Ubuntu Desktop vs Ubuntu Server: What's the Difference?

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Ubuntu is one of the most widely used and popular Linux distributions, that comes in multiple editions including **Ubuntu Desktop**, **Ubuntu Server**, and **Ubuntu Core** to mention a few.

Ubuntu Desktop is a perfect choice for novices or users who are getting started out with Linux owing to its neat and intuitive user interface and default apps to help users get started.

Ubuntu Server is built for server environments, which is a lightweight and minimalistic version that is stripped off of any GUI applications and elements to enhance the speed and performance of running production-grade applications. It can serve as a web server, file server, development server, and DNS server to mention a few use cases.

In this guide, we will review some differences and similarities between these two **Ubuntu** editions.

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Differences Between Ubuntu Desktop and Ubuntu Server

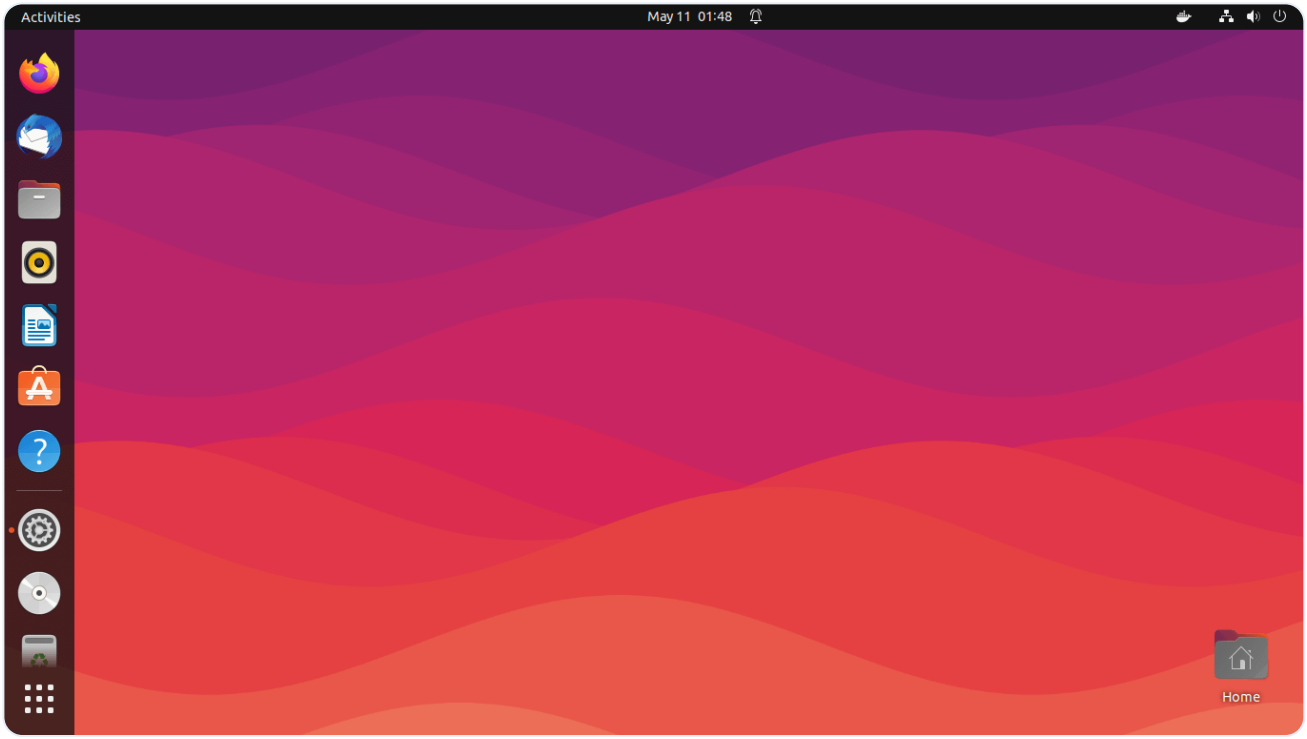
In this section, we are going to explore the differences between **Ubuntu Desktop** and **Ubuntu Server** based on the following parameters:

Ubuntu Graphical User Interface (GUI)

One parameter distinguishing **Ubuntu Desktop** from the **Server** is the presence of a Graphical User Interface, which provides a desktop environment out of the box. **Unity** has been the default environment for the longest until the introduction of **Ubuntu 18.04** (**Bionic Beaver**) which was the first Ubuntu desktop edition to feature **GNOME** desktop.

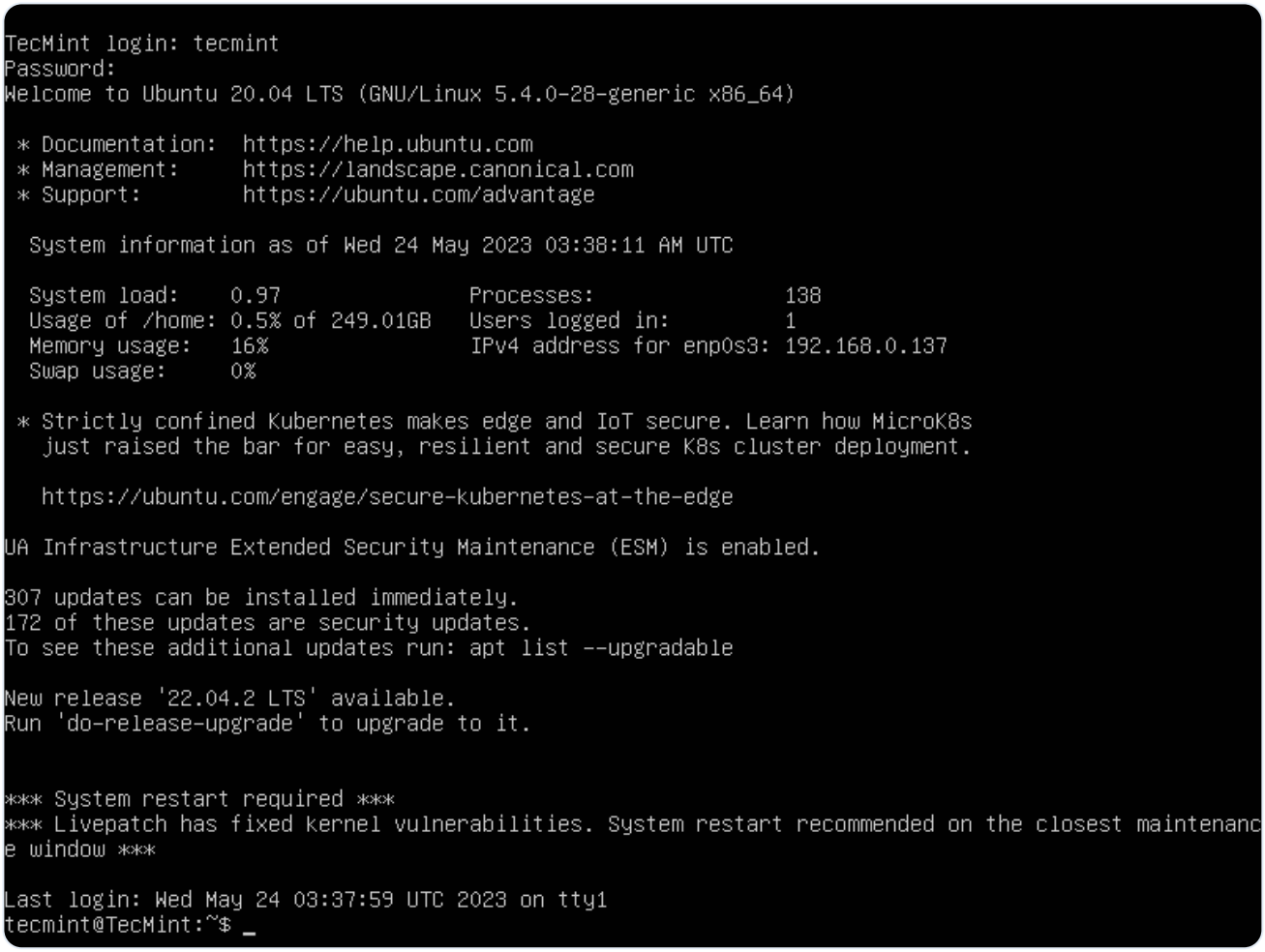
The GUI allows users to interact with the operating system using Windows, widgets, menus, icons, and other graphical elements. It's more intuitive, especially for beginners and users who are not adept at the (CLI) command line interface.

The administration of the Ubuntu desktop is pretty straightforward since the interaction is via the graphical interface. In addition, you can install remote software tools such as **TeamViewer**, **AnyDesk**, and **VNC Viewer** to remotely connect to your system.



Ubuntu Desktop

On the other hand, **Ubuntu Server** provides minimal installation and lacks a graphical interface. Administration of the server is mostly via CLI through SSH protocol. However, you can install web-based server-management tools such as Cockpit, Webmin, and Ajenti that will allow you to remotely administer your server on a browser.



Ubuntu Server

Ubuntu Memory Footprint

Ubuntu Desktop ISO image is quite big (**4.6GB** for **Ubuntu 22.04**) given the sheer number of software packages, libraries, and utilities that it bundles with by default. Therefore, ensure you have ample disk space when downloading the desktop version.

Ubuntu Server has a relatively small memory footprint (**1.8GB** for **Ubuntu 22.04**) for obvious reasons. It packs fewer software packages and utilities compared to the desktop edition.

Ubuntu Pre-Installed Software

Another major difference between **Ubuntu Desktop** and **Ubuntu Server** is in the number of pre-installed software applications.

Ubuntu Desktop ships with a vast array of pre-installed applications in almost every domain. Some of the applications you get out of the box include:

- Firefox Web browser
- LibreOffice suite
- Nautilus File Manager
- Thunderbird Email Client
- Screenshot Tool
- Multimedia app for watching videos, and playing mp3 files.
- Basic apps such as Calculator, Calendar, weather app, etc.

The **Ubuntu Server** is a stripped-down version of **Ubuntu Desktop** and only provides a handful of pre-loaded applications and software stacks that you can choose to install during installation, which includes:

- OpenSSH server
- LAMP server
- DNS server
- Print server
- Tomcat Java server
- Samba File server
- PostgreSQL database

Ubuntu Resource Utilization/Performance

As we have already seen, **Ubuntu Desktop** comes with a whole lot of pre-installed GUI applications, some of which might be considered bloatware if you are never going to use them at all.

The **GNOME** desktop environment is notorious for high CPU and RAM usage which can sometimes lead to degraded performance.

Firefox browser alone is known to cause sustained high resource usage in processing and displaying web content. For this reason, the Ubuntu desktop is not the right pick for server environments as high resource overhead will impact production-grade applications.

Ubuntu Server is stable and runs smoothly for the most part. It's devoid of bloatware and you get to choose which applications and services to run. Thus, it records better performance than the Ubuntu desktop and is a great choice for running enterprise applications.

Ubuntu System Requirements

Due to its lightweight and minimalistic nature, the Ubuntu server's recommended installation requirements are slightly lower compared to Ubuntu Desktop. Here is a comparison of the two.

Ubuntu Server

- 1 GHz CPU or higher
- 1GB RAM or more
- 4.0 GB of hard drive space or higher

Ubuntu Desktop

- 2 GHz CPU or higher
- 4 GB RAM or more
- GPU: VGA capable of 1024×768 screen resolution
- 25 GB of hard drive space or higher

Similarities Between Ubuntu Desktop and Ubuntu Server

Having looked at the differences, let us now explore the similarities between the two.

Ubuntu Maintainer

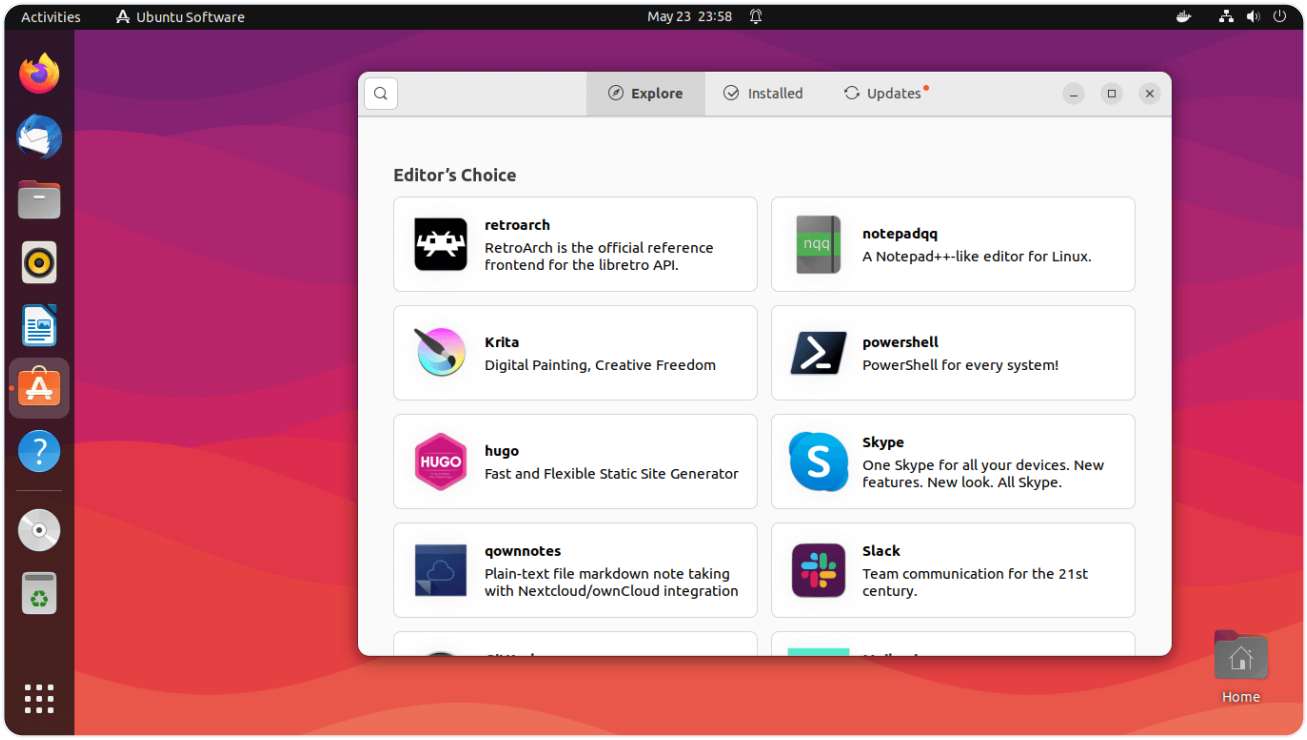
Both **Ubuntu Server** and **Ubuntu Desktop** are actively maintained by **Canonical** and get updates, bug fixes, and patches from the same company.

Ubuntu Software Repositories

Ubuntu Desktop and Server share the same application repositories. To be more specific, these include **Main**, **Multiverse**, **Universe**, and **Restricted**.

Ubuntu Package Management

Both editions use the APT package manager which handles dependencies quite well during the installation of software packages. However, Ubuntu desktop also provides **Software Center** which is a GUI package manager that allows users to install and manage packages without running commands. Another popular GUI package manager is **Gdebi**.



Ubuntu Software Center

The dpkg package manager is also used by both editions to install .deb packages from external sources other than the main repository.

Ubuntu Desktop provides **Gdebi** which is a tiny app that helps users install `.deb` files efficiently by handling dependencies.

Ubuntu Kernel Build

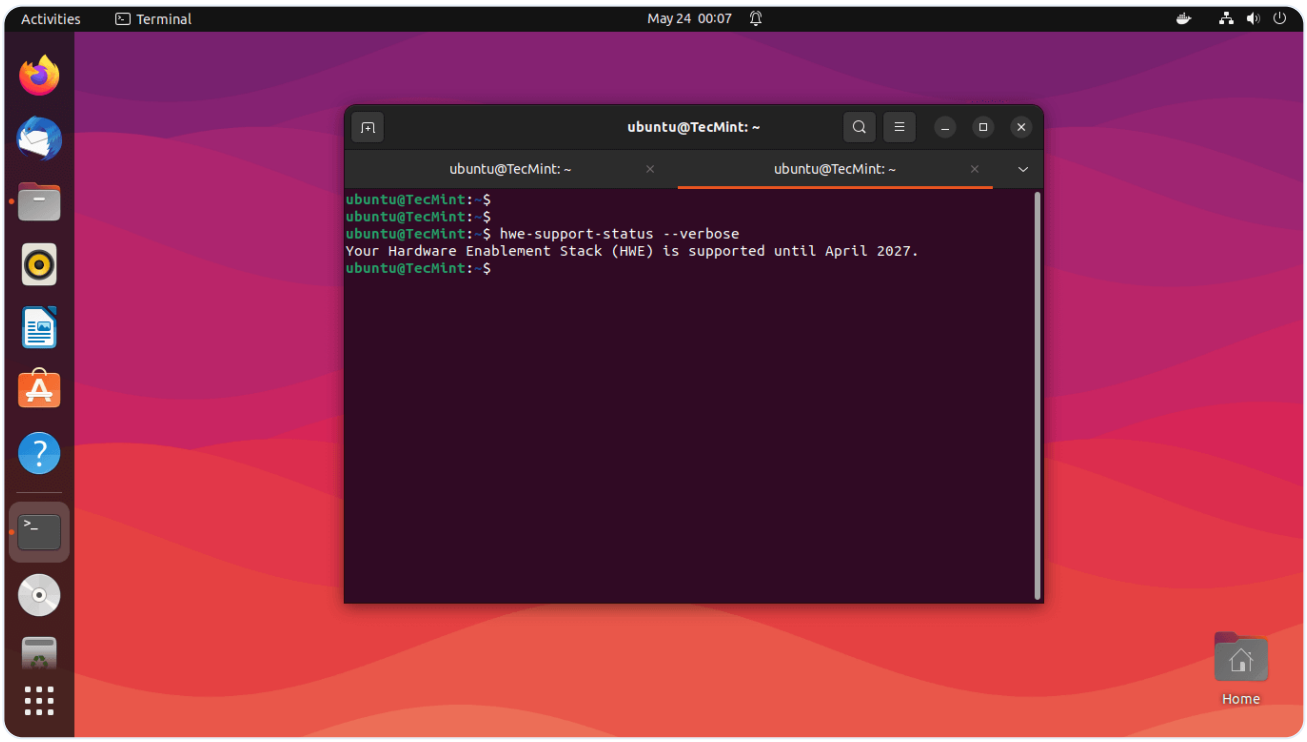
If you've been wondering whether Ubuntu desktop and server use the same kernel, then the answer is a resounding **YES**. This has been the case since the release of **Ubuntu 12.04 LTS**.

Ubuntu Support

Every **Ubuntu LTS** release enjoys 5 years of standard support and this includes critical s y fixes and patches as well as ongoing app updates.

You can check your Ubuntu support [EOL – End of Life] from the command line as shown.

```
$ hwe-support-status --verbose
```



Check Ubuntu EOL

When Should You Use Ubuntu Desktop and Ubuntu Server?

Ubuntu Desktop is typically what you would go for if you intend to run a desktop operating system that provides a wide collection of apps and utilities for everyday use. Whether it's office productivity, graphic design, video editing, or multimedia, Ubuntu Desktop is no doubt the right choice.

If you intend to host mission-critical applications, the **Ubuntu server** is recommended due to its great performance and stability. Its minimal nature ensures that most of the system resources are allocated to running intensive applications without service degradation.

You can comfortably run a web server, microservices using Docker and **Kubernetes**, and a myriad of other software stacks.

Conclusion

In this guide, we drew a comparison between **Ubuntu Desktop** and **Ubuntu Server** and flushed out the major differences and similarities between the two.

Typically, **Ubuntu Desktop** is a hot pick for home users and everyone who enjoys the appeal and elegance of a desktop environment. The server edition is majorly reserved for server workloads.

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This is James, a certified Linux administrator and a tech enthusiast who loves keeping in touch with emerging trends in the tech world. When I'm not running commands on the terminal, I'm taking listening to some cool music. taking a casual stroll or watching a nice movie.