



# Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #203 - March 2024



ubuntu Unity



## UBUNTU UNITY AND CUBUNTU REVIEWED

## HowTo



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### Text Colour

Red text using the `textcolor` syntax Outside to black.  
This is red text using the `color` syntax, remains red until color is changed.

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## Graphics



# Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

```
#An alias to make the ls command more detailed  
alias ls = "ls -la --color=always --classify"
```

Command & Conquer p.27



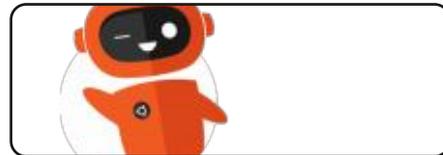
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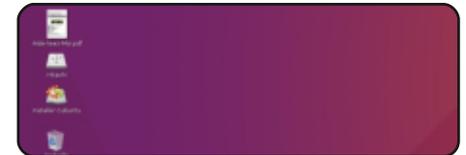
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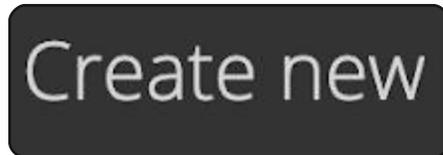
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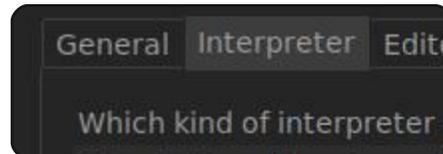
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## WELCOME TO THE LATEST ISSUE OF FULL CIRCLE

It's another full house this month with Python, Micro This Micro That, Latex, Stable Diffusion, and some Inkscape.

For reviews, we have Ubuntu Unity, and Cubuntu. You may not have heard of Cubuntu, but it is important in the history of Ubuntu and Linux. For games, we have Bzzt.

In other news: the Ubports team had a TouchDown day to show the devices running Touch and to show how far along Touch is these days. I wasn't there, but it looked fun. See their report elsewhere in this issue.

For his story, Art brings up ONLYOFFICE. You know, the one that's not LibreOffice. I'm not sure where it lies between OpenOffice and LibreOffice, or if they're even related, but it's always good to have an alternative.

Don't forget: we have a Table of Contents which lists every article from every issue of FCM. Huge thanks to **Paul Romano** for maintaining: <https://goo.gl/tpOKqm> and, if you're looking for some help, advice, or just a chinwag: remember that we have a **Telegram** group: <https://t.me/joinchat/24ec1oMFO1ZjZDc0>. I hope to see you there. Come and say hello.

All the best!

Ronnie

[ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org)



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## MIRACLE-WM, A COMPOSITE MANAGER BASED ON WAYLAND AND MIR:

19/02/2024

Matthew Kosarek from Canonical presented the first release of the new composite manager miracle-wm, which is based on the Wayland protocol and components for building Mir composite managers. Miracle-wm supports window tiling similar to the i3 window manager, the Hyprland composite manager and the Sway user environment. The project code is written in C++ and distributed under the GPLv3 license. Finished builds are generated in snap format.

Functionality offered in the first release of miracle-wm include, a tiled window management with the ability to leave stylish gaps between windows, the use of virtual desktops, support for reserving screen areas for placing panels, the ability to expand windows to full screen and support for multi-output, navigation and

control using the keyboard. Waybar can be used as a panel. Configuration is done through a configuration file.

The ultimate goal of the project is to create a composite server that uses tiled windowing, but is more functional and stylish than projects like Swayfx. They expect that miracle-wm will be useful for those users who prefer visual effects and brighter graphics with smooth transitions and colors. The first release is positioned as a preview version. The next two releases will also have this status, after that, the first stable release will be formed. To install miracle-wm you can use the command "sudo snap install miracle-wm --classic".

The next version plans to add support for floating overlapping windows, changing settings without restarting, options for customizing the screen, the ability to pin to a specific location on the desktop, IPC I3 support and highlighting active windows. Thereafter, preparations will begin for the first release, which will implement

support for animation effects, stacked window layout, overview mode for navigating windows and desktops, and a graphical interface for configuration.

<https://discourse.ubuntu.com/t/introducing-miracle-wm-a-wayland-compositor-built-on-mir/42583>

## WEBKIT ADDS SUPPORT FOR THE SKIA LIBRARY FOR RENDERING 2D GRAPHICS:

19/02/2024

The WebKit browser engine developed by Apple, used in browsers such as Safari and Epiphany (GNOME Web), has added the ability to use the Skia library for rendering 2D graphics, used in Google Chrome, Firefox, ChromeOS, Android and Flutter and supporting rendering with using GPUs (addition: it was initially stated that WebKit would switch to Skia, but later a new version of the announcement was published, which clarified that we are talking

only about WebKitGTK, and not WebKit from Apple). The porting was carried out by Igalia as part of an initiative to optimize the performance of WebKitGTK for GNOME. The reason cited for the migration was reaching a limit in the process of optimizing 2D rendering performance using the CPU, and the need to use the GPU to further improve performance.

A day later there was an update:

## A CLARIFICATION ABOUT WEBKIT SWITCHING TO SKIA

February 20, 2024

In the previous post I talked about the plans of the WebKit ports currently using Cairo to switch to Skia for 2D rendering. Apple ports don't use Cairo, so they won't be switching to Skia. I understand the post title was confusing, I'm sorry about that. The original post has been updated for clarity.

<https://blogs.igalia.com/carlosgc/2024/02/20/a-clarification-about-webkit-switching-to-skia/>

## VALVE OPEN SOURCED STEAM AUDIO TOOLKIT:

20/02/2024

Valve has announced the opening of the source code for the Steam Audio SDK and all related plugins. The code is written in C++ and published under the Apache 2.0 license, which allows you to adapt Steam Audio to your needs and use modified versions in various products, including commercial ones, without the need to open the source code of the changes made. Developers from the community interested in the development of Steam Audio also had the opportunity to participate in the development and submit their changes to the project. At the same time, Valve will continue to support and develop Steam Audio as before, but as an open project.

Steam Audio provides a wide range of tools for working with 3D surround sound in applications and simulating a sound environment, taking into account how it is perceived by the listener. Steam Audio can be useful in computer games and virtual reality systems to

create a realistic adaptive sound environment that changes depending on the position of the listener, turning or tilting the head, changing the distance from the sound source, sound reflection from objects and the appearance of obstacles between the listener and the sound source.

<https://steamcommunity.com/games/596420/announcements/detail/7745698166044243233>

## RAWTHERAPEE 5.10 RELEASED:

20/02/2024

After a year of development, RawTherapee 5.10 has been published, providing tools for photo editing and converting images in RAW format. The program supports a large number of RAW file formats, including cameras with Foveon- and X-Trans sensors, and can also work with the Adobe DNG standard and JPEG, PNG and TIFF formats (up to 32 bits per channel). The project code is written in C++ using GTK and is distributed under the GPLv3 license. Builds are prepared for Linux (AppImage) and Windows.

RawTherapee provides a set of tools for color correction, white balance, brightness and contrast, as well as automatic image enhancement and noise reduction functions. Several algorithms have been implemented to normalize image quality, adjust lighting, suppress noise, enhance details, combat unnecessary shadows, correct edges and perspective, automatically remove dead pixels and change exposure, increase sharpness, remove scratches and traces of dust.

<https://discuss.pixls.us/t/rawtherapee-5-10-released/42149>

## RELEASE OF LIGHTTPD 1.4.74:

20/02/2024

A new release of the lightweight http server lighttpd 1.4.74 has been published, focused on a combination of high performance, security, compliance with standards and configuration flexibility. Lighttpd is suitable for use on highly loaded systems and is aimed at low memory and CPU consumption. The project code is written in C and distributed under

the BSD license.

<https://blog.lighttpd.net/articles/2024/02/19/lighttpd-1.4.74-released/>

## KUBUNTU HAS ANNOUNCED A COMPETITION TO CREATE A LOGO AND BRANDING ELEMENTS:

21/02/2024

The developers of the Kubuntu distribution have announced a competition among graphic designers aimed at creating new branding elements, including the project logo, desktop screensaver, color palette and fonts. They plan to use the new design in the release of Kubuntu 24.04. The competition brief states the desire to achieve a recognizable and modern design that reflects the specifics of Kubuntu, is positively perceived by new and old users, and harmoniously combines with the KDE and Ubuntu styling. Admissions will be accepted until April 1. The authors of the three best works will receive branded merchandise worth \$50, and the winner will be awarded a Kubuntu

Focus NX MiniP computer worth more than \$1000.

<https://kubuntu.org/news/kubuntu-graphic-design-contest/>

## THE ARDOR 8.4 GTK2

FORK:

21/02/2024

Ardor 8.4 has been published, designed for multi-channel recording, processing and mixing of sound. Release 8.3 was skipped due to a serious bug discovered during the post-branch phase of Git. Ardor provides a multi-track timeline, an unlimited level of rollback of changes throughout the entire process of working with a file (even after closing the program), and support for a variety of hardware interfaces. The program is positioned as a free analogue of

professional tools ProTools, Nuendo, Pyramix and Sequoia. The code is distributed under the GPLv2 license. In the near future, unofficial builds for Linux will be generated in Flatpak format .

<https://ardour.org/whatsnew.html>

## RELEASE OF GCOMPRIS 4.0:

21/02/2024

GCompris 4.0 , a free learning center for preschool and primary school children, is out. The package provides 190 mini-lessons and modules, offering, from a simple graphics editor, to puzzles and keyboard simulator to lessons in mathematics, geography and reading training. GCompris uses the Qt library and is developed by the KDE community. Ready-made builds are created for Linux , macOS , Windows , Raspberry Pi and

Android .

<https://gcompris.net/news/2024-02-21-en.html>

## RELEASE OF GIMP 2.99.18. FREEZE BEFORE GIMP 3.0

RELEASE:

22/02/2024

The release of GIMP 2.99.18 is available, continuing the development of the functionality of the future stable branch GIMP 3.0, in which the transition to GTK3 was made. Also, standard support for Wayland and HiDPI was added, basic support for the CMYK color model was implemented (late binding), a significant cleanup of the code base was carried out, proposed a new API for plugin development, rendering caching has been implemented, support for

Multi-layer selection has been added, and editing in the original color space has been provided. A flatpak package is available for installation (org.gimp.GIMP in the flathub-beta repository), as well as builds for Windows and macOS.

GIMP 2.99.18 is announced as the last experimental release before the formation of a release candidate. All tasks planned for the release have been completed and development has been placed in a pre-release freeze state, implying a shift in attention to final testing and bug fixes (the interface will not change before the release, but individual API changes are allowed before the release candidate is released). The GIMP 3.0 release candidate is scheduled for mid-March, and the release, under optimal circumstances, is planned to be published in time for the Libre Graphics Meeting, which will take place May 9-12. At the same time, the deadlines are not strictly defined, and if serious problems are identified at the final stage of development, the release time will be shifted.

<https://www.gimp.org/news/2024/02/21/gimp-2-99-18-released/>



# DistroWatch.com

Put the fun back into computing. Use Linux, BSD.

## RELEASE OF MYLIBRARY 3.0:

22/02/2024

The home library cataloger, MyLibrary 3.0 has been released. The program code is written in C++ and is available (GitHub, GitFlic) under the GPLv3 license. The graphical user interface is implemented using the GTK4 library. The program is adapted to work on Linux and Windows operating systems. A ready-made package is available for Arch Linux users in the AUR. An experimental installer is available for Windows users.

MyLibrary catalogs book files in fb2, epub, pdf, djvu formats, both available directly and packaged in archives (zip, 7z, jar, cpio, iso, tar, tar.gz, tar.bz2, tar.xz, rar), and creates its own database without changing the source files or changing their position. Control of the integrity of the collection is carried out by creating a database of hash sums of files and archives.

<https://github.com/ProfessorNavigator/mylibrary/releases/tag/v3.0>

## RELEASE OF UBUNTU 22.04.4 LTS:

22/02/2024

An update to the Ubuntu 22.04.4 LTS distribution has been created, which includes changes related to improved hardware support, updating the Linux kernel and graphics stack, and fixing errors in the installer and bootloader. The package also includes current updates for several hundred packages related to eliminating vulnerabilities and issues affecting stability. At the same time, similar updates are presented to Ubuntu Budgie 22.04.4 LTS, Kubuntu 22.04.4 LTS, Ubuntu MATE 22.04.4 LTS, Ubuntu Studio 22.04.4 LTS, Lubuntu 22.04.4 LTS, Ubuntu Kylin 22.04.4 LTS and Xubuntu 22.04.4 LTS.

<https://lists.ubuntu.com/archives/ubuntu-announce/2024-February/000299.html>

## RELEASE OF ANTI-X 23.1:

23/02/2024

A new version of the lightweight Live distribution AntiX 23.1 has been published. It is built on Debian and aimed at installation on outdated equipment. The release is based on Debian 12, but ships without the systemd system manager and with eudev instead of udev. Runit or sysvinit can be used for initialization. The default user environment is created using the IceWM window manager, but fluxbox, jwm and herbstluftwm are also included in the package. ISO image sizes: 1.9 GB (full, includes LibreOffice and 4 window managers - IceWM, fluxbox, jwm and herbstluftwm), 1.2 GB (basic), 642 MB (without graphics) and 227 MB (network installation). Builds are prepared for x86\_64 and i386 architectures.

<https://antixlinux.com/antix-23-1-released/>

## ARMBIAN 24.2 IS AVAILABLE:

23/02/2024

Armbian 24.2 has been published, providing a compact

system environment for various single-board computers with processors based on ARM, RISC-V and x86 architectures, including various models of Raspberry Pi, Odroid, Orange Pi, Banana Pi, Helios64, pine64, Nanopi and Cubieboard based on Allwinner, Amlogic, Actionsemi, Freescale / NXP, Marvell Armada, Rockchip, Radxa and Samsung Exynos processors.

Debian and Ubuntu bases are used to generate builds, but the environment is completely rebuilt using its own build system, including optimizations to reduce size, increase performance, and apply additional security mechanisms. For example, the /var/log partition is mounted using zram and stored in RAM in a compressed form with data flushed to the drive once a day or upon shutdown. The /tmp partition is mounted using tmpfs.

The project supports more than 30 Linux kernel builds for different ARM and ARM64 platforms. To simplify the creation of your own system images, packages and distribution editions, an SDK is provided. ZSWAP is used for swapping. When logging in via SSH,

an option is provided to use two-factor authentication. The box64 emulator is included, allowing you to run programs compiled for processors based on the x86 architecture. Ready-made packages are offered for running custom environments based on KDE, GNOME, Budgie, Cinnamon, i3wm, Mate, Xfce and Xmonad.

<https://www.armbian.com/newsflash/armbian-24-2-kereru/>

## DIETPI 9.1:

24/02/2024

A new release of a specialized distribution, DietPi 9.1 has been published, intended for use on single-board PCs based on ARM and RISC-V architectures, such as Raspberry Pi, Orange Pi, NanoPi, BananaPi, BeagleBone Black, Rock64, Rock Pi, Quartz64, Pine64, Asus Tinker, Odroid and VisionFive 2. The distribution is built on Debian and is available for more than 50 boards. DietPi can also be used to create compact environments for virtual machines and regular PCs based on the x86\_64 architecture. Builds for boards are compact (on average

130 MB) and take up less space on a drive compared to Raspberry Pi OS and Armbian. Tools for building and maintaining the distribution are distributed under the GPLv2 license.

The project is optimized for minimal resource consumption and develops several of its own utilities: an interface for installing DietPi-Software applications, a DietPi-Config configurator, a DietPi-Backup backup system, a temporary logging mechanism DietPi-Ramlog (rsyslog is also supported), an interface for setting execution priorities DietPi-Services processes and DietPi-Update update delivery system. The utilities provide a console user interface with menus and dialogs based on whiptail. A fully automated installation mode is supported, allowing for unattended installation on boards.

[https://dietpi.com/docs/releases/v9\\_1/](https://dietpi.com/docs/releases/v9_1/)

## RELEASE OF TINY CORE LINUX 15.0:

26/02/2024

Tiny Core Linux 15.0 has been published, which can run on systems with 48 MB of RAM. The graphical environment of the distribution is built on the TinyX X server, the FLTK toolkit and the FLWM window manager. The distribution is loaded entirely into RAM and runs from memory. The bootable iso image takes up only 18 MB. For 64-bit systems, a CorePure64 assembly with a size of 24 MB has been prepared. Additionally, the CorePlus build (253 MB) is supplied, which includes a number of additional packages, such as a set of window managers (FLWM, JWM, IceWM, Fluxbox, Hackedbox, Openbox), an installer with the ability to install additional extensions, as well as a ready-made set of tools to provide output to a network, including a manager for setting up Wifi connections.

<https://forum.tinycorelinux.net/index.php/topic,26861.0.html>

## RELEASE OF CAD KICAD 8.0:

27/02/2024

After a year of development, the release of the free computer-aided design system for printed circuit boards KiCad 8.0.0 has been published. This is the second major release formed after the project came under the wing of the Linux Foundation. Builds are prepared for various distributions of Linux, Windows and macOS. The code is written in C++ using the wxWidgets library and is licensed under the GPLv3 license.

KiCad provides tools for editing electrical circuits and printed circuit boards, 3D visualization of the board, working with a library of electrical circuit elements, manipulating Gerber templates, simulating the operation of electronic circuits, editing printed circuit boards and project management. The project also provides libraries of electronic components, footprints and 3D models. According to some PCB manufacturers, about 15% of orders come with schematics prepared in KiCad.

<https://www.kicad.org/blog/2024/02/Version-8.0.0-Released/>

## TAILS 6.0, SWITCHED TO DEBIAN 12 AND GNOME 43:

27/02/2024

Tails 6.0 (The Amnesic Incognito Live System), based on Debian and intended for anonymous access to a network, has been created. Anonymous access to Tails is provided by the Tor system. All connections other than traffic through the Tor network are blocked by the packet filter by default. Encryption is used to store user data in the save user data between runs mode. An iso image capable of working in Live mode, 1 GB in size, has been prepared for downloading .

[https://tails.net/news/version\\_6.0/index.en.html](https://tails.net/news/version_6.0/index.en.html)

## THESEUS SHIP 6.0:

28/02/2024

The developers of the composite window manager KWinFT,

based on the KWin codebase , have announced that they are renaming the project Theseus Ship , moving development from GitLab to GitHub , and forming a major release of Theseus Ship 6.0. Theseus Ship supports Wayland and X11, is aimed at KDE Plasma, and can be used as a transparent replacement for KWin. The project code is written in C++ and is distributed under the GPLv2 license.

The Theseus Ship composite window manager differs from KWin by significant internal processing and the use of COMO (Compositor Modules) libraries, which form a set of compositing modules that can be used as base units for creating composite managers for Wayland and X11. COMO is initially developed with KDE integration in mind, but is not strictly tied to KDE and can be used in other desktop environments. COMO actively uses C++ templates, which makes it easy to replace functions and make changes to the operating logic. OpenGL is used to flatten the output.

The new release is notable for its transition to Qt 6 and adaptation for use with KDE Plasma 6, which is

expected to be released in a few hours. The devs added support for rendering using OpenGL drivers Lima (Mali 400), VC4 (VideoCore IV) and V3D (VideoCore 3D). Visual effects have been expanded and redesigned. To run X11 applications in the Wayland environment, Xwayland is automatically launched. They also added support for Wayland extensions `wlr_output_management_unstable_v1` for configuring output devices and `security_context_v1` for sandbox isolation.

<https://subdiff.org/blog/2024/kwinft-becomes-theseus-ship>

## RELEASE OF ZENTYAL 8.0:

28/02/2024

Three years after the last branch, the release of the server Linux distribution Zentyal 8.0 was published , built on the Ubuntu 22.04 LTS package base and specializing in creating servers for servicing the local network of small and medium businesses. The distribution is positioned as an alternative to Windows Server and includes components to replace Microsoft Active Directory and

Microsoft Exchange Server services. The iso image size is 2.9 GB. The commercial edition of the distribution is kept separately, while packages with Zentyal components are available to Ubuntu users through the standard Universe repository.

All aspects of the distribution are managed through a web interface, which integrates about 40 different modules for managing the network, network services, office server and enterprise infrastructure components. The distro supports fast roll out operation of a gateway, firewall, mail server, VoIP (Asterisk), VPN server, proxy (squid), file server, system for organizing employee interaction, monitoring system, backup server, network security system (Unified Threat Manager), as well as systems for organizing user login through Captive portal, etc. After installation, each of the supported modules is immediately ready to perform its functions. All modules are configured through wizard and do not require manual editing of configuration files.

<https://zentyal.com/news/zentyal-8-0-changelog/>

## RELEASE OF RAR 7.0

28/02/2024

**E**vgeniy Roshal has released a new major version of the RAR 7.0 archiver. The unrar source code continues to be available but is distributed under a restrictive license agreement. Ready-made builds are generated for Linux, macOS, Windows, Android and FreeBSD.

<https://www.rarlab.com/rarnew.htm>

## THE OPEN COLLECTIVE FOUNDATION HAS DECIDED TO CLOSE:

29/02/2024

**T**he Open Collective Foundation, a non-profit organization that provides financial and legal support to non-profit projects, has decided to close at the end of 2024. It is important to clarify that several independent legal entities are involved in maintaining the Open Collective ecosystem, which provides services for the collection of donations and financing of non-

profit projects. In addition to the closing non-profit organization, the Open Collective Foundation, there is the company Open Collective Inc, the non-profit organization Open Source Collective and the organization Open Collective Europe.

The reason for the closure of the Open Collective Foundation is the inefficiency of the business model used, taking into account the number of complex services provided and the commissions paid by Open Collective Inc. At the end of last year, the organization suspended accepting new applications and tried to develop a strategy to solve the financial problems that had arisen, but in the end they decided that the organization was not viable.

<https://blog.opencollective.com/open-collective-official-statement-ocf-dissolution/>

## RELEASE OF DISTROBOX 1.7:

29/02/2024

**D**istrobox 1.7 has been published, allowing you to quickly install and run any Linux

distribution in a container and ensure its integration with the main system. The project code is written in Shell and distributed under the GPLv3 license.

The project provides an add-on for Docker, Podman or LiliPod and is characterized by maximum simplification of work and integration of the running environment with the rest of the system. To create an environment with another distribution, just run one distrobox-create command without thinking about the intricacies. After launching, Distrobox forwards the user's home directory to the container, configures access to the X11 and Wayland server to run graphical applications from the container, allows you to connect external drives, adds audio output, and implements integration at the SSH agent, D-Bus and udev levels.

<https://github.com/89luca89/distrobox/releases/tag/1.7.0>

## RELEASE OF VIVALDI 6.6:

29/02/2024

**T**he release of the proprietary browser Vivaldi 6.6, developed based on the Chromium engine, has been published. Vivaldi builds are prepared for Linux, Windows and macOS. Changes made to the Chromium code base are distributed under an open license by the project. The browser interface is written in JavaScript using the React library, the Node.js platform, Browserify and various ready-made NPM modules. The implementation of the interface is available in source code, but under a proprietary license.

The browser is being developed by former Opera Presto developers and aims to create a customizable and functional browser that preserves the privacy of user data. Key features include a tracking and ad blocker, note, history and bookmark managers, private browsing mode, synchronization protected by end-to-end encryption, tab grouping mode, sidebar, configurator with a large number of settings, horizontal tab display mode, and also in test mode built-in email client, RSS reader and calendar.

<https://www.askvg.com/vivaldi-new-web-browser/>

## MICROSOFT PROPOSED IPE ACCESS CONTROL SYSTEM FOR THE LINUX KERNEL:

29/02/2024

The company put up a "for discussion" post on the Linux kernel developer mailing list: Code for an LSM module with an implementation of the IPE ( Integrity Policy Enforcement ) mechanism, which expands existing mandatory access control systems. Instead of binding to labels and paths in IPE, the decision to allow or deny an operation is made based on the persistent properties of the system component on which the operation is performed. The module allows you to define a general integrity policy for the entire system, indicating which operations are allowed and how the authenticity of components should be verified.

IPE aims to create fully verifiable systems whose integrity is verified from the boot loader and kernel to the final executables, configuration and boot files. For example, using IPE, you can specify

which executable files are allowed to run, taking into account their compliance with a reference version using cryptographic hashes provided by the dm-verity system. If a file is changed or replaced, IPE can block the operation or log the fact.

The proposed mechanism can be used in firmware for embedded devices, in which all software and settings are specially assembled and provided by the owner, for example, in Microsoft data centers, IPE is used in firewall equipment. What distinguishes IPE from other integrity checking systems, such as IMA, is its independence from metadata in the FS - all properties that determine the permissibility of operations are stored directly in the kernel.

<https://lkml.org/lkml/2024/2/28/1540>

## RELEASE OF /E/OS 1.20:

29/02/2024

A new release of the mobile platform /e/OS 1.20, aimed at maintaining the confidentiality of user data, has been presented. The

platform was founded by Gaël Duval, creator of the Mandrake Linux distribution. The project provides firmware for many popular smartphone models, and also under the Murena One, Murena Fairphone 3+/4 and Murena Teracube 2e brands offers editions of the OnePlus One, Fairphone 3+/4 and Teracube 2e smartphones with pre-installed /e/OS firmware. A total of 224 smartphones are officially supported .

The /e/OS firmware is being developed as a fork from the Android platform ( LineageOS developments are used ), freed from binding to Google services and infrastructure, which allows, on the one hand, to maintain compatibility with Android applications and simplify equipment support, and on the other hand, to block the transfer of telemetry to Google servers and ensure a high level of privacy. Implicit sending of information is also blocked, for example, contacting Google servers when checking network availability, resolving DNS and determining the exact time.

The user interface has been significantly redesigned and

includes its own environment for launching BlissLauncher applications, an improved notification system, a new lock screen and a different style. BlissLauncher uses a set of automatically scaling icons and a selection of widgets specially developed for the project.

<https://e.foundation/leaving-apple-google-welcome-e-os-1-20-and-the-improved-advanced-privacy/>

## RELEASE OF MUSL 1.2.5 STANDARD C LIBRARY:

01/03/2024

After 10 months of development, a new release of the standard C library Musl 1.2.5 is presented, providing a libc implementation that is suitable for use on both desktop PCs and servers, and on mobile systems, combining full support for standards (as in Glibc) with a small size, low resource consumption and high performance (as in uClibc, dietlibc and Android Bionic). There is support for all required C99 and POSIX 2008 interfaces, as well as C11 ( partially ) and a set of extensions for multi-threaded

programming (POSIX threads), memory management and working with locales. The Musl code is provided under the free MIT license.

<https://www.openwall.com/lists/musl/2024/03/01/2>

## RELEASE OF LIVE DISTRIBUTION GRML 2024.02:

01/03/2024

After more than a year of development, the live distribution grml 2024.02, based on Debian, has been released. The distribution contains a selection of programs for performing operations on processing text data using the texttools package and for performing system administration tasks (data recovery after a failure, incident analysis, etc.). The graphical environment is built using the Fluxbox window manager. The size of the full iso image is 915 MB, the minimal one is 508 MB.

<https://blog.grml.org/archives/413-Grml-new-stable-release-2024.02-available.html>

## RELEASE OF PROXMOX MAIL GATEWAY 8.1:

02/03/2024

Proxmox Mail Gateway 8.1, which is presented as a ready-made solution for quickly creating a system for monitoring mail traffic and protecting an internal mail server, has a new version. The installation ISO image is available for download free of charge. Distribution-specific components are licensed under the AGPLv3 license. To install updates, both a paid Enterprise repository and two free repositories are available, which differ in the level of update stabilization. The system part of the distribution is based on Debian. It is possible to install Proxmox Mail Gateway components on top of existing Debian-based servers.

Proxmox Mail Gateway functions as a proxy server, acting as a gateway between the external network and an internal mail server based on MS Exchange, Lotus Domino or Postfix. You can manage all incoming and outgoing mail flows. All correspondence logs are parsed and available for analysis via the web interface. Both graphs are

provided to assess overall dynamics, as well as various reports and forms to obtain information about specific letters and delivery status. It supports the creation of cluster configurations to ensure high availability (maintaining a synchronized backup server, data synchronized via an SSH tunnel) or load balancing.

<https://forum.proxmox.com/threads/proxmox-mail-gateway-8-1-available.142509/>

## MENUETOS 1.50:

02/03/2024

A new release of the MenuetOS 1.50 operating system has been published, coded entirely in assembler. MenuetOS builds are prepared for 64-bit x86 systems and can be run under QEMU. The system build occupies 1.4 MB and is created in the form of a floppy disk image and an iso image for burning to CD (running in VirtualBox is supported). The project's source code is distributed under a modified MIT license, which requires approval for any commercial use.

The system supports preemptive multitasking, booting on UEFI systems and SMP on multi-core systems. The project also develops its own X server and provides a built-in graphical user interface with support for themes, Drag&Drop operations, UTF-8 encoding and switching keyboard layouts.

To develop applications in assembler, they offer their own integrated development environment. There is a network stack and drivers for Loopback and Ethernet interfaces. The system supports work with USB 2.0, including USB drives, printers, DVB tuners and web cameras. AC97 and Intel HDA (ALC662/888) are supported for audio output.

The project also develops a simple HTTPC web browser, mail and ftp clients, a VNC client, ftp and http servers, applications for viewing images, editing texts, working with files, watching videos, playing music. To navigate through files, they suggest that you use the NDN (Necromancer's Dos Navigator) file manager, ported for MenuetOS.

You can run a DOS emulator and

games such as Quake and Doom. A multimedia player is being developed separately, written exclusively in assembly language and not using external libraries with codecs. The player supports TV/Radio broadcasting (DVB-T, mpeg-2 video, mpeg-1 layer I,II,III audio), DVD display, MP3 playback and video in MPEG-2 format.

<http://www.menuetos.net/index.htm>

## NIXBSD DEVELOPS A VARIANT OF NIXOS WITH A KERNEL FROM FREEBSD:

04/03/2024

NixBSD, developing an unofficial offshoot of the NixOS distribution, in which the FreeBSD kernel is used instead of the Linux kernel, was announced. To install programs, it uses the Nix package manager, which stores the result of building packages in subdirectories inside /nix/store and provides the ability to use several versions of one program. System parameters are configured through one configuration file. You can quickly roll back the system to a previous version of the configuration as with

NixOS.

<https://discourse.nixos.org/t/is-nixbsd-a-possibility/29612/34>

## RELEASE OF ARTI 1.2:

04/03/2024

The Tor network developers have published the release of the Arti 1.2.0 project, which is a Tor client written in Rust. The 1.x branch is marked as suitable for use by general users and provides the same level of privacy, usability, and stability as the main C implementation. The code is distributed under the Apache 2.0 and MIT licenses.

Unlike the C implementation, which was first designed as a SOCKS proxy and then tailored to other needs, Arti is initially developed in the form of a modular embeddable library that can be used by various applications. In addition, when developing a new project, all past Tor development experience is taken into account, which avoids known architectural problems and makes the project more modular and efficient.

The new version also fixes a vulnerability in the relay message processing code caused by the ability to send empty DATA messages, which can be used to substitute undetectable traffic indicators. The issue is rated Low because DATA packets are only accepted for threads that are already open.

[https://translate.google.com/website?sl=auto&tl=en&hl=en-US&u=https://blog.torproject.org/arti\\_1\\_2\\_0\\_released/](https://translate.google.com/website?sl=auto&tl=en&hl=en-US&u=https://blog.torproject.org/arti_1_2_0_released/)

## OPUS 1.5 AUDIO CODEC AVAILABLE:

05/03/2024

After almost a year of development, Xiph.Org, an organization dedicated to the development of free video and audio codecs, has unveiled the release of the Opus 1.5 audio codec, providing high-quality encoding and minimal latency for both high-bitrate streaming audio compression and voice compression in bandwidth-constrained applications VoIP telephony. The encoder and decoder reference implementations are licensed

under the BSD license. The complete specifications for the Opus format are publicly available, free of charge, and approved as an Internet standard (RFC 6716).

The codec was created by combining the best technologies from the CELT codec developed by Xiph.org and the SILK codec opened by Skype. In addition to Skype and Xiph.Org, companies such as Mozilla, Octasic, Broadcom and Google also took part in the development of Opus. The patents involved in Opus are provided by the companies involved in the development for unlimited use without payment of license fees. All Opus-related intellectual rights and patent licenses are automatically delegated to applications and products using Opus, without the need for additional approval. There are no restrictions on the scope of application and the creation of alternative third-party implementations. However, all rights granted are revoked in the event of patent litigation involving Opus technology against any user of Opus.

Opus features high encoding quality and low latency for both high-bitrate streaming audio and

voice compression in bandwidth-constrained VoIP telephony applications. Previously, Opus was recognized as the best codec when using a 64Kbit bitrate (Opus beat out competitors such as Apple HE-AAC, Nero HE-AAC, Vorbis and AAC LC). Products that support Opus out of the box include the Firefox browser, the GStreamer framework, and the FFmpeg package.

<http://lists.xiph.org/pipermail/opus/2024-March/004589.html>

## OPENSUSE TUMBLEWEED & SYSTEMD-BOOT:

05/03/2024

The developers of the openSUSE project announced the integration of support for the systemd-boot bootloader into the openSUSE Tumbleweed distribution. Compared to using the traditional GRUB boot loader, switching to systemd-boot will improve boot speed and enhance the security of the boot process. Currently, systemd-boot support is implemented as an option, and GRUB continues to be used by default, with the exception of

builds for QEMU, which plan to enable systemd-boot by default along with full-disk encryption soon.

The main goal of adding systemd-boot support to openSUSE is to make working with full-disk encryption easier and more efficient. If you use GRUB in a full-disk encryption configuration, code must be built into the bootloader to decrypt the data and obtain the key, which significantly complicates the bootloader code. When using systemd-boot, these operations are moved to the Linux kernel side and to a handler in user space.

In addition, MicroOS and openSUSE Tumbleweed use the Btrfs file system by default, working with snapshots in which complicates the loading process. Snapshot management is integrated into systemd-boot, which simplifies booting from individual snapshots and increases the efficiency of organizing kernel updates using the sdbootutil utility.

<https://news.opensuse.org/2024/03/05/systemd-boot-integration-in-os/>

<https://www.youtube.com/watch?v=drgo6pvn5hl>

## FREEBSD 13.3:

05/03/2024

After 11 months of development, FreeBSD 13.3 has been released. Installation images are generated for amd64, i386, powerpc, powerpc64, powerpc64le, powerpcspe, armv6, armv7, aarch64 and riscv64 architectures. Additionally, builds have been prepared for virtualization systems (QCOW2, VHD, VMDK, raw) and cloud environments Amazon EC2, Google Compute Engine and Vagrant. The FreeBSD 13.x branch is being developed in parallel with the FreeBSD 14 branch, for which release 14.0 was generated in the fall, and will continue to be supported until the end of January 2026. FreeBSD 13.4 is expected to be released in about a year.

<https://www.freebsd.org/releases/13.3R/announce/>

## AZURE LINUX:

06/03/2024

Microsoft has renamed the CBL-Mariner distribution to Azure Linux. Previously, the name Azure Linux was used for a specialized build installed on Azure Kubernetes Service (AKS), and the general platform for creating distributions was developed under the name CBL-Mariner (Common Base Linux Mariner). A few days ago, Microsoft renamed the CBL-Mariner repository to azurelinux, changed the names of the utilities, and replaced the mention of CBL-Mariner in the Azure Linux documentation. After this, the first release of the platform was formed with a new name - Azure Linux 2.0.20240301, which eliminated the accumulated errors and vulnerabilities in applications.

The Azure Linux distribution provides a small standard set of basic packages that serve as a universal basis for creating containers, host environments and services running in cloud infrastructures and on edge devices. More complex and specialized solutions can be created by adding additional packages on top of Azure Linux, but the foundation for all such systems remains the same, making it easier

to maintain and prepare updates.

<https://github.com/microsoft/azurelinux/pull/8136>

## LINUX MINT DEVELOPS NEW CHAT APP AFTER SHUTTING DOWN HEXCHAT:

06/03/2024

The developers of the Linux Mint distribution have announced a new application, Jargonaut, which attempts to create a simple chat implementation based on the use of the IRC protocol, but is not an IRC client in the traditional sense. Jargonaut provides a simple interface for users to chat, abstracted from IRC. The project code is written in Python and is distributed under the GPLv2 license. The interface is built using the xapp library, which provides an add-on for GTK with elements for unifying work in various user environments (Cinnamon, MATE and Xfce).

The reason for starting work on a new chat application is cited as the discontinuation of development of the HexChat IRC client, which was included in the

main part of Linux Mint. In early February, the HexChat maintainer published version 2.16.2, moved the repository to an archived state, and announced that the project would no longer be maintained. Development was stopped due to the lack of people willing to support the project due to lack of time and the desire to continue development with the current maintainer.

The Linux Mint developers used the current situation as an opportunity to realize their vision of what a lightweight communication application should look like. Continuing the development of Hexchat using Linux Mint was considered inappropriate, since for HexChat to work correctly on screens with high pixel density, a large amount of work was required to perform porting the application to GTK3.

As a result, it was decided to create a new application, initially written using current technologies and embodying the developers' idea of the chat they would like to see. For example, Jargonaut plans to build in support for the pastebin service, add the ability to insert images through the imgur service,

provide problem reporting, and implement some other functions that are not associated with traditional IRC functions.

<https://blog.linuxmint.com/?p%3D4650>

## FEDORA 41 IS SLATED TO REMOVE THE X11 SESSION FOR GNOME:

07/03/2024

FESCo (Fedora Engineering Steering Committee), responsible for the technical part of the development of the Fedora Linux distribution, has approved the removal of the gnome-session-xsession package, which is responsible for launching a GNOME session based on the X server. The change is planned for the release of Fedora 41, which will be released this fall. The only sessions supported by default in Fedora Workstation 41 will remain Wayland, but X11 session packages can still be installed from the repositories. However, the gnome-session-xsession package is marked as deprecated, and the GNOME developers intend to stop supporting X11 in the future.

Among the planned tasks, there is also the separation of the gnome-classic-session package, which includes extensions and settings for the GNOME Shell to recreate the classic session in the style of GNOME 2. The gnome-classic-session package will continue to be installed by default, but the code for X11 support is now separated the gnome-classic-session-x11 package, and the main package retains only Wayland-based session support.

Previously, the FESCo committee approved the end of support for the X11-based KDE session in Fedora 40. The decision was made in connection with the transition to the KDE 6 branch, where a session using the Wayland protocol is offered by default, and work using X11 is transferred to the category of options. To run X11 applications in Wayland-based environments, Xwayland continues to be supplied.

<https://pagure.io/fedora-workstation/issue/414%23comment-899128>

## BETA RELEASE OF OPENSUSE LEAP 15.6:

07/03/2024

Testing of the first beta release of the openSUSE Leap 15.6 distribution has begun. The release builds on the core set of packages shared with the SUSE Linux Enterprise 15 SP 6 distribution and also includes some custom applications from the openSUSE Tumbleweed repository . A universal DVD build of 4.3 GB (x86\_64, aarch64, ppc64le, 390x) is available for download. The release of openSUSE Leap 15.6 is expected on June 12, 2024. It is expected that openSUSE Leap 15.6 will be the last release in the 15.x series, and openSUSE Leap 16 will be released on the ALP platform in 2025.

<https://news.opensuse.org/2024/03/07/leap-reaches-beta-phase/>

## RELEASE OF ZORIN OS 17.1:

07/03/2024

The release of Zorin OS 17.1,

based on Ubuntu 22.04, has been presented . The target audience of the distribution is novice users who are accustomed to working in Windows. To manage the design, the distribution offers a special configurator that allows you to give the desktop a look typical of different versions of Windows and macOS, and includes a selection of programs close to the programs that Windows users are accustomed to. The boot iso image size is 3.5 GB. It is noted that the last release of Zorin OS 17 was downloaded more than 500 thousand times, with 78% of all downloads coming from users of the Windows and macOS platforms.

Zorin OS uses GNOME as its desktop base, with a set of its own add-ons and a panel based on Dash to Panel and Dash to Dock . Zorin Connect (powered by KDE Connect) is provided for desktop and smartphone integration. In addition to deb packages and Ubuntu repositories, support for Flatpak, AppImage and Snap formats is enabled by default, with the ability to install programs from the Flathub and Snap Store directories.

<https://blog.zorin.com/2024/03/07/zorin-os-17.1-is-released/>

## POSTFIX 3.9.0 MAIL SERVER

PUBLISHED:

08/03/2024

After almost a year of development, a new stable branch of the Postfix mail server - 3.9.0 was released. At the same time, the developers announced the end of support for the Postfix 3.5 branch, released at the beginning of 2020. Postfix is one of the rare projects that combines high security, reliability and performance at the same time, which was achieved thanks to a well-thought-out architecture and a fairly strict policy for code design and patch auditing. The project code is written in C and distributed under EPL 2.0 (Eclipse Public License) and IPL 1.0 (IBM Public License).

According to a January automated survey of about 400 thousand mail servers, Postfix is used on 36.81% (a year ago 33.18%) of mail servers, the share of Exim is 56.61% (a year ago 60.27%), Sendmail - 3.60% (3.62%), MailEnable - 1.82 % (1.86%), MDAemon - 0.40% (0.39%),

Microsoft Exchange - 0.19% (0.19%), OpenSMTPD - 0.09% (0.06%).

<https://www.mail-archive.com/postfix-announce@postfix.org/msg00098.html>

## KD LAB ASSOCIATION OPENS THE CODE FOR THE QDENGINE GAME ENGINE:

08/03/2024

The KD Lab association has opened the source code of the qdEngine game engine, designed for creating quest games. All code, with the exception of third-party libraries, is published under the GPLv3 license. The engine supports the Windows 10 platform and can be tested with resources from the game "The Good Soldier Schweik". They have a community Telegram channel here: [https://t.me/kdlab\\_association\\_chat](https://t.me/kdlab_association_chat)

<https://github.com/KD-lab-Open-Source/qdEngine>

## BRUCE PERENS PUBLISHED A DRAFT VERSION OF THE POST-OPEN LICENSE:

09/03/2024

Bruce Perens, one of the authors of the Open Source definition and co-founder of the Open Source Initiative, presented the first draft of a new "Post-Open Zero-Cost" license aimed at solving the accumulated problems associated with the interaction of open source developers and commercial companies in the context of obtaining a fair return on commercial use of the code. The license reflects the possibility of imposing additional conditions on commercial use, for example, companies are asked to pay for the benefits obtained as a result of using open source software either by participating in the development or by paying royalties that will be distributed among the direct developers.

The key difference between a Post-Open license and existing open licenses such as the GPL is the introduction of a contractual component that can be terminated if the terms of the license are violated. There are two types of

contractual agreements - free and paid. The paid agreement provides for the possibility of concluding an agreement for the provision of additional rights, and is used for the commercial distribution of products or changes without their public disclosure.

The license also defines the organization "POST-OPEN ADMINISTRATION", acting on behalf of the licensors, being their legal representative, defending their rights if necessary and distributing the funds received, taking into account the contribution to the development. The structure of the organization, which should use transparent processes in its activities, as well as financial mechanisms, has not yet been determined and is the subject of future discussions.

<https://perens.com/2024/03/08/post-open-license-first-draft/>

## THE LXQT DESKTOP READY FOR WAYLAND:

09/03/2024

The developers of the LXQt user environment reported that the

desktop is 100% ready to use Wayland. Changes have been made to the LXQt code base to convert PCManFM-Qt to use the layer-shell-qt component, which allows the desktop to function in Wayland-based environments without additional hacks that bypass compatibility with some composite managers, such as LabWC.

In its current form, LXQt is not tied to individual composite managers and can be used with LabWC, WayFire, kwin\_wayland, Sway, Hyprland, and possibly other Wayland-based composite managers. In accordance with the previously published plan. The release of LXQt 2.0, translated to Qt 6 and Wayland, is expected in April. The April release will feature a new "Fancy Menu" by default, which, in addition to categorizing apps, introduces a summary view of all apps and adds a list of frequently used apps.

<https://mastodon.social/@LXQt/112065354791368936>

## RELEASE OF LIBRESSL 3.9.0:

10/03/2024

The developers of the OpenBSD project presented a new release of a portable edition of the LibreSSL 3.9.0 package, where a fork of OpenSSL is being developed, aimed at providing a higher level of security. The LibreSSL project is focused on high-quality support for the SSL/TLS protocols by removing unnecessary functionality, adding additional security features, and significantly cleaning and reworking the code base. The LibreSSL 3.9.0 release is considered an experimental release that develops features that will be included in OpenBSD 7.5. At the same time, a stable release of LibreSSL 3.8.3 has been built, which fixes several Windows-specific errors and strengthens support for the CET (Control-flow Enforcement Technology) security mechanism.

<https://www.mail-archive.com/announce@openbsd.org/msg00517.html>

**LINUX KERNEL 6.8****RELEASED:**

11/03/2024

Strating this weeks news is the Linux kernel, after two months of development, Linus Torvalds presented version 6.8. Notable changes include: the Xe driver for Intel GPUs, the protection mode for block devices with mounted file systems, the Deadline server task scheduler mechanism, automatic optimization of merging identical memory pages, the first driver in the Rust language, listmount and statmount system calls, removal of bpfiler and SLAB mechanism guest\_memfd in KVM, data access profiling.

The new version includes 15,641 fixes from 2018 developers, the patch size is 44 MB (the changes affected 12,212 files, 663,864 lines of code were added, 339,094 lines were deleted). The last release had 18405 fixes from 2066 developers, the patch size was 72 MB. About 42% of all changes introduced in 6.8 are related to device drivers, approximately 15% of changes are related to updating code specific to hardware architectures, 14% are related to the network stack, 6%

are related to file systems, and 3% are related to internal kernel subsystems.

There are 9.996 million objects in the Git repository with kernel 6.8, which indicates that the next kernel 6.9 will pass the landmark 10 million Git objects. Previously, the change in branch numbers 3.x and 4.x correlated well with the number of git objects in the repository - when kernel 3.0 was released when there were approximately 2 million objects in the repository, and kernel 4.0 - 4 million objects. At the same time, in 2019, release 5.0 broke this logical chain, since when it was formed, the repository included approximately 6.5 million git objects.

<https://lkml.org/lkml/2024/3/10/243>

**RELEASE OF TENV 1.2.0:**

11/03/2024

A new version of tenv 1.2.0 has been published - a console manager for managing versions of the Terraform , Terragrunt and OpenTofu platforms used to manage external resources and

automate the maintenance of infrastructure in accordance with the " infrastructure as code " model. tenv is written in Go, does not require additional dependencies and can be run on any operating system. The code is distributed under the Apache 2.0 license.

Unlike its competitors, tenv does not require dependencies like bash and jq, and offers additional features such as automatically detecting and installing Terraform/ OpenTofu distributions, as well as checking the signatures of installed versions using cosign .

<https://github.com/tofuutils/tenv/releases/tag/v1.2.0>

**RELEASE OF OPENSSH 9.7:**

11/03/2024

A new release of OpenSSH 9.7 has been published. It is an open implementation of a client and server for working over the SSH 2.0 and SFTP protocols. The proposed version has begun making changes to anticipate the future deprecation of DSA-based keys. OpenSSH 9.7 provides an option to

disable DSA at compile time, but the default build with DSA support is retained for now. In the next release, scheduled for June, the build mode will be changed to disable DSA by default, and the DSA implementation will be removed from the codebase in early 2025.

The new release offers a new type of timeout in ssh and sshd, enabled by specifying the value "global" in the ChannelTimeout directive. In the new mode, OpenSSH monitors all open channels and closes them at once if there is no traffic on all of them for a specified period of time. For example, when both SSH session and X11 redirection channels are open to a host at the same time, the new mode allows both channels to be closed at once if they are inactive, instead of separately tracking timeouts for each channel. There is also a significant improvement in compatibility with the PuTTY project.

<https://lists.mindrot.org/pipermail/openssh-unix-dev/2024-March/041264.html>

## THE OPENAI PROJECT HAS OPENED TRANSFORMER DEBUGGER:

12/03/2024

The OpenAI project, that develops public projects in the field of artificial intelligence, has published a debugger called Transformer Debugger. It is designed to analyze the activation of structures in machine learning language models when processing certain data. Like traditional debuggers, Transformer Debugger supports step-by-step navigation through model output, tracing, and interception of specific activity. In general, Transformer Debugger allows you to understand why a language model displays one token instead of another in response to a certain request, or why the model pays more attention to certain tokens in a request. The code is written in Python and is distributed under the MIT license.

<https://github.com/openai/transformer-debugger>

## GTK 4.14 WITH NEW ENGINES FOR OpenGL AND VULKAN:

12/03/2024

After seven months of development, a new release of a multi-platform toolkit for creating a graphical user interfaces has been published - GTK 4.14.0 . GTK 4 is being developed as part of a new development process that attempts to provide application developers with a stable and supported API for several years that can be used without the fear of having to rewrite applications every six months due to API changes in the next GTK branch.

In the future, they plan to form an experimental branch 4.90, which will develop functionality for the future release of GTK5. The GTK5 branch will include changes that break compatibility at the API level, for example, related to deprecating some widgets, such as the old file selection dialog. The possibility of ending support for the X11 protocol in the GTK5 branch and being able to work with only using the Wayland protocol is also being discussed.

<https://gitlab.gnome.org/GNOME/gtk/-/tags/4.14.0>

## OBS STUDIO 30.1

RELEASED:

13/03/2024

OBS Studio 30.1 , a suite for streaming, compositing and video recording, has been released. The code is written in C/C++ and distributed under the GPLv2 license. Builds are created for Linux ( flatpak ), Windows and macOS.

The goal of developing OBS Studio was to create a portable version of the Open Broadcaster Software (OBS Classic) application that is not tied to the Windows platform, supports OpenGL and is extensible through plugins. Another difference is the use of a modular architecture, which implies the separation of the interface and the core of the program, as opposed to classic. It supports transcoding of source streams, video capture during games and streaming to PeerTube, Twitch, Facebook Gaming, YouTube, DailyMotion, Hitbox and other services. To ensure high performance, you can use hardware

acceleration mechanisms (for example, NVENC, Intel QSV and VA-API).

Support is provided for compositing with scene construction based on arbitrary video streams, data from web cameras, video capture cards, images, text, the contents of application windows or the entire screen. During broadcasting, you can switch between several predefined scenes. The program also provides tools for audio mixing, filtering using VST plugins, volume equalization and noise reduction.

<https://github.com/obsproject/obs-studio/releases/tag/30.1.0>

## THE OLD NTFS DRIVER & LINUX KERNEL 6.9:

13/03/2024

Sticking with kernel news, Linus Torvalds has approved a request to remove the old NTFS file system driver from the Linux kernel. Starting with release 5.15, the kernel includes the new NTFS3 driver, developed and maintained by Paragon Software. Providing two

drivers with NTFS implementation in the kernel is impractical, given that the old driver has not been updated for many years, is in a deplorable state and can only work in read mode.

The new NTFS3 driver supports write mode and all the features of the current version of NTFS 3.1, including extended file attributes, access lists (ACLs), data compression mode, effective work with empty spaces in files (sparse) and replaying changes from the log to restore integrity after failures. Removing the old driver should not affect distributions, since, for example, Debian does not build or use NTFS drivers from the kernel at all, but instead offers users an ntfs-3g implementation that runs in user space. Arch Linux uses the new ntfs3 driver by default.

<https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git/commit/?id%3D77417942e49017ff6d0b3d57b8974ab1d63d592c>

## PDP-10 MAINFRAME ON RASPBERRY PI 5:

14/03/2024

Vintage computer enthusiasts have published Project PiDP-10, aimed at creating a working reconstruction of the DEC PDP-10 KA10 mainframe from 1968. A new plastic control panel housing was manufactured for the device, equipped with 124 lamp indicators and 74 switches. The computing components and software environment are recreated using a Raspberry Pi 5 board with the Debian-based Raspberry Pi OS distribution and the SIMH toolkit, which supports full PDP-10 simulation, including reproducing known errors.

The emulator can run the TOPS-10 multitasking and multi-user operating system, which was originally shipped on PDP-10 mainframes. The alternative ITS operating system, developed in 1967 at MIT for the PDP-10, is also supported as an option. More than 400 historical applications recovered from MIT tape archives are available to run on ITS. The code for the components used by the project and the script for

automating the installation are published on GitHub. To launch ITS, assembly tools developed by enthusiasts were used.

A PiDP-10 commissioning event is scheduled for April 1 at the MIT Computer Museum, which will be combined with a seminar on the history of the PDP-10 at MIT. Among the projects being developed in parallel, one can note the creation of clones for the computers Whirlwind (1945), PDP-1 (1959), PDP-8 (1968) and PDP-11/70 (1975). The project is also involved in a complete renovation of the PDP-10 computer center room, which will provide a truly immersive experience of 1960s computing.

<https://obsolescence.dev/pidp10>

## UPDATING VOID LINUX INSTALLATION BUILDS:

15/03/2024

New bootable builds of Void Linux have been generated, which is an independent project that does not use the developments of other distributions and is developed using a rolling release cycle. Previous

builds were published a year ago. Apart from the appearance of current boot images based on a more recent slice of the system, updating builds does not bring functional changes and their use only makes sense for new installations.

Builds are available in versions based on the Glibc and Musl system libraries. Live images with the Xfce desktop and a basic console build have been prepared for the x86\_64, i686, armv6l, armv7l and aarch64 platforms. ARM builds support BeagleBone/BeagleBone Black, Cubieboard 2, Odroid U2/U3 and Raspberry Pi boards.

The distribution uses the runit system manager to initialize and manage services. To manage packages, they are developing their own xbps package manager and xbps-src package build system. Xbps allows you to install, uninstall, and update applications, detect shared library incompatibilities, and manage dependencies. You can use Musl as a standard library instead of Glibc. Systems developed by Void are distributed under the BSD license.

<https://voidlinux.org/news/2024/03/new-images.html>

## UPDATE OF MINECLONIA 0.97:

15/03/2024

Update 0.97 has been released for the game Mineclonia, which is a fork of Mineclone2 and made on the Minetest engine. What sets Mineclonia apart from Mineclone2 is its emphasis on stability and performance. At the moment, the game has more features than Mineclone2, but at the same time, in-game music (to reduce size) and “hamburgers”, which were not present in Minecraft and had a negative impact on performance, were deliberately removed from Mineclone. The project code is written in Lua and is distributed under the GPLv3 license.

Among the changes in the new version are the addition of a level cost on the anvil, the implementation of a fishing rod and the addition of the ability to fish, as well as fixing some bugs.

<https://content.minetest.net/packages/ryvnf/mineclonia/>

## FIRST RELEASE OF TILEOS:

15/03/2024

TileOS 1.0 "T-Rex" is now available, built on Debian and offering a desktop using tiled window managers. TileOS pursues the same goals as the Ubuntu Sway Remix distribution (developed by the same author), offering a ready-to-use interface that does not require additional configuration and is aimed at both experienced Linux users and beginners who want to try out a tiled window manager environment without spending a lot of time setting them up.

However, unlike Ubuntu Sway Remix, TileOS is much more open to changes and customization, and is free of any potential copyright issues (Ubuntu Sway Remix uses registered Canonical trademarks, but there has been no official response regarding the distro's inclusion in the official Ubuntu family has not yet been received). Builds for the amd64 architecture have been prepared for download (in the future, he plans to provide support for arm64, in particular

Raspberry Pi boards). The source code for TileOS components is available on GitLab.

<https://tile-os.com/>

## RELEASE OF LIBADWAITA 1.5:

16/03/2024

The GNOME Project has published the release of Libadwaita 1.5, which includes a set of components for user interface styling that follows the GNOME HIG (Human Interface Guidelines). The library includes ready-made widgets and objects for building applications that comply with the general GNOME style, that can be adaptively adjusted to screens of any size. The library code is written in C and is distributed under the LGPL 2.1+ license.

The libadwaita library is used in conjunction with GTK4 and includes components of the Adwaita theme. Moving GNOME styling elements into a separate library allows GNOME-specific changes to be developed separately from GTK, allowing GTK developers to focus on the core stuff and GNOME

developers to more quickly and flexibly push forward styling changes they want without affecting GTK itself.

The main change in libadwaita 1.5 was the reworking of adaptive widgets to create dialog boxes that adjust to the size of the visible area. Unlike traditional dialogs, which are housed in separate windows, new dialogs are rendered client-side, rendered inside existing windows, and cannot extend beyond the parent window. This approach simplifies the creation of universal dialogs that can be combined with interfaces for mobile and desktop systems, and also provides additional options for managing dialogs.

<https://blogs.gnome.org/alicem/2024/03/15/libadwaita-1-5/>

## ROCKY, ORACLE AND SUSE WILL PROVIDE FURTHER SUPPORT FOR THE LINUX 4.14 KERNEL:

16/03/2024

OpenELA (Open Enterprise Linux Association), formed

last year by CIQ (Rocky Linux), Oracle and SUSE, to join efforts to ensure compatibility with RHEL, introduced the kernel-lts project, where it will provide additional support for some outdated LTS branches kernels after they are no longer officially supported.

The first kernel to receive additional support will be the 4.14 branch, which was published in November 2017 and has been supported for 6 years. In January, the core kernel development team stopped maintaining this branch. OpenELA has resumed maintenance and updates for kernel 4.14, which will be released at least until December 2024. Following the final release of Linux kernel 4.14.336, the OpenELA team has already released extended updates 4.14.337-openela, 4.14.338-openela and 4.14.339-openela.

The OpenELA repository took the place of the git.centos.org repository, which was discontinued by Red Hat.

<https://openela.org>

## WebKitGTK 2.44.0

### BROWSER ENGINE:

17/03/2024

WebKitGTK 2.44.0, a port of the WebKit browser engine for the GTK platform, has been announced. WebKitGTK allows you to use all the features of WebKit through a GNOME-oriented programming interface based on GObject and can be used to integrate web content processing tools into any application, from use in specialized HTML/CSS parsers to creating full-featured web browsers. Among the well-known projects that use WebKitGTK, we focus on the standard GNOME browser (Epiphany). Previously, WebKitGTK was used in the Midori browser, but after the project passed into the hands of the Astian Foundation, the old version of Midori on WebKitGTK was abandoned and a fundamentally different product was created with the same name Midori.

<https://webkitgtk.org/2024/03/16/webkitgtk2.44.0-released.html>

## GNU COBOL COMPILER AND THE SUPERBOL

### DEVELOPMENT

### ENVIRONMENT:

18/03/2024

Fabrice Le Fessant summed up the 20-year development of the free GnuCOBOL compiler, which allows you to translate COBOL programs into a C representation for subsequent compilation using GCC or other C compilers. According to Fabris, the project has reached maturity, ready for use in industrial systems and the ability to compete with proprietary solutions. GnuCOBOL's competitive advantages include support for 19 dialects of the COBOL language, high performance and cross-platform, allowing the toolkit to be used on various systems, including Linux, BSD, macOS, Windows, Android and many proprietary Unix-like OSes.

According to the speaker, recently there has been an active implementation of GnuCOBOL by commercial companies and banks, which are transferring backends written in COBOL to GnuCOBOL from the proprietary Micro Focus

compiler. It is noted that the transition to GnuCOBOL allows you to achieve increased productivity and get rid of lock-in to one vendor. For example, the French Ministry of Finance recently replaced a mainframe computer running the GCOS operating system with a solution based on GnuCOBOL.

Among the events related to GnuCOBOL, we can also mention the publication of the first version of the integrated development environment SuperBOL Studio, written in the OCaml language and distributed under the AGPLv3, MIT and ISC licenses. SuperBOL Studio is an extension to the VS Code code editor that works with the GnuCOBOL compiler and is designed for developing, debugging and profiling COBOL projects. SuperBOL also provides an LSP (Language Server Protocol) server implementation for integrating COBOL code navigation, parsing, and editing tools into another IDE.

This year, the COBOL language will turn 65 years old, while it remains one of the oldest actively used programming languages, as well as one of the leaders in terms of the amount of code written.

<https://ftp.heanet.ie/mirrors/fosdem-video/2024/h2215/fosdem-2024-3249-gnucobol-the-free-industrial-ready-alternative-for-cobol.av1.webm>

## MICROSOFT OPEN SOURCED GARNET STORAGE:

19/03/2024

Microsoft has open sourced the NoSQL system Garnet, designed for creating caching stores and compatible with existing client libraries for Redis storage. Garnet supports the creation of scalable data caching clusters that can use replication, key migration, and data sharding across cluster nodes. The project is written in C# with a storage core in C++. It is opened under the MIT license and can run on all platforms supported by .NET (the primary platforms are Linux and Windows).

<https://www.microsoft.com/en-us/research/blog/introducing-garnet-an-open-source-next-generation-faster-cache-store-for-accelerating-applications-and-services/>

## GNOME 46 PUBLISHED:

20/03/2024

After six months of development, the GNOME 46 desktop environment was released. To quickly evaluate the capabilities of GNOME 46, specialized Live builds based on openSUSE and an installation image prepared as part of the GNOME OS initiative are offered. GNOME 46 is also already included in experimental builds of Ubuntu 24.04 and Fedora 40 .

<https://foundation.gnome.org/2024/03/20/introducing-gnome-46/>

## RELEASE OF WAYLAND-PROTOCOLS 1.34:

21/03/2024

After six months of development, a new release of the wayland-protocols 1.34 package was published, containing a set of protocols and extensions that complement the capabilities of the base Wayland protocol and provide the capabilities necessary for building composite servers and user environments.

<https://lists.freedesktop.org/archives/wayland-devel/2024-March/043537.html>

## THE REDIS DBMS IS MOVING TO A PROPRIETARY LICENSE:

21/03/2024

Redis Ltd has announced a change in the license for the Redis DBMS, that belongs to the class of NoSQL systems. Starting with the release of Redis 7.4, the project code will be distributed under two proprietary licenses RSALv2 (Redis Source Available License v2) and SSPLv1 (Server Side Public License v1), instead of the previously used BSD license.

The change of license will allow the integration of proprietary modules into the main structure of future versions of the Redis DBMS with the implementation of advanced types and data processing engines, previously offered only as part of the Redis Stack product. Old releases will remain available under the previous BSD license and can be used as the basis for creating an independent fork.

<https://redis.com/blog/redis-adopts-dual-source-available-licensing/>

## RED HAT INTRODUCED NOVA:

21/03/2024

Red Hat has begun work on the Nova project, which is a new open driver for NVIDIA GPUs, where GPU initialization and control operations are included in the firmware and performed by a separate GSP (GPU System Processor) microcontroller. The new driver is designed as a module for the Linux kernel and uses the DRM (Direct Rendering Manager) subsystem. The project is positioned as a continuation of the development of the Nouveau driver for GPUs with GSP firmware used starting with the NVIDIA GeForce RTX 2000 series based on the Turing microarchitecture, and in the long term may replace Nouveau.

The driver code is written in Rust and additionally uses several layers to develop video drivers in this language, which have not yet been accepted into the main kernel.

Among the reasons for creating a new driver is the opportunity to achieve significant simplification compared to the Nouveau driver, thanks to the use of many ready-made handlers provided by the GSP firmware. Due to the need to support older NVIDIA GPUs, the Nouveau driver code is unnecessarily complex and inflexible, and significant reworking of the code base is required to solve problems existing in the Nouveau driver, for example, related to blocking in the VMM/MMU code.

<https://lists.freedesktop.org/archives/dri-devel/2024-March/446709.html>

## THE REDICT PROJECT WAS FOUNDED:

21/03/2024

In response to the change in the license for the Redis DBMS, a fork was created that will be distributed under the name Redict and will continue to develop the code base corresponding to the release of Redis 7.2.4, the last one under the BSD license. Redict can be used as a transparent replacement for Redis

7.2.4, but compatibility with future versions of Redis that will be released under a proprietary license is not guaranteed.

The fork was founded by Drew DeVault, the author of the Sway user environment, the Hare programming language, the Aerc email client, and the SourceHut collaborative development platform. Haelwenn Monnier, the author of the BadWolf browser (based on WebKitGTK) and the Pleroma platform for deploying federated social networks, joined the work on the fork.

The Redict code license has changed from BSD to GPLv3 (the old code remains under the BSD license, but all new changes to Redict will be made under the GPLv3 license). This way, the Redict project will be able to port patches published by Redis Inc for older versions of Redis under the BSD license, but patches and changes created for Redict under the GPLv3 license will not be able to be ported to Redis.

Update: The license for Redict has been changed from the originally chosen GPLv3 to LGPLv3.

<https://codeberg.org/redict/redict>

## NINTENDO BEING ASSHATS AGAIN:

21/03/2024

Nintendo secured the blocking of the main Suyu project repository on GitLab, a day after the publication of the first release. The repository was blocked after a complaint was sent to GitLab about the Suyu project violating the Digital Millennium Copyright Act (DMCA) in force in the United States. An alternative repository launched on its own server using the Forgejo platform (a fork of Gitea), as well as a repository with releases on the GitLab site and continue to work.

The DMCA request sent to GitLab claims that, like Yuzu, the Suyu emulator is specifically designed to bypass technical security methods, and in the process uses illegally obtained copies of cryptographic keys to decrypt games and firmware. Despite the fact that extracting keys for decrypting games falls on users and is done using third-party tools, the very fact of decryption on

the emulator side is perceived by Nintendo as an illegal bypass of technical protection measures, even if the user uses keys extracted from his own purchased copy (in the terms of use it is prohibited to create copies to run on other platforms).

<https://twitter.com/MrSujano/status/1770896278165004294>

## INCIDENT WITH KDE THEME DELETING USER FILES:

22/03/2024

The KDE Project has recommended against installing unofficial global themes and widgets for KDE following an incident involving the deletion of all personal files from a user who installed the Gray Layout theme from the KDE Store, with approximately 4,000 downloads. It is believed that the incident was not caused by malicious intent, but by an error related to the unsafe use of the "rm -rf" command.

KDE global themes provide the ability to use plasmoids that run arbitrary commands, which can be used to delete files, among other

things. When using constructs like "rm -rf \$VAR/\*" in code, a situation may arise when the \$VAR variable is uninitialized, which will lead to the actual execution of the command "rm -rf /\*". Previously, similar errors appeared in the initialization or installation scripts of Squid , Steam , yandex-disk-indicator and bumblebee .

The KDE developers intend to audit third-party themes posted to the KDE Store directory to identify similar errors, and also organize warnings when installing themes posted by third-party users.

<https://floss.social/@kde/112128243960545659>

## FIRST ALPHA RELEASE OF ETCD OPERATOR FOR KUBERNETES:

23/03/2024

The first alpha version of the etcd-operator project has been published. They develop tools to simplify the deployment of etcd distributed storage in a Kubernetes environment and management of etcd clusters. The toolkit can handle tasks such as node

deployment, configuration, management, scaling, and disaster recovery. The configuration is specified in YAML format. The project code is written in Go and distributed under the Apache 2.0 license.

<https://github.com/aenix-io/etcd-operator/releases/tag/v0.0.1>

## PALEMOON PLANS TO INCREASE CPU

### REQUIREMENTS:

24/03/2024

The developers of the Palemoon browser plan to increase the CPU requirements in ready-made builds. The reason given is the desire to use AVX processor instructions to significantly speed up the browser. The change is planned for summer 2024.

To use the new builds, you will need a processor that supports the second version of the x86-64 microarchitecture (x86\_64-v2), which has been used by processors since approximately 2009, starting with AMD FX and the first generation Intel Core i7 (Nehalem). The x86\_64-v2 microarchitecture is

distinguished by the presence of extensions such as SSE3, SSE4\_2, SSSE3, POPCNT, LAHF-SAHF and CMPXCHG16B.

It is also worth noting that over the past week, users of the Palemoon browser have been experiencing failures when passing Cloudflare's DDoS attack protection. At some point the problem was resolved, but at the end of the week it reappeared.

<https://forum.palemoon.org/viewtopic.php?t%3D30971%26p%3D249944%23p249944>

## BATTLE FOR WESNOTH 1.18:

24/03/2024

Two and a half years since its last major release, a new version of Battle for Wesnoth 1.18 is available, a cross-platform turn-based fantasy strategy game that supports both single-player campaigns and multiplayer online or on a single computer. The game code is distributed under the free GPLv2+ license, and game resources, including graphics and sounds, are licensed under GPLv2+ and Creative

Commons BY-SA licenses. Builds are prepared for Linux , Windows, macOS and iOS. The game is also available through Steam.

The new version offers a new game campaign for Drake "Winds of Fate", dedicated to seafarers and the exploration of new continents. The oldest Loyalist campaign "Eastern Invasion" has been completely redesigned. The Quenoth campaign "Under the Burning Suns" has been reworked. They updated the map "King of the Hill". Graphics performance has been significantly improved and the rendering system has been upgraded (a 60% increase in FPS has been noted). The balance of power and multiplayer game parameters have been changed. A large portion of improvements have been made to the map and scenario editors. Support for achievements has been implemented. Added a section with the history of multiplayer games. Many units have been improved and animation effects have been modernized. The possibilities for developing add-ons have been expanded.

<http://wesnoth.org/start/1.18/>

THE

# VIRTUALBOX NETWORKING PRIMER

Connecting and Configuring  
Virtual Machines



Robin Catling

## The VirtualBox Networking Primer

Connecting and Configuring Virtual Machines

*The VirtualBox Networking Primer is a no-nonsense guide for the VirtualBox user taking their next steps into virtual networks.*

*While Oracle VM VirtualBox is a great free tool, the real power of virtualisation comes when you start connecting virtual machines to each other and to the wider world. Software development, sales, education and training are just some of the areas in which network access to virtual machines offers endless opportunities. But the world of computer networks is filled with complex technical jargon.*

*Complete with principles, practice, examples and glossary, The VirtualBox Networking Primer takes the frustration and confusion out of connecting real-world projects.*

Author: **Robin Catling**

Publisher: Proactivity Press

ISBN13 : 9781916119482

Amazon US link:

[https://www.amazon.com/dp/1916119484?  
ref=pe\\_3052080\\_397514860](https://www.amazon.com/dp/1916119484?ref=pe_3052080_397514860)

Amazon UK link:

[https://www.amazon.co.uk/VirtualBox-Networking-Primer-Connecting-Configuring/dp/1916119484/ref=sr\\_1\\_1?  
dchild=1&keywords=virtualbox+networking+primer&qid=1600253699&s=books&sr=1-1](https://www.amazon.co.uk/VirtualBox-Networking-Primer-Connecting-Configuring/dp/1916119484/ref=sr_1_1?dchild=1&keywords=virtualbox+networking+primer&qid=1600253699&s=books&sr=1-1)

Kobo:

<https://www.kobo.com/us/en/ebook/the-virtualbox-networking-primer>



So after a question on Telegram the other day, I decided to write a piece on networking in Ubuntu ending in Firewalls. You cannot have a proper picture of firewalls if you don't understand why they exist.

Here is how it started:

Jimmie, [2024/02/01 18:59] So like. I'm trying to get an obs ndi setup and the thing about it is that it only seems to work when both computers have their firewall disabled.

Jimmie, [2024/02/01 18:59] Both are running linux mint and have gufw.

Jimmie, [2024/02/01 19:00] I tried allowing access

between the two as an exception in the ufw rules but it didn't work.

Jimmie, [2024/02/01 19:00] The only way it worked was disabled the firewall on both of my computers and that's not really something I wanna do.

Robert, [2024/02/01 19:09] No idea what it is, but it sounds like the firewall is still blocking it

Jimmie, [2024/02/01 19:14] Oh no it definitely is but I have no idea what it's blocking specifically that requires firewall to be off.

Jimmie, [2024/02/01 19:15] Even f\*\*\*ing ndi newteks website about their sh\*t says to disable firewall like what

Jimmie, [2024/02/01 19:15]

What the f\*\*\* is your protocol doing that it doesn't work even with firewall exceptions.

Jimmie, [2024/02/01 19:39] Ok so I think I'll just have to use it with the firewall off.

So what we can do is start with IP, explain basic hostname resolution, basic routing and work our way to ufw, as I think that once you understand, troubleshooting becomes a lot easier. Starting with ufw, you may end up frustrated like the person above.

Now we have already talked about the "ip" command in a previous issue.

So let's do a very basic refresher. If you want more detail, please see the older issues.

Open your terminal and type:

```
ip a sh
```

(IP address show) We want to type as little as possible as I am lazy and typing is generally slow.

If you want just the wireless or wired, we would use:

```
ip l sh
```

(IP link show)

As you can see, very much in my opinion. As opinion's go I don't

```
File Edit View Terminal Tabs Help
Welcome to Linux Lite 6.6 ed

Saturday 17 February 2024, 07:21:08
Memory Usage: 10590/31841MB (33.26%)
Disk Usage: 828/938GB (94%)
Support - https://www.linuxliteos.com/forums/ (Right click, Open Link)

ed ~ ip a sh
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
   link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
   inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
   inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eno1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN group default qlen 1000
   link/ether 34:48:ed:4d:e4:c7 brd ff:ff:ff:ff:ff:ff
   altname enp0s31f6
3: wlp111s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
   link/ether f8:e4:e3:72:d9:cc brd ff:ff:ff:ff:ff:ff
   inet 192.168.1.207/24 brd 192.168.1.255 scope global dynamic noprefixroute wlp111s0
       valid_lft 57872sec preferred_lft 57872sec

ed ~
```

```
File Edit View Terminal Tabs Help
ed ~ ip l sh
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT group default qlen 1000
   link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: eno1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN mode DEFAULT group default qlen 1000
   link/ether 34:48:ed:4d:e4:c7 brd ff:ff:ff:ff:ff:ff
   altname enp0s31f6
3: wlp111s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP mode DORMANT group default qlen 1000
   link/ether f8:e4:e3:72:d9:cc brd ff:ff:ff:ff:ff:ff

ed ~
```

really like it, as when I want an address, I want it front and centre, but that is just me.

Ubuntu 20.04 and up use netplan. You can find out more on the website or you can type:

`netplan info`

or:

`man netplan`

The man page describes it thus: netplan - YAML network configuration abstraction for various backends

YAML is not difficult, it is basically: the thing, a colon and its setting.

Example -

Name: Ronnie Tucker  
Age: 36

If you are a n00b of n00bs, I recommend cloudbees: <https://www.cloudbees.com/blog/yaml-tutorial-everything-you-need-get-started>

The catch is, YAML is whitespace sensitive and tabs != spaces.

YAML is used by netplan for

```
File Edit View Terminal Tabs Help
ed ~ | SIGTSTP cd /etc/netplan/
ed / > etc > netplan | ls
01-netcfg.yaml
ed / > etc > netplan | cat 01-netcfg.yaml
# This file describes the network interfaces available on your system
# For more information, see netplan(5).
network:
  version: 2
  renderer: networkd ed / > etc > netplan |
```

configuring your network and it is easy to read.

Here you can see my laptop's netplan YAML file. I need you to co-check yours.

The killer feature of netplan for me, is the "try". If you make changes, and you are not 100% sure if they will work, you can type: netplan try -this will try your config and if it does not work, go

back to what it was. Use sudo if you need to.

Getting info with netplan is also much nicer, well for me at least. Go ahead and try: netplan ip leases <your card name>

Alas, we are not doing a deep dive into netplan, if you would like one, why not drop us a message on [misc@fullcirclemagazine.org](mailto:misc@fullcirclemagazine.org) ???

```
edd@eddv: ~$ hostnamectl
Static hostname: eddv
Icon name: computer-vm
Chassis: vm
Machine ID: 9743ea627ad1426a8fcfbf27c6f8f48
Boot ID: 33eaba6f830d435e9bcddde8a04f54e3
Virtualization: oracle
Operating System: Ubuntu 22.04.3 LTS
Kernel: Linux 6.2.0-39-generic
Architecture: x86-64
Hardware Vendor: innotek GmbH
Hardware Model: VirtualBox
edd@eddv: ~$
```

So now you know where to look to get basic network information on your Ubuntu machines.

So how do we find more info on your computers? A simple way is to type:

`hostname`

The command hostnamectl will give you the same information, but with all that juicy metadata the CIA says is not important and oh look there – a terrorist!

There is another case where you would see something different. Say I were to change my hostname from eddv to ubuv, that change does not immediately take place, so you would see something different eg:

Notice from the above screenshot that there is now a "Transient" hostname. You can think of the transient hostname as temporary, because if the system restarts, it is gone.

The other oddball you may run into is that the machine may have a "Pretty name". You will often see this on Macbooks, eg. "Dave's Macbook Pro" If you have a pretty

## COMMAND & CONQUER

name on your Ubuntu machine, know that posix compliance will mean the hostname will not have the pretty characters.

Another reason you may not be able to see or access some other PC on your network, may be that you have it's IP address hard coded. This will be your hosts file, where your computer can look at a list of PC's and derive their IP addresses without needing to ask someone. When I say ask someone, I mean a DNS server. You can look at yours with: `cat /etc/hosts`

I will not paste mine as it is filled with <https://raw.githubusercontent.com/StevenBlack/hosts/master/hosts>

If you too are tired of endless amounts of horse manure on the internet, I suggest you replace your file contents with that one. That does make it difficult to spot something you may have added yourself – spotting one entry in five thousand lines is not an easy job.

Another place to look, may be the ARP cache. In Ubuntu your ARP (Address Resolution Protocol) is volatile, (It does not store anything) as it resides in /proc. Proc/ is a

directory used by the Linux kernel, to give you information, it is not a "real" file, if you wanted to know. You can look at it here:

```
cat /proc/net/arp
```

In the next issue we will take this a bit further, so you can do your

own troubleshooting when it comes to networking issues.



**Erik** has been in IT for 30+ years. He has seen technology come and go. From repairing washing machine sized hard drives with multimeters and oscilloscopes, laying cable, to scaling 3G towers, he's done it.

```
eddv@eddv: ~  
Machine ID: 9743ea627ad1426a8fcfbbf27c6f8f48  
Boot ID: 33eaba6f830d435e9bcbdde8a04f54e3  
Virtualization: oracle  
Operating System: Ubuntu 22.04.3 LTS  
Kernel: Linux 6.2.0-39-generic  
Architecture: x86-64  
Hardware Vendor: innotek GmbH  
Hardware Model: VirtualBox  
eddv@eddv:~$ sudo hostname ubuv  
[sudo] password for eddv:  
\\eddv@eddv:~$ hostnamectl  
Static hostname: eddv  
Transient hostname: ubuv  
Icon name: computer-vm  
Chassis: vm  
Machine ID: 9743ea627ad1426a8fcfbbf27c6f8f48  
Boot ID: 33eaba6f830d435e9bcbdde8a04f54e3  
Virtualization: oracle  
Operating System: Ubuntu 22.04.4 LTS  
Kernel: Linux 6.2.0-39-generic  
Architecture: x86-64  
Hardware Vendor: innotek GmbH  
Hardware Model: VirtualBox  
eddv@eddv:~$
```



## FUN AND GAMES WITH DATES

Greetings fellow Beings. I hope that your year is going well for you so far.

I suppose that I really should preface this month's article by explaining the title. "Fun and Games with Dates" really isn't what I wanted to name this month's article. In reality, it's more like "Pain, Suffering and Angst with Dates". But like the old dad joke "Why does McDonalds call them 'Happy Meals'? Because if they called them 'Sad Meals', no one would buy them!", I figured if I named it 'My horrible experience with Dates', either you wouldn't want to read it OR you would assume that I was talking about an experience trying to date someone.

This article started with an idea for my Micro This Micro That article series. This weekend (as I'm writing this) is the switch to Daylight Saving Time here in most of the U.S. and I was thinking about a

Microcontroller program that needs to keep track of the actual time and date, making sure that, after a power failure or reboot of the device, the device goes up to the internet, gets the current time and date. Then what happens when Daylight Saving time hits? Here in the U.S. we change to Daylight Saving on the Second Sunday of March at 02:00 and change back to "Standard" time the first Sunday in November at 02:00. Never having lived in any other part of the world, and time change has not been a major conversation topic between my international friends and myself, I wondered if the rest of the world had this issue. With a little digging on the Internet, I found out.

Some areas of the world change to Daylight Saving on the Second Sunday in March at 02:00, some on the Second Sunday in March at 00:00, some on the last Sunday in March at 01:00 UTC, some on the Last Sunday in March at 02:00, some on the Friday before the last Sunday in March, some on the last Friday in April at 00:00, some on the first Sunday in October at 00:00,

and others at even more difficult times to remember, unless you live there. And the switch back to "regular" time can even be more convoluted. ([https://en.wikipedia.org/wiki/Daylight\\_saving\\_time\\_by\\_country#](https://en.wikipedia.org/wiki/Daylight_saving_time_by_country#))

Knowing this caused me to push things around in the "to write about" queue and sit down and start digging into research and testing code.

So keeping with proper programming protocol, I needed to define the issue and lay out the steps that will need to be taken to complete the task.

For those of us that identify with "human" (as opposed to silicon based computer lifeforms), the task is easy.

IF this is the day before a time change, then...

IF the change adds an hour, then...

Before going to bed, move the clock ahead one hour.

ELSE IF the change subtracts an hour, then...

Before going to bed, move the clock back one hour.

ELSE IF the change adds 30 minutes, then...

Before going to bed, move the clock ahead 30 minutes.

ELSE IF the change subtracts 30 minutes, then...

Before going to bed, move the clock back 30 minutes.

ELSE

Get rid of all the analogue clocks in the house and let the computers handle things!

Ok. MAYBE I over simplified the situation and the ending ELSE task MIGHT be a bit drastic, but hey. What can I say? AND YES, there is an area in the world that only changes the time by 30 minutes.

Anyway, now how do we go about coding this? I won't bore you with 10 pages of failed attempts (not that they were all failed attempts, but none that I was pleased with). I will, however, share the solution that I found that I liked.

The key to the entire thing is to

# HOWTO - PYTHON

use a library named dateutil. It's simple to install with pip. To walk you through the process, I'll use PtPython. Once you have it installed, we can import it and datetime (top right).

Once we have that we want to find the first Sunday of the month. Since we imported everything from dateutil.relativedelta, that includes weekday and a two-character abbreviation for the days of the week. In our case, we want "SU" for Sunday (below).

While we are here, let's get the date for the End of Daylight Saving time (in the U.S.) which is the FIRST

Sunday in November 2024. This time, it's easier, since we don't need to add the 7 days (bottom right).

I created two one-liners for all of the above steps. I simply added a year variable instead of "hardcoding" the year in the datetime.date call (below).

```
year = 2024
dstStart = (
    datetime.date(year, 3, 1) + relativedelta(weekday=SU) + relativedelta(days=+7)
)
dstEnd = datetime.date(year, 11, 1) + relativedelta(weekday=SU)
```

```
>>> firstSun=marchStart+relativedelta(weekday=SU)
>>> print(firstSun)
2024-03-03
```

So the first Sunday of March 2024 is the third. Now that we know that, we just need to add 7 days.

```
>>> dstStart=firstSun+relativedelta(days=+7)
>>> print(dstStart)
2024-03-10
```

So, the beginning (in the U.S.) of Daylight Saving time in 2024 is March 10. We could also have used the following line instead of "(days=+7)".

```
>>> dstStart=firstSun+relativedelta(weeks=+1)
```

Which would return the same date. Just two ways of doing the same thing.

```
>>> import datetime
>>> from dateutil.relativedelta import *
>>>
```

Next, we need to get a start date, which in our case will be March 1, 2024, and it needs to be a type of datetime.date.

```
>>> marchStart = datetime.date(2024,3,1)
>>> print(marchStart)
2024-03-01
```

Now that we have our one-liners defined, we can use it to find any Daylight Saving time start and end dates. So for the US, here's a quick program that will get the start and end dates for the years from 2024 to 2030 (next page, top right).

That's all well and good, but I feel that it's safe to assume that there are many fewer readers of

FCM in the U.S. than there are in the rest of the world. The second largest group of countries (which probably includes you, dear reader) starts their time change on the last Sunday of March at 00:00 UTC and ends it on the last Sunday of October at 01:00 UTC.

It's a very simple task to modify the code to handle the last Sunday

```
>>> novStart=datetime.date(2004,11,1)
>>> print(novStart)
2004-11-01
>>> novFirstSun=novStart+relativedelta(weekday=SU)
>>> print(novFirstSun)
2004-11-07
>>>
```

instead of the second Sunday.

So we can use a bit of syntax change for our relativedelta call.

```
dstStart =  
datetime.date(year, 3, 1) +  
relativedelta(day=31,  
weekday=SU(-1))
```

In this case, we will give it the same datetime.date value, but we'll want to set the relativedelta to start its calculations from the 31st of the month and find the nearest Sunday with a "-1" modifier, since we are going back from the 31st. For the last Sunday of October, that's a simple change from 3 for the month (in the datetime.date) to 10.

```
dstEnd = datetime.date(year,  
10, 1) +  
relativedelta(day=31,  
weekday=SU(-1))
```

So making the changes to the above program the code would be (bottom right)...

So until someone gets things changed, this will do. For those of you who don't fall into the first two groups, you should have enough information to change things to get the dates for the time changes for your country.

```
import datetime  
from dateutil.relativedelta import *  
  
# Set the years to get the dates in a list  
dstyears = [2024, 2025, 2026, 2027, 2028, 2029, 2030]  
# For each year in the list, get the start and end dates of Daylight Saving  
for cntr in dstyears:  
    dstStart = (  
        datetime.date(cntr, 3, 1) + relativedelta(weekday=SU) + relativedelta(days=+7)  
    )  
    dstEnd = datetime.date(cntr, 11, 1) + relativedelta(weekday=SU)  
  
    print(f"U.S. {cntr} DST Start {dstStart} - DST End {dstEnd}")
```

And the output would be...

```
U.S. 2024 DST Start 2024-03-10 - DST End 2024-11-03  
U.S. 2025 DST Start 2025-03-09 - DST End 2025-11-02  
U.S. 2026 DST Start 2026-03-08 - DST End 2026-11-01  
U.S. 2027 DST Start 2027-03-14 - DST End 2027-11-07  
U.S. 2028 DST Start 2028-03-12 - DST End 2028-11-05  
U.S. 2029 DST Start 2029-03-11 - DST End 2029-11-04  
U.S. 2030 DST Start 2030-03-10 - DST End 2030-11-03
```

```
import datetime  
from dateutil.relativedelta import *  
  
dstyears = [2024, 2025, 2026, 2027, 2028, 2029, 2030]  
for cntr in dstyears:  
    dstStart = datetime.date(cntr, 3, 1) + relativedelta(day=31, weekday=SU(-1))  
    dstEnd = datetime.date(cntr, 10, 1) + relativedelta(day=31, weekday=SU(-1))  
  
    print(  
        f"Last Sunday of month countries - {cntr} DST Start {dstStart} - DST End {dstEnd}"  
    )
```

And the output is...

```
Last Sunday of month countries - 2024 DST Start 2024-03-31 - DST End 2024-10-27  
Last Sunday of month countries - 2025 DST Start 2025-03-30 - DST End 2025-10-26  
Last Sunday of month countries - 2026 DST Start 2026-03-29 - DST End 2026-10-25  
Last Sunday of month countries - 2027 DST Start 2027-03-28 - DST End 2027-10-31  
Last Sunday of month countries - 2028 DST Start 2028-03-26 - DST End 2028-10-29  
Last Sunday of month countries - 2029 DST Start 2029-03-25 - DST End 2029-10-28  
Last Sunday of month countries - 2030 DST Start 2030-03-31 - DST End 2030-10-27
```

If you want to learn more about the dateutil package, the documentation can be found at <https://dateutil.readthedocs.io/en/stable/index.html> .

Remember that this whole thing started because I wanted to have a Microcontroller know when the time change actually occurs. We have addressed only the date portion. The time part has yet to be finished. That will be shown in my Micro This Micro That article in this month's Full Circle Magazine.

I've placed the code for the two sample programs on my github repository at <https://github.com/gregwa1953/FCM-203>.

Until next time, as always; stay safe, healthy, positive and creative!



**Greg Walters** is a retired programmer living in Central Texas, USA. He has been a programmer since 1972 and in his spare time, he is an author, amateur photographer, luthier, fair musician and a pretty darn good cook. He still is the owner of RainyDaySolutions a consulting company and he spends most of his time writing articles for FCM and tutorials. His website is [www.thedesignatedgeek.xyz](http://www.thedesignatedgeek.xyz) .



# HOW-TO

Written by Jon Hoskin

# Stable Diffusion 12

You may remember the last time I introduced the ComfyUI interface to Stable Diffusion. Hopefully it enticed some readers, and this article is an explanation of how to install it. I wanted to do a clean install, and accomplished that by using a V-NAND connected via USB on which I had previously installed Ubuntu Studio. There are several installation web pages available which are essentially the same. I used the Yushan777 version, which also includes a windows install, and is found here: <https://medium.com/@yushantripleseven/installing-comfyui-linux-windows-b59a57af61b6>

It does require Python 3.10 and Git. It is installed via a few lines pasted in terminal, and begins by cloning the repository. First make an appropriate directory: `mkdir ai`, in your home directory for example. Then clone the repo by using terminal in that new directory using:

```
git clone https://github.com/comfyanonymous/ComfyUI.git
```

In a few minutes it responds

with done; then change to the newly created subdirectory (`cd ComfyUI`), and input: `python3 -m venv venv`, to create a virtual environment – named `venv` in this example. Make it active via: `source venv/bin/activate`. The prompt should now be prefixed with `(venv)`.

Next, dependencies are added:

```
pip install torch torchvision torchaudio --extra-index-url https://download.pytorch.org/whl/cu121
```

This will take several minutes, but you are almost done. Lastly, install additional dependencies:

```
pip install -r requirements.txt
```

Although at this point, the installation is complete, you will want to add two other things. To launch ComfyUI easier, create a launch file, for example a plain text file “`launch.sh`” in the ComfyUI directory to activate the VENV and start ComfyUI with two lines:

```
source venv/bin/activate
```

```
python3 main.py
```

Running the program

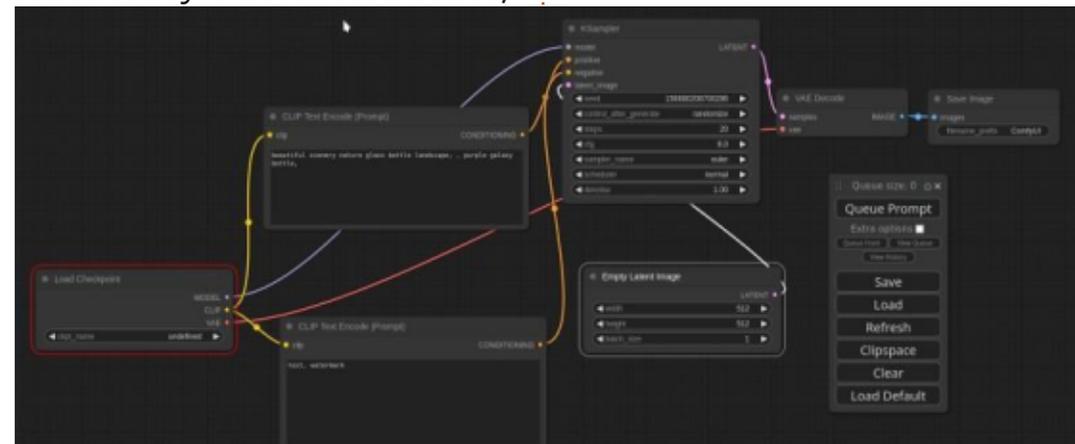
```
./launch.sh
```

with terminal in that directory, will start ComfyUI but it will not allow you to produce any images. You need to install a model. I used: `ghostmix_v20Bakedvae.safetensors` <https://civitai.com/images/862133> because it’s a relatively small file, 2.2 GB. Although it’s not an SDXL model, they could be used if your video card is sufficient. AMD video cards may be used but additional AMD drivers will need to be installed. Safetensors and Checkpoint models need to be copied into the Models/Checkpoint subdirectory. If no model is added,

the Load Checkpoint node will be circled in red when attempting to produce an image as shown (below).

Using the default positive and negative prompts will produce a 512x 512 image such as that shown on the next page, top right.

At the same location where examples of outputs can be found for the Ghostmix model, you can find prompts to produce impressive images. Using the below Positive and Negative prompts will allow you to produce something like the below. The output was 1024 x 1024, resized in the Empty Latent Image node, which was resized back down for this article (provided prompts



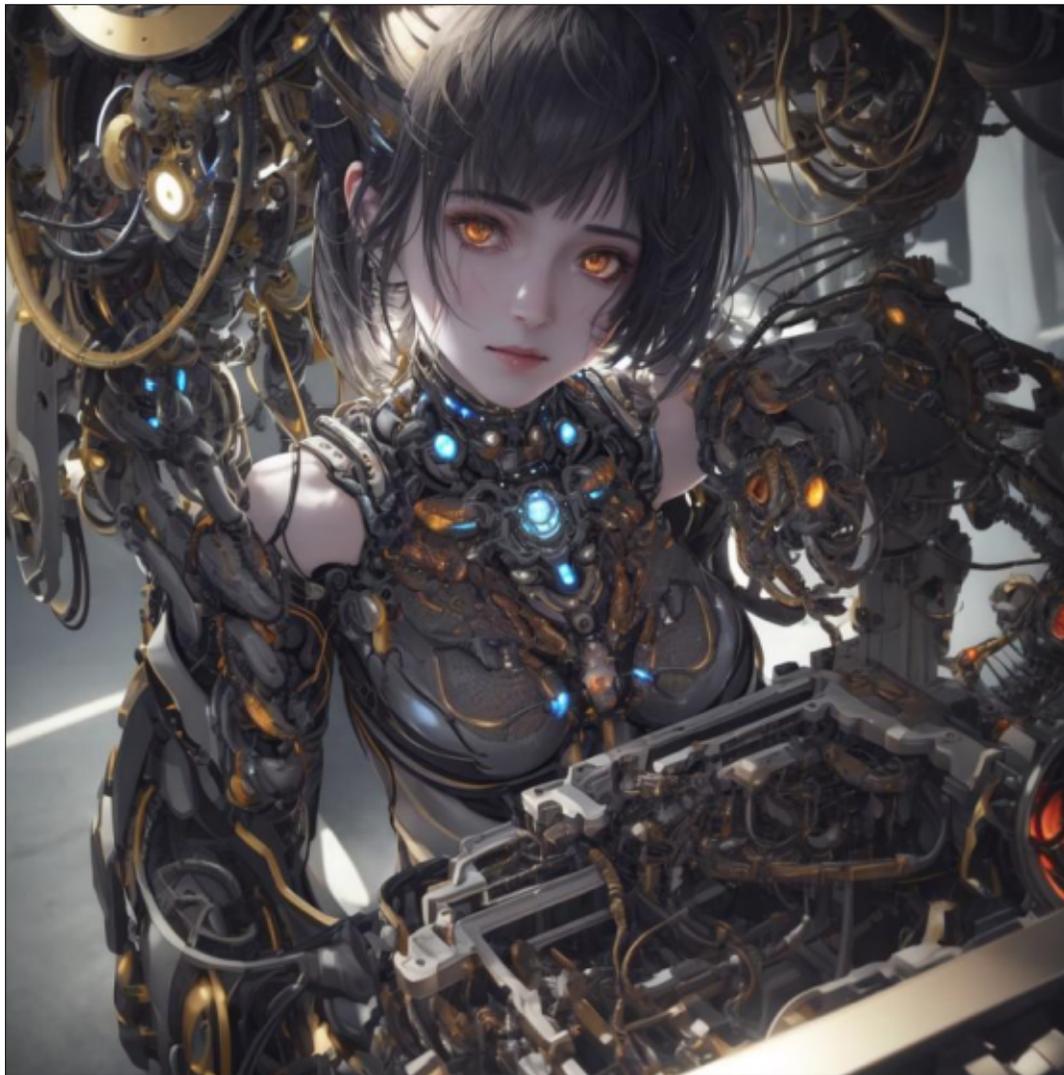
# HOWTO - STABLE DIFFUSION

can be used with any model).

Positive Prompt:

1mechanical girl, ((ultra realistic details)), portrait, global illumination, shadows, octane render, 8k, ultra sharp, metal, intricate, ornaments detailed, cold colors, egyptian detail, highly

intricate details, realistic light, trending on cgsociety, glowing eyes, facing camera, neon details, mechanical limbs, blood vessels connected to tubes, mechanical vertebra attaching to back, mechanical cervical attaching to neck, sitting, wires and cables connecting to head



Negative Prompt:

NSFW, 3d, cartoon, lowres, bad anatomy, bad hands, text, error, missing fingers, extra digit, fewer digits, cropped, worst quality, low quality, normal quality, jpeg artifacts, signature, watermark, username, blurry, artist name, young, loli, elf, 3d, illustration ng\_deepnegative\_v1\_75t

At this point you are ready to go, but there is one more addition worthy of adding (there are many more, but this is the way to start). In the Queue Prompt node, there are some extra options available when checking that option as shown. But after loading the

# HOWTO - STABLE DIFFUSION

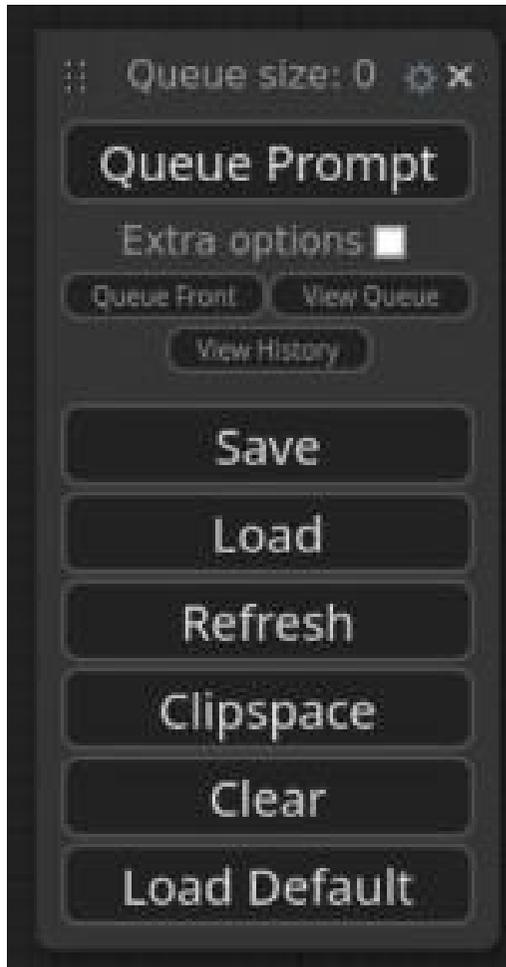
ComfyUI Manager Menu, two additional options are added to the Queue Prompt node. Pressing the Manager button provides many options including updates and the ability to add others. (More about this in the next article).

To add the Manager, bring up the terminal in the ComfyUI/custom\_nodes directory and run:

```
git clone https://github.com/ltdrdata/ComfyUI-Manager.git
```

After restarting ComfyUI, you should notice the Manager button option. The colored button labeled Share allows you to publish your work in a variety of appropriate

web locations. We will address some of these options next time.





# HOW-TO

Written by Robert Boardman

# Colors & Images

This time I thought we would have some fun with colors and images. I am going to explore more of what is available in the graphicx package. Eric discussed some of the possibilities in his articles a few years ago. I will start by reviewing the code necessary to get an image into a Latex-generated PDF (top right).

It turns out the graphicx package allows authors to do things on a page for not only involving images. The graphicx package can be used to modify text and other features of page design when the author wants something other than ordinary black text on a white background. For example you might want a particular bit of text not to be black but have some colour or you might want some text to be set at an angle to rest of the text. Perhaps you want part of a page to be highlighted with some color. We will look at the code for rotating text first.

The command is `\rotatebox[key val list]{angle}{text}`. The key-value list can contain different elements:

`origin=label` `x=dimen` `y=dimen` `units=number`. The effect of `rotatebox` command is to put the text into a box and then rotate the box. The centre of rotation can be the default or defined by the user. Instead of defining a specific location in the box as the centre or rotation with `x` and `y`, the user can use the `origin=label` key-value. The label can be any of `lrtcbb`: `left`, `right`, `top`, `centre`, `bottom`, `baseline`. (Combinations of `l` and `r` with `t`, `c`, `b` are allowed to indicate specific points on the perimeter of the box. Here are a few examples.

```
\rotatebox[origin=c]{180}{180
degrees on centre}
```

```
\rotatebox[origin=tr]{90}{90
degrees on top-right}
```

There is another instruction that puts text into a box which can then be manipulated. It is `\scalebox` and it has two parameters `{h-scale}` and `{v-scale}`. As with `rotatebox` the text being scaled is the last parameter in the instruction.

`\scalebox{h-scale}{v-scale}{Text goes here}`. The `v-scale` parameter is

```
\begin{figure}[h] %Use [b] to move to bottom of page
\centering
\includegraphics[height=3cm,width=3cm]{atom}
\caption{Model atom}
\label{fig:atom}
\end{figure}
```

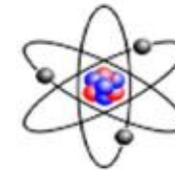


Figure 1: Model atom

## 0.1 Rotate Box

180 degrees on centre  
90 degrees on top-right

## 0.2 Scale Box

Distorted text  
Reflected text

## Resize Box

Some text using ! instead of v-height.  
Some text using height

## Text Colour

Red text using the `textcolor` syntax: Outside the curly braces the text returns to black.

This is red text using the `color` syntax. Text is not in curly braces and remains red until color is changed.

Used the `cmymk` model set to `(0,0,0,1)` to return the text to black.

## HOWTO - LATEX

optional, if not specified it is set to the same value as h-scale. If both are specified and are not equal the text will be distorted since the proportions will not be maintained. Note the v-scale has to be inside square brackets (or missing) in order for the scalebox instruction to be effective

```
\scalebox{2}[1]{Distorted text}
```

Here is an interesting use of scalebox.

```
\scalebox{-1}[1]{Reflected text}
```

Sometimes it is necessary to have text fit into a certain line length or line height. Another form of the text box instruction can be used to do that. It is `\resizebox` with (as you would predict I am sure) three parameters, one for horizontal measure, one for vertical measure and the last for the text.

```
\resizebox*{h-length}{v-length}{text}
```

The scalebox instruction controls the size of the text and therefore the size of the invisible box the text is in. The resizebox instruction controls the size of the

invisible box and therefore the size of the text the box contains. Sometimes a page designer know the size of text required, other times the designer knows the size of the space to be filled. The original text appears first and then the resizebox instruction is applied to stretch the text.

```
\resizebox{5cm}{\height}{Some text}
```

Both length parameters are required. However one measure can be replaced with an exclamation mark which instructs Latex to use the same scaling factor for the missing parameter as for the included parameter. If `\height` is in the second set of braces, the original height is maintained.

Now let us add some color to the text. (I was unable to get the color command to work on my system until I added `xcolor` to the package list. I suggest you do the same to avoid the frustration I experienced.) It is necessary to tell Latex which color model is to be used: `rgb`, `cmymk`, `gray`, `named`. The support for named colors is variable. Each different printer driver defines color names in a specific way. Your printer driver

may not use the same names as mine. It may use the same names but define them differently. Of course you are free to experiment and discover what color names are supported and what the result is. It is also possible to define a custom colour (or set of colors).

```
\definecolor{custome name}{colour model}{colour specification}
```

If using the `rgb` model then the specification must consist of three numbers, each one between 0 and 1. If using the `cmymk` model then use four numbers, again each one between 0 and 1. (If using the `gray` color model, then only one number is used to indicate the amount of gray desired, again between 0 and 1.) Here are examples of text in color using `rgb` and `cmymk`. Notice the important difference between the `textcolor` instruction and the `color` instruction. Either one can use

either the `rgb` model or the `cmymk` model.

```
\textcolor[rgb]{0.9,0,0.1}{Red text using the textcolor syntax} Outside the curly braces the text returns to black.
```

```
\color[rgb]{0.9,0,0.1}This is red text using the color syntax. Text is not in curly braces and remains red until color is changed.
```

```
\color[cmymk]{0,0,0,1}Used the cmymk model set to (0,0,0,1) to return the text to black.
```

It is also possible, and easy, to make the background behind some text a specific color. The same effect is usually possible in a word processor with the highlight tool or a background fill style.

```
\colorbox[cmymk]{0,.5,.5,0}{Text with colour in the background}
```

We can take advantage of the

### Text Colour

Red text using the `textcolor` syntax Outside the curly braces the text returns to black.

This is red text using the `color` syntax. Text is not in curly braces and remains red until color is changed.

Used the `cmymk` model set to (0,0,0,1) to return the text to black.

### Colorbox

Text with colour in the background

A box with one colour for the border and another for the background

# HOWTO - LATEX

features of the fbox set of commands and do the following:

```
\fcolorbox[rgb]{0.9,0,.1}{0,.9,0}{A box with one colour for the border and another for the background.}
```

In case it is not clear from the image, the first parameter sets the color of the outline and the second sets the color of the background.

At the beginning of this article I gave the basic instructions for including a graphic: tell Latex what size you want the graphic and what its name is and the graphic will appear in the generated PDF. The `includegraphics` command has other parameters. One basic form of the command looks like:

```
\includegraphics[keyvals]{imagefile}
```

To use the flexibility of the command means you need to know what the various key-value pairs are. I used height and width already. Angle is used to rotate an image. Possible variables for the origin key-value used with angle are the same as for the `rotatebox` command used for text above. Images can use the scale key value to control size without specifying a

specific number and unit. I demonstrate these few key values in this article. There are a number of other possibilities. I suggest you read the documentation for the `graphicx` package and experiment.

Note: Latex reads and responds to the parameters from left to right. Rearranging the order of parameters may give a different result. Look at the results of the last two commands for an example.

```
\includegraphics[scale=0.25]{135}
```

```
\includegraphics[angle=35,scale=0.25]{135}
```

```
\includegraphics*[height=4cm,width=2.5cm,angle=45]{135}
```

```
\includegraphics*[height=4cm,angle=45,width=2.5cm]{135}
```

Again I encourage you to read through the documentation for the `graphicx` package, it only sixteen pages long. Some parts may seem overly complex if you are new to Latex. Generally you can skip sections that are not applicable to your needs. Put the documentation in a safe place, you may need it in the future.

Next time I will introduce another of the over two thousand default packages that are available with a standard installation of Latex. If you have any questions or need assistance with a specific task in Latex do not hesitate to send me a note.

## Graphics



# KILOBYTE MAGAZINE

Kilobyte Magazine is a fanzine for 8bit enthusiasts. It covers consoles, computers, handhelds and more, as well as new games for old systems. If you grew up with Commodore, Atari, Sinclair or Amstrad, this magazine is for you.

<https://retro.wtf/kilobytemagazine/>



# HOW-TO

Written by Mark Crutch

## Inkscape - Part 143

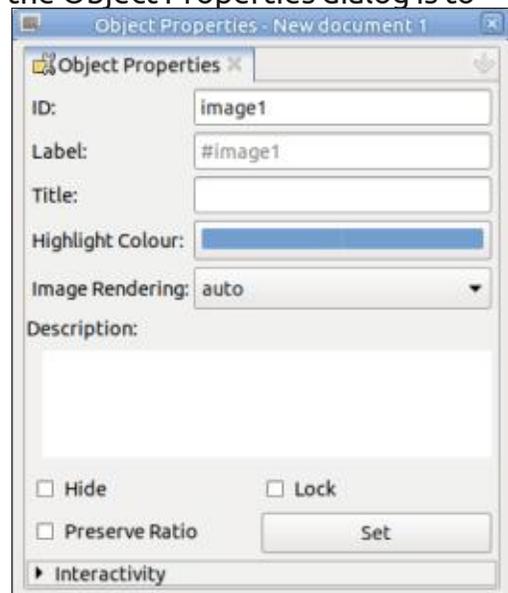
This month, I'll be looking at another dialog that was updated with Inkscape 1.3: the Object Attributes dialog. This is one that I haven't covered in this series before, because, quite frankly, I had no idea it even existed! That came as quite a surprise to me – after more than a decade of writing Inkscape tutorials, I thought I'd found just about every hidden corner of the application, but it turns out I was wrong.

The content of this dialog changes based on the selected object. If a bitmap image is selected, then this dialog replaces the older 'Image Properties...' dialog that was available via the right-click context menu. In fact it replaces it to the extent that it still appears in the context menu with



the same label, but the dialog that opens is definitely now 'Object Attributes'.

At the top of the dialog is a thumbnail of the image, together with its dimensions and a label to indicate whether it's linked or embedded. In the latter case, the label also shows the amount of space the image data takes up, to give you an idea of how much it will bloat your SVG file size. The text beneath the thumbnail shows the image's ID, prefixed by a hash character. This is a little misleading, as the default for showing the ID in the Object Properties dialog is to



not include a hash, whereas the placeholder text for the 'Label' field does include it.

Even if you set a label via this field in the Object Properties dialog, it is not displayed in the Object Attributes dialog. I guess the Inkscape developers must have their own idea of what's a property and what's an attribute, and only the ID counts as the latter.

Moving on down the dialog, the URL field shows the path to the linked image. For an embedded image, this field is disabled. Although the field is editable for a linked image, changes made here are not reflected in the stored data for the image in the SVG file. If, as I do, you keep your linked bitmaps in the same folder as their SVG file, you can sometimes find that moving or copying SVGs results in them being linked to the wrong place, via an absolute path. In older versions it was possible to directly edit the link via this dialog, replacing the absolute path with a local filename. Not any more.

Instead you have to use the button to the right of the URL field which allows you to select a different image to replace the linked or embedded one. Even using this to select a file in the same directory as the SVG results in an absolute 'file://...' URL rather than a simple filename. This is definitely something to be aware of, as it not only results in less transportable files (ie. just sending someone the directory containing both the SVG and the bitmaps probably won't work), but also leaks information about the folder structure on your machine, which might be considered a security risk, albeit a relatively minor one. On reloading your SVG file you may find that Inkscape does replace the URL with a simple filename if they're in the same directory, but I was unable to find any reliable, repeatable steps that would consistently make this happen across the files I tested with. The only way to really be sure is to edit any linked image paths directly in the XML editor.

The buttons below the URL field



## HOWTO - INKSCAPE

allow you to convert a linked image to an embedded one, or to export a copy of the image – regardless of whether it's linked or embedded – to a new location. One use of this might be to save a copy of an embedded file, then use the folder icon next to the URL to replace the embedded file with a link to the external copy you just saved. A button to achieve this with a single click would be nice, though – making it just as easy to un-embed an image as it is to embed one.

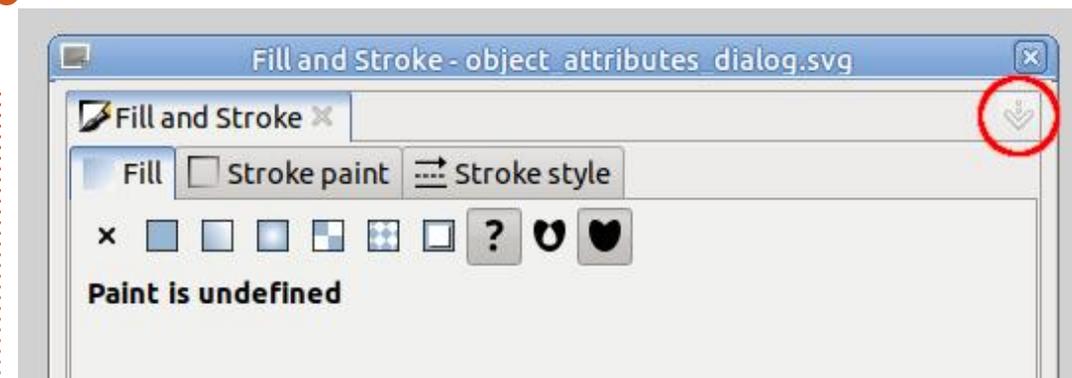
A welcome addition is the pair of radio buttons to select between preserving the aspect ratio of the image, or stretching it out of proportion if necessary. I'd like to see buttons to revert to the original dimensions, or to keep the width or height fixed while changing the other dimension to suit the original proportions. Being able to preserve the aspect ratio allows you to address most of the issues for which such buttons would be of benefit, though, turning these tasks from 'almost impossible' to just 'a bit tricky'. Finally, a popup lets you select between different rendering hints. This is the same as the 'Image Rendering' popup you can see in the Object Properties dialog. Note that selecting any of

the options in this menu really is just a hint; whether or not they're honored will depend on the software being used to display or print the SVG.

But what if you want to view the Object Attributes dialog for something other than an image? Common sense would say that you just right-click on the object and select it from the context menu? Or choose it from the main 'Object' menu, right? Common sense, it would seem, is a little short among the Inkscape UX team in this case, as neither of these menus contain an entry for this dialog.

One way to get to it is to use the Image Properties menu option on a raster image, then select the object you're actually interested in. The dialog will change dynamically as objects are selected, so will update to reflect the non-image item you've chosen. But that's hardly an effective way to get to this dialog, and your drawing might not even contain any bitmaps that you can right-click on.

Instead, the official way to open this dialog is to either bind it to a keyboard shortcut via Preferences dialog (in the Interface > Keyboard

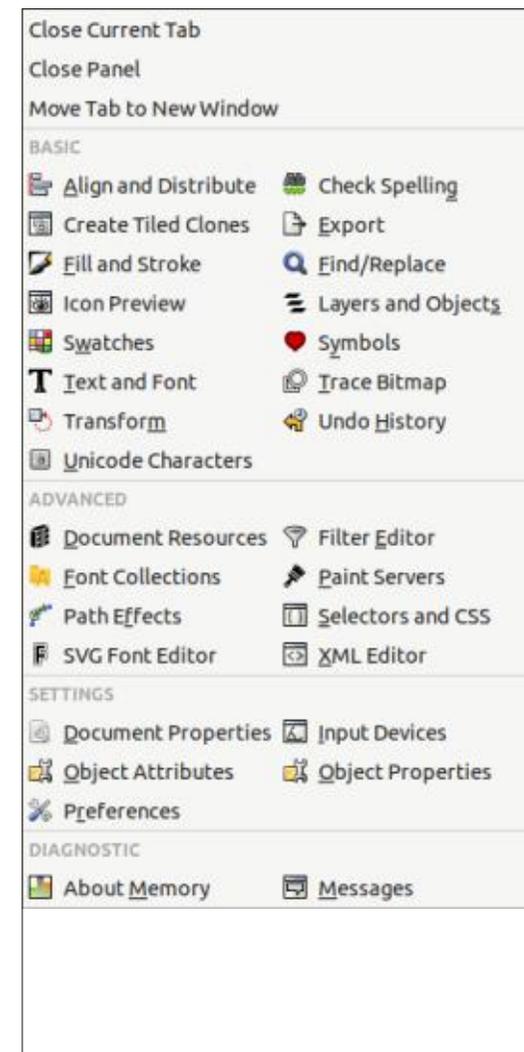


pane), or access it via the 'dialog popup menu'. The what now? If you've no idea what I'm talking about, you're not alone – I also had to go hunting to find this menu, as it wasn't a term I was familiar with.

When you open a dialog – any dialog – within Inkscape, there is an icon at the right of the tab bar (circled top right). This is present whether the dialog is opened in a window, or docked to Inkscape's main window. With the theme I use, this icon appears as a light grey down-facing arrow which is very easy to miss. Here it is at the top-right of the Fill & Stroke dialog on my machine, circled in red because it really is so easy to miss.

Clicking this icon opens the 'dialog popup menu' (right).

In my defence, I was vaguely aware of this menu, but it's not one



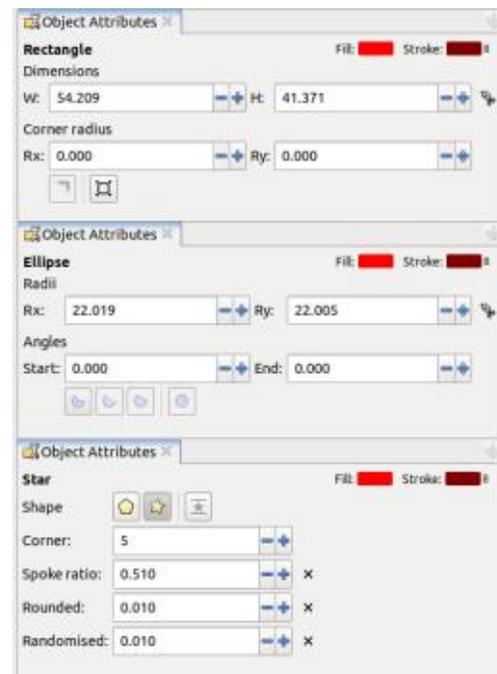
I ever use. The top few entries are useful if you're managing multiple dialogs in a tabbed interface which is probably docked to the main window. That's not the way I work. The remaining entries open various dialogs, but I always open my dialogs via toolbar buttons, menus, and context menus. Never by clicking on a faint icon in some completely different dialog, then selecting the thing I really wanted via this menu.

Towards the bottom of the dialog, in the 'Settings' section, you can find the entry for Object Attributes. If you don't have a bitmap image in your document, and haven't bound a separate keyboard shortcut, this seems to be the only way to access it. To summarise, the steps required are:

- Open a dialog. Any one will do, so feel free to use the "Layers and Objects", "Fill and Stroke", or "Align and Distribute" dialogs if they're already open. If you don't have a dialog open, right-clicking on an object and choosing "Document Properties" feels to me like a route that won't break the mental context of what you're trying to do.
- Click on the icon at the right of the tab bar in your selected dialog.

- Click on "Object Attributes" in the Settings section of the menu.
- On the canvas, select the object whose attributes you wish to view or edit.
- Optionally close the other dialog if you no longer require it.

With nothing selected, the dialog is empty, and with multiple objects selected, it simply shows the text "Multiple objects selected". When an individual object is selected, however, the display will change depending on the type of object. We've already seen how it looks when a bitmap image is chosen, but here are the other possibilities:



Essentially these replicate the controls in the relevant tool control bar for each type of object, but there are some interesting additions and differences. First is that the object's fill and stroke colors, and stroke width, are indicated at the top-right of each view. None of the other stroke properties are reflected here, and unlike the corresponding swatches and numbers in the status bar, you can't change the values in any way from here. Disappointingly, clicking on the swatches doesn't even open the Fill & Stroke dialog.

The top row of fields for Rectangles and Ellipses has a small icon to the right. Clicking this will round the values in those fields to the nearest integer, which is a potentially handy feature that would be nice to have in the main tool control bar fields. Conversely, the quick shortcut values that are present on the context menus for these fields in the tool control bar are not included within this dialog. That limitation applies to all the fields, regardless of the selected object.

The Rectangle pane has a couple of buttons at the bottom. The first

sets the corner radius values to zero (i.e. 90° corners) as it does in the tool control bar. But the second button is another useful one which is missing from the tool control bar: it adds the 'Corners' live path effect, allowing each of the four corner radii to be modified independently. The Object Attributes dialog does not actually show the individual values, however – this button is more of a quick way to add the LPE so you can tweak the values on-canvas, but you'll still need to open the LPE dialog for fine control and editing.

The Star pane also has a couple of extra touches compared to the regular tool control bar. The first is the third button in the 'Shape' row – whose drab icon in this theme makes it appear disabled, even though it isn't. The tooltip in this button says 'Level shape', which in this case means that it will be rotated such that the first spoke runs vertically. Inkscape veterans already know to hold the CTRL key and drag upwards when using the Star tool to achieve this type of alignment, but if you're not aware of that trick, or you simply forget to do it on a particular object, reorienting a star or regular polygon to make it neatly aligned

## HOWTO - INKSCAPE

can be a surprisingly tricky task. This button achieves it with one click, and makes me wonder why this isn't also on the tool control bar.

The other feature is less impressive, but a nice touch nevertheless: next to the last three numeric entry fields is a small 'x' button which appears when these fields are set to anything other than their default values (0.5, 0 and 0, respectively). Clicking the button simply resets that field back to its default.

Missing in this image are the Object Attributes panes for Spirals, Paths, Text, and 3D Boxes. None of these objects show any content at all in this dialog – not even the non-editable fill and stroke information. This makes the dialog as a whole feel rather unfinished and inconsistent. Perhaps that's why it's been hidden away so well.

In summary, this dialog is a potentially useful tool which even offers a few capabilities that can't be found anywhere else in Inkscape. That makes it all the more disappointing that it's hidden away in an obscure popup menu, rather than appearing in the context

menu. This is doubly baffling when you consider that it does appear there – albeit with a historic title – if the selected object happens to be a bitmap image. I'm not sure I'll use this dialog enough to warrant creating a keybinding for it, but now that I know it exists I've little doubt that I'll have cause to open it from time to time. To be honest, that will mostly be when I forgot to hold CTRL while creating a star.



**Mark** uses Inkscape to create comics for the web ([www.peppertop.com/](http://www.peppertop.com/)) as well as for print. You can follow him on Twitter for more comic and Inkscape content: [@PeppertopComics](https://twitter.com/PeppertopComics)

# The Daily Waddle



**DID YOU KNOW THAT NYAN CAT SOLD FOR SIX FIGURES WORTH OF CRYPTO ???**



Greetings fellow Beings. I hope you have already read my How-To Python in the Real World #149 in this issue, because that is the actual beginning of this article. Consider this the second half of it. So if not, please jump back to the contents page (usually page #2) and read that first. I'll wait.

Ready now? GREAT! We're talking about Time change from Standard Time to Daylight Saving time and back to Standard time. Why is that important? Well, if you have a Microcontroller that is dealing with time sensitive logging or needs to do something at a particular time, your device needs to know what the actual correct time is at all times.

You might be thinking to yourself that this isn't a big deal, especially if you use Thonny as your IDE for programming your device. Have you ever noticed that when you get the current time on your device is correct? That's because, by default, Thonny sets the time on the device and more times than not, it is also set, again by default,

to use the local time from the computer you are running Thonny on.

That is a good thing, isn't it? Well, yes. Most of the time.

Let's say that you have a program that you are going to test that requires the time and date to

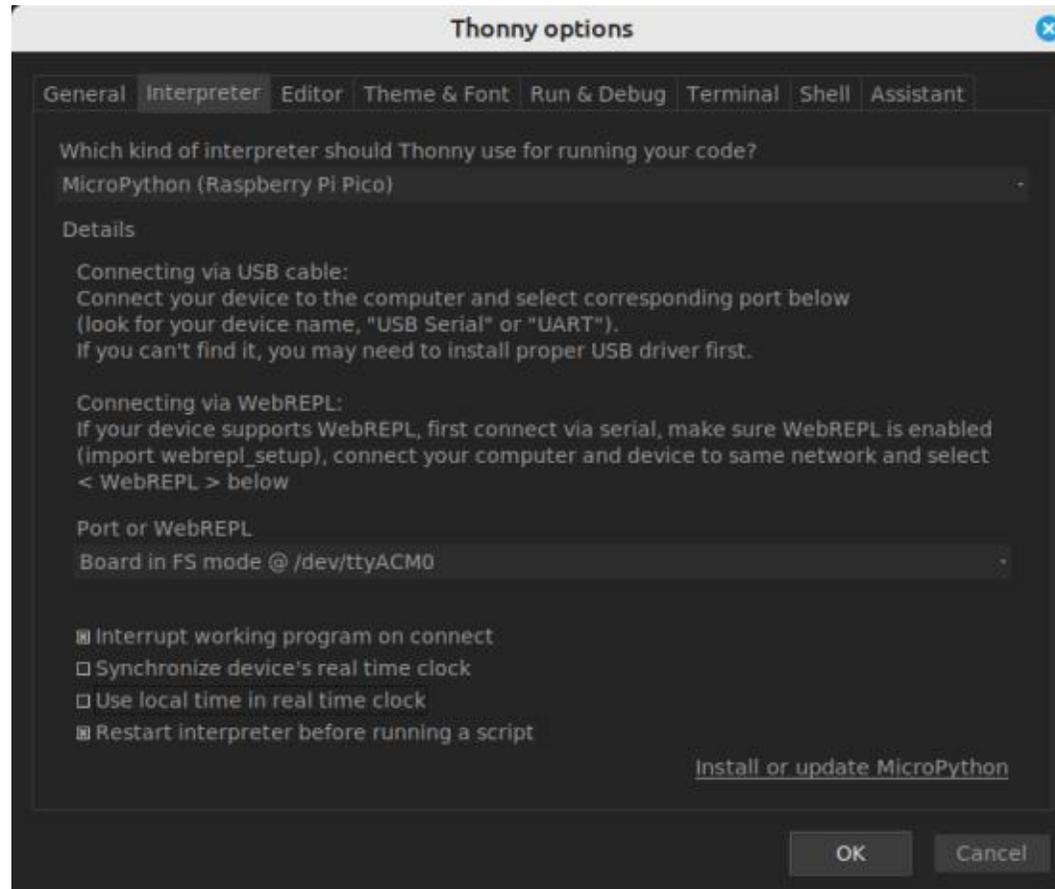
be set. You test it under Thonny and it runs just fine. Now, you save the program to the device as main.py so that it will run when the device is powered on. Now you close Thonny and unplug then replug in the device. Assuming the device and your program have some sort of display showing the time, the time will display

"00:00:00". Even if you've connected to the network, unless you have connected to an NTP server (time server), the time is not set. That's why having Thonny auto set the time and date isn't always a good idea.

How do we keep that from happening?

There are four options that can be turned on or off by clicking in the small squares (Radiobuttons in the Tkinter world). Click on the two center options ('Synchronize device's real time clock' and 'Use local time in the real time clock') to turn off the options. Then restart Thonny.

Originally, I had planned on a full project including code for this article. However, there have been many stumbling blocks keeping me from doing this. Not the least of which is a problem in the ntpime function of MicroPython. It seems that this is across all the types of Microcontrollers, not just the RPI-PicoW. So, my fallback plan is to explain how it SHOULD be done,



then try to lay out a plan on how it should be implemented (at least until things get settled in the MicroPython world) and give you the project code next month.

## NTPTIME

The MicroPython firmware has a module called `ntptime` that, assuming your device supports internet communication, will go out to a special Internet address and ask for the time. HOWEVER, the time that is returned is not what you would think it is. It is a very large integer that specifies the number of seconds since midnight Jan 1, 1900, and then an offset is applied to that to adjust it to either the number of seconds from Jan 1, 1970 or Jan 1, 2000. This is known as the EPOCH. This depends on the Microcontroller you are using. You really shouldn't have to worry about the deep-down internal calculations, since the `ntptime` module should deal with that for you. What you DO need to worry about is that there are two times that are kept on the system. One is `gmtime` and one is `localtime`. As you might guess, `gmtime` is UTC (Universal Coordinated Time) or Greenwich Mean Time. This number

never gets Daylight Saving Time applied to it. Now you would think that `localtime` would have at least the timezone applied to it and at best the DST value applied to it. As John Belushi used to say... "BUT NOOOOOOOOOOOOOOOOOOOOO". In the world of MicroPython (at least currently), `gmtime` and `localtime` are both the same. This has caused a large discussion that you can follow if you wish at <https://github.com/orgs/micropython/discussions/12378>. As I said just above, time zones are not currently implemented in MicroPython.

To make matters a bit crazier, there are two versions of `gmtime` and `localtime`. There is one set in the `time` module and one in the `utime` module. Currently they all point to the same values.

So, if you are interested in getting the correct time for wherever your Microcontroller is located at that moment, you have to play a bunch of games.

So, since there is no consensus on this subject, let's look at the games we can play to get the values that we want/need, at least for now.

The VERY simplest solution at this point is to write your own `localtime` function that will take the timezone information and return a proper `localtime`. However, you really don't need to do that, since I found one for you.

User MrEbbinghaus posted a quick solution on August 31, 2023 at <https://github.com/orgs/micropython/discussions/11173#discussioncomment-6876888> a one-line solution (not counting comments) that works pretty well.

I copied the small function (since I already have `time` imported in my code) and named it "localtime2". That way, there is no naming conflict.

```
import time

TZ_OFFSET = 0

def localtime(secs=None):

    """Convert the time secs expressed in seconds since the
    Epoch into an 8-tuple which contains: (year, month, mday,
    hour, minute, second, weekday, yearday) If secs is not
    provided or None, then the current time from the RTC is
    used."""

    return time.localtime((secs if secs else time.time()) +
                           TZ_OFFSET)
```

Now, you would think that the `TZ_OFFSET` value should be simply the hour offset, either positive or negative based on your offset. Here where I live, "Standard" time is 6 hours behind UTC and "Daylight Saving Time" is 5 hours behind UTC. So I should use -6 as the `TZ_OFFSET` during "Standard" time and -5 as the offset during "Daylight Saving Time", right?

**NOOOOOOOOOOO**

You have to convert that hour offset to seconds first. WHAT?

Yep. Now, we all know that there are 60 seconds in a minute and 60 minutes in an hour, so that would be  $60*60*-6$  (-21600) or  $60*60*-5$  (-18000). THOSE are the

## MICRO THIS MICRO THAT

numbers you need to send into the “replacement” localtime function .

To make matters worse, the ntplib module is NOT very user friendly. Nor is the NTP Timeserver. Many times, the ntplib server doesn't return anything at all and sometimes it returns a value that will crash your program. When that happens, the “current thinking” is that the NTP server is sending you a KoD or “Kiss-'o-Death” packet that basically says you have made too many calls in too short a time.

According to the RFC4430: Best Practices document for the NTP servers: “A client MUST NOT under any conditions use a poll interval less than 15 seconds.”

Not something that is known by just everyone! But, ok. How can we handle this better than a try/Except loop?

It seems that Peter Hinch (who I've mentioned more than once in my MTMT articles) has created a 'portable' NTP module of his own. You can find it at <https://github.com/peterhinch/micropython-samples/blob/master/ntptime/ntptime.py> .

I would copy the code and place it in a module all on its own with a name like “port\_ntptime”.

The nice thing about Peter's module, is that not only can you pass a timezone value (again in seconds) it also will return either the proper time value (in seconds) OR a 0 if the NTP Server failed to respond in time.

There's a discussion of this at <https://github.com/peterhinch/micropython-samples/blob/master/README.md#414-ntp-time> and a larger discussion at <https://forum.micropython.org/viewtopic.php?t=12726>.

Unfortunately, Peters module doesn't actually set the time, it just gets the time. So, here is how you can use his code and still get the time set properly:

```
trials=10
while trials > 0:
    lt=port_ntptime.time()
```

Lt is the return value. Check to see if it is 0 or not. If it is, then call the ntplib.settime() function. If not, sleep for 15 seconds and then try again (top right).

```
if lt > 0:
    print(lt)
    utime.gmtime(lt)
    ntpWorked=False
    while not (ntpWorked):
        try:
            ntplib.settime()
            ntpWorked=True
        except:
            time.sleep(15)
    break
else:
    print(".",end="")
    trials-=1
    time.sleep(1)
```

The ntplib.settime() function will force the corrected time into utime.gmtime. Again, we have the issue that gmtime and localtime are the same, so you should remember when you want to use localtime, use the localtime2 function.

Hopefully, this will take the problems away from my code I want to present next month and allow me to get it tested completely without it crashing.

Until next time, as always; stay safe, healthy, positive and creative!



**Greg Walters** is a retired programmer living in Central Texas, USA. He has been a programmer since 1972 and in his spare time, he is an author, amateur photographer, luthier, fair musician and a pretty darn good cook. He still is the owner of RainyDaySolutions a consulting company and he spends most of his time writing articles for FCM and tutorials. His website is [www.thedesignedgeek.xyz](http://www.thedesignedgeek.xyz) .



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# UBPORTS DEVICES

Written by UBports Team

# Touchdown

The first UBports TouchDown is now over, and what an event it turned out to be! Then it was straight into FOSDEM and the mobile on FOSS stand and another great and busy time with plenty of highlights. There is much to tell you about, so we may as well get on with it.

One surprise takeaway from FOSDEM, for some of the UBports team, was the FOSDEM bug. We hope everyone that did have now crushed that particular bug and is fully recovered, along with everyone else who did so.

## UBPORTS TOUCHDOWN AND FOSDEM

### UBPORTS TOUCHDOWN

Starting with introductions and initial thoughts, the following day and a half of work and discussions identified six initial areas or buckets of development to concentrate on. Each one will be headed by one person acting as the

main contact and focus to see the project through. They were also discussed in the last Q&A so for now we will not repeat it here. Please have a read of the Q&A blog for now, we will be looking at each "bucket" in future newsletters.

We had high hopes for the TouchDown event and what it might achieve in the short and long term for UBports and Ubuntu Touch. We hoped that bringing developers together for the first time after Covid-19 in person would

create something special, and it did. Seeing the interaction and involvement between the developers and their passion for the project was really something special. This is only the start, much more will follow.

The following diagram is of the "6 Buckets" of developments decided on at the TouchDown. As mentioned above, further information is available for now in the Q&A blog (<https://ubports.com/r/pVY/m/175288>).



## FOSDEM 2024

We were on the end of a very crowded FOSS on mobile stand table. Even before we had all the UT devices set up, the interest and questions started, and it did not stop for the rest of the two days.

Technical, general and how can I do this or that, the questions kept coming while phones were picked up and interacted with. Many, many stickers and leaflets were handed out. Everyone was kept busy and excited by the interest in both Ubuntu Touch and UBports. Of course, meeting and talking with everyone there in person was amazing.

Devices on display included a Bq Aquaris 5HD, just to show how far we have come then a OP5, PinePhone, PinePhonePro with keyboard case, PineTab and PineTab2, Volla Phone, Volla X, Volla 22, Volla X23, Fairphone 4 and Fairphone 5.

## UBPORTS DEVICES

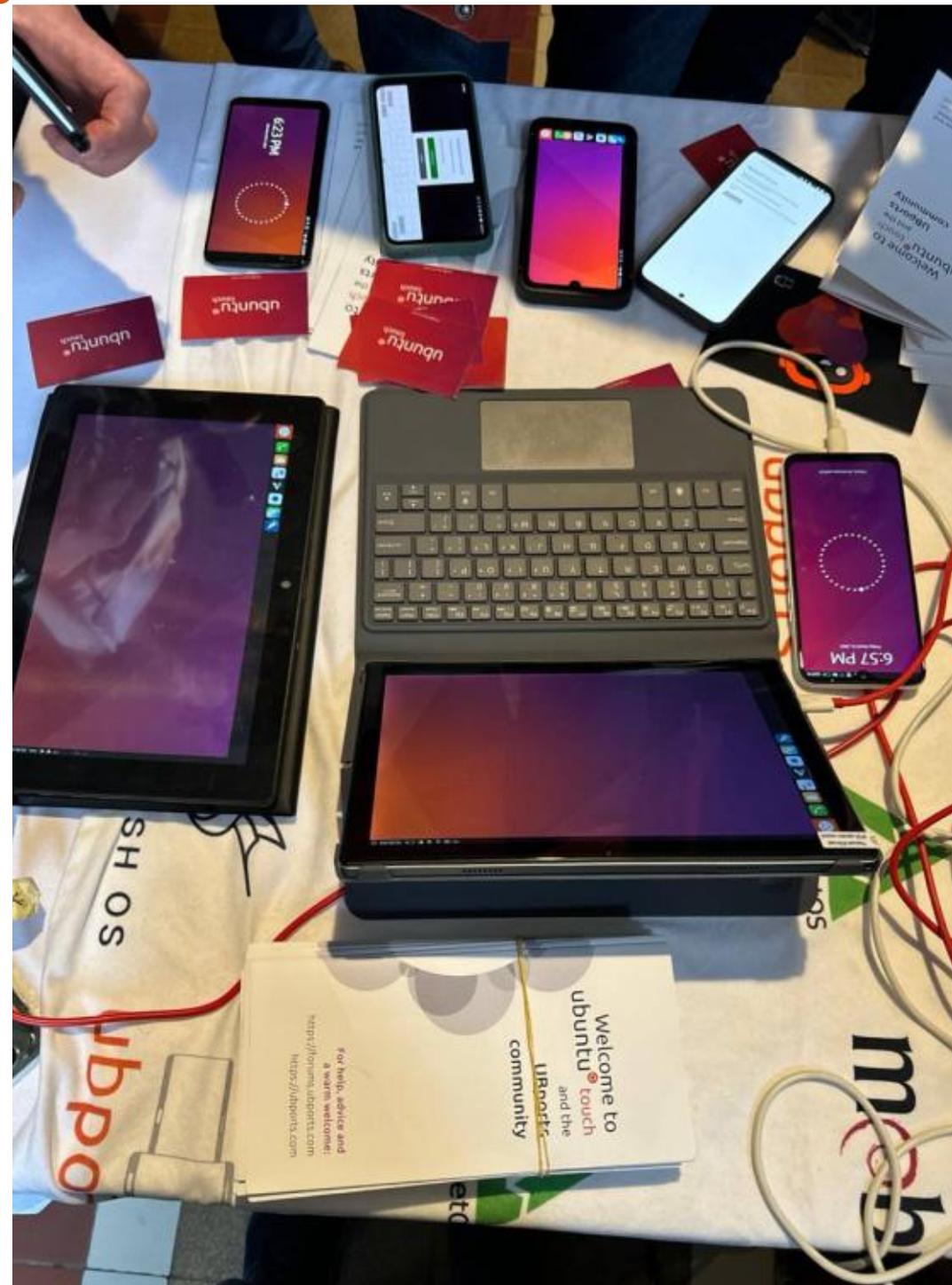
Yes you did read that right the Fairphone 5 was at FOSDEM, and it was running 20.04. Not unsurprisingly it got a lot of attention as you would expect. The port was only finished the day before by Nikita from initial work started by Marius.

Additionally, the first day in the Fosdem cantina, we demonstrated Lomiri on the desktop with Ubuntu 24.04. That project is also coming on well, more on that in the next newsletter.

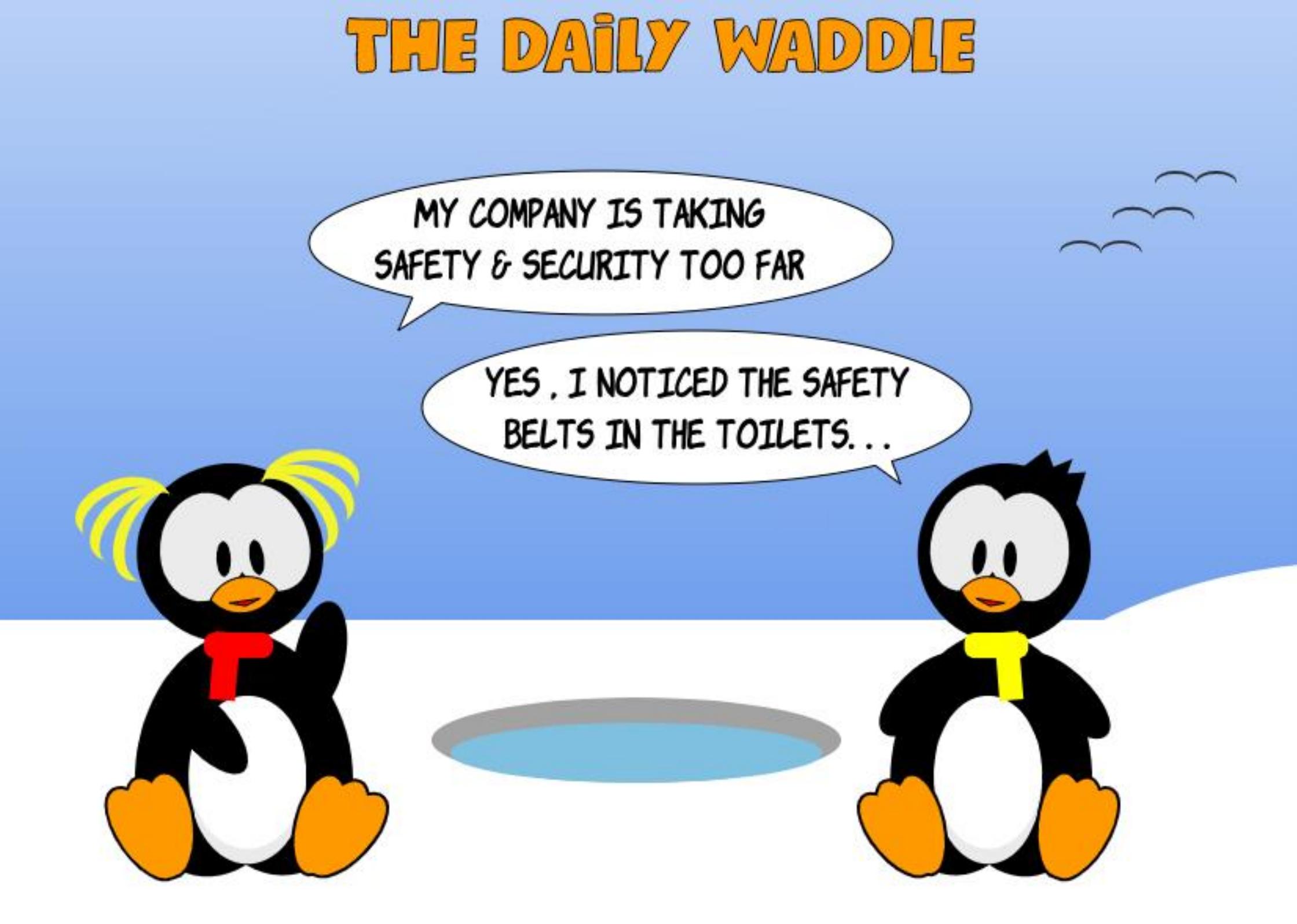
Not only on the stand, there were also the talks to look forward to. Unfortunately, Marius could not make FOSDEM this year and so Ivan and Nikita stepped in bravely to give the VoLTE talk and Oren his excellent Ubuntu Touch on Pine talk. You can watch all of these great talks using the links.

<https://ftp.belnet.be/mirror/FOSDEM/video/2024/h1309/fosdem-2024-3378-volte-for-foss.av1.webm>

<https://video.fosdem.org/2024/h1309/fosdem-2024-2851-the-journey-to-ubuntu-touch-20-04-on-pine64.mp4>



# THE DAILY WADDLE



MY COMPANY IS TAKING  
SAFETY & SECURITY TOO FAR

YES, I NOTICED THE SAFETY  
BELTS IN THE TOILETS...





# MY STORY

Written by Art Schreck

I use LibreOffice quite a bit. My difficulty is, many outside projects I receive are Microsoft (MS) Office formatted (docx, xlsx, etc).

And while LibreOffice is a great office suite, its conversion of anything outside the open document arena is a bit dicey.

That's always been an issue, and the same issue appears when converting LibreOffice projects into MS formatting. You may think you've got it saved in MS formatting, but weird things happen in the conversion process.

You could opt for loading MS Office in Wine, but that's a failure waiting to happen. Plus, you have to have an MS Office license and that'll cost you.

How about a Microsoft 365 subscription? You're using a free operating system so why would you be tempted to pay \$69 to \$99 yearly for this?

That leaves an existing, but

largely ignored (by most) suite - ONLYOFFICE (I'm not shouting, that's how it's spelled). You can find it at <https://www.onlyoffice.com/desktop.aspx>. More on locating and installing it later.

The major difference between LibreOffice and ONLYOFFICE is the protocol.

LibreOffice creates documents, spreadsheets, presentations, etc in the ODT (Open Document) format. If users so desire, they can save in Microsoft (MS) or a variety of other offerings such as RTF, PDF, etc.

However, whatever you create starts in the Open Document format and conversions go from there.

ONLYOFFICE deals with MS formats, saves in those formats, but also has the ability to save in ODT as well as PDF, RTF, etc (same as LibreOffice).

As such, OPENOFFICE starts in the MS format and then offers users other format options if they

so choose.

I would venture a guess this means MS formatted projects coming in will open better in ONLYOFFICE as compared to LibreOffice.

Is this true?

So far, and my experiments have been limited to run-of-the-mill documents and presentations, ONLYOFFICE does an admirable job of opening without loss of formatting from the original MS office created projects.

However, I had a rather complex spreadsheet that was prepared in Office and carried the xlsx format symbol.

It was legible and readable but anchor points for the columns were out of whack and had to be readjusted. So, it appears, not even MS formats agree with each other on occasion.

But ONLYOFFICE does help greatly. That same spreadsheet

opened in LibreOffice required much more effort to make it workable.

Now comes the question, where do I find ONLYOFFICE?

You could go to the website I mentioned above. Or you can use Flatpak or Snap to install a copy.

And for the really adventurous, you can try Linuxfx, it has ONLYOFFICE preinstalled.

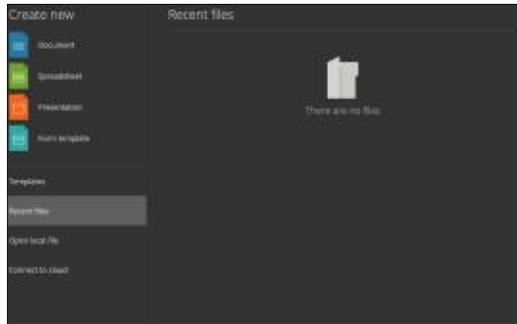
My recommendation would be to try the appimage off the website. That makes it portable so you can run it as a desktop program or use it on a USB stick.

Now comes the real test. How does OPENOFFICE work?

Like LibreOffice. In fact, you might confuse the two initially; however, whereas LibreOffice gives names (Writer, etc), ONLYOFFICE dispenses with such formalities.

For example:

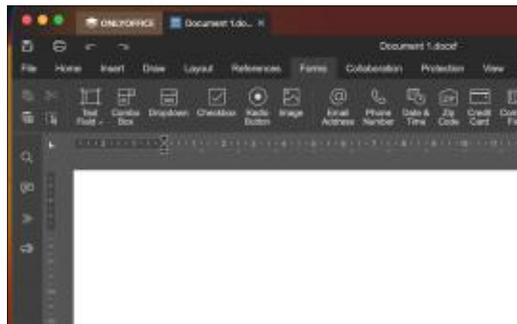
Below is what you'll see upon opening.



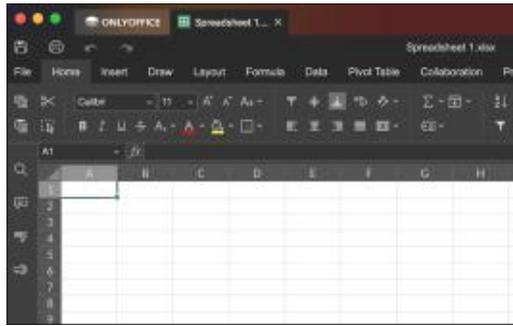
Nothing special, just a menu.

Click on Document:

Although it's barely visible, notice the docx banner on the second tab.



And what about spreadsheets?



And, finally, form templates.



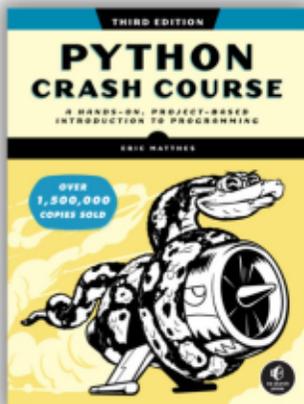
In case you've noticed and are wondering, the first tab in any open window will always state ONLYOFFICE. That's the main menu always lurking in the background.

In short, it's another office suite, just with different parameters.

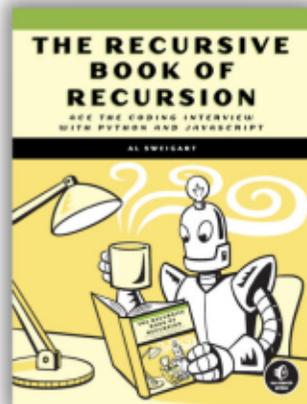
But it's free for personal use, doesn't take up too much space, and is even cross compatible with just about any OS out there, much like LibreOffice (although OPENOFFICE works in Android and iOS, too).



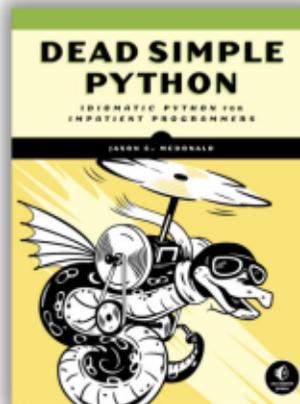
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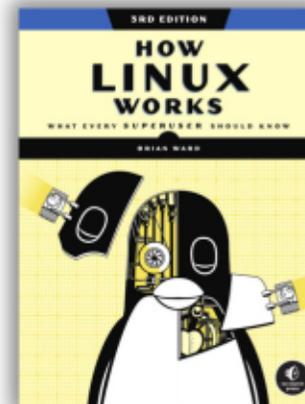
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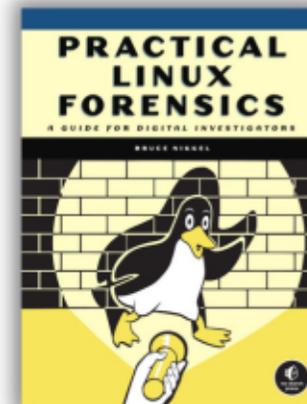
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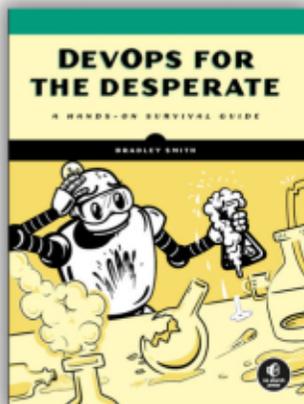
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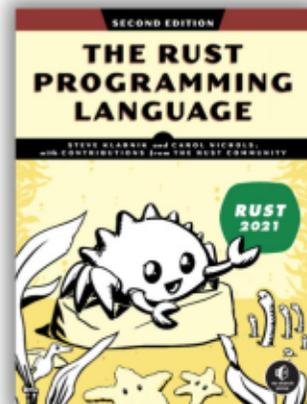
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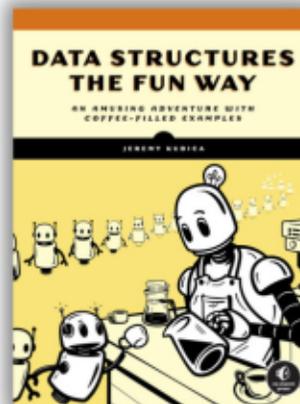
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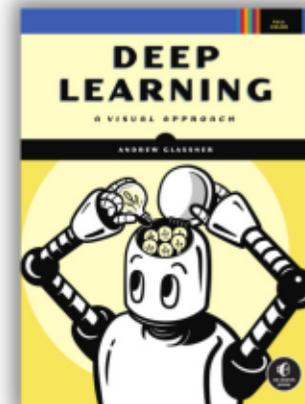
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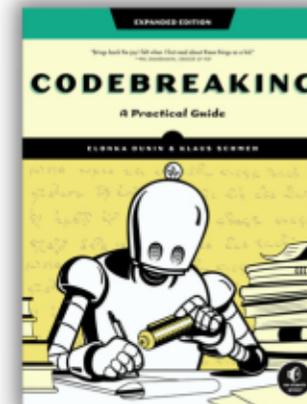
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# HOW-TO

Written by Ronnie Tucker

# Write For Full Circle Magazine

## GUIDELINES

The single rule for an article is that **it must somehow be linked to Ubuntu or one of the many derivatives of Ubuntu (Kubuntu, Xubuntu, Lubuntu, etc).**

## RULES

• There is no word limit for articles, but be advised that long articles may be split across several issues.

• For advice, please refer to the **Official Full Circle Style Guide:** <http://bit.ly/fcmwriting>

• Write your article in whichever software you choose, I would recommend LibreOffice, but most importantly - **PLEASE SPELL AND GRAMMAR CHECK IT!**

• In your article, please indicate where you would like a particular image to be placed by indicating the image name in a new paragraph or by embedding the image in the ODT (Open Office) document.

• Images should be JPG, no wider than 800 pixels, and use low compression.

• Do not use tables or any type of **bold** or *italic* formatting.

If you are writing a review, please follow these guidelines :

When you are ready to submit your article please email it to: [articles@fullcirclemagazine.org](mailto:articles@fullcirclemagazine.org)

## TRANSLATIONS

If you would like to translate Full Circle into your native language please send an email to [ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org) and we will either put you in touch with an existing team, or give you access to the raw text to translate from. With a completed PDF, you will be able to upload your file to the main Full Circle site.

## REVIEWS

### GAMES/APPLICATIONS

When reviewing games/applications please state clearly:

- title of the game
- who makes the game
- is it free, or a paid download?
- where to get it from (give download/homepage URL)
- is it Linux native, or did you use Wine?
- your marks out of five
- a summary with positive and negative points

### HARDWARE

When reviewing hardware please state clearly:

- make and model of the hardware
- what category would you put this hardware into?
- any glitches that you may have had while using the hardware?
- easy to get the hardware working in Linux?
- did you have to use Windows drivers?
- marks out of five
- a summary with positive and negative points

**You don't need to be an expert to write an article - write about the games, applications and hardware that you use every day.**



# REVIEW

Written by Adam Hunt

# Ubuntu Unity 23.10

Release notes for new versions of Linux distributions make interesting reading. They are normally written by developers to introduce the new release and, hopefully for those of us writing reviews, list the changes incorporated. Some release notes have clear lists of changes, others require a bit more reading in-between-the-lines. Such is the case with Ubuntu Unity 23.10.

This latest Ubuntu Unity version came out on 12 October, 2023, along with all the other Ubuntu 23.10 flavors. Ubuntu Unity 23.10 is the eighth release of this distribution using the Unity interface. It is the third and last interim release of this development cycle. The next version will be a long term support release, Ubuntu Unity 24.04 LTS, which will be out on 25 April, 2024. As an interim release, Ubuntu Unity 23.10 is supported for just nine months until July, 2024.

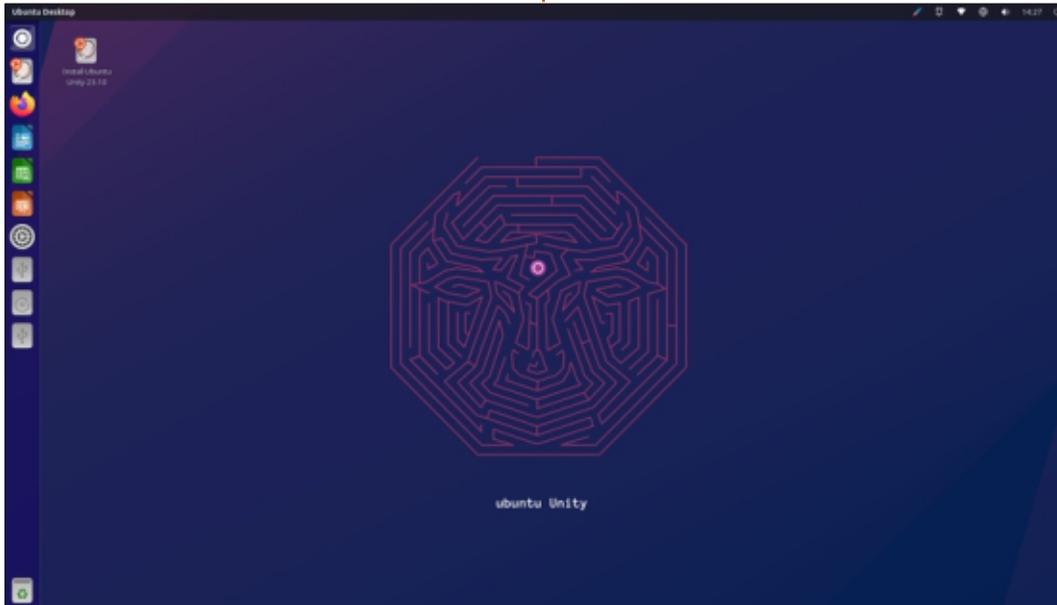
## INSTALLATION

I downloaded Ubuntu Unity

23.10 from the official source using Transmission to get the file via BitTorrent. Once I had the ISO file, I ran an SHA256 sum check on it from the command line to make sure the download was good.

This release is a 3.5 GB download, which is 200 MB bigger than the last version which was 3.3 GB. Still, Ubuntu Unity 23.10 is much smaller than mainstream Ubuntu 23.10 which weighs in at a much heftier 5.2 GB.

I tested Ubuntu Unity 23.10 from a USB stick equipped with



Ventoy 1.0.96. Even though Ubuntu Unity is not officially listed as being supported by Ventoy, it boots up just fine. Ventoy allows dragging and dropping multiple Linux distributions onto a single USB device which makes reviewing or just distro-hopping very easy. Ventoy does the hard work of unpacking the one selected right at boot up.

## SYSTEM REQUIREMENTS

Ubuntu Unity does not specify any system requirements but it is

probably safe to assume that it is the same as Ubuntu 23.10, a minimum of:  
2 GHz dual core processor  
4 GB of RAM

## NEW

The release announcement for Ubuntu Unity 23.10 indicates that the project's developers have spent this six-month release period working on three projects, none of which made it into this release.

The first project aims to replace Nux, an OpenGL toolkit, in the next version of Unity which is currently under the working name of UnityX. Replacing Nux will allow Unity to be run under the full Wayland display server protocol, instead of the XWayland workaround currently employed.

The second project is work to allow Lomiri to be used on Ubuntu Unity. Lomiri was previously known as Unity 8. A development of Unity 7, it was originally started by Canonical as a "convergence

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desktop” for all devices, including phones, and is now developed by UBPorts as part of their Ubuntu Touch phone operating system. Lomiri was intended to be available for Ubuntu Unity 23.10’s release, but was delayed due to the discovery of some application launcher bugs.

The third project is listed as “adding support for CUPS 2.0 in Unity (printing), which has now been pushed back by Ubuntu to 24.04.” Since this Ubuntu Unity release uses CUPS 2.4.2, and even the very first Ubuntu Unity version, 20.04 LTS, used CUPS 2.3.1, it is not clear what that project entails.

Otherwise, the release

announcement does not list any changes actually incorporated in Ubuntu Unity 23.10, and my own testing found only a few new setting changes. There are, of course, upstream changes that are unavoidably part of 23.10, including new application versions from the Ubuntu repositories, newer hardware support with Linux kernel 6.5, and the systemd 253.5 initialization system.

In many ways, a lack of distribution-level changes may be a good sign, as it may indicate that the developers are now happy with how Ubuntu Unity looks and works, and don’t see any need for anything new to be added or removed. In the past, both Ubuntu Unity 22.04 LTS

and 22.10 brought a dizzying swap in and out of default applications, so this new stability may mean that the developers are content with the application mix. If the upcoming LTS version does not bring much new, then I think that this is a reasonable conclusion and that it will probably be a good thing for the users, too.

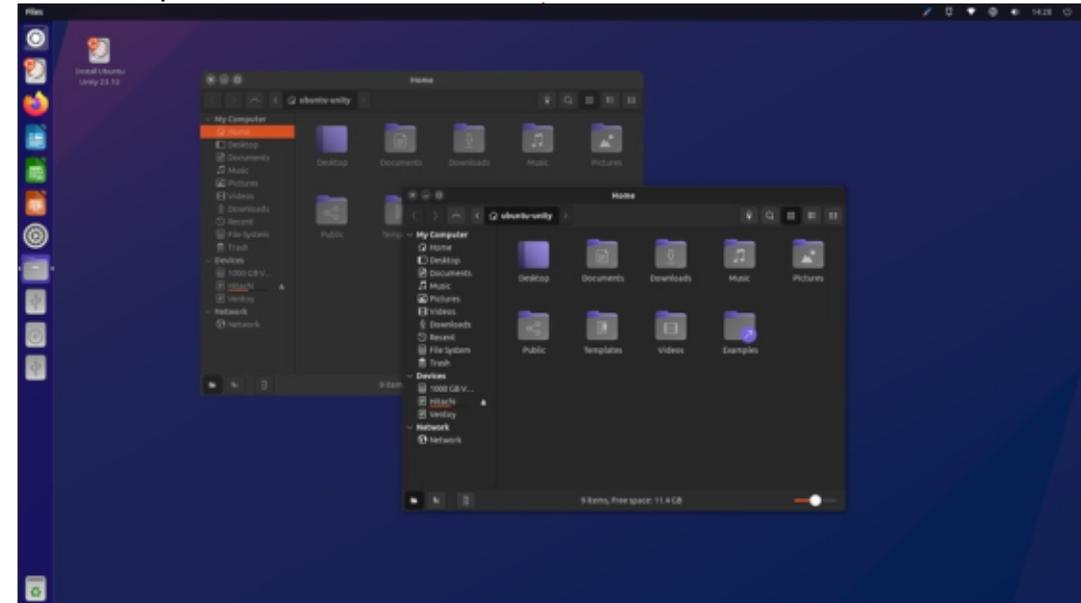
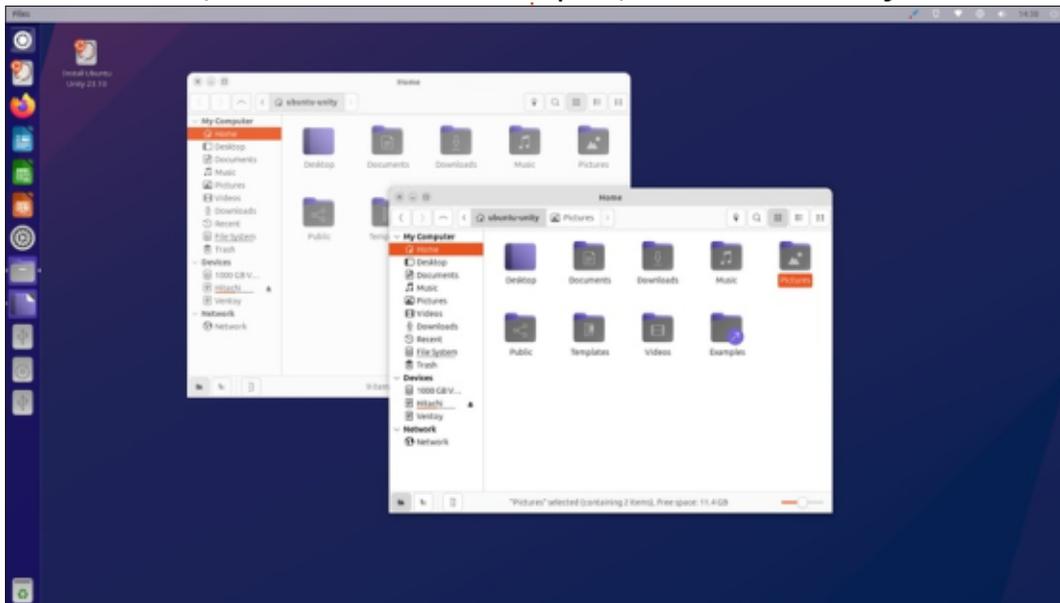
Not new is that Ubuntu Unity 23.10 continues to use Unity 7.7, the same as Ubuntu Unity 23.04 did. This version of the user interface introduced a “portrait” style main menu system that only uses half the screen (the left half), and usually requires vertical scrolling to find things. I am not sure why the full screen is not used, as it would be more space efficient. This

interface also continues with the indicator-notification system for desktop notifications which I still find the most intrusive and annoying of all the user notification systems used in Linux distributions.

## SETTINGS

The settings in this release are once again spread out in three places: the regular settings menu, the “brush” icon on the panel, and the included Unity Tweak Tool. Once you locate them, they all work well.

The Unity Tweak Tool still has four window themes: Ambiance, Radiance, Yaru, and Yaru-dark, plus



# REVIEW

36 icon themes and six cursor styles. The regular settings menu and the brush icon offer up only two window themes, Yaru and Yaru-dark. Both the settings menu and brush icon now have 20 accent colors to choose from, an increase of ten over the last release, something not mentioned in the release notes.

For this release, code named "Mantic Minotaur", there is a new default Minotaur wallpaper based on the Ubuntu 23.10 one, and is quite nicely done. There are 19 other wallpapers, 13 of which have Minotaurs. If you want something with "less Minotaur", you can always use your own wallpaper.

Ubuntu Unity continues with its aim of offering a high degree of user customization, which sets it apart from mainstream Ubuntu which has very limited user choices.

## APPLICATIONS

Some of the applications included with Ubuntu Unity 23.10 are:

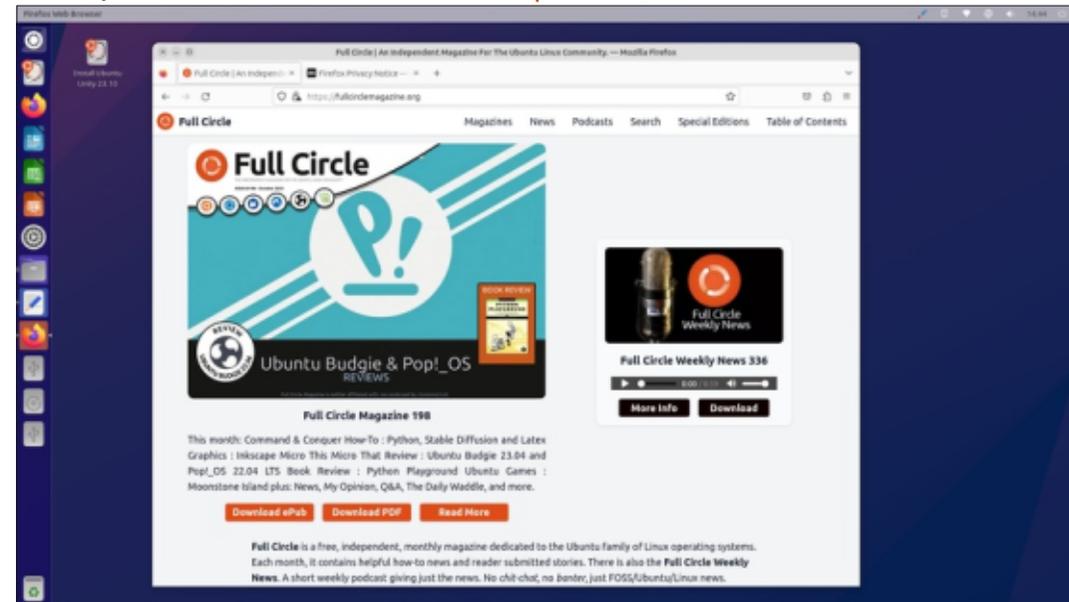
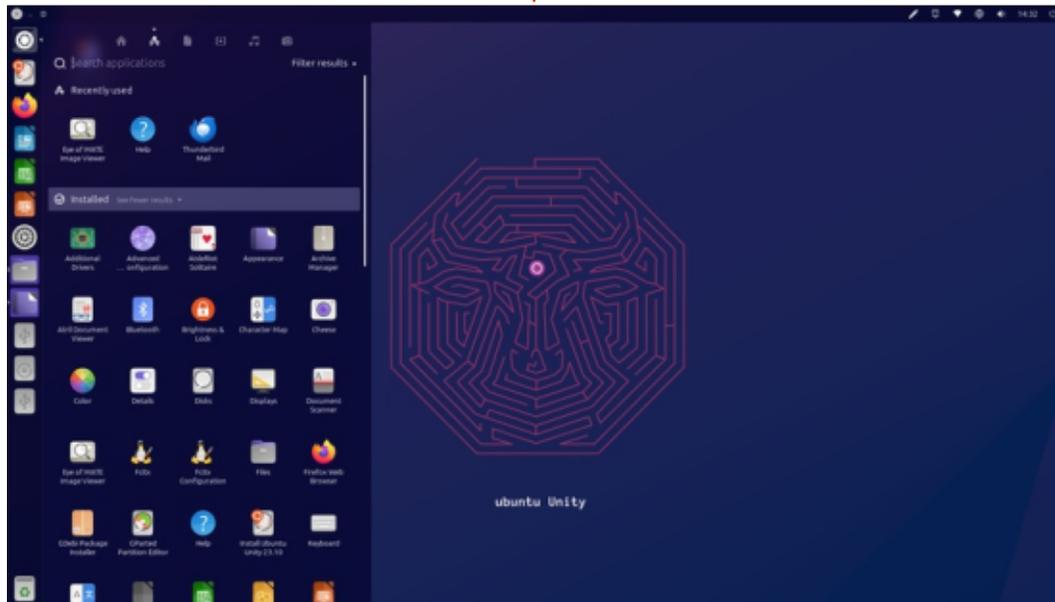
- Archive Manager (File Roller) 43.0 file archiver\*
- Atril 1.26.0 PDF viewer\*
- Cheese 44.1 webcam application
- CUPS 2.4.6 printing system
- Document Scanner (Simple Scan) 44.0 optical scanner\*
- Firefox 118.0.1 web browser\*\*
- GDebi 0.9.5.7 .deb package

- installer\*
- Gnome Disks 45.0 disk manager
- Gnome Screenshot 41.0 screenshot tool\*
- Gnome System Monitor 45.0.2 system resource monitor
- Gnome Terminal 3.49.92 terminal emulator
- Gparted 1.5.0 partition editor
- Image Viewer (Eye of MATE) 1.26.0 image viewer\*
- LibreOffice 7.6.2 office suite
- Mate Calculator 1.26.0 calculator
- Nemo 5.8.4 file manager
- Pluma 1.26.0 text editor\*
- PulseAudio 16.1 audio controller\*
- Remmina 1.4.31 remote desktop client
- Rhythmbox 3.4.7 music player
- Shotwell 0.32.2 photo manager
- Startup Disk Creator 0.3.17 USB ISO

- writer
- Synaptic 0.91.3 package management system\*
- Thunderbird 115.3.1 email client
- Transmission 4.0.2 bittorrent client
- Unity 7.7.0 interface\*
- Unity Tweak Tool 0.0.7 settings manager\*
- VLC 3.0.18 media player\*
- XTerm 384-1 terminal emulator

\* indicates same application version as used in Ubuntu Unity 23.04  
\*\* supplied as a snap, so version depends on the upstream package manager

As noted, the selection of default applications provided has not changed in this release. The mix mostly comes from the Gnome and



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Mate desktops with some, like the VLC media player, Firefox web browser and the Thunderbird email client from outside projects. Overall, the applications seem like reasonable choices and, of course, if you want something else it can be easily installed.

Ubuntu Unity 23.10 is still using PulseAudio as its audio controller and, unlike all the other Ubuntu flavors, has not yet switched to PipeWire.

The file manager used in 23.10 continues as Nemo from the Cinnamon desktop environment. Nemo has a nice look and works well enough but still lacks bulk file renaming which really is a feature

that is needed. There are some workarounds available in the repositories, like the standalone GPRename bulk file renamer, for instance.

The LibreOffice 7.6.2 office suite is once again supplied almost complete, missing only the LibreOffice Base database application. If needed, it can also be installed from the Ubuntu repositories.

## CONCLUSIONS

Ubuntu Unity 23.10 is a very smooth and solid release that looks good and works well. The developers seem to have decided

on a final (at least for now) list of default applications which is a good thing for the users. The distribution continues to offer lots of user customization options and that tends to engender user loyalty. People like to be able to make their operating system look the way they want.

The lack of changes in 23.10 tends to indicate that Ubuntu Unity 24.04 LTS, due out on 25 April, 2024, will be very similar, but with three years of support. Perhaps Lomiri or UnityX will be available options in the near future, too? My guess would be to look for stability in the upcoming LTS and those new features over the next development cycle.

## EXTERNAL LINKS

Official website:  
<https://ubuntuunity.org/>



**Adam Hunt** started using Ubuntu in 2007 and has used Lubuntu since 2010. He lives in Ottawa, Ontario, Canada, in a house with no Windows.





# REVIEW

Written by Adam Hunt

# Cubuntu 16.04 LTS

As part of our series on the other 'buntus, Linux distributions that are based on Ubuntu and still carry its name or at least parts of it, I thought this month we would look at a slice of Linux history: Cubuntu.

Developed from 2012 until the project ended in 2017, I recently discovered that the last release, Cubuntu 16.04.3 LTS, is still available for download from the official Cubuntu SourceForge project page. That means that despite being a bit of a historical artifact, given the right hardware, it can still be run today. Even though it is out of standard support, extended support is still available.

## BACKGROUND

The story of Cubuntu is really tied to GNOME 3. When GNOME 3 was publicly introduced in 2011 as a replacement for the very popular GNOME 2 desktop, it was notable for how many people hated it. Even Linus Torvalds, the creator of the Linux kernel, termed it a "total user experience design failure". But, in

the Linux world bad things generate good things and Linux developers everywhere set to work to make a better desktop. Those efforts at Ubuntu resulted in Unity, from South America came a reboot of GNOME 2 called MATE and from the Linux Mint developers, Cinnamon.

Ubuntu launched Unity in Ubuntu 10.10 for netbooks and as Ubuntu 11.04 for the general desktop. At that time, there were already flavors of Ubuntu with several different desktops including KDE and Xfce and LXDE

so creating Ubuntu flavors with Cinnamon and MATE made sense, it just needed someone to take the projects on.

In 2012, Eric Kranich of France started Cubuntu with a first release of 12.04 LTS. He conceived Cubuntu to be different from the other existing Ubuntu flavors, though. Kranich termed his project a "100% Ubuntu Ultimate Edition". He kept everything Ubuntu had, including the Unity interface, and added two more desktop installation options. The default would be the new Cinnamon desktop, with MATE and

Unity as options at installation, providing three of the desktops that resulted from GNOME 3 dissatisfaction. He included a fairly long list of media codecs, plug-ins and proprietary drivers, including drivers for NVIDIA graphics cards. He also added some proprietary applications.

## GETTING CUBUNTU 16.04 LTS

I discovered how to get the last Cubuntu version download from an interesting website, ArchiveOS.org. It is a sort of an online Linux, Solaris, BSD and Open DOS museum which has a page and at least one download for many old distributions, most of which are hosted on ArchiveOS's own SourceForge page. The ArchiveOS Cubuntu page pointed me to the still-existing Cubuntu official SourceForge page as the place to get Cubuntu 16.04.3 LTS.

I downloaded the 2.8 GB file via https as there is no BitTorrent download. There are too few



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people downloading it for BitTorrent to work anyway. ArchiveOS provided an MD5 sum to validate the downloaded ISO file and that worked fine. There is no SHA256 sum provided.

## INSTALLING

As usual, I did not install Cubuntu for testing but, instead, ran it as a live session from a USB stick equipped with Ventoy 1.0.96. Cubuntu is not listed as having been tested as working with Ventoy but it booted up just fine.

## SYSTEM REQUIREMENTS

I was not able to locate any

system requirements. That said, this release uses Linux kernel 4.10.0 which will not necessarily support hardware newer than 2017 or so. I ran it on an old desktop computer that I have which dates from 2012.

## TRYING OUT CUBUNTU 16.04 LTS

Booting up Cubuntu presents a nice Cinnamon desktop with an Ubuntu style purple and orange wallpaper. In addition to the simple Cinnamon menu, Cubuntu comes with a dock that can be turned on from an icon on the panel. The dock then appears vertically on the

screen's right side. It is very Mac-like in appearance and the icons "swell" on mouse over. The dock can be easily turned off using a button on the dock itself.

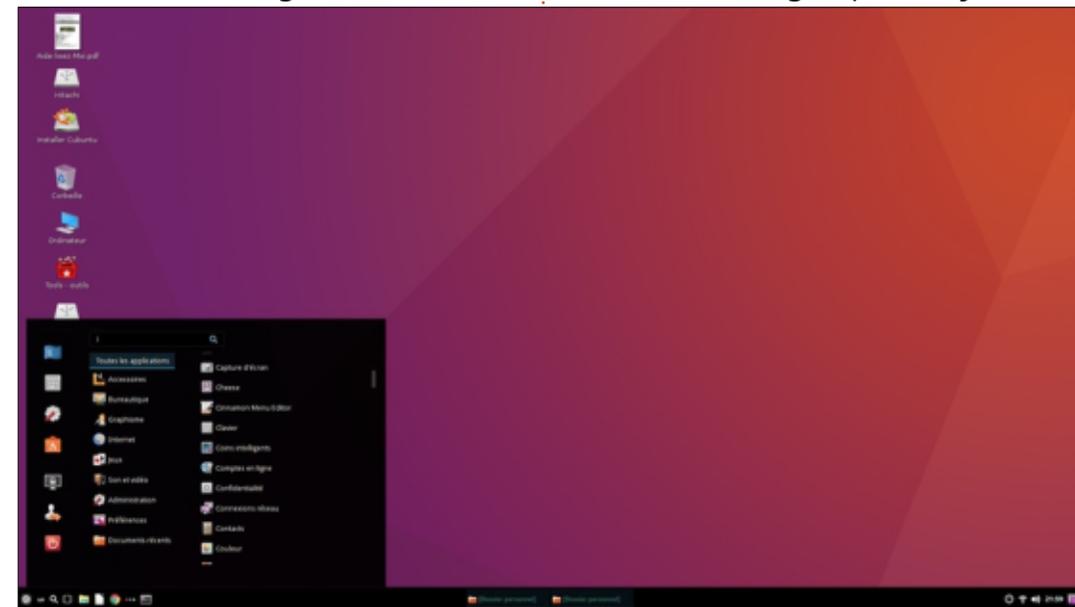
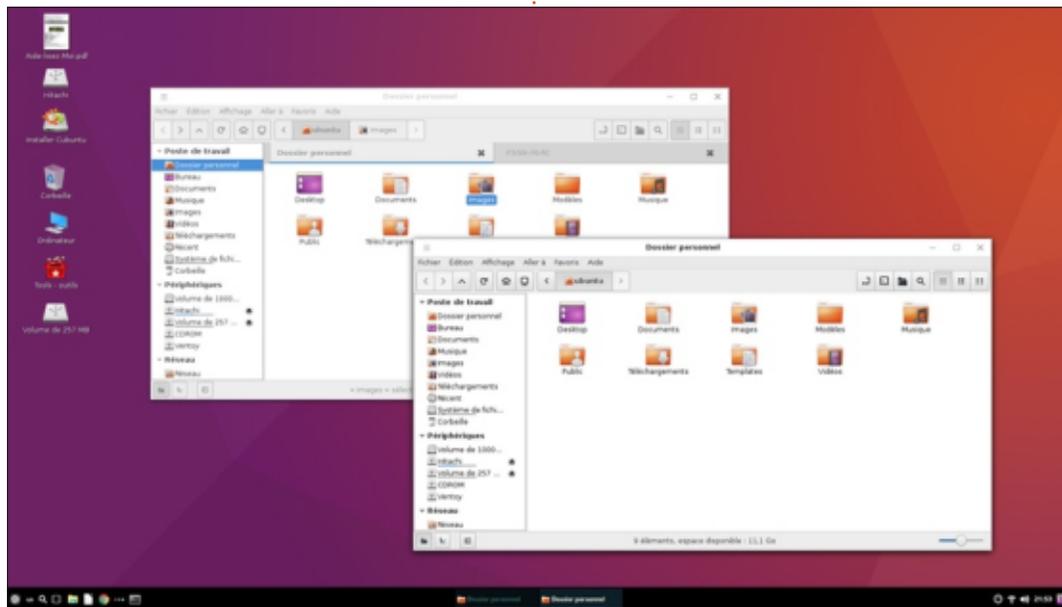
Even though version 16.04.3 LTS was the last Cubuntu version and was the product of five years of development, it still has some oddities and failings. On boot up, you notice that the splash screen says Ubuntu. I guess this was never updated.

I also had issues with the Cinnamon menu. It worked fine using the keyboard but did not work well with my mouse, closing the menu on any mouse click instead of selecting the desired

application to open. This may have been a unique issue to my 2012 vintage test hardware.

Cubuntu boots up in a live session with a default French keyboard arrangement. There is a quick panel setting to change this to English, which is good, as my English keyboard did not work right with a French keyboard arrangement set. There are only the two keyboard layout choices given, English and French.

More of an issue, one also noted by contemporary reviews, is that all versions of Cubuntu boot up in French only. Installed systems are also in French (although the installer is in English). Once you



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have it installed in French, you can use the included Synaptic package manager to install other languages but you have to be able to read enough French to accomplish that!

Overall, these drawbacks probably go a long way to explain the lack of popularity of Cubuntu during its lifespan and contributed to its 2017 demise.

## SETTINGS

Cubuntu comes with a wide variety of settings for user customization. These include 48 wallpaper designs, five cursor styles, 13 icon sets and an amazing total of 56 window color themes,

although I have to note that the majority of these don't work right.

The default window theme is a custom one called "Cubuntu" which is an attractive and simple light theme.

## APPLICATIONS

Some of the applications included with Cubuntu 16.04.3 LTS are:

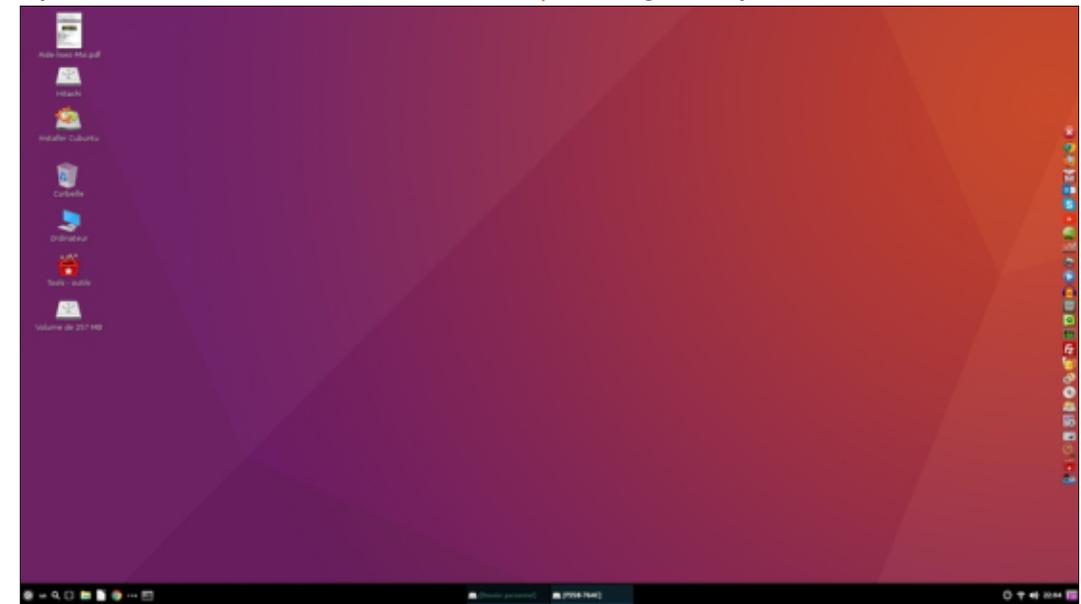
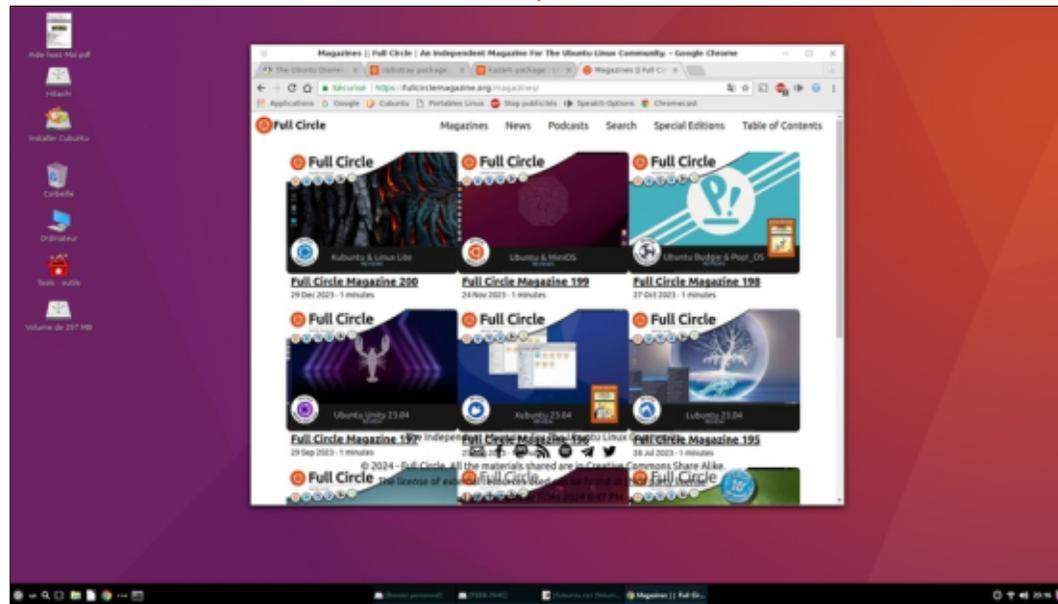
Audacity 2.1.2 audio editor  
Brasero 3.12.1 CD/DVD burner  
Cheese 3.18.1 webcam utility  
Empathy 3.12.11 contacts  
Evolution 3.18.5.2 email client  
FileZilla 3.15.0.2 file transfer

protocol client  
Firefox 54.0 web browser  
Geany 1.27 Integrated Development Environment  
GNOME Disks 3.18.3.1 disk manager  
GNOME Document Viewer (Evince) 3.18.2 PDF reader  
GNOME System Monitor 3.18.2 system monitor  
GNOME Terminal 3.18.3 terminal emulator  
GNOME Text Editor (gedit) 3.18.3 text editor  
Google Chrome 60.0.3112.90 web browser\*  
GParted 0.25.0 partition manager  
Kazam 1.4.5 screencasting  
LibreOffice 5.1.6.2 office suite  
Nemo 2.8.6 file manager  
Openshot 1.4.3 video editor

Radio Tray 0.7.3 online radio streaming player  
Remmina 1.1.2 remote desktop client  
Rhythmbox 3.3 music player  
Shotwell 0.22.0 photo manager  
Synaptic 0.83 package manager  
Skype 4.3.0.37 video conferencing\*  
Spotify music streaming client\*  
Thunderbird 52.2.1 email client  
Transmission 2.84 BitTorrent client  
UXTerm (Bash) 4.3.14 terminal emulator  
VLC 2.2.2 media player  
XTerm 322-1 terminal emulator

\* indicates proprietary software

This list of included applications is quite long and includes a great variety of capabilities. For instance,



## REVIEW

there are not a lot of distributions that include a video editor by default. The default applications do include some redundancies, though, including two web browsers and three terminal emulators!

There are three proprietary applications included: the Google Chrome web browser, Skype video conferencing client and the Spotify music streaming client. I suspect these inclusions did not thrill free software advocates at the time, especially Skype, which has many known security issues and was compromised by law enforcement backdoor access.

The Cinnamon desktop has its own file manager, Nemo, which is a fork of GNOME Files (Nautilus) with much of Nautilus' previous functionality and customization restored.

Like mainstream Ubuntu, Cubuntu includes the LibreOffice office suite which is complete except for the LibreOffice Base database program which is probably the least-used part of LibreOffice.

## CONCLUSIONS

Overall, Cubuntu was a promising concept, bringing a choice of three GNOME 3 alternative desktops to Ubuntu along with a lot of additional functionality. Its flaws, including the use of proprietary software, as well as single language, French-only out-of-the-box support, probably explain why Cubuntu never gained the traction hoped for. Of course, when Cubuntu was introduced in 2012 Ubuntu already had the Unity interface so making that available was not a big attraction. A dedicated version of Ubuntu with the MATE desktop, called Ubuntu MATE, was introduced in 2014, just two years after Cubuntu was



started. Ubuntu MATE became an official flavor in 2015 which probably also reduced Cubuntu's attraction in offering that desktop.

Cubuntu development halted with its last point release in 2017 and that marked a temporary end for an Ubuntu flavor with the Cinnamon desktop. Two years later, in 2019, Ubuntu Cinnamon was introduced to fill that niche and became an official flavor in March 2023.

While Cubuntu itself only lasted five years and never gained official Ubuntu flavor status, in many ways it broke ground for today's Ubuntu MATE, Ubuntu Cinnamon and even Ubuntu Unity which was first

introduced in 2020. All three went on to become official Ubuntu flavors and have achieved enthusiastic user acceptance.

Today Cubuntu remains as just a footnote to Linux history. It is gone, but its legacy endures in three new Ubuntu flavors.

## EXTERNAL LINKS

Official website:

<https://sourceforge.net/projects/cubuntu/>



# LETTERS

If you would like to submit a letter for publication, compliment or complaint, please email it to: [letters@fullcirclemagazine.org](mailto:letters@fullcirclemagazine.org). PLEASE NOTE: some letters may be edited for space.

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[ubuntuforums.org/  
forumdisplay.php?f=270](https://ubuntuforums.org/forumdisplay.php?f=270)

## FULL CIRCLE NEEDS YOU!



Without reader input **Full Circle** would be an empty PDF file (which I don't think many people would find particularly interesting). We are always looking for articles, reviews, anything! Even small things like letters and desktop screens help fill the magazine.

See the article **Writing for Full Circle** in this issue to read our basic guidelines.

Have a look at the last page of any issue to get the details of where to send your contributions.



# Q&A

Compiled by EriktheUnready

If you have a Linux question, email it to: [questions@fullcirclemagazine.org](mailto:questions@fullcirclemagazine.org), and Erik will answer them in a future issue. Please include as much information as you can about your query.

Welcome back to another edition of Questions and Answers! In this section we will endeavour to answer your Ubuntu questions. Be sure to add details of the version of your operating system and your hardware. I will try to remove any personally identifiable strings from questions, but it is best not to include things like serial numbers, UUIDs, or IP addresses. If your question does not appear immediately, it is just because there is such a lot, and I do them, first-come-first-served.

So I was looking at new games to review (Deep Rock Survivors) and realised there were waaay too many Vampire Survivors clones. I realised that I wanted to play an auto-battler, not an auto shooter, and the second game that came to mind was Z from 1996. I used to own the game, but CD rot meant it was gone. So I bought it on Steam for less than \$5 USD. Big mistake! Not only is it slower than a government worker coming back from break, it is also buggy, and not the original. So I went looking.

Google – to find the results have been censored. It is not the first time I realised how much Google censors, but this time it just peeved me off. This had me searching for search engines that don't just mirror Google results! Anyway, it brings me to my point; when you outsource your work or computer, you have no control over it. Google decides what you see or don't see when you use them. This is the other reason I do not like VPS's and other cloud hosting... Don't get me wrong, there are use cases for it. The company I work for now, certainly has a use case for it. I'm talking about things like Sony deleting people's digital movies or Kindle deleting my digital books. Everyone wants control over your stuff these days and everyone seems content to give it to them??? I mean, I wanted to grab that new Nightingale game, but online only is a hard pass for me. Instead of people voting with their wallets and not buying the game, millions of sheeple are buying, basically a game that is a bomb with a fuse. It's times when I see stuff like this, I feel they deserve everything that

comes their way. I suppose that is why Linux people are my people.

**Q** : I got a course on Udemy, Ultimate SQL bootcamp, but they only cover windows and MAC installs for mysql. I installed it myself from linuxgenie.net, and all went well. I went to bed and the next day I couldn't log in any more. My password can't be wrong as I made it "zxcvb" because it is in a VM with no network and I used it all night. This is copied from the terminal: `sudo mysql -u root -p [sudo] password for Sydney: Sorry, try again [sudo] password for Sydney: Sorry, try again. And it just continues like that, even if I copy and paste from my notes. This is not the first time it happened, I can't keep uninstalling and reinstalling every time. What are my options?`

**A** : Look carefully, even though you typed `mysql -u...` you have a `sudo` preceding it. That may be the first time you authenticated `sudo` in that terminal, so you need to put in your Ubuntu user

password first and once that is successful, it will ask you for your `sql user / password`.

**Q** : Something weird happened in the last week; if I go to the files I saved, I can't access them any more. If I go to `properties->permissions`, it says "root" and not "me". I'm not even sure what I did wrong either.

**A** : Usually the culprit is `sudo` if you are new to Ubuntu. You usually see `sudo this` and `sudo that`, and then you launch an application with `sudo`, like `gedit` or `kate` or whatever. `Sudo` means you are now pretending to be root. The files you save don't know that, and will say they belong to root. Don't use `sudo` unless 100% needed. You will have to use `chown` on each and every file you saved as root. Don't do this willy-nilly as there are files supposed to be owned by root, only the files belonging to you.

**Q** : My bluetooth headphones work fine with my dongle,

however, my dongle is old USB (office supplies) and my laptop has only USB-C ports. I use a converter, but it sticks out too far. I want to use my laptop's built-in bluetooth, but my headphones are not detected at all. My Ubuntu is up to date and I know that the bluetooth works; it used to work with my previous headphones. It connects to my phone's built-in bluetooth every time.

**A**: Before we go off faffing with software, if you boot with a live Ubuntu distro, does it work there? Bluetooth is a bit of a minefield when it comes to computers. See: <https://www.youtube.com/watch?v=frXqa4hmE>

**Q**: I want to control the fans on my Dell laptop with fancontrol on Ubuntu 22.04. If I use lm-sensors, I can see sensors, but I have no idea where to start to configure any of this. Isn't there something simple like MSI afterburner? I mean Dell supports Linux now, right?

**A**: MSI Afterburner, I wish! OK, Dell usually needs a shim to run, \*IF you can get fancontrol talking to Dell firmware at all. I

have no idea why they don't make fan control software for Linux, probably M\$ money at play. Dell does not really support Linux, other than allowing firmware updates, the rest is just lip service. (Don't believe me? Call the support). You are going to have to console yourself with the firmware controlled version, sorry.

**Q**: This is weird, I have Ubuntu 22.04 and 22.10. When I try to install a library, I can get it working on the older version, but the newer version is saying "unable to locate package". It is this knock-on effect, I need a to run b, and b to run c. It's not making sense to me. <removed> <removed> <removed>

**A**: This is why I tell people not to bother with test releases, unless you are willing to toss it. Ubuntu 22.10 is end-of-life, but Ubuntu 22.04 is not, so it does not matter how much newer it is, EOL means there are no upgraded packages released for it any more. See: <https://help.ubuntu.com/community/EOLUpgrades>

**Q**: Is there a graphical way to work with grub? I am not at all

comfortable on the terminal with grub timeouts and adding stuff to lines as I have bungled it twice before. Every time something goes wrong I get nervous.

**A**: May I suggest using Grub Customizer, I have not used it myself, but it seems like a viable option. See: <https://askubuntu.com/questions/100232/how-do-i-change-the-grub-boot-order>

**Q**: Do I need to learn docker to have an isolated environment? I am using Ubuntu Minotaur.

**A**: Firstly, the question is too vague for a real answer. Docker is an isolated environment, BUT it is made to run an app and terminate once the app completes and therefore application environment only. You may be looking for a virtual machine. "Docker is a tool for building and deploying applications by packaging them into lightweight containers."

**Q**: I get a popup that says: kernel driver not installed == rc1908. The virtualbox kernel driver is either not loaded or not set up correctly, please try setting it up

again by executing '/sbin/vboxconfig' as root. I have Ubuntu 22.04 LTS.

**A**: My first reaction would be to uninstall virtualbox and reinstall virtualbox, especially if you did it from a .deb-file. The kernel driver issue I suspect is you installed DKMS, so that may be build-essentials. After searching for a few minutes, I found this, hope it helps: <https://stackoverflow.com/questions/78061041/getting-an-error-in-virtualbox-on-ubuntu-22-04-lts-kernel-driver-not-installed/78067344#78067344>

**Q**: I have set up a server with Ubuntu 22.04 LTS. Only two of my friends know about it and when it is on. I see six IP addresses always. How can I check to see who they belong to? Please explain it like you are talking to a toddler?

**A**: a) You could simply ask your friends for their IP's. b) You could look it up if you know where they live. On the server, simply curl their IP address to a resolver like <https://ipinfo.io/>. For instance, let's say I know Ronnie's IP. I look at the resolver above and see they provide ip: hostname: city:

## Q&A

region: country: loc: org: postal:  
timezone: Since he is in the UK,  
postal would be the best  
(narrowest, some provide long/lat),  
so I type:

```
curl -s https://ipapi.co/  
84.64.83.209/postal
```

and get g68. If you have a better  
resolver, you may get g68 8bw. You  
will need a browser to look that up  
and find it is Dunbrach Road,  
Cumbernauld, Glasgow, Scotland.  
There are some cheap OSINT  
courses on Udemy.

\*\* for all the monkeys out there, it  
is a thumb-suck IP, not Ronnie's real  
IP.

**Q**: Month-old newbie here. I  
installed Dbgate on Ubuntu as  
it is free and it has a dark theme. I  
connected to my mySQL instance. I  
see 'localhost – unsaved a  
checkmark and mysql', my question  
is, how do I save it as a named  
instance? I don't even see a save.

**A**: I cannot say, I suspect it may  
be a feature of the paid  
version? You will need to ask on  
their forum. We mostly cover the  
OS only, not app support.

**Q**: I installed VirtualBox 7, and  
when I run my Manic Minotaur  
VM, it opens a small window, and  
when I try to maximize it, the OS  
window stays small; what's going on  
here?

**A**: You would need to install the  
guest utils in the vm:

```
sudo apt install virtualbox-  
guest-utils
```

once done, adjust your screen size  
with display and you should be  
good.



**Erik** has been in IT for 30+ years. He  
has seen technology come and go.  
From repairing washing machine sized  
hard drives with multimeters and  
oscilloscopes, laying cable, to scaling  
3G towers, he's done it.



# UBUNTU GAMES

Written by Erik

# BZZZT

Website: <https://store.steampowered.com/app/1293170/BZZZT/>

Price: +- \$9.99 USD

Blurb: *"Jump into the retro-future world with the nostalgic arcade journey of a tiny robot ZX8000! Experience an engaging story, upgrade your robotic abilities, challenge yourself in stages full of ever-changing gameplay mechanics and compete with other players in global and friends leaderboards."*

You guys know me; if I like a soundtrack I hunt down the game. I also like chiptunes a lot. There is no downside to chiptunes for me. It is always happy nostalgia. There was a tune I ran across, Martin Linda – Chase for the avatar, that had a game link in the description. (<https://www.youtube.com/watch?v=drXoh18E1xc>) Those of you who know the podcast 'VGM journey', will be familiar with the tune. (<https://castbox.fm/channel/The-Messenger-Presents-A-VGM->

Journey-id2444712?country=us) Well, the game had Linux support as per Steam, which meant I had to try it out. As I don't like DRM on my computer, I obviously took the Good Old Games version. It installed smoothly as all the GOG installers have so far on Ubuntu (Linux Lite, but potato-tomato). When I first launched the game, I was a bit surprised; the palette was bright and it filled my 4K screen. Though it looked a little fuzzy from the up-scaling. I went to the graphics settings to see if I could fix that. Imagine my shock (and delight) to find resolution support

for my screen!! I will include 4K screen-shots; Ronnie may fire me for sending such large pictures, but it all looks fantastic.

The font was tiresome, but I did not mind too much.

It will be Christmas soon and I will have some time to play it more and give it a proper run for the money, but I just could not wait! The happy music, the bright palette, the gorgeous backdrops, I mean this is pixel art done right.

So it is a platformer, paying homage to the 8-bit Zilog Z80 computers, and, I suppose, the ZX spectrum – with a little robot named ZX8000. I recall seeing something about it months ago that pitched it as a puzzle game with robots, but let me assure you it is a platformer. Apparently this one sports a whole 50 levels and let's not kid about those levels, they look gorgeous.

The parallax scrolling is like four levels deep, and really makes this world seem alive. The main sprite is nothing to write home about, basically being a block, but once you play the game, you will understand why that decision was made. The entry bar to this game is low; it's really easy to pick up and start playing, but mastering it will take time. While the main character is simply a block, there are a lot of small details in the world with lots of moving parts throughout. It reminds me of old cartoons and it is brimming with cuteness. If you don't believe me, wait until you get your first upgrade. The upgrade



## UBUNTU GAMES

station is lovingly animated, and with analogue dials and whatnot. I suppose that is what makes this stand out from the myriad of precision platformers out in the wild. Speaking of upgrades, the upgrades spaced out with a few levels in-between, letting you get used to your new abilities before ramping up the difficulty and slapping you with your next power. This progression makes you feel like you are getting better at the game or mastering the game as you go deeper.

The game has a lot of locations and none of them feel the same as even the enemies change. There are also a wide variety of enemies that you will encounter, as the game gets more deadly and the levels harder and the obstacles increase. This is not a brutal unforgiving game, but it is also not a walk in the park. At no point did I feel like I wanted to smash the keyboard out of frustration.

There is a sort of progression board, where you will get your gold star if you beat the level par and also if you collect every single gold bolt in the level. If you are a completionist, they catered for you too. It would have been nice if

there were more characters to play or unlock-able skins or stages if you perform certain feats, like collect all the bolts in five stages straight or whatever. I have not found any secrets, and it would have been nice if there were. Just for the replayability. (Maybe even a ZX Spectrum lookalike mode?). There are different difficulty levels, with the hardest giving you limited lives to finish the game. Heh, I think, as a throwback to the ZX Spectrum, that should have been three lives, lol.

The controls are good, you can play with the arrow keys or w, a, s, d, etcetera, and the responsiveness is right in the goldilocks zone. The game feels like it was meant to be played fast. The hit boxes are tight

and at no point when you die, do you blame the game; you will know that you alone are to blame. On this note I would recommend that you play with wired peripherals, I tried with a Dell bluetooth keyboard and I could immediately feel the difference with a wired one, in terms of responsiveness. The game also has that "just one more go" feel when you die, so I guess it can get the addictive tag as well. Like all games, it has to be fun, or else you would not play it, and this is most definitely more fun than a barrel of monkeys.

I have not finished the game, I played about thirty to thirty five levels in the last two hours. Though fifty levels sounded a lot in the

beginning, I think one can beat this in under three hours if you put your mind to it, but I'm enjoying myself. I have not tried this on my potato laptop as that is out of action, but the Steam page says Nvidia or AMD GPU, so you low-spec gamers will miss out.



**Erik** has been in IT for 30+ years. He has seen technology come and go. From repairing washing machine sized hard drives with multimeters and oscilloscopes, laying cable, to scaling 3G towers, he's done it.



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The current site was created thanks to **Arun** (from our Telegram channel) who took on the task of completely rebuilding the site, from scratch, in his own time.

The Patreon page is to help pay the domain and hosting fees. The money also helps with the new mailing list.

Several people have asked for a PayPal (single donation) option, so I've added a button below.

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## Full Circle Team



**Editor** - Ronnie Tucker

[ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org)

**Webmaster** -

[admin@fullcirclemagazine.org](mailto:admin@fullcirclemagazine.org)

## Editing & Proofreading

Mike Kennedy, Gord Campbell, Robert Orsino, Josh Hertel, Bert Jerred, Jim Dyer and Emily Gonyer

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