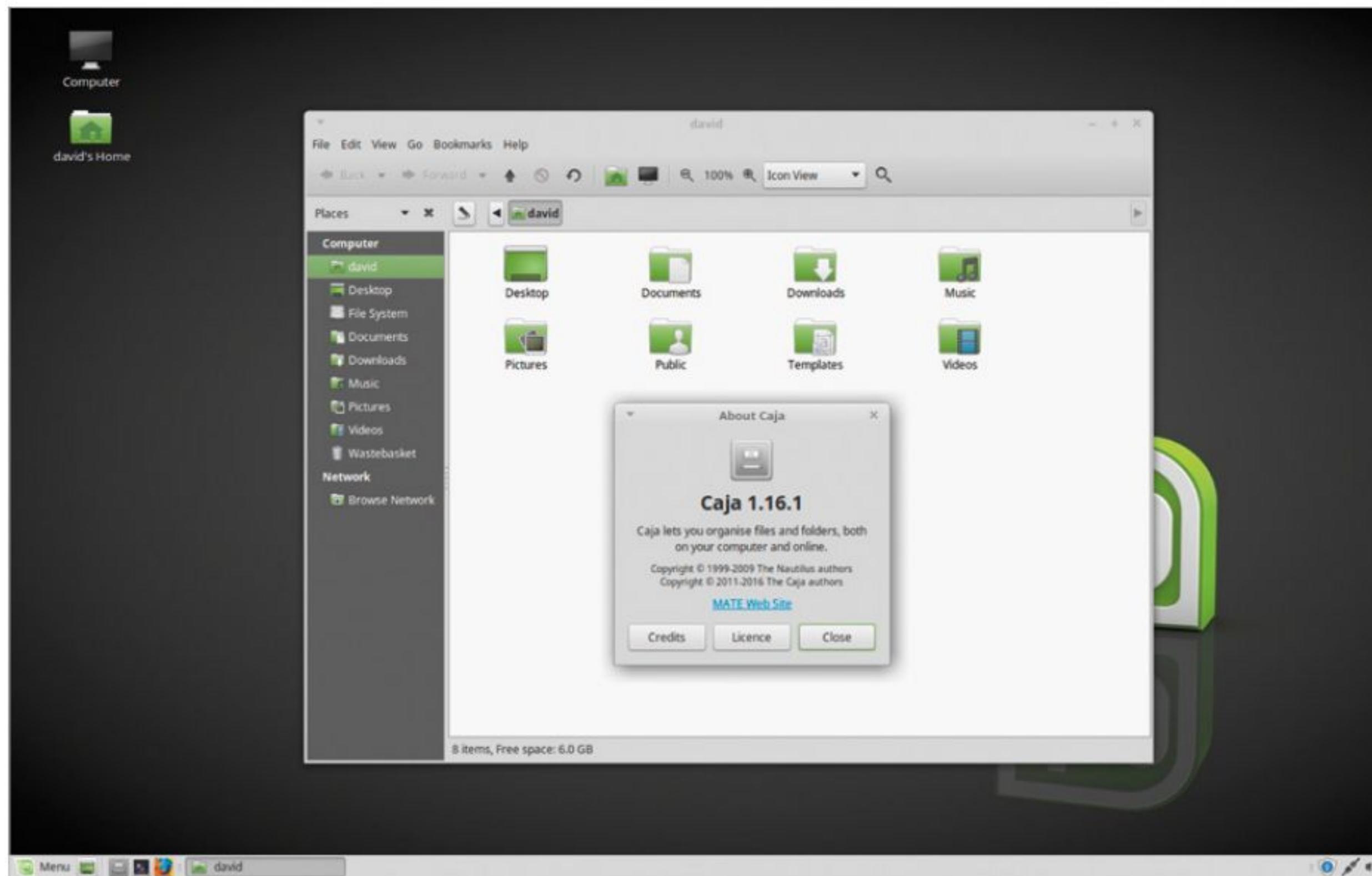
Navigating the MATE Desktop

MATE's sleek code lets it work exceptionally well with a wide range of system specifications. Most modern systems perform magnificently when using MATE. It's a well developed desktop environment, and a firm favourite of Mint users.

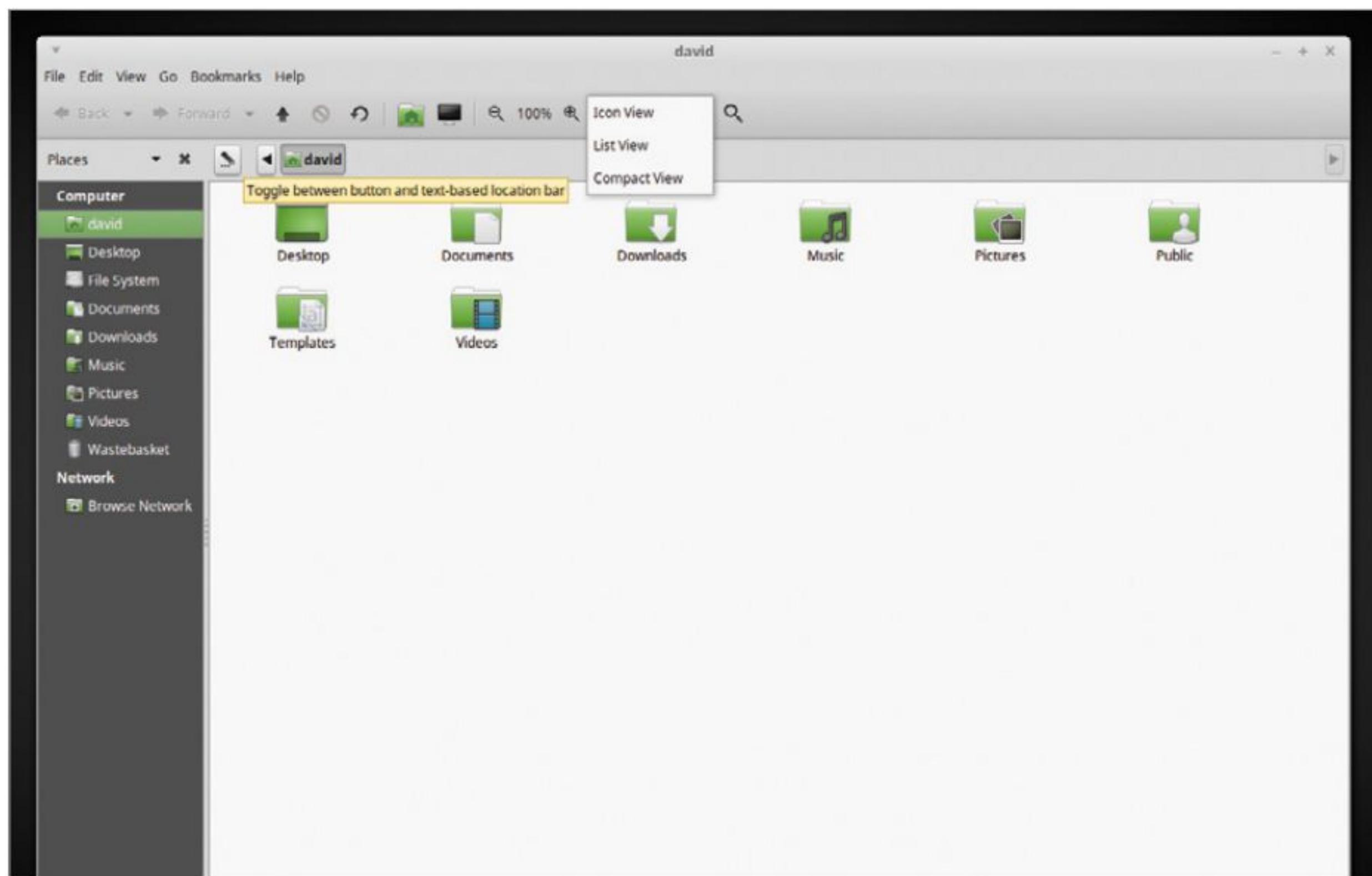
MATES FOREVER

As with Cinnamon, MATE is a great blend of style and performance. Whilst it lacks some of the bells and whistles of Cinnamon, it makes up with practicality and stability.

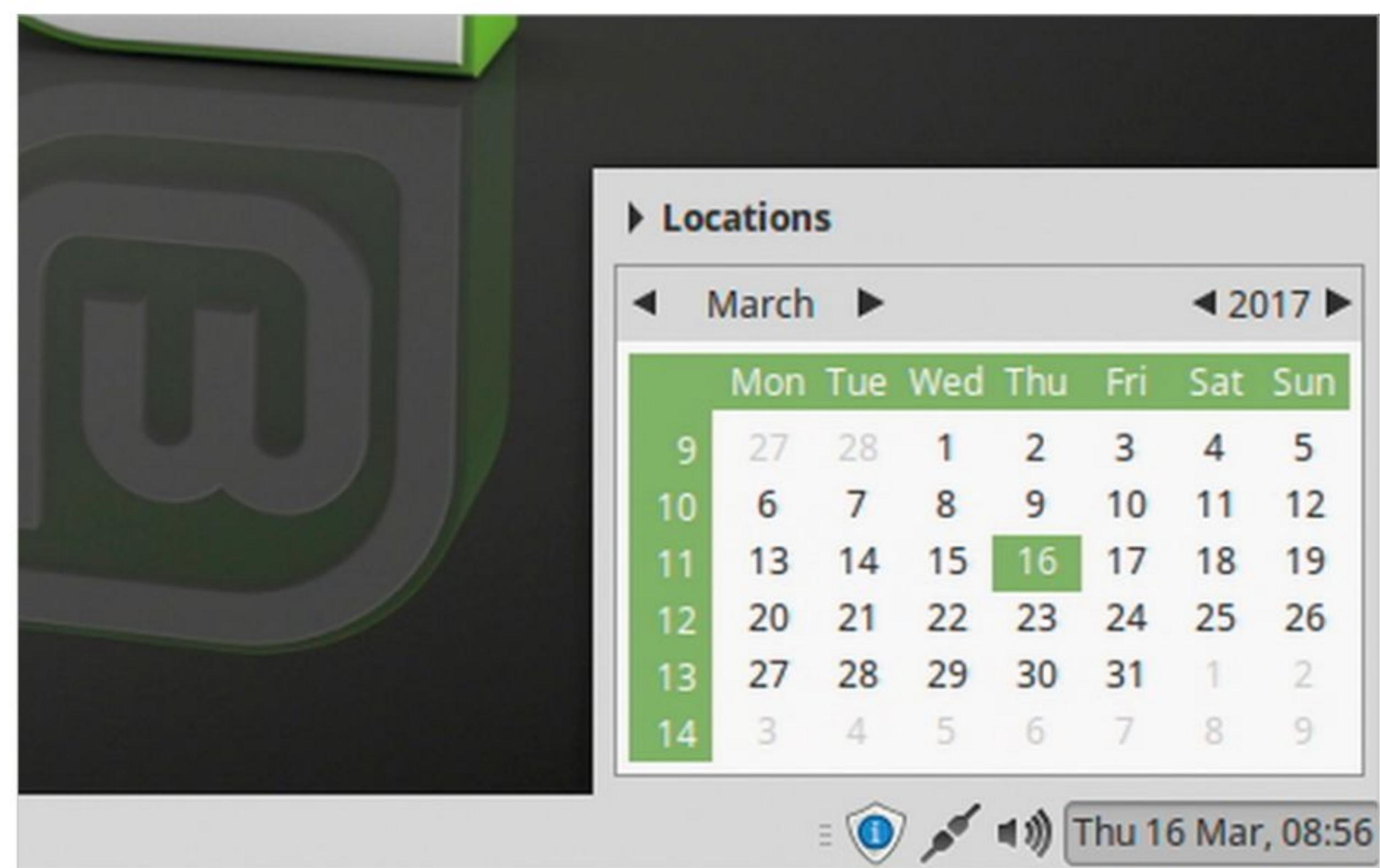
- STEP 1** As with Cinnamon, you can start exploring the MATE desktop by double-clicking on the Computer and your Home icons in the top left of the desktop. They take you to the same places we looked at earlier but you can see that Caja is the MATE file manager.



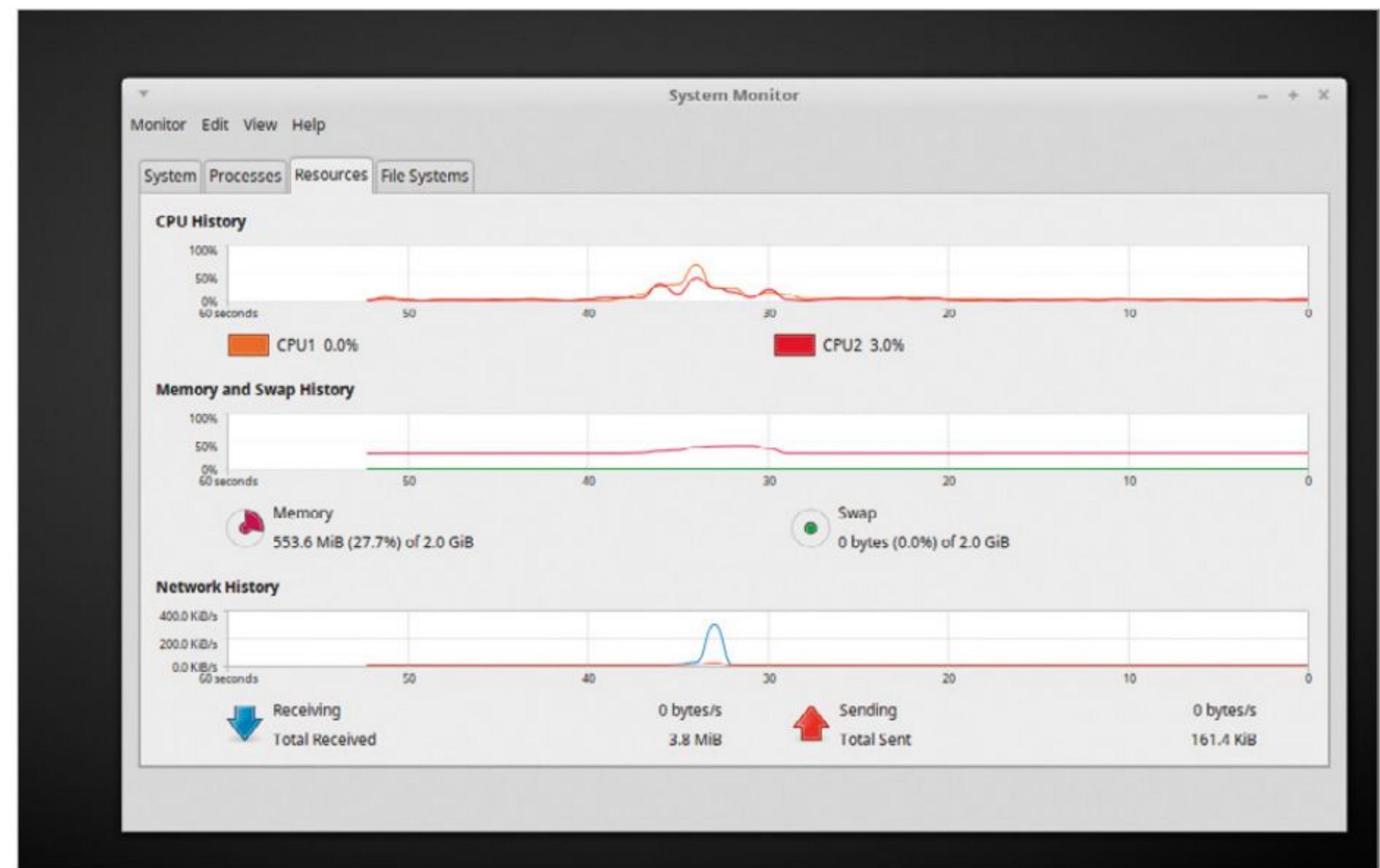
- STEP 2** Caja works as well as Nemo, with plenty of options available along the top toolbar, right-click context menus and shortcut Places. You can toggle between an icon based navigation bar, or text based, zoom and present the viewed icons in varying sizes and connect to remote and local shares and services.



- STEP 3** The Panel at the bottom of the desktop contains not only the MATE Menu by default but also quick launch links to the file manager, Caja, the Terminal and Firefox. At the other end of the Panel, to the right, you find the Update Manager, network/internet connection, volume and time and date.

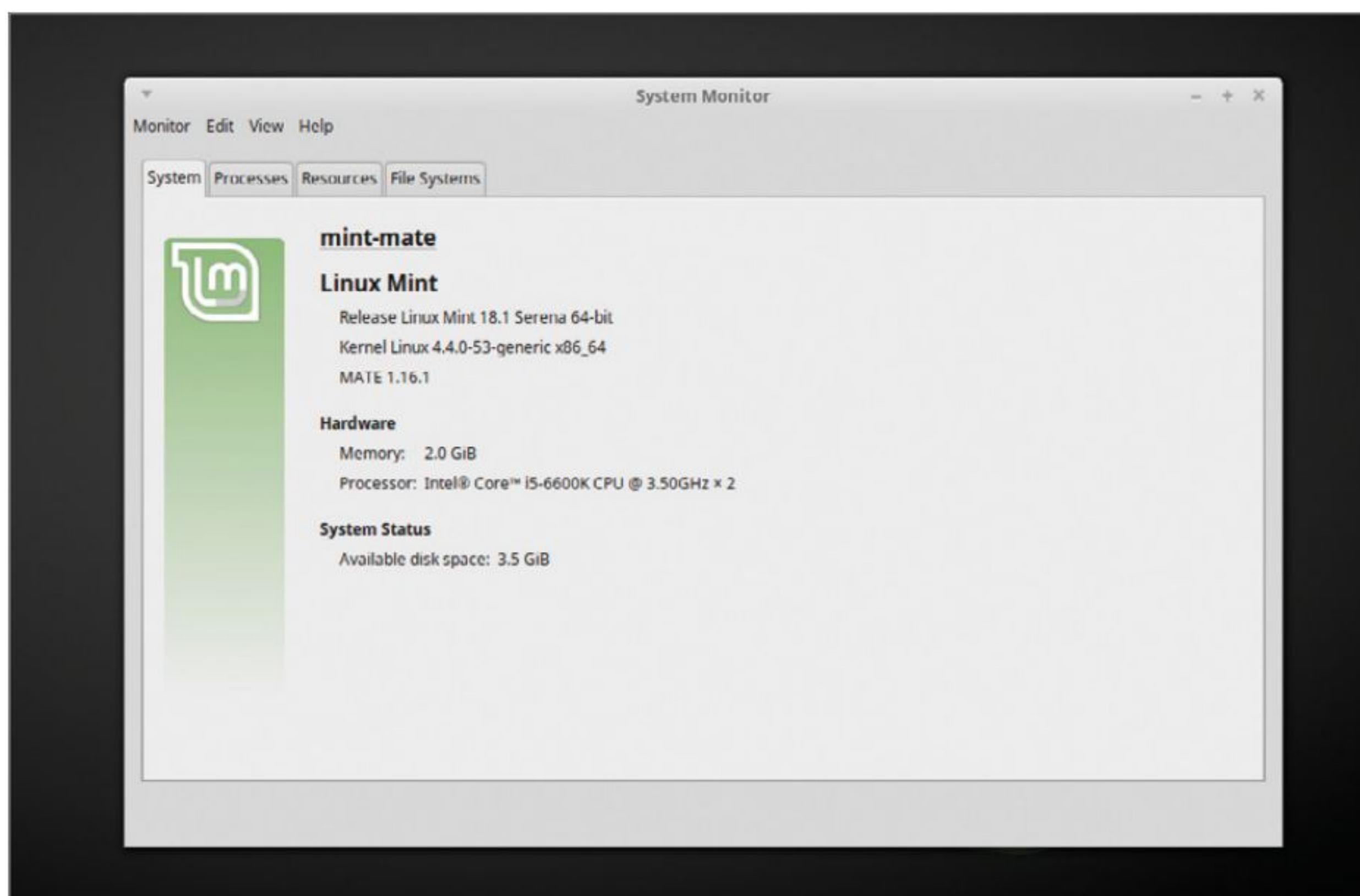


- STEP 4** Right-clicking the Panel gives you a number of options. The first, System Monitor, brings up the current information regarding the load on your computer's processor and cores, the amount of memory being used as well as the swap history and information about the bandwidth load on the network.

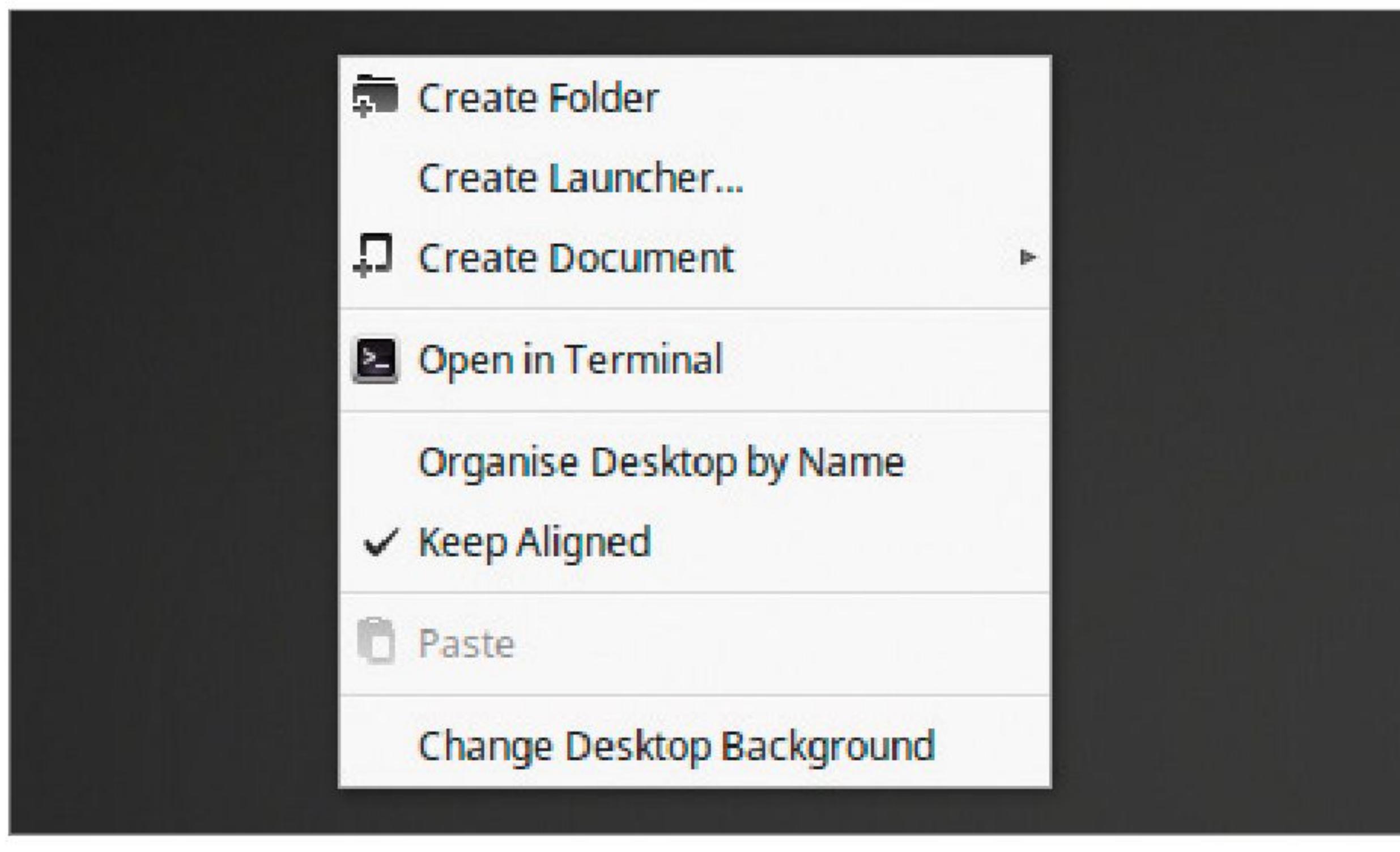


**STEP 5**

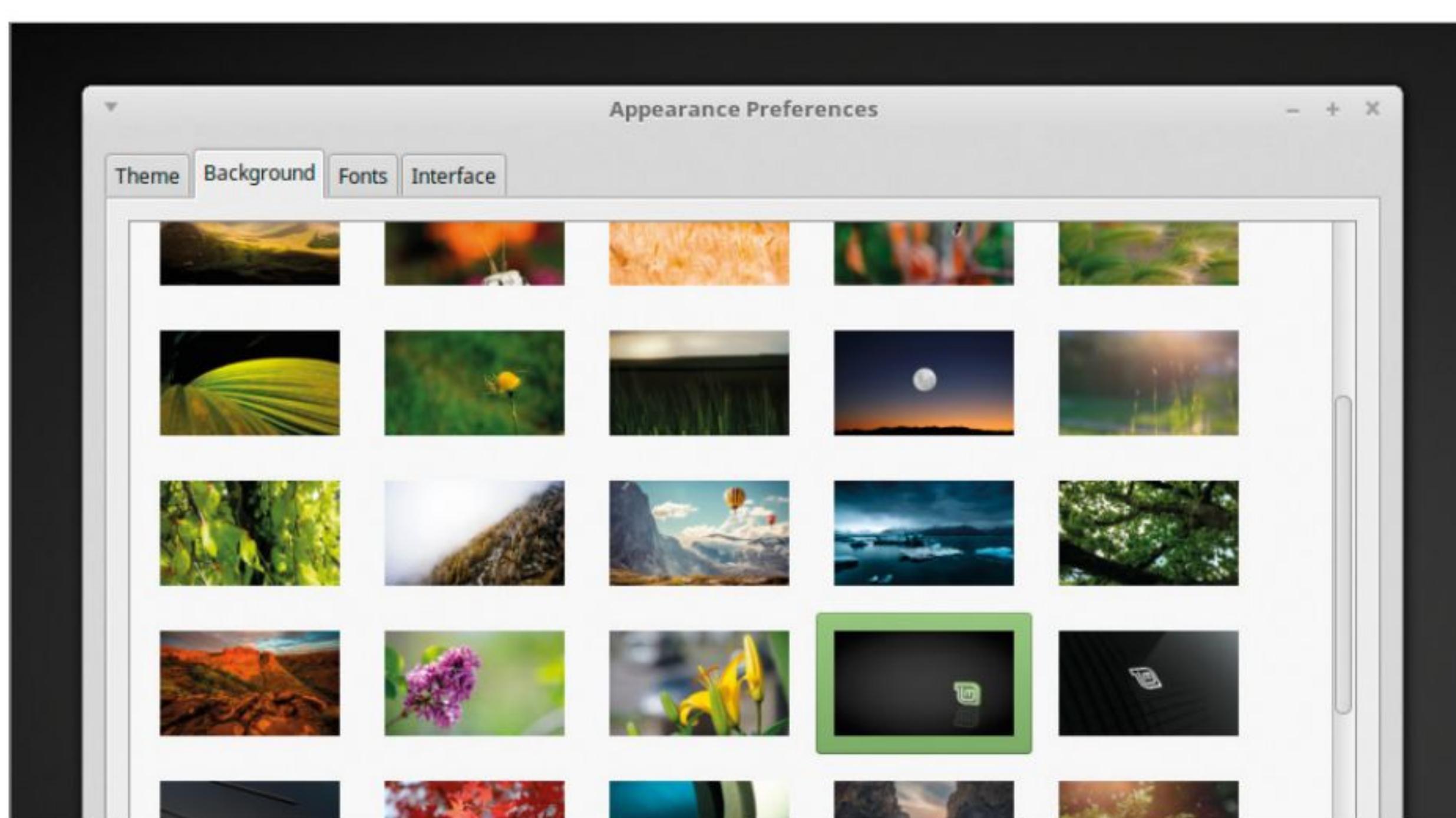
You can browse through the System Monitor console whilst it's still active. The available tabs: System, Processes, Resources and File Systems all make for interesting reading. Should you come across any issues in the future, such as a sudden slowdown of executed apps, then you can check here to help see where the issue may lie.

**STEP 6**

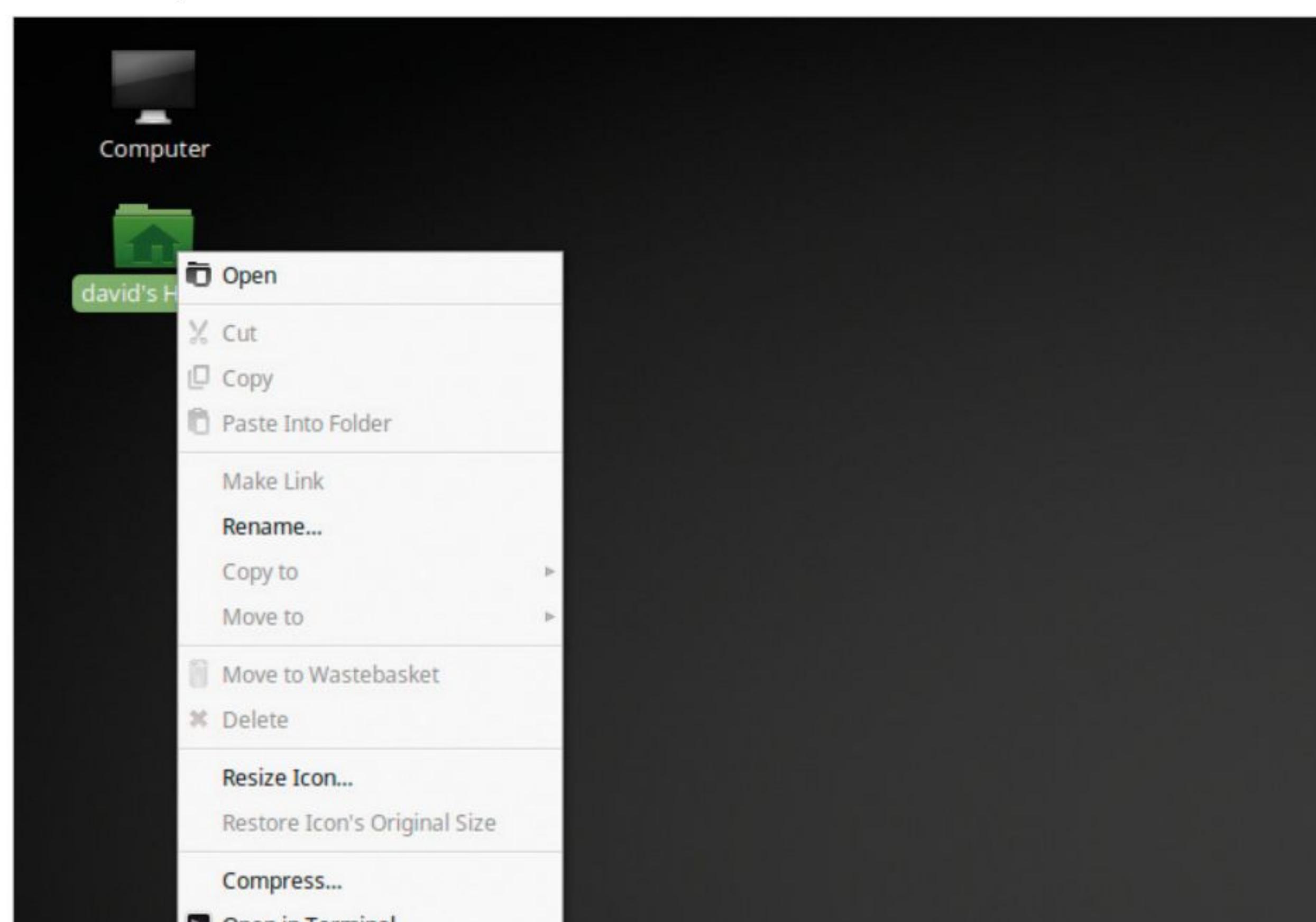
Right-clicking anywhere on the desktop will bring up a set of familiar options. These, as with Cinnamon and most other operating systems' menus, allow you to create folders, launchers, documents, open in Terminal, organise the desktop icons and change the desktop background.

**STEP 7**

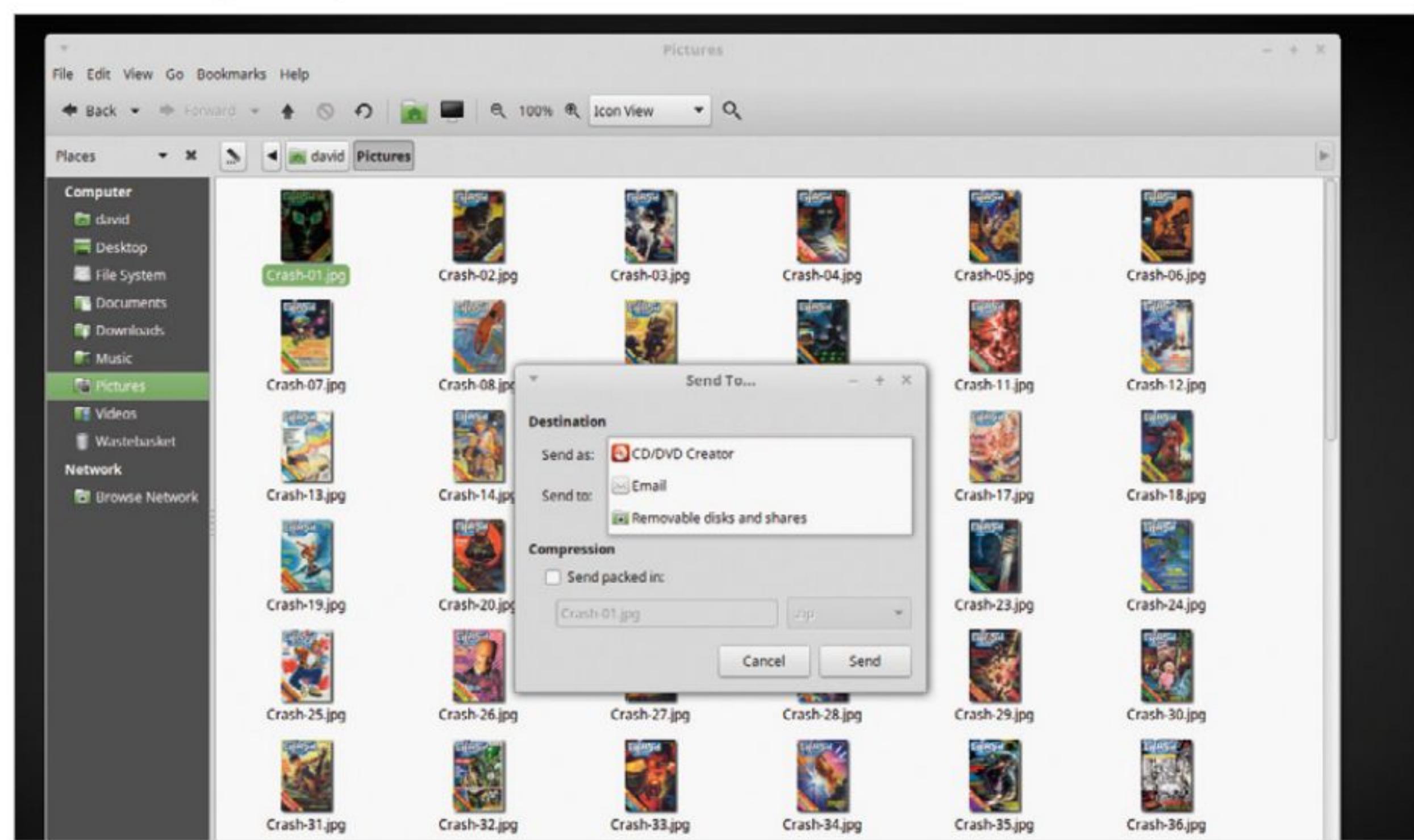
If you select Change Desktop Background from the list of options, the Appearance Preferences console opens. Obviously, as the name suggests, you're able to change to any of the included Linux Mint wallpapers and themes; you can also view and install new fonts and even change how the MATE interface, menus and toolbars look.

**STEP 8**

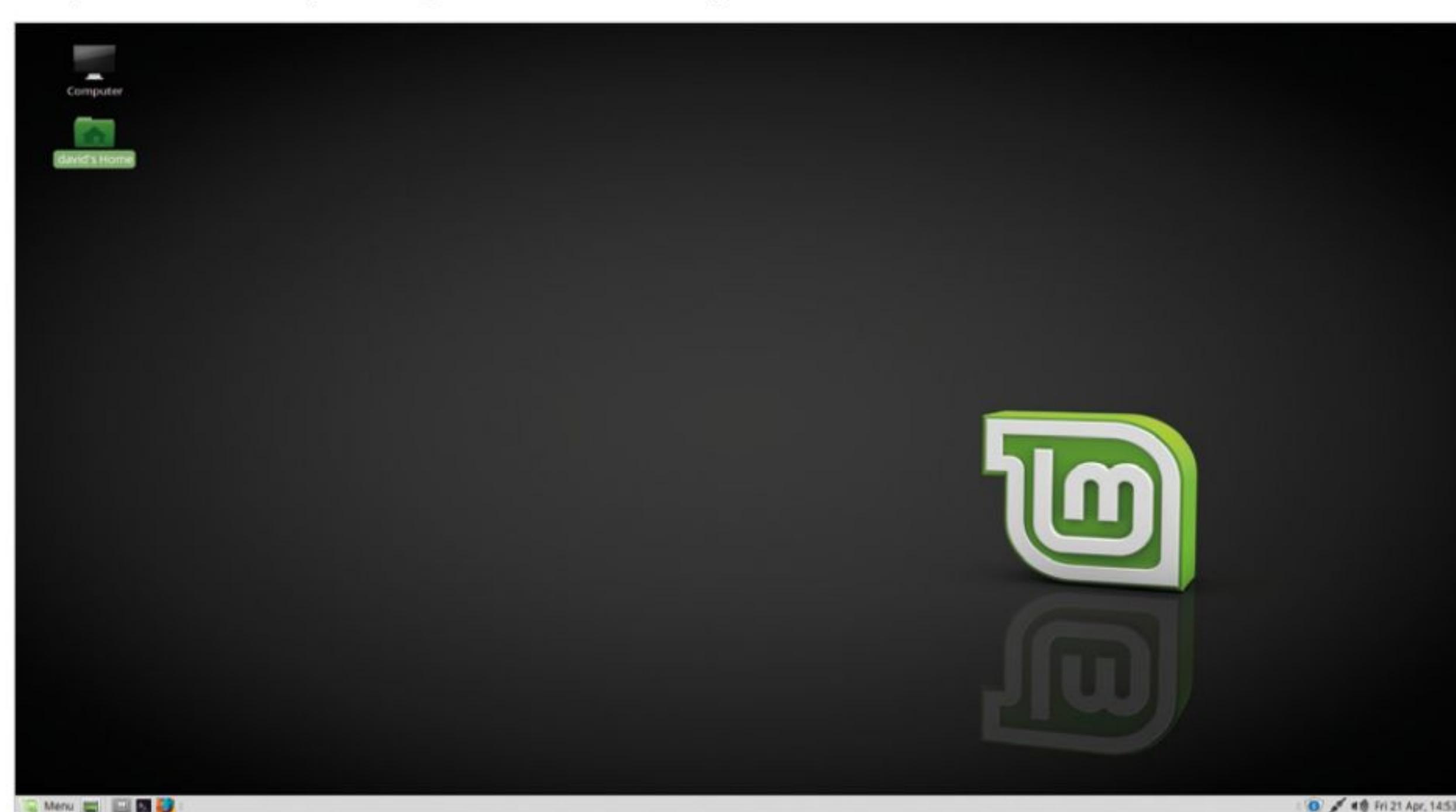
Right-clicking on any of the desktop icons will bring up yet more options. You can Rename, Copy, Move, Resize the icon; also Open it in a Terminal, Unmount if it's an icon connected to an external hard drive or remote server or Eject if it's USB or optical media.

**STEP 9**

Whilst we're on the subject of right-click menus, if you right-click any file within Caja you're able to command a range of different options. The list is quite extensive and covers almost everything you'll generally want to achieve. Interestingly, you can also send the file to a location, email message or to a queue ready for burning to optical media.

**STEP 10**

In short, the MATE desktop is an effective and efficient environment that can easily compete with Windows and macOS setups. Cinnamon may well be the Linux Mint flagship desktop environment but MATE is certainly one to consider if you don't require desktop widgets but want performance and ease of use.





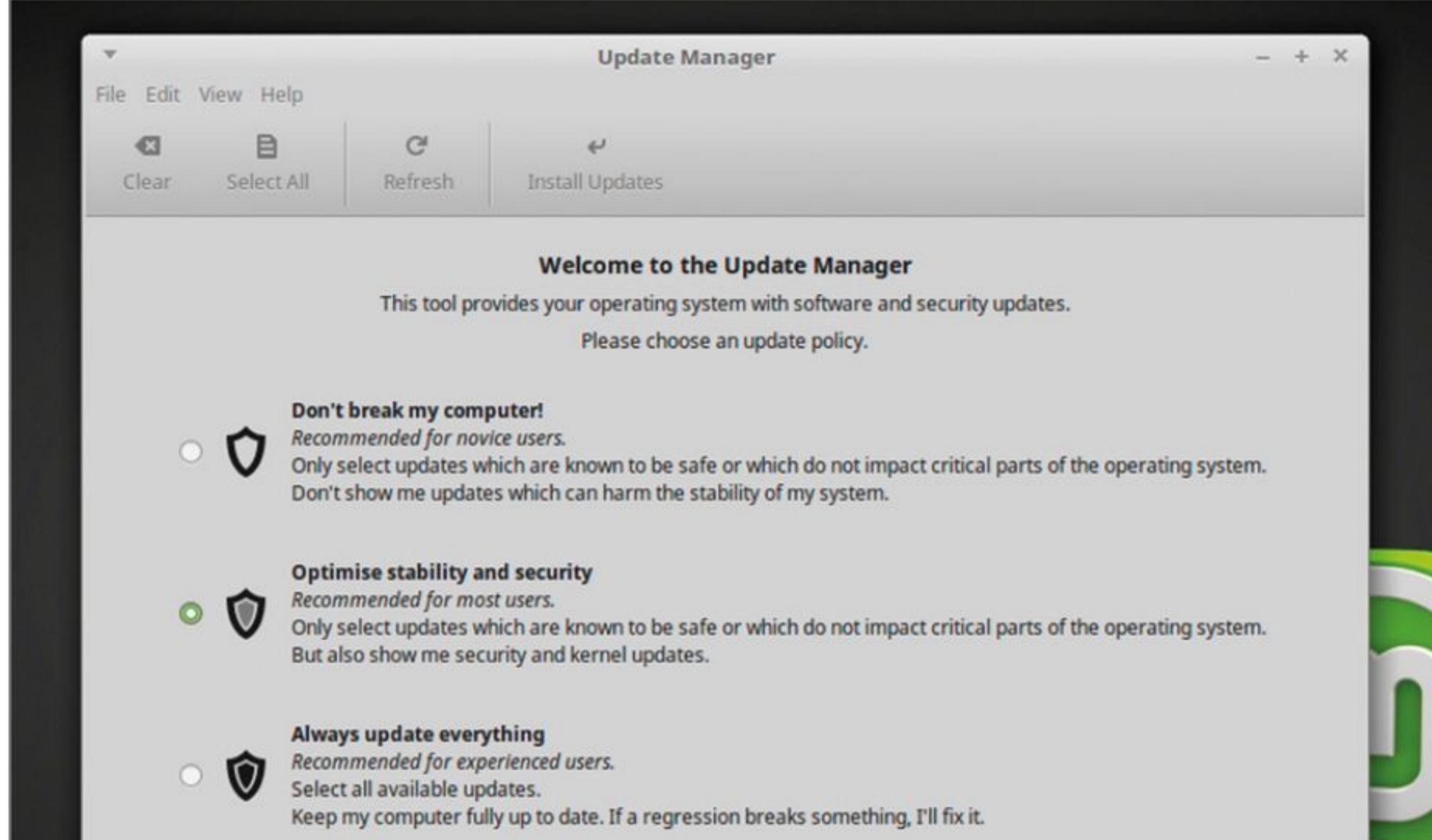
10 Things to Do After Installing Linux Mint MATE

MATE out of the box works perfectly fine, but just as with Cinnamon and any other operating system, there are a few post-installation tasks that can help it run a little better. Aside from the usual security updates and additional hardware drivers, we can tweak the system further.

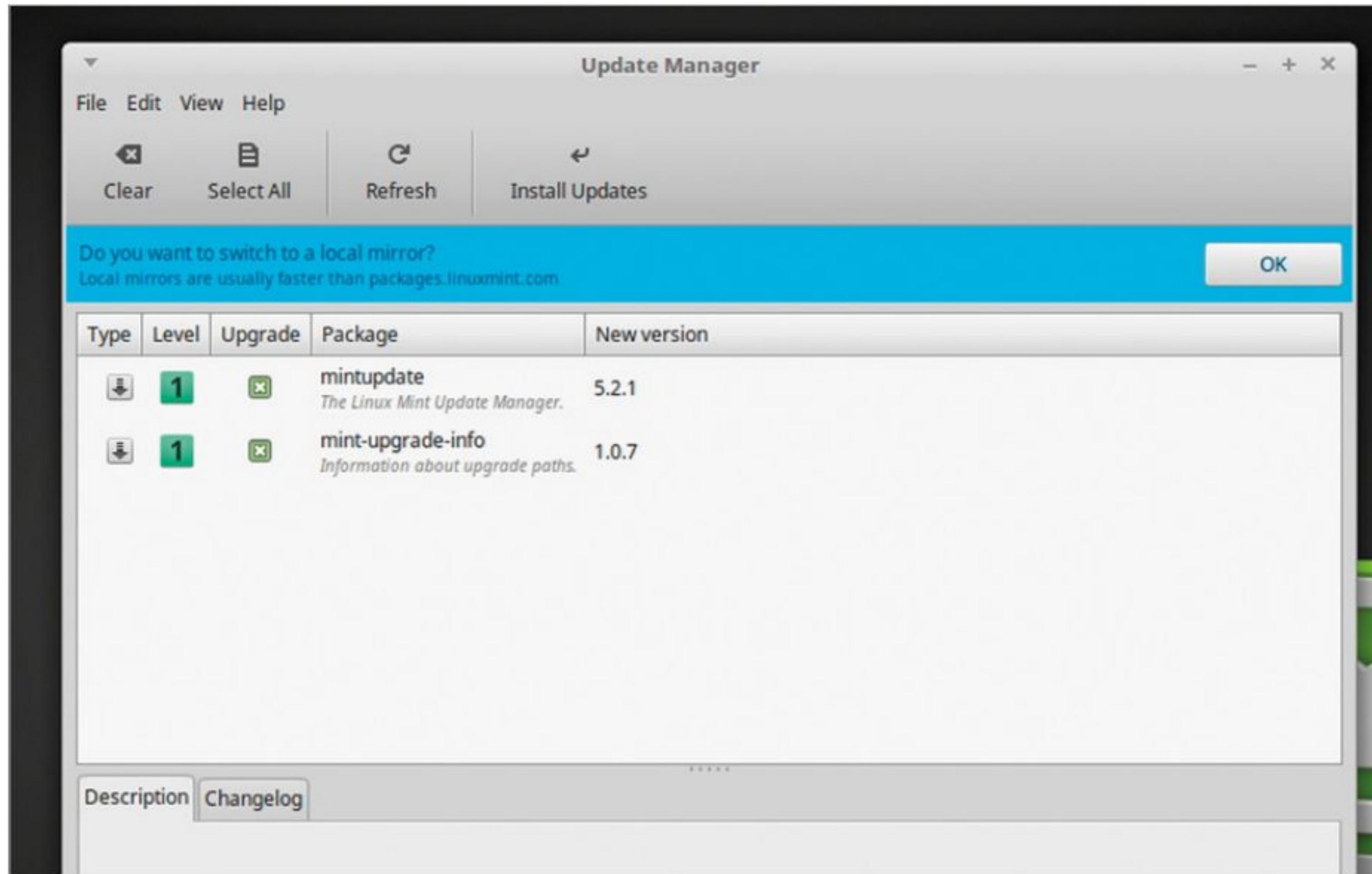
BEING A BETTER MATE

Just as we did with Cinnamon, for those of you who have opted for Linux Mint MATE, here are ten steps to help make MATE a little bit better, and keep it in tip-top working order.

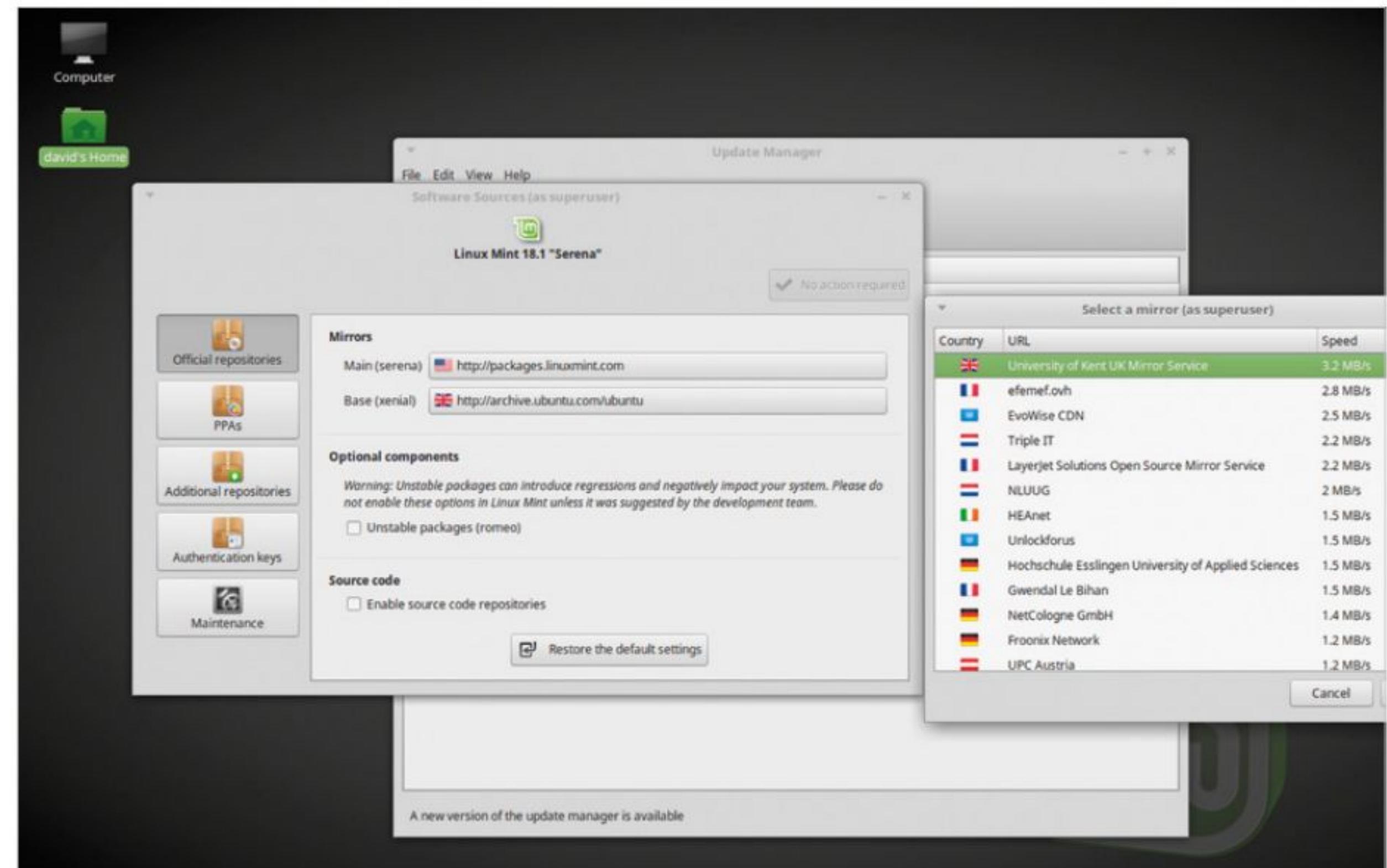
STEP 1 Updates! You've probably guessed that you need to start with the Update Manager. Click on the shield icon in the Panel, located in the bottom right of the desktop. As with Cinnamon, you have a three-option update policy to choose from. Again, we'd recommend you stick with the middle option, Optimise Stability And Security.



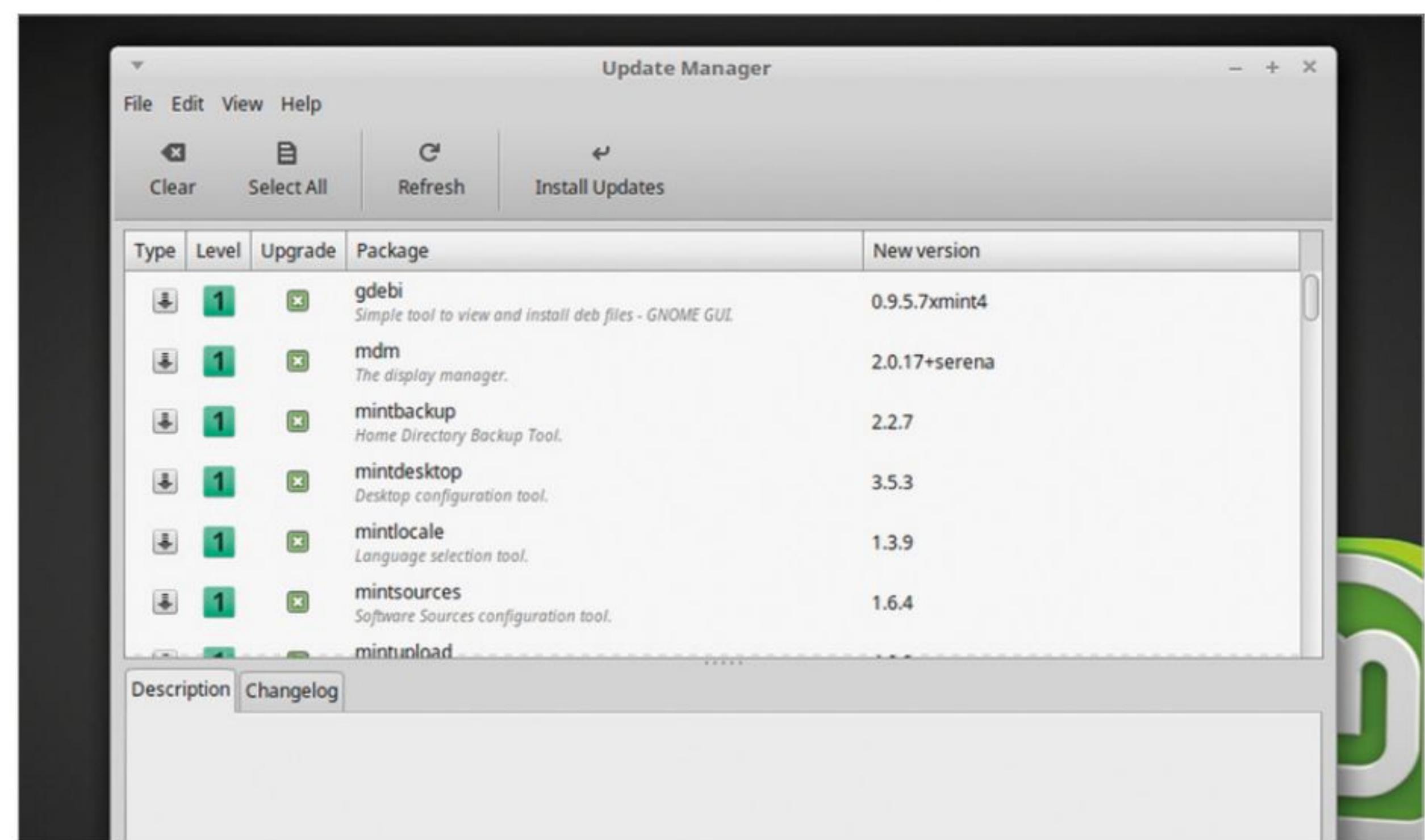
STEP 2 Click the OK button after you've chosen your update policy and you'll see a couple of updates ready to be installed. Before you do that though, click on the OK button in the blue bar along the top of the Update Manager window: 'Do you want to switch to a local mirror?' and enter your password.



STEP 3 If you click the drop-down menus under the Mirrors section, next to Main and Base, you get an active list of available servers and their speeds relative to you. The closest servers are usually at the top and it's advisable to keep local to cut down any potential broadband cost.

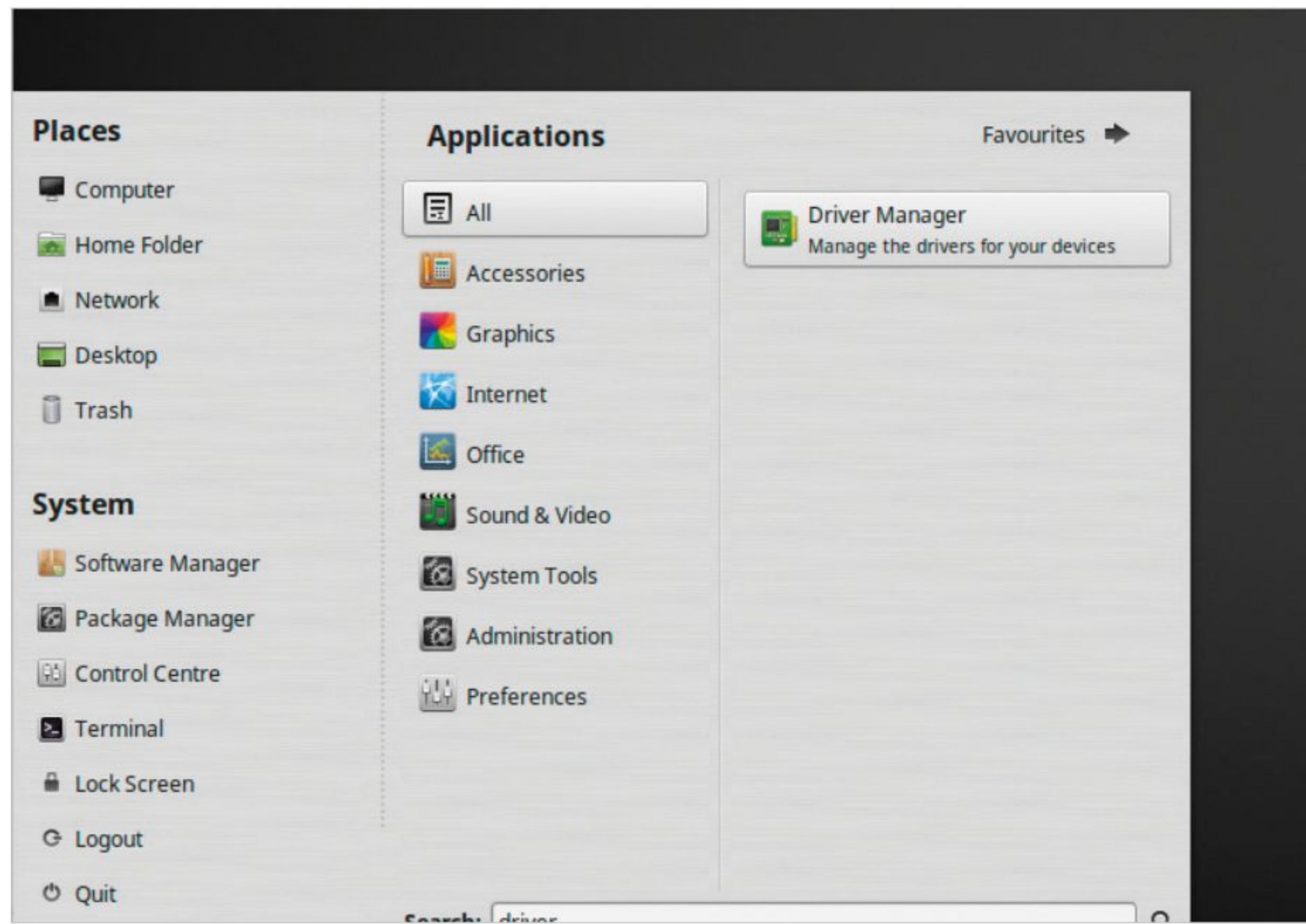


STEP 4 Once you have your local server, click the Apply button, followed by the Update the Cache button; you can then close the Software Sources window. Click the Install Updates button in the Update Manager window, re-enter your password and hit Enter. After the initial updates, you'll have more to install, so repeat by clicking the Install Updates button again.

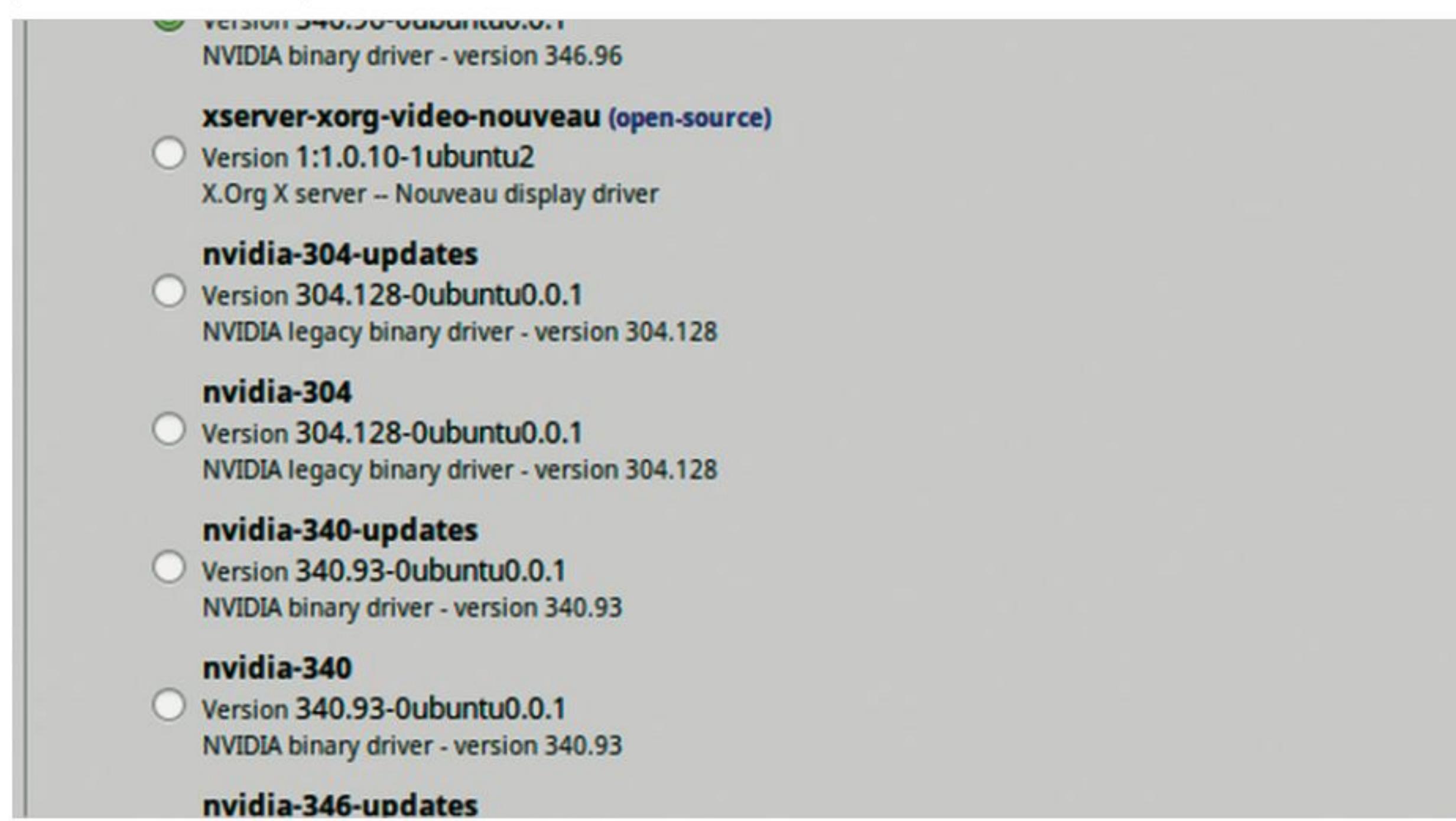


**STEP 5**

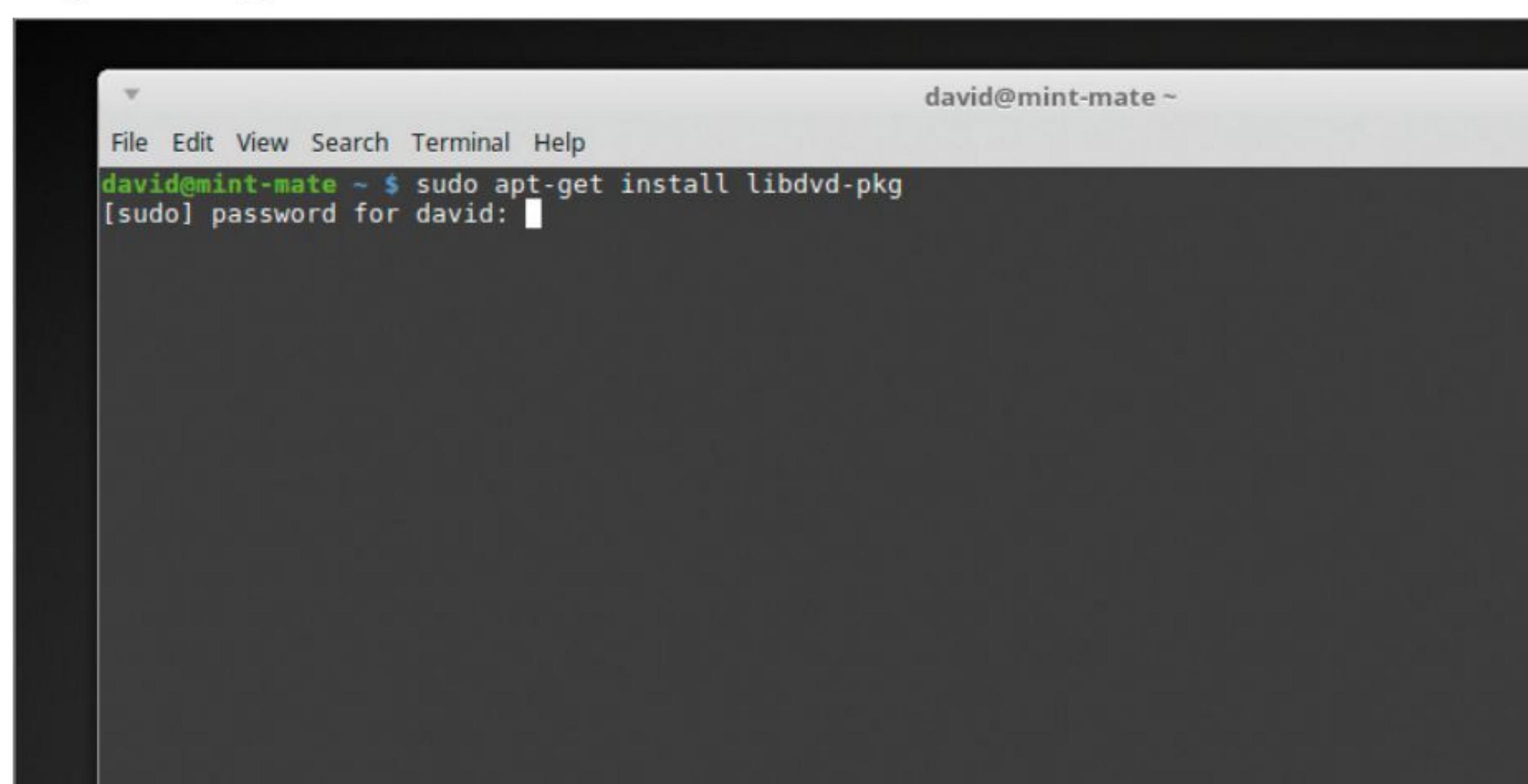
Click Replace for any configurations scripts that require your attention during the update process and leave the remaining level-5 updates for now. Next, check your driver updates by clicking on the Menu and entering driver into the search box; click on the Driver Manager icon when it's available and enter your password.

**STEP 6**

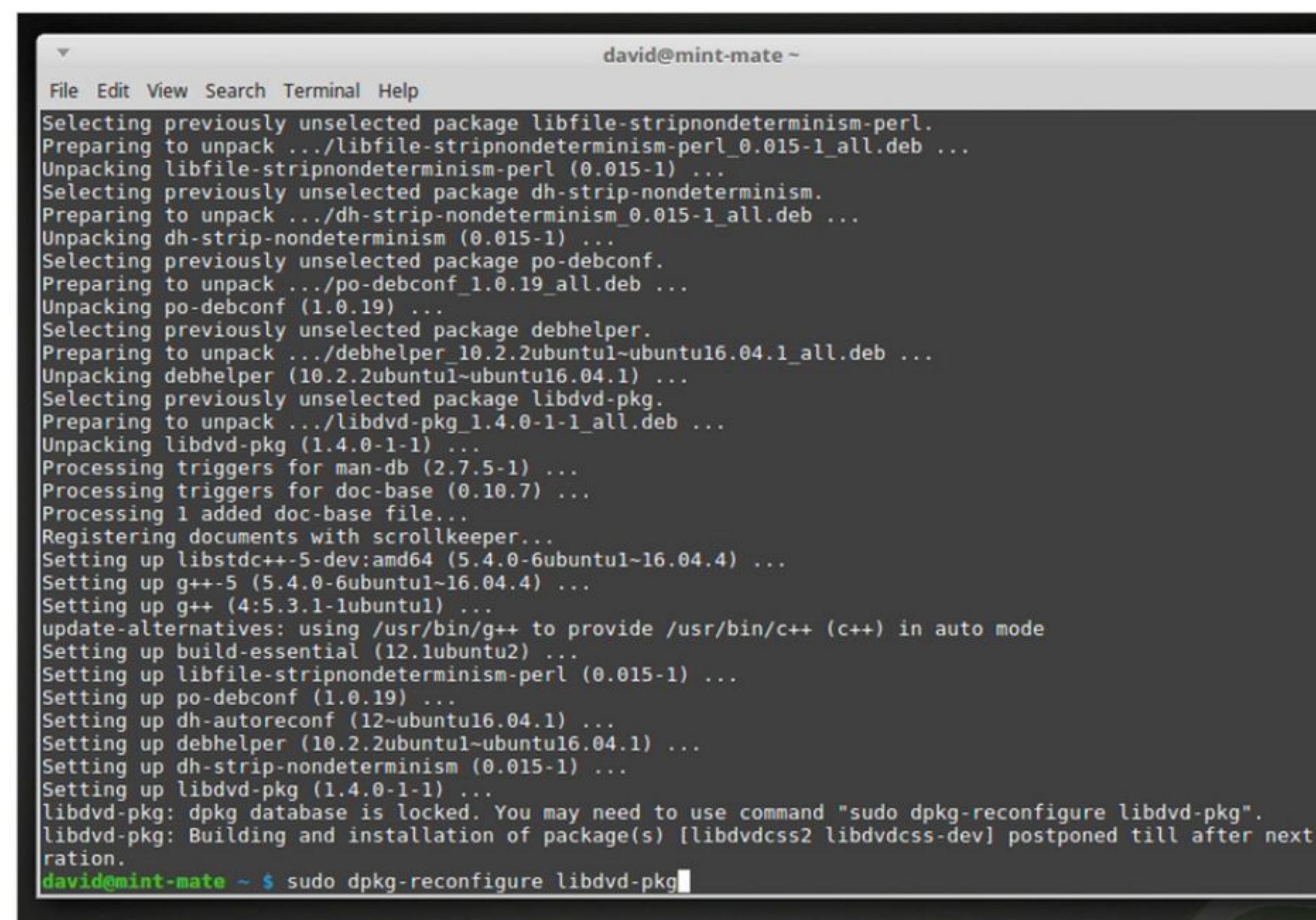
The available drivers for your detected hardware will be listed here. To install the hardware specific driver, click on the recommended versions of any graphics card, Wi-Fi or CPU drivers that are present, click the Apply Changes button and enter your password if asked. You ideally need to reboot your computer when the process is complete.

**STEP 7**

Although the third-party codecs for media playback were installed when you first set up Linux Mint, providing you ticked the box when asked during the installation process, you won't be able to play encrypted DVDs. On the Panel, click the Terminal icon (next to the Firefox icon) and enter: `sudo apt-get install libdvd-pkg`. Enter your password and accept any messages.

**STEP 8**

You may notice in the Terminal that a message pops up stating that the dpkg data is locked. If this happens, enter the following: `sudo dpkg-reconfigure libdvd-pkg` and press Enter. You can now continue with the set up, accepting any other messages that may pop up.

**STEP 9**

Enable the Linux Mint Firewall by clicking on the Menu button and typing 'firewall' into the search box. Click the Firewall Configuration icon from the search results and enter your password. Next to Status is the on/off slider, click it to enable the Mint Firewall and help protect your computer.

**STEP 10**

If you haven't already, right-click the desktop and choose Change Desktop Background. There's a good range of desktop wallpapers available in Linux Mint 18.1 or you can click the link Get More Backgrounds Online, to see what's available from the community pages.

