

Debian

# How to Change Debian Desktop Environment

2 years ago • by Sidratul Muntaha

In Linux, a desktop environment refers to the bundle of components that provide the common graphical user interface (GUI) components on the screen, such as icons, wallpapers, toolbars, widgets, etc. Thanks to the desktop environment, it's possible to use Linux with your mouse and keyboard like any other graphical operating system.

There are numerous desktop environments available on Debian, each with its own perks and features. Interested in switching to a new desktop environment? In this guide, we'll explore how to install and change the desktop environment on Debian.

## Desktop environment on Debian

Debian supports a wide range of desktop environments, from full-fledged desktop environments to lighter/minimalist alternatives. By default, Debian comes with the GNOME

desktop. Check out the [official Debian documentation on supported desktop environments, window managers, and display managers](#).

We'll be showcasing how to install additional desktop environments, for example, [GNOME](#), [Xfce](#), [LXDE](#), [KDE Plasma](#), and [MATE](#). All of them are directly available from the official Debian package repos.

## Installing desktop environment on Debian

It requires root permission to perform any system-level change on any Linux system. In Debian, the root permission is stricter by default. I'll be assuming that you have access to either the root account or a non-root user with sudo permission. Here's [how to grant a non-root user permission to sudo](#).

## Listing all available desktop environments

We need to check the list of all the available desktop environments. Run the following APT command.

```
$ apt show task-desktop
```

```
viktor@viktor-computer:~$ apt show task-desktop
Package: task-desktop
Version: 3.68
Priority: optional
Section: tasks
Source: tasksel
Maintainer: Debian Install System Team <debian-boot@lists.debian.org>
Installed-Size: 6,144 B
Depends: tasksel (= 3.68), xorg, xserver-xorg-video-all, xserver-xorg-input-all, desktop-base
Recommends: task-gnome-desktop | task-xfce-desktop | task-kde-desktop | task-lxde-desktop | task-gnome-flashback-desktop | task-cinnamon-desktop | task-mate-desktop | task-lxqt-desktop, xdg-utils, fonts-symbola, avahi-daemon, libnss-mdns, anacron, eject, iw, alsa-utils, sudo, firefox | firefox-esr
Download-Size: 1,036 B
APT-Manual-Installed: yes
APT-Sources: http://deb.debian.org/debian bullseye/main amd64 Packages
Description: Debian desktop environment
 This task package is used to install the Debian desktop.

viktor@viktor-computer:~$ |
```

Here, each desktop environment is denoted as a **task-<desktop\_environment>-desktop** format.

## Installing GNOME

This is the default desktop environment of Debian. It's one of the most widely used desktop environments. It also has its own suite of apps. GNOME is elegant and intuitive.

To install GNOME, run the following command.

```
$ sudo apt install task-gnome-desktop
```

```
viktor@viktor-computer: ~  
viktor@viktor-computer:~$ sudo apt install task-gnome-desktop  
[sudo] password for viktor:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
task-gnome-desktop is already the newest version (3.68).  
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.  
viktor@viktor-computer:~$ |
```

## Installing Xfce

Xfce is a lightweight desktop environment. It's designed for productivity while having minimal impact on system resources.

From the list of the available desktops, we've determined that Xfce is available as the package task-xfce-desktop.

Run the following APT command to install the Xfce desktop.

```
$ sudo apt install task-xfce-desktop
```

```
viktor@viktor-computer: ~  
viktor@viktor-computer:~$ sudo apt install task-xfce-desktop  
[sudo] password for viktor:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  atril atril-common cups-client cups-common exfalso exo-utils fonts-font-awesome fonts-lato  
  fonts-mathjax gimp-data gir1.2-gtksource-3.0 gir1.2-keybinder-3.0 gstreamer1.0-alsa hddtemp  
  libamd2 libatril-document3 libatril-view3 libbabl-0.1-0 libcaja-extension1 libcamd2  
  libccolamd2 libcholmod3 libexo-2.0 libexo-common libgarcon-1.0 libgarcon-common  
  libgarcon-gtk3-1.0 libgegl-0.4-0 libgegl-common libgimp2.0 libgtksourceview-3.0-1  
  libgtksourceview-3.0-common libjs-jquery libjs-mathjax libjs-sphinxdoc libjs-underscore  
  libkeybinder-3.0-0 liblightdm-gobject-1.0 libmetis5 libnotify-bin libqrencode4 libtagc0  
  libthunarx-3.0 libtumbler-1.0 libumfpack5 libutempter0 libxfce4panel-2.0-4 libxfce4ui-2.0  
  libxfce4ui-common libxfce4ui-utils libxfce4util-bin libxfce4util-common libxfce4util7  
  libxfconf-0.3 libxnvctrl0 libxpresent1 light-locker lightdm lightdm-gtk-greeter lm-sensors  
  mousepad parole pavucontrol python3-feedparser python3-musicbrainzngs python3-mutagen  
  python3-pyinotify quodlibet ristretto sphinx-rtd-theme-common system-config-printer  
  tango-icon-theme thunar thunar-archive-plugin thunar-data thunar-media-tags-plugin  
  thunar-volman tumbler tumbler-common xfburn xfce4 xfce4-appfinder xfce4-battery-plugin  
  xfce4-clipman xfce4-clipman-plugin xfce4-cpufreq-plugin xfce4-cpugraph-plugin  
  xfce4-datetime-plugin xfce4-dict xfce4-diskperf-plugin xfce4-fsguard-plugin  
  xfce4-genmon-plugin xfce4-goodies xfce4-helpers xfce4-mailwatch-plugin xfce4-netload-plugin  
  xfce4-notifyd xfce4-panel xfce4-places-plugin xfce4-power-manager xfce4-power-manager-data  
  xfce4-power-manager-plugins xfce4-pulseaudio-plugin xfce4-screenshooter
```

## Installing KDE Plasma

Plasma by KDE is a powerful desktop environment. It features ease of use, robust functionalities, and gorgeous graphics. It also comes with its own suite of applications.

To install KDE Plasma, tell APT to install the package task-kde-desktop.

```
$ sudo apt install task-kde-desktop
```

```
viktor@viktor-computer: ~  
viktor@viktor-computer:~$ sudo apt install task-kde-desktop  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  accountwizard akonadi-backend-mysql akonadi-contacts-data akonadi-mime-data akonadi-server  
  akregator apper apper-data apt-config-icons-hidpi apt-config-icons-large  
  apt-config-icons-large-hidpi ark baloo-kf5 bc bluedevil breeze breeze-cursor-theme  
  breeze-gtk-theme breeze-icon-theme bup bup-doc catdoc cdparanoia cups cups-browsed cups-bsd  
  cups-client cups-common cups-core-drivers cups-daemon cups-filters  
  cups-filters-core-drivers cups-ipp-utils cups-ppdc cups-server-common debconf-kde-data  
  debconf-kde-helper default-mysql-client-core default-mysql-server-core docbook-xsl dolphin  
  dragonplayer drkonqi dvd+rw-tools fonts-hack fonts-liberation fonts-noto fonts-noto-cjk  
  fonts-noto-cjk-extra fonts-noto-core fonts-noto-extra fonts-noto-hinted fonts-noto-ui-core  
  fonts-noto-ui-extra fonts-noto-unhinted frameworkintegration gdb-minimal genisoimage  
  ghostscript gimp gimp-data git git-man gnustep-base-common gnustep-base-runtime  
  gnustep-common graphviz growisofs gsfonts gwenview haveged hwdata ieee-data imagemagick  
  imagemagick-6-common imagemagick-6.q16 install-info juk k3b k3b-data k3b-il8n
```

## Installing LXDE

The goal of LXDE is to work on low-end machines with fewer hardware resources, for example, the older resource-constrained machines. Because of its nature, LXDE is also highly suitable for netbooks and other small computers.

To install LXDE, install the package task-lxde-desktop.

```
$ sudo apt install task-lxde-desktop
```

```

viktor@viktor-computer: ~
viktor@viktor-computer:~$ sudo apt install task-lxde-desktop
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  cups-client cups-common ffmpeg glib1b1 gimp-data gnome-brave-icon-theme gnome-colors
  gnome-colors-common gnome-dust-icon-theme gnome-human-icon-theme gnome-icon-theme
  gnome-illustrious-icon-theme gnome-noble-icon-theme gnome-system-tools
  gnome-wine-icon-theme gnome-wise-icon-theme gpicview gtk2-engines guicharmap libamd2
  libavdevice58 libayatana-appindicator1 libayatana-indicator7 libbabl-0.1-0 libcamd2
  libccolamd2 libcholmod3 libdbusmenu-gtk4 libdouble-conversion3 libfm-data libfm-extra4
  libfm-gtk-data libfm-gtk4 libfm-modules libfm4 libgegl-0.4-0 libgegl-common libgimp2.0
  libgtksourceview-3.0-1 libgtksourceview-3.0-common libid3tag0 libimlib2 libiw30
  libjpeg-turbo-progs libkeybinder0 liblightdm-gobject-1-0 libmad0 libmd4c0 libmenu-cache-bin
  libmenu-cache3 libmetis5 libnotify-bin libobrender32v5 libobt2v5 liboobs-1-5 libpcre2-16-0
  libqt5core5a libqt5dbus5 libqt5gui5 libqt5network5 libqt5svg5 libqt5widgets5 libqt5xml5

```

To install the LXQt desktop instead, install the package task-lxqt-desktop.

```
$ sudo apt install task-lxqt-desktop
```

```

viktor@viktor-computer: ~
viktor@viktor-computer:~$ sudo apt install task-lxqt-desktop
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  audacious audacious-plugins audacious-plugins-data cups-client cups-common feathernotes
  feathernotes-ll10n featherpad featherpad-ll10n ffmpeg ffmpegthumbnailer fonts-hack
  galternatives gimp-data guicharmap haveged hwdata kded5 kio kwayland-data
  kwayland-integration libamd2 libaribb24-0 libaudcore5 libaudgui5 libaudqt2 libaudtag3
  libavdevice58 libbabl-0.1-0 libcamd2 libccolamd2 libcdcd2 libcholmod3 libdbusmenu-qt5-2
  libdouble-conversion3 libdvbpsi10 libebml5 libfam0 libffmpegthumbnailer4v5 libfm-extra4
  libfm-qt-ll10n libfm-qt8 libgegl-0.4-0 libgegl-common libgimp2.0 libhavege2 libhfstospell11
  libixml10 libjpeg-turbo-progs libkf5archive5 libkf5attica5 libkf5auth-data libkf5authcore5
  libkf5codecs-data libkf5codecs5 libkf5completion-data libkf5completion5 libkf5config-bin
  libkf5config-data libkf5configcore5 libkf5configgui5 libkf5configwidgets-data
  libkf5configwidgets5 libkf5coreaddons-data libkf5coreaddons5 libkf5crash5

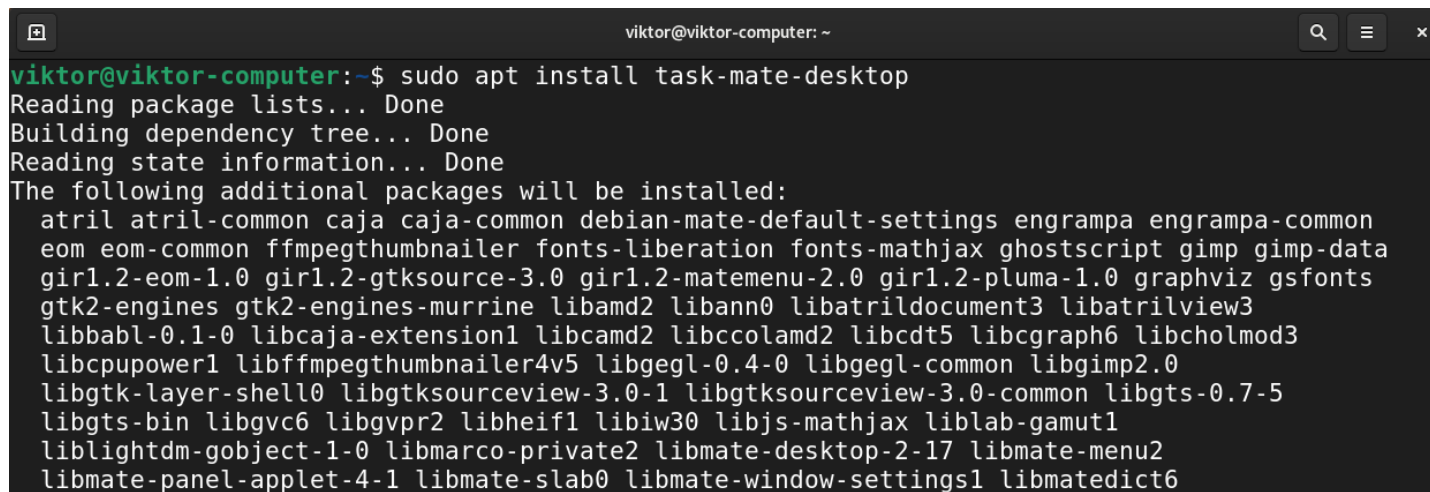
```

## Installing MATE desktop

The MATE desktop is the continuation of GNOME 2. It offers an intuitive and attractive desktop environment incorporating the traditional metaphors for Linux/UNIX-like operating systems.

Installing the package task-mate-desktop will install the MATE desktop.

```
$ sudo apt install task-mate-desktop
```

A terminal window titled 'viktor@viktor-computer: ~' showing the command 'sudo apt install task-mate-desktop' and its output. The output indicates that several additional packages will be installed along with the requested package.

```
viktor@viktor-computer:~$ sudo apt install task-mate-desktop
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  atril atril-common caja caja-common debian-mate-default-settings engrampa engrampa-common
  eom eom-common ffmpegthumbnailer fonts-liberation fonts-mathjax ghostscript gimp gimp-data
  gir1.2-eom-1.0 gir1.2-gtksource-3.0 gir1.2-matemenu-2.0 gir1.2-pluma-1.0 graphviz gsfonts
  gtk2-engines gtk2-engines-murrine libamd2 libann0 libatrildocument3 libatrilview3
  libbabl-0.1-0 libcaja-extension1 libcamd2 libccolamd2 libcdt5 libcgraph6 libcholmod3
  libcpupower1 libffmpegthumbnailer4v5 libgegl-0.4-0 libgegl-common libgimp2.0
  libgtk-layer-shell0 libgtksourceview-3.0-1 libgtksourceview-3.0-common libgts-0.7-5
  libgts-bin libgvc6 libgvpr2 libheif1 libiw30 libjs-mathjax liblab-gamut1
  liblightdm-gobject-1-0 libmarco-private2 libmate-desktop-2-17 libmate-menu2
  libmate-panel-applet-4-1 libmate-slab0 libmate-window-settings1 libmatedict6
```

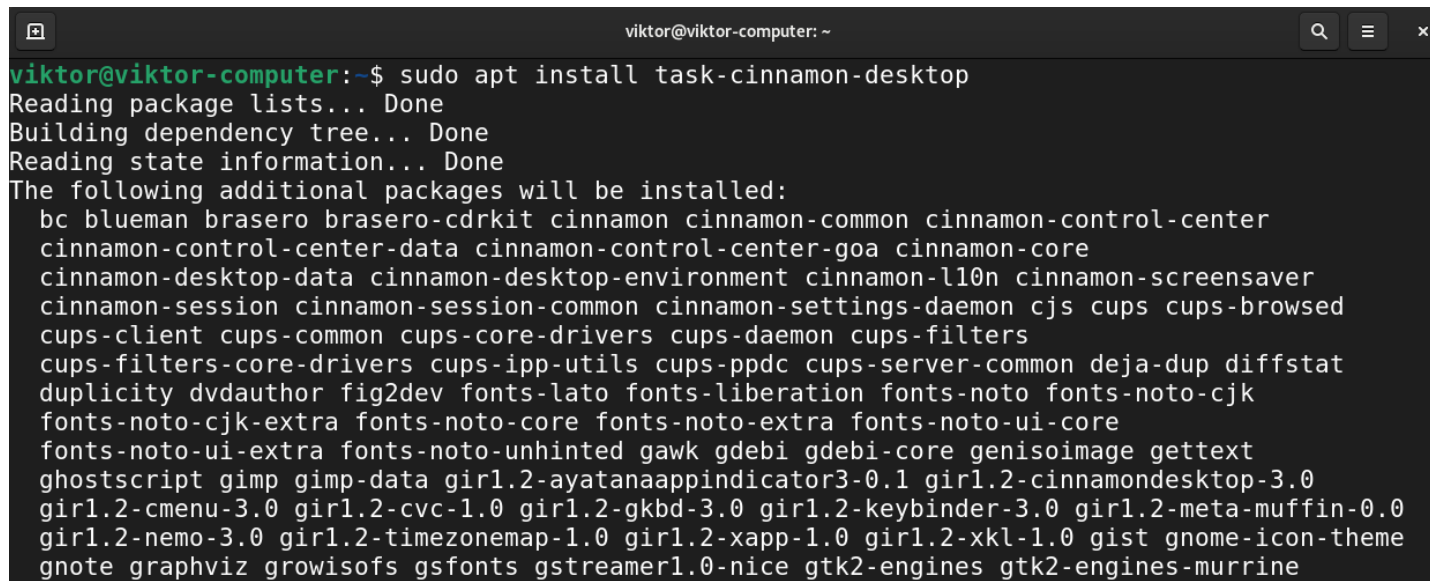
## Installing Cinnamon desktop

The Cinnamon desktop is a derivative of GNOME 3. However, it keeps the traditional desktop metaphor conventions. It's primarily developed as a part of Linux Mint. However, it's available on many other Linux distros (including Debian).



To install Cinnamon desktop, run the following command.

```
$ sudo apt install task-cinnamon-desktop
```



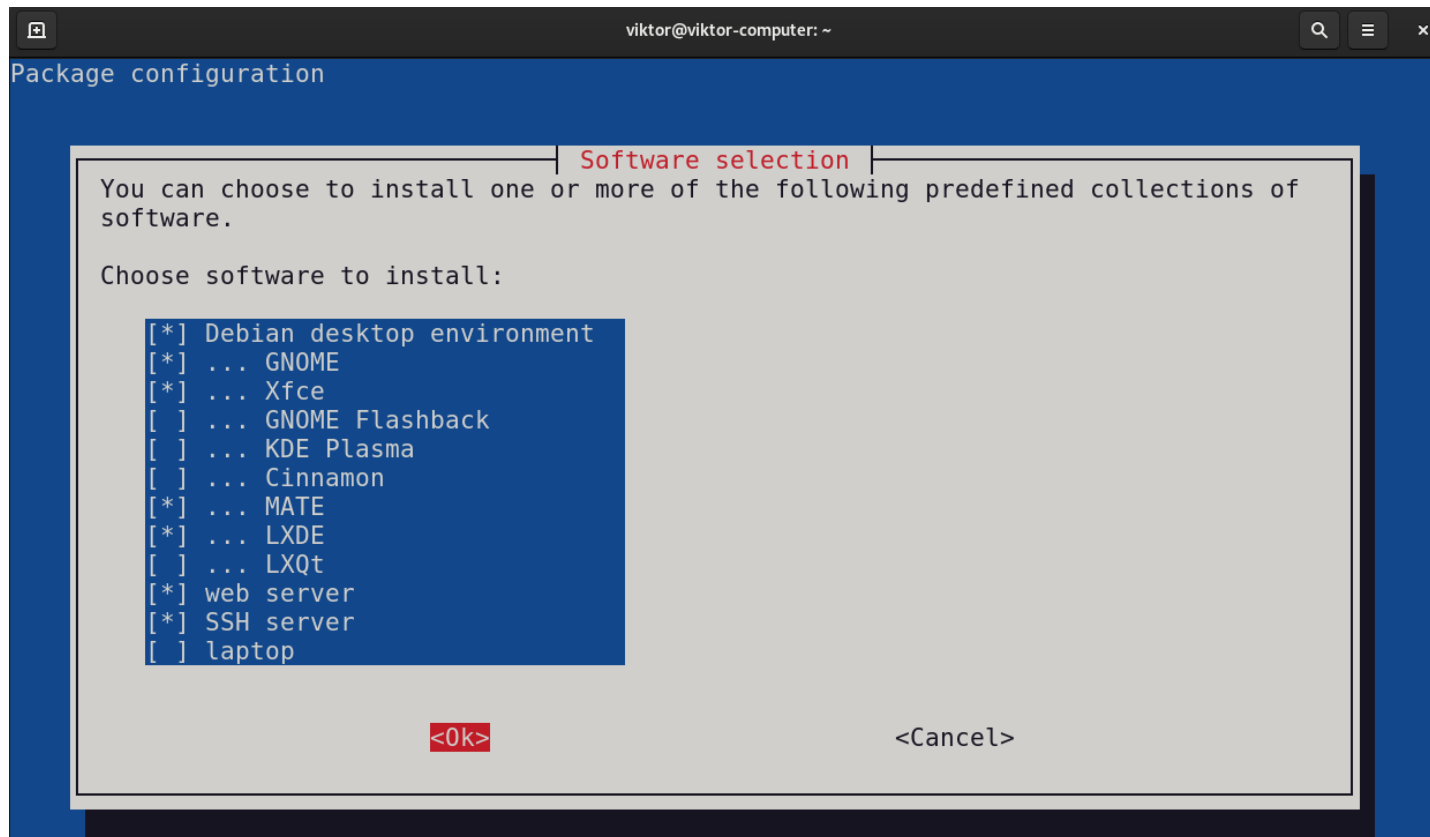
```
viktor@viktor-computer: ~  
viktor@viktor-computer:~$ sudo apt install task-cinnamon-desktop  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  bc blueman brasero brasero-cdrkit cinnamon cinnamon-common cinnamon-control-center  
  cinnamon-control-center-data cinnamon-control-center-goa cinnamon-core  
  cinnamon-desktop-data cinnamon-desktop-environment cinnamon-ll0n cinnamon-screensaver  
  cinnamon-session cinnamon-session-common cinnamon-settings-daemon cjs cups cups-browsed  
  cups-client cups-common cups-core-drivers cups-daemon cups-filters  
  cups-filters-core-drivers cups-ipp-utils cups-ppdc cups-server-common deja-dup diffstat  
  duplicity dvdauthor fig2dev fonts-lato fonts-liberation fonts-noto fonts-noto-cjk  
  fonts-noto-cjk-extra fonts-noto-core fonts-noto-extra fonts-noto-ui-core  
  fonts-noto-ui-extra fonts-noto-unhinted gawk gdebi gdebi-core genisoimage gettext  
  ghostscript gimp gimp-data gir1.2-ayatanaappindicator3-0.1 gir1.2-cinnamondesktop-3.0  
  gir1.2-cmenu-3.0 gir1.2-cvc-1.0 gir1.2-gkbd-3.0 gir1.2-keybinder-3.0 gir1.2-meta-muffin-0.0  
  gir1.2-nemo-3.0 gir1.2-timezonemap-1.0 gir1.2-xapp-1.0 gir1.2-xkl-1.0 gist gnome-icon-theme  
  gnote graphviz growisofs gsfonts gstreamer1.0-nice gtk2-engines gtk2-engines-murrine
```

## Installing desktop environments using tasksel

Instead of installing the desktop environments manually, we can use tasksel. It's a UI tool for easier management of tasks (including various desktop environments).

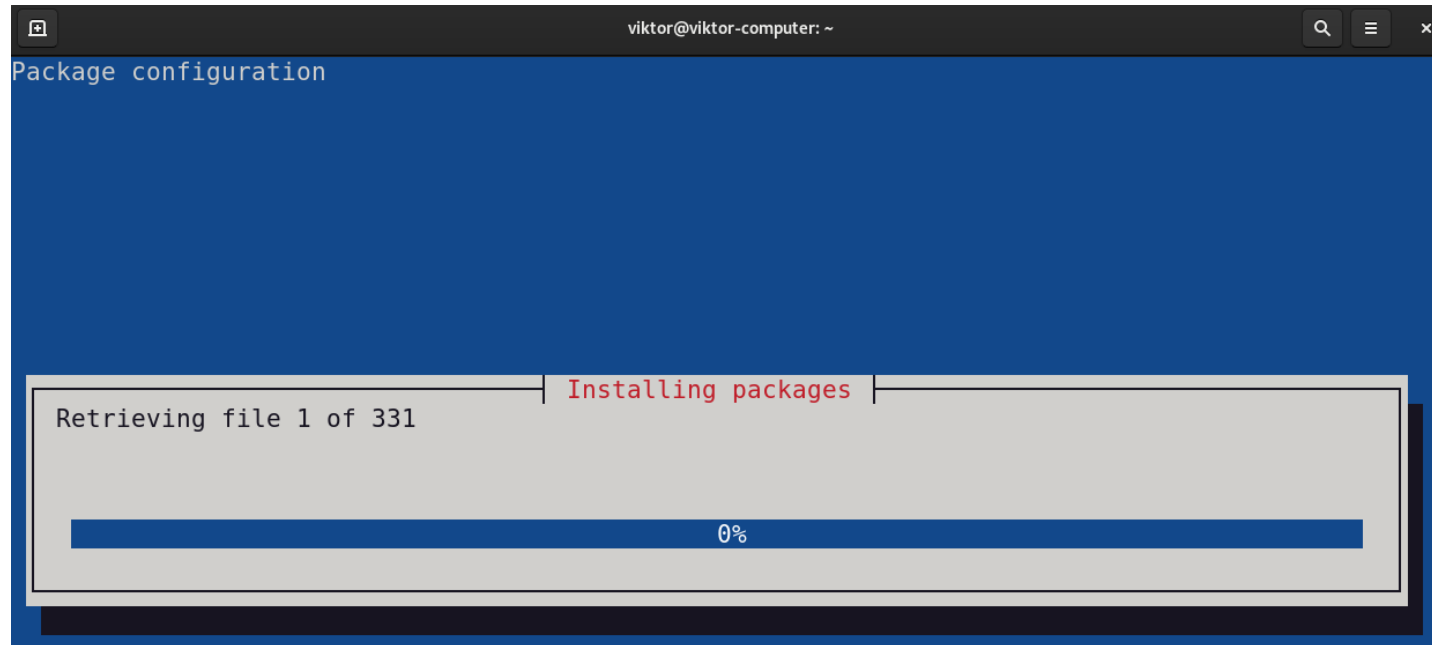
Launch tasksel.

```
$ sudo tasksel
```



Besides desktop environments, tasksel can also manage other component groups like **SSH server, web server, etc.** To select/deselect a component, press the spacebar. Select the desired desktop environment(s) you want to install, then select “Ok”.

The tool will download and install the necessary packages.



The man page of **tasksel** has an in-depth explanation of its functionalities.

```
$ man tasksel
```

```
TASKSEL(8)                                Debian specific manpage                                TASKSEL(8)

NAME
    tasksel - a user interface for installing tasks

SYNOPSIS
    tasksel install <task>

    tasksel remove <task>

    tasksel [options]

DESCRIPTION
    tasksel shows all available tasks and allows selecting ones to install

OPTIONS
    -t, --test
        test mode; don't actually install or remove packages

    --new-install
        automatically select some tasks without even displaying them to the user; default
        other tasks to on; used during new Debian installs.

    --list-tasks
        list on stdout the tasks that would be displayed in the tasksel interface

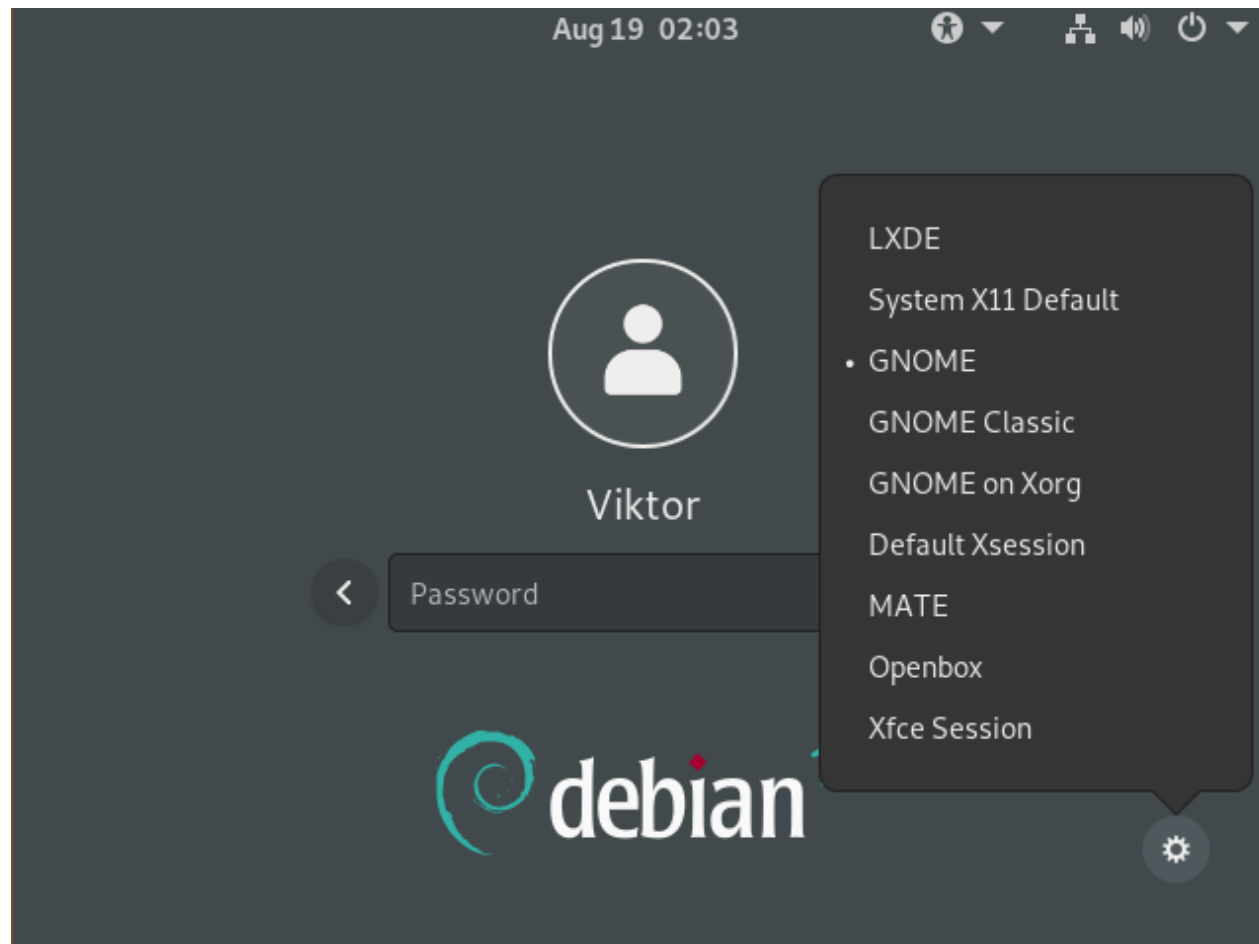
    --task-packages task
        lists on stdout the packages that are available and part of the given task

Manual page tasksel(8) line 1 (press h for help or q to quit)
```

## Switching to a different desktop environment

We now have all the desired desktop environments installed. Time to switch to the new desktop environment.

Log out of the current session or restart the system. From the login screen, click the gear icon.



Select the desired desktop environment. Log in to your user account as usual.

Voila! The new desktop environment is in action! If not changed, it will be the default desktop environment for the rest of the time.

## Final thoughts

Desktop environments offer an elegant way of interacting with the system. It also serves as visual customization.

We can further customize the look using themes. **GTK-based desktop environments (GNOME, MATE, Xfce, etc.)** can use numerous **GTK themes** to spice things up. Check out some of the [best GTK3 themes for Linux](#).

Happy computing!

## ABOUT THE AUTHOR



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