



Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #207 - July 2024



LUBUNTU & XUBUNTU AND REVIEW OF ASUS TUF GAMING LAPTOP



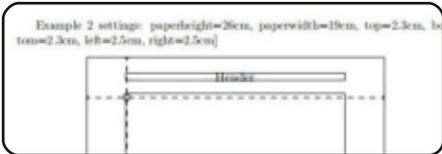
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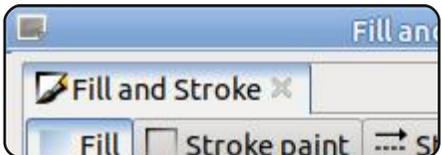
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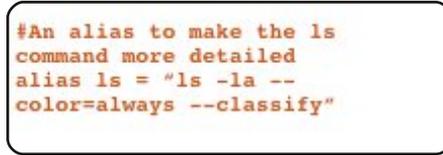
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WELCOME TO THE LATEST ISSUE OF FULL CIRCLE

As ever, we bring you Python, Micro This Micro That, Latex, Stable Diffusion, Inkscape and some reviews.

Speaking of said reviews: apart from Xubuntu and Lubuntu, I bring you the review of my ASUS gaming laptop that I purchased several month's ago. I completely forgot about the review! Yes, I forgot to publish my own article. Oh well. I put it down to my old age.

If you've thought about writing an article (and I hope you have) but didn't know what to write about then I'd like to direct you to the Letters page where I publish an email I received with some rather jolly good ideas. If you can help out and write an article from that list then please do and email it to me (Ronnie) using the email address below.

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



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OPENBSD REMOVES DHCLIENT UTILITY IN FAVOR OF A BACKGROUND PROCESS CALLED DHCPLEASED:

01/07/2024

Theo de Raadt made a change to the OpenBSD-current codebase, that is building toward the next major release, to remove the DHCP client dhclient . Instead of dhclient, he suggested the always running background process dhcpleased, which shipped with OpenBSD 6.9 and uses the ifconfig utility to enable auto-configuration of network interfaces via DHCP (enabled by running "ifconfig \$if autoconf" or adding "inet autoconf" to /etc/hostname.\$if). Starting with OpenBSD 7.0, the dhcpleased background process was enabled by default and the dhclient utility was made an option. The dhcpleased code, along with resolvd, slaacd and unwind, was written by Florian Obser to simplify and unify auto-configuration of network interfaces.

<https://marc.info/?l%3Dopenbsd-cvs%26m%3D171976865018013%26w%3D2>

LADYBIRD RECEIVES \$1 MILLION DONATION FROM GITHUB CO-FOUNDER:

01/07/2024

The developers of the free web browser Ladybird, which is being developed from scratch, announced they have received a donation of \$1 million. The donation was provided by Chris Wanstrath , co-founder of GitHub.

The Ladybird browser was previously a component of SerenityOS , a hobby project to develop a Unix-like operating system from scratch, which was founded by Andreas Kling, formerly of Nokia and developing Safari. In June 2024, Kling decided to separate the browser project from the operating system project and devote his time entirely to its development.

According to a post on the project's website, Wanstrath and his family have decided to donate a million dollars to the project to further fund development because they believe in the need for an alternative project in the browser market that is not funded by Google in any way and does not rely on the technology stack of Google Chrome or any other browser.

At the moment, the development team consists of four people, including Kling, who are employed on a permanent basis; In the future, they plan to hire three more. The project is focused on supporting Linux and macOS operating systems; There are no plans to release a version for Windows yet. The first alpha version is scheduled for release in 2026.

<http://ladybird.org/why-ladybird.html>

MYSQL 9.0.0 DBMS

AVAILABLE:

02/07/2024

Oracle has created a new branch of the MySQL 9.0.0 DBMS. MySQL Community Server 9.0.0 builds are prepared for all major Linux, FreeBSD, macOS and Windows distributions. As part of the release model introduced last year, MySQL 9.0 is classified as an "Innovation" branch, which will also include the next major releases of MySQL 9.1 and 9.2. Innovation branches are recommended for those who want early access to new functionality, are published every 3 months and are supported only until the publication of the next major release (for example, after the release of the 9.1 branch, support for the 9.0 branch will be discontinued). In about a year, they plan to create an LTS release, which will be recommended for implementations that require predictability and long-term unchanged behavior. Following the LTS branch, a new Innovation branch will be formed - MySQL 10.0.

<https://dev.mysql.com/downloads/mysql/>

FEDORA 42 INTENDS TO IMPLEMENT TELEMETRY:

02/07/2024

Fedora Workstation 42, scheduled for release next spring, will add components to collect and send metrics that will allow you to study the real preferences of users and take them into account when making decisions related to the development of the distribution, determining development priorities and improving the user experience. The proposal is still under discussion and has not been considered by the FESCo (Fedora Engineering Steering Committee), which is responsible for the technical part of the development of the Fedora distribution.

By default, telemetry collection will be disabled and can only be activated by explicit user action, while there are plans to provide separate options to enable telemetry collection on the local system and sending it to Fedora

servers. The user will also be given the ability to view statistics collected on their system and remove telemetry-related components.

To maintain confidentiality, they plan to collect only general metrics that do not allow identification of an individual user. For example, metrics will not cover information such as IP addresses, email, open sites and files. To send metrics, they plan to use the “ethical telemetry” technology Azafea, developed by the Endless distribution.

<https://www.mail-archive.com/devel-announce@lists.fedoraproject.org/msg03320.html>

RELEASE OF APACHE 2.4.61:

03/07/2024

Apache HTTP Server 2.4.61 is available, which was published almost immediately after the release of 2.4.60 and includes a fix for the regression change that caused the vulnerability (CVE-2024-39884), which allows you to view the code of scripts that are configured to be processed using

the AddType directive (you can create a specially designed request to a PHP script, which will lead to displaying its contents rather than executing it).

<https://www.mail-archive.com/announce@httpd.apache.org/msg00178.html>

RELEASE OF COZYSTACK 0.8.0:

04/07/2024

The release of the free PaaS platform Cozystack 0.8.0, built on Kubernetes, was published. The project is aimed at providing a ready-made platform for hosting providers and a framework for building private and public clouds. The platform is installed directly on servers and covers all aspects of preparing infrastructure for the provision of managed services. Cozystack allows you to run and provision Kubernetes clusters, databases, and virtual machines. The platform code is available on GitHub and is distributed under the Apache-2.0 license.

https://t.me/aenix_io/110

RELEASE OF FREERDP 3.6:

04/07/2024

FreeRDP 3.6 has been released, offering a free implementation of the Remote Desktop Protocol (RDP) developed, based on Microsoft specifications. The project provides a library for integrating RDP support into third-party applications and a client that can be used to connect remotely to the Windows desktop. The project code is distributed under the Apache 2.0 license.

https://www.freerdp.com/2024/07/04/3_6_2-release

WIREGUARD DEVELOPER SPEEDS UP GETRANDOM():

05/07/2024

Jason A. Donenfeld, author of VPN WireGuard, introduced patches that significantly speed up the collection of random numbers from the system via the `getrandom()` function, implemented through the corresponding Linux system call. The advantage of this solution over

using `/dev/random` or `/dev/urandom` is that it is not susceptible to file descriptor exhaustion attacks, which can result in uninitialized and non-random cryptographic keys.

The proposed optimization is based on the use of the vDSO (virtual dynamic shared object) mechanism, which makes it possible to move the system call handler from the kernel to user space and avoid context switches. In the case of `getrandom()`, the implementation of the system call associated with this function is designed as a vDSO, the code of which is pre-loaded into the process address space directly by the kernel. This approach made it possible to speed up the production of random numbers in some situations by 15 times or more.

Addition: Linus Torvalds expressed doubts about the advisability of including the proposed optimization in the kernel, since, if necessary, applications can use similar implementations on their side, without external manipulation through vDSO. Jason Donenfeld explained that substitution through vDSO is necessary because it is important to ensure that the algorithm for generating pseudorandom numbers works identically in implementations running at the kernel level and in user space. Torvalds agreed that there was a point, and moved on to discuss the technical issues that need to be resolved in order for the patches to be accepted into the kernel.

<https://lore.kernel.org/lkml/20240703183115.1075219-1-Jason@zx2c4.com/>

RELEASE OF GnuPG 2.5.0:

A year and a half after the formation of the last major branch, the release of the GnuPG 2.5.0 (GNU Privacy Guard) toolkit is presented. It is compatible with the OpenPGP (RFC-4880) and S/MIME standards and providing utilities for data encryption, working with electronic signatures, and key management and access to public key stores. The project code is written in C and is distributed under the GPLv3 license.

GnuPG 2.5.0 is billed as the first release of a new codebase incorporating the latest changes. GnuPG 2.4 is presented as a stable branch, optimised for general use. GnuPG 1.4 continues to be maintained as a classic series that

consumes minimal resources, is suitable for embedded systems, and is compatible with legacy encryption algorithms.

<https://lists.gnupg.org/pipermail/gnupg-users/2024-July/067193.html>

FOOYIN 0.5 MUSIC PLAYER

AVAILABLE:

07/07/2024

Fooyin 0.5 has been published, which has been developing since the beginning of this year and is aimed at providing ample opportunities for customizing and adapting the program to your preferences. The user is offered a set of widgets with various modes for managing your music collection and playing music. Additional features can be added in the form of plugins. To customize the interface, a special mode for editing is offered, allowing you to affect the layout of elements on the screen. The project is written in C++ using the Qt library and is distributed under the GPLv3 license. Ready-made packages have been created for Fedora, Debian and Ubuntu (there is plans to



DistroWatch.com

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update the package in flatpak format in the near future).

The new version adds support for CUE files, the ability to import/export playlists, and an output mode that displays thumbnails of album covers. Support for creating plugins for parsing tags and decoding audio formats has been implemented. In file navigation mode, the last opened directory is remembered.

<https://github.com/fooyin/fooyin/releases>

BOOTING ARCH LINUX FROM GOOGLE DRIVE:

08/07/2024

Proof of concept - the ability to boot Arch Linux with the contents of the root partition placed in the Google Drive cloud storage. The idea was implemented by adding an initramfs RAM disk image, launched by the kernel at an early boot stage to mount the FS, a FUSE module google-drive-ocamlfuse, providing access to Google Drive content in the form of a virtual file system. The FUSE-based virtual file system is used to

host the root partition on the Arch Linux system environment, to create the necessary initramfs stuffing, which, among other things, should set up a network connection to access Google Drive. The toolkit used was dracut, through the use of the FUSE module, s3fs. The method can also be applied to cloud storage that supports Amazon S API3.

<https://ersei.net/en/blog/fuse-root>

GNOME SWITCHING FONT?

08/07/2024

A change has been made to GNOME Settings to set the interface to use the default Inter font, a font specifically designed for use in user interfaces and optimized for high clarity in small to medium sized characters) when displayed on computer screens. The change may be reverted if testing is found to be unsuccessful, before the fall release of GNOME 47,

In the default mode, the Inter font has problems such as the same display of the uppercase letter "l" and lowercase "l", as well as the letter "O" and the number "0". This

problem is successfully solved by setting the optional mode "ss02" in the font-feature-settings property supported in GTK.

The reason for replacing the old Cantarell font, used in GNOME since 2010, is stagnation and maintenance problems, especially noticeable against the backdrop of the active development of the Inter font, where a large community has formed around it, continuing the development of the font, eliminating shortcomings, implementing new font features and testing display quality for different languages and screen types.

To test the new font on existing GNOME installations, you need to download and unzip the Inter font zip archive, double-click the InterVariable.ttf and InterVariable-Italic.ttf files in the GNOME Fonts application, and then activate it as an interface font in the GNOME Tweaks application or through the gsettings utility ("gsettings set org.gnome.desktop.interface font-name 'Inter Variable 11'").

https://gitlab.gnome.org/GNOME/gsettings-desktop-schemas/-/merge_requests/85

GDB DEBUGGER 15:

08/07/2024

G.D.B. 15.1 (first release of the 15.x series, branch 15.0 was used for development) was just released. GDB supports source-level debugging for a wide range of programming languages (Ada, C, C++, D, Fortran, Go, Objective-C, Modula-2, Pascal, Rust, etc.) on various hardware (i386, amd64, ARM, Power, Sparc, RISC-V, etc.) and software platforms (GNU/Linux, *BSD, Unix, Windows, macOS).

<https://www.mail-archive.com/info-gnu@gnu.org/msg03302.html>

RELEASE OF Box64 0.3.0:

09/07/2024

Box64 0.3.0 emulator, designed to run Linux programs compiled for the x86_64 architecture on hardware with ARM64, RISC-V and Loongarch64 processors. is out. The project pays great attention to launching of gaming applications and provides the ability to launch Windows builds through wine and Proton.

The source code for the project is written in C and distributed under MIT license.

A special feature of the project is the use of a hybrid execution model, where emulation is applied only to the machine code of the application itself and specific libraries. Typical system libraries including libc, libm, GTK, SDL, Vulkan and OpenGL, are replaced to variants native to the target platforms. This way, library calls are performed without emulation, resulting in significant performance gains.

Emulation of code for which there are no replacements native to the target platform, is performed using the dynamic recompilation (DynaRec) technique from one set of machine instructions to another. Compared to interpreting machine instructions, dynamic recompilation demonstrates 5-10 times higher performance.

<https://box86.org/2024/07/new-box64-v0-3-0-released/>

SHOTSTARS 0.2:

10/07/2024

Shotstars 0.2, solves the problem of tracking the disappearance of "stars" for projects on GitHub. The standard capabilities of GitHub do not provide users with information on decreasing "stars" in a project and allow them to obtain information when new ones are added. The project is written in Python and distributed by licensed under GPLv3+

<https://github.com/snooppr/shotstars/>

DEBIAN GNU/HURD BUILDS

71% OF DEBIAN PACKAGES:

10/07/2024

Developers of the Hurd project announced they were ensuring the ability to build 71% of Debian archive packages in the Debian GNU/Hurd distribution. Last year this figure amounted to 58%. Other GNU/Hurd achievements include the porting of the Mach kernel to the AArch64 architecture and the adoption of patches that allow GCC to be used to build GNU/Hurd programs for AArch64. Currently,

the port does not yet provide all the desired functionality, but can already be used to run simple applications. The GNU Mach kernel provides experimental support for symmetric multithreading (SMP). Problems with builds using GCC 14 have been resolved. Support for the rustc compiler has been added, which allows you to build applications written in Rust for GNU/Hurd.

Debian GNU/Hurd combines the Debian software environment with the GNU/Hurd kernel and remains the only actively developed Debian platform created on the basis of a kernel other than Linux (a port of Debian GNU/KFreeBSD was previously developed, but it has long been abandoned). GNU Hurd is a kernel developed as a replacement for the Unix kernel and designed as a set of servers running on top of the GNU Mach microkernel and implementing various system services, such as file systems, a network stack, and a file access control system. The GNU Mach microkernel provides an IPC mechanism used to organize the interaction of GNU Hurd components and build a distributed multi-server architecture.

<https://www.gnu.org/software/hurd/news/2024-q2.html>

MULTI-USER CODE EDITOR ZED NOW SUPPORTS LINUX:

11/07/2024

Text editor development team "Zed" announced implementation support for Linux platforms. Ready-made builds, prepared for x86_64 and ARM64 architectures, support most Linux distributions. The editor is notable for its ability to collaborate on code, highly responsive interface, and window rasterization on the GPU.

The project is being developed under the leadership of Nathan Sobo, author of the Atom editor (the basis of VS Code) with the participation of teams former editor developers Atom, Electron platform and parsing libraries Tree-sitter. Source code of the server part, which provides multi-user editing, open under the AGPLv3 license, and the editor itself - under the GPLv3 license. To create the user interface, our own GPUI library is used, open under the Apache 2.0 license. The project code is written

in Rust.

Zed combines a lightweight text editor and the functionality of modern integrated development environments in one product. During development, the experience of creating Atom was taken into account and an attempt was made to embody some ideas about what an ideal editor for a programmer should look like. Much attention is paid to the performance and responsiveness of the interface - according to the creators of the project, all editing actions should be performed instantly, and coding tasks should be solved in the most efficient way. The high performance of Zed is achieved through the active use of multithreading, using all available CPU cores and the involvement of the GPU in the rendering process.

<https://zed.dev/blog/zed-on-linux>

CLONEZILLA LIVE 3.1.3:

11/07/2024

Clonezilla Live 3.1.3, designed for fast cloning of disks (only used blocks are copied), was just released. The tasks performed by

the distribution are similar to the proprietary product Norton Ghost. The size of iso image is: - 457MB (i686, amd64).

The distribution is based on Debian GNU/Linux and uses code from projects such as DRBL, Partition Image, ntfsclone, partclone and udpcast. Loading from CD/DVD, USB Flash and network (PXE) is possible. LVM2 and FS ext2, ext3, ext4, reiserfs, reiser4, xfs, jfs, btrfs, f2fs, nilfs2, FAT12, FAT16, FAT32, NTFS, HFS+, UFS, minix, VMFS3 and VMFS5 (VMWare ESX) are supported. There is a mass cloning mode over the network, including traffic transmission in multicast mode, which allows you to simultaneously clone the source disk onto a large number of client machines. You can both clone from one disk to another and create backup copies by saving a disk image to a file. Cloning is possible at the level of entire disks or individual partitions.

<https://sourceforge.net/p/clonezilla/news/2024/07/stable-clonezilla-live-313-11-released/>

NEW VERSION OF EXIM MAIL SERVER 4.98:

11/07/2024

After eight months of development, the mail server Exim 4.98 was released, to which accumulated corrections have been made and new features have been added. The project code is written in C and distributed under GPLv2+ license. According to the June automated survey of about 400 thousand mail servers, Exim's share is 59.06% (a year ago 55.93%), Postfix is used on 34.68% (37.40%) of mail servers, Sendmail - 3.42% (3.45%), MailEnable - 1.81% (1.86%), MDAemon - 0.37% (0.48%), Microsoft Exchange - 0.17% (0.25%).

<https://lists.exim.org/lurker/message/20240710.155945.8823670d.en.html>

RELEASE OF FIREWALLD 2.2.0:

11/07/2024

A new release of dynamically managed firewall, firewalld 2.2,

implemented in the form of a wrapper over the nftables and iptables packet filters, is out. Firewalld runs as a background process that allows you to dynamically change packet filter rules via D-Bus without having to reload the packet filter rules or breaking established connections. The project is already used in many Linux distributions, including RHEL 7+, Fedora 18+ and SUSE/openSUSE 15+. The firewalld code is written in Python and distributed by licensed under GPLv2.

To manage the firewall, the firewall-cmd utility is used, which, when creating rules, is based not on IP addresses, network interfaces and port numbers, but on the names of services (for example, to open access to SSH you need to run "firewall-cmd --add --service=ssh", to close SSH - "firewall-cmd --remove --service=ssh"). To change the firewall configuration, the firewall-config (GTK) graphical interface and the firewall-applet (Qt) applet can also be used. Support for firewall management via the D-BUS API firewalld is available in projects such as NetworkManager, libvirt, podman, docker and fail2ban.

<https://github.com/firewalld/firewalld/releases/tag/v2.2.0>

FREEBSD SWITCHES TO A SHORTER RELEASE CYCLE:

12/07/2024

Colin Percival, FreeBSD Release Team Leader, announced changes in the processes of generation and support of releases. Starting with the FreeBSD 15 branch, scheduled for the end of 2025, the maintenance time for major branches after the formation of their first release will be reduced from 5 to 4 years. At the same time, new major branches will be formed every two years.

Interim releases (15.1, 15.2, 15.3) will be developed as part of a fixed development cycle, implying the publication of new versions in one branch approximately every 6 months, and not once a year as before. Taking into account the simultaneous maintenance of two different major branches, a new intermediate release will be published once every 3 months (15.4, 16.1, 15.5, 16.2, etc.), with the exception of the preparation of the first releases of new major

branches, where there will be a 6-month break in releases (for example, release 15.3 will be released in June 2027, 16.0 in December 2027, 15.4 in March 2028, 16.1 in June 2028).

It is noted that recent optimizations of interaction between teams responsible for generating releases and development have made it possible to reduce the process of preparing releases to 3 beta versions and one release candidate, instead of 3-4 beta versions and 3-6 release candidates. With this kind of development organization, 3 months to prepare an interim release is quite enough. Shortening the release preparation cycle will allow us to more quickly bring new features to users and reduce the burden of preparing each release. A common predictable development model will make it easier for users to plan for the transition to new releases, but if critical issues are identified, the developers reserve the right to delay the release until a fix is ready.

<https://lists.freebsd.org/archives/freebsd-announce/2024-July/000143.html>

THUNDERBIRD EMAIL CLIENT 128:

12/07/2024

A year after the publication of the last major release, mail client Thunderbird 128 is out, community-driven and powered by Mozilla technology. Thunderbird 128 is built on the ESR release codebase Firefox 128 and is classified as a long-term support version, for which updates are released throughout the year.

<https://blog.thunderbird.net/2024/07/welcome-to-thunderbird-128-nebula/>

RELEASE OF THE OBS STUDIO 30.2:

13/07/2024

OBS Studio 30.2, package for streaming, compositing and video recording, is out. The code is written in C/C++ and distributed by licensed under GPLv2. Assemblies formed for Linux (flatpak), Windows and macOS.

The goal of developing OBS

Studio was to create a portable version of the application Open Broadcaster Software (OBS Classic), 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. OBS 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 (for example, switch views with an emphasis on screen content and webcam image). The program also provides tools for audio mixing, filtering using VST plugins, volume equalization and

noise reduction.

<https://obsproject.com/blog/obs-studio-hybrid-mp4>

RELEASE OF WHONIX 17.2: 14/07/2024

Whonix 17.2 is available, aimed at providing guaranteed anonymity, security and protection of private information. The distribution is based on Debian GNU/Linux and uses Tor to ensure anonymity. The project is distributed under the GPLv3 license. Images of virtual machines in ova format for VirtualBox (2.1 GB with Xfce and 1.4 GB for console) have been prepared for downloading. The image can also be converted for use with the KVM hypervisor.

A feature of Whonix is the division of the distribution into two separately launched components - Whonix-Gateway - a network gateway for anonymous communications and Whonix-Workstation with a desktop. Both components are shipped within the same boot image. Access to the network from the Whonix-

Workstation environment is made only through the Whonix-Gateway, which isolates the working environment from direct interaction with the outside world and allows the use of only fictitious network addresses. This approach allows you to protect the user from leaking the real IP address in the event of a web browser being hacked and even when exploiting a vulnerability that gives the attacker root access to the system.

Hacking Whonix-Workstation will allow the attacker to obtain only fictitious network parameters, since the real IP and DNS parameters are hidden behind a network gateway powered by Whonix-Gateway, which routes traffic only through Tor. It should be taken into account that Whonix components are designed to run in the form of guest systems, i.e. the possibility of exploiting critical 0-day vulnerabilities in virtualization platforms that can provide access to the host system cannot be ruled out. Due to this, it is not recommended to run Whonix-Workstation on the same computer as Whonix-Gateway.

Whonix-Workstation provides the Xfce user environment by

default. The package includes programs such as VLC, Tor Browser, Thunderbird+TorBirdy, Pidgin, etc. Whonix-Gateway includes a set of server applications, including Apache httpd, nginx and IRC servers, which can be used for Tor hidden services. You can forward tunnels over Tor for Freenet, i2p, JonDonym, SSH and VPN. If desired, the user can make do with only Whonix-Gateway and connect his usual systems through it, including Windows, which makes it possible to provide anonymous access to workstations already in use.

<https://forums.whonix.org/t/whonix-17-2-0-1-all-platforms-point-release/20078>

UPDATE TO QUBES OS 4.2.2:

14/07/2024

Qubes 4.2.2 is available, which implements the idea of using a hypervisor to strictly isolate applications and OS components (each class of applications and system services runs in separate virtual machines). For normal operation, they recommend a system with 16 GB of RAM

(minimum 6 GB) and a 64-bit Intel or AMD CPU with support for VT-x with EPT/AMD-v with RVI and VT-d/AMD IOMMU technologies, preferably an Intel GPU (GPU NVIDIA and AMD are not well tested). The installation image size is 6 GB (x86_64).

Applications in Qubes are divided into classes depending on the importance of the data being processed and the tasks running. Each class of applications (for example, work, entertainment, banking), as well as system services (networking subsystem, firewall, storage, USB stack, etc.), run in separate virtual machines using the Xen hypervisor. At the same time, these applications are available within the same desktop and are highlighted for clarity with different window border colors. Each environment has read access to the base root file system and local storage, which does not overlap with the storage of other environments; a special service is used to organize application interaction.

Fedora and Debian can be used as a basis for creating virtual environments; templates for Ubuntu, Gentoo and Arch Linux are

also supported by the community. You can organize access to applications in a Windows virtual machine, as well as create Whonix-based virtual machines to provide anonymous access via Tor. The user shell is built on top of Xfce. When a user launches an application from the menu, the application starts in a specific virtual machine. The content of virtual environments is determined by a set of templates.

<https://www.qubes-os.org/news/2024/07/13/qubes-os-4-2-2-has-been-released/>

LINUX KERNEL 6.10

RELEASED:

15/07/2024

After two months of development, Linus Torvalds presented a new release of the Linux kernel, 6.10. The most notable changes include: the ntsync driver with Windows NT synchronization primitives, DRM Panic components to implement an analogue of the “blue screen of death”, discontinuation of support for older Alpha CPUs, the ability to verify integrity in a FUSE-based FS, restricting access to ioctl through

the Landlock mechanism, a subsystem for profiling of memory allocation operations, mseal() system call, the ability to encrypt data exchange with TPM devices, support for high-priority work queues in dm-crypt, panthor driver for the tenth generation Mali GPU.

The new version includes 14,564 fixes from 1,989 developers, the patch size is 41 MB (the changes affected 12,509 files, 547,663 lines of code were added, 312,464 lines were deleted). The last release had 15680 fixes from 2106 developers, the patch size was 54 MB. About 41% of all changes introduced in 6.10 are related to device drivers, approximately 15% of changes are related to updating code specific to hardware architectures, 13% are related to the network stack, 5% are related to file systems, and 4% are related to internal kernel subsystems.

<https://lkml.org/lkml/2024/7/14/250>

RELEASE OF NOMADBSD 141:

15/07/2024

A new release of the Live distribution, NomadBSD 141R-20240711, which is an edition of FreeBSD, adapted for use as a portable desktop, bootable from a USB drive, is out. The graphical environment is based on Xfce. To mount drives, DSBMD is used (FS ISO-9660, FAT, NTFS, UFS, Ext2/3, Ext4, HFS+, exFAT, XFS and Btrfs are supported). Boot image size 2.5 GB (i386, amd64).

In the new release, the base environment has been updated to FreeBSD 14.1. The fusefs module has been modified to reduce errors when using unionfs. NomadBSD-specific graphics utilities have been migrated from Qt5 to Qt6.

<https://nomadbsd.org/index.html%2320240715>

GNOME FOUNDATION EXECUTIVE DIRECTOR

LEAVES:

16/07/2024

The GNOME Foundation, which oversees the development of the GNOME desktop environment, has announced a new executive director, who is responsible for managing and developing the GNOME Foundation as an organization, as well as interacting with the board of directors, advisory board and members of the organization.

Since October last year, the post of executive director has been occupied by Holly Million, who has attracted attention with a diverse range of interests - from producing documentaries and painting films to founding an institute of shamanic arts and herbal medicine. The reason for leaving is the desire to devote time to obtaining a PhD in psychology and to focus on developing her own private practice.

Richard Littauer, a SustainOSS community activist, one of the leaders of the CURIOS organization, community

engagement manager for the Open Source Collective, and a participant in the development of the Node.js and IPFS projects, has been appointed acting executive director of the GNOME Foundation. They intend to present the search plan for a permanent executive director at the GUADEC conference, which will take place from July 19 to 24.

<https://foundation.gnome.org/2024/07/12/gnome-foundation-announces-transition-of-executive-director/>

RELEASE OF TAILS 6.5:

16/07/2024

A new release of Tails 6.5 (The Amnesic Incognito Live System), based on Debian 12, supplied with the GNOME 43 desktop and designed 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 mode between runs. An iso image capable of working in Live

mode, 1 GB in size, has been prepared for downloading .

The new version has significantly reduced installation time using the Tails Cloner utility (the 30-second delay when splitting partitions has been removed). The package base is synchronized with Debian 12.6. Tor Browser has been updated to version 13.5.1 (previously the 13.0 branch was supplied). Problems with connecting to the internet through mobile broadband, LTE and PPPoE DSL operators have been resolved.

https://tails.net/news/version_6.5/

RELEASE OF PEERTUBE 6.2;

16/07/2024

A new release of a decentralized platform for video hosting and video broadcasting, PeerTube 6.2 took place. PeerTube offers a vendor-neutral alternative to YouTube, Dailymotion and Vimeo, using a content distribution network based on P2P communications and linking visitors' browsers together. The project's developments are distributed under the AGPLv3 license.

<https://joinpeertube.org/news/release-6.2>

SUSE HAS ASKED TO STOP USING THE SUSE BRAND IN THE OPENSUSE PROJECT:

16/07/2024

The openSUSE developers have begun discussions about changing the name of the project, as well as restructuring management. The name change was necessary because SUSE asked the openSUSE project to stop using the SUSE brand to avoid confusion between SUSE and the community-driven openSUSE project.

Renaming openSUSE is not yet a strict requirement and is presented as a polite request to consider it, however, openSUSE is completely dependent on the SUSE company, which provides resources to the project and turns a blind eye to the work on openSUSE by some of its employees during working hours. Rebranding is at the initial stage of discussion, at which proposals for specific actions, timing and options for a new name have not yet been

developed.

<https://lists.opensuse.org/archives/list/project@lists.opensuse.org/message/7IVGVJOAO4NIQILUYI3ZUL7NHCVBDQO7/>

RELEASE OF NFTABLES 1.1.0:

17/07/2024

A new release of packet filter, nftables 1.1.0 has been published, unifying packet filtering interfaces for IPv4, IPv6, ARP and network bridges (aimed at replacing iptables, ip6table, arptables and ebtables). The major change in the version number is not associated with any fundamental changes, but is only a consequence of the consistent continuation of numbering in decimal notation (the previous release was 1.0.9). At the same time, the release of the companion library libnftnl 1.2.7 was published, providing a low-level API for interacting with the nf_tables subsystem.

The nftables package includes packet filter components that run in user space, while the kernel-level work is provided by the nf_tables

subsystem, which has been part of the Linux kernel since release 3.13. The kernel level provides only a generic protocol-independent interface that provides basic functions for extracting data from packets, performing data operations, and flow control.

The filtering rules and protocol-specific handlers are compiled into bytecode in user space, after which this bytecode is loaded into the kernel using the Netlink interface and executed in the kernel in a special virtual machine reminiscent of BPF (Berkeley Packet Filters). This approach allows you to significantly reduce the size of the filtering code running at the kernel level and move all the functions of parsing rules and logic for working with protocols into user space.

<https://www.mail-archive.com/netfilter-announce@lists.netfilter.org/msg00265.html>

RELEASE OF AUDACITY 3.6: 17/07/2024

A new release of the free sound editor, Audacity 3.6 has been

published, providing tools for editing sound files (Ogg Vorbis, FLAC, MP3 and WAV), recording and digitizing sound, changing sound file parameters, overlaying tracks and applying effects (for example, noise reduction, changing tempo and tone). Audacity 3.6 was the sixth major release formed after the project was taken over by Muse Group. The Audacity code is licensed under GPLv3, with binary builds available for Linux, Windows and macOS.

<https://www.audacityteam.org/blog/audacity-3-6/>

GOOGLE HAS OPENED AN APPLICATION FOR CREATING 3D MODELS USING VIRTUAL REALITY: 17/07/2024

Google announced the open source code of the Google Blocks project, which provides a virtual 3D environment for creating scenes, objects and models for virtual and augmented reality systems. Work within the program is carried out using virtual reality helmets, which, instead of

traditional processes of developing 3D elements using flat screens, allows you to create models directly inside a virtual three-dimensional environment. The code is written in C# using the Unity game engine and is open under the Apache 2.0 license. It supports 3D helmets like HTC Vive and Oculus Rift.

<https://opensource.googleblog.com/2024/07/google-blocks-is-now-open-source.html>

RELEASE OF STARTWINE-LAUNCHER 404: 17/07/2024

The StartWine-Launcher project, developed to run applications and games compiled for the Windows platform on Linux-based systems, is out. The main goal of developing StartWine-Launcher was to simplify the process for beginners to create Wine prefixes, a set of Windows libraries and dependencies necessary for running Windows applications on Linux. Features include a runimage-based container, no need to install system dependencies, and a

friendly graphical interface. The StartWine-Launcher code is written in Python and distributed under the GPLv3 license. The interface is implemented based on the GTK library.

<https://github.com/RusNor/StartWine-Launcher>

BCACHEFS IMPLEMENTS THE ABILITIES: 18/07/2024

Kent Overstreet, the developer of the Bcachefs file system, proposed a change for inclusion in the Linux 6.11 kernel. With the implementation in the Bcachefs file system ability to automatically transparently recover problematic data using stored redundant error recovery codes. The operating logic of the proposed functionality resembles the implementation of a similar function in Btrfs: if an I/O error occurs during reading or a checksum mismatch is calculated, the problematic data block will be automatically rewritten, if there is redundancy to restore it.

Linus Torvalds delayed the release of this change into the 6.11

kernel due to problems with the design of the patches (he did a "git rebase" to a new branch) and unanswered questions about the changes the patches made to areas outside of fs/ bcache/fs.

Update: Kent Overstreet submitted a second pull request for the 6.11 branch containing the fixes.

<https://lore.kernel.org/lkml/r75jqddjp24qikil2l26wwtxdxvqxpqfaixb2rqmuyzxbnhseq@6k34emck64hv/>

update:

<https://lore.kernel.org/lkml/73rweeabpoyzqwyxa7hld7tnkskkaotuo3jifxnpqn6gq47ly@admkywnz4fsp/>

RELEASE OF NXS-BACKUP 3.9.0:

18/07/2024

The backup tool, nxs-backup 3.9.0 has been published, allowing you to create backup copies, perform rotation and save to local or external storage. In addition to file backup, it supports creating backups of various DBMSs:

MySQL, PostgreSQL, MongoDB, Redis. The project code is distributed under the Apache 2.0 license.

Backups can be stored both locally and in remote storage (S3, FTP, SSH, SMB, NFS, WebDAV). Thanks to integration with monitoring, you can receive metrics such as backup file size, verification of backup collection, backup collection time, etc., in a Prometheus-compatible format. They also added additional metric `nxs_backup_creation_ts`, containing a Unix timestamp of the date the backup was created. Each backup can be identified and configured with a corresponding alert, in addition to (or instead of) existing alerts using hooks, which allows you to more effectively manage the state of the backups.

<https://github.com/nixys/nxs-backup/releases>

NVIDIA SUMMARIZED PLANS TO TRANSFER LINUX DRIVERS TO OPEN KERNEL MODULES:

18/07/2024

NVIDIA engineers have published a note summarizing plans to transition NVIDIA's proprietary drivers to open Linux kernel modules for GPUs, starting with the Turing microarchitecture (GeForce GTX 1600 and RTX 2000). The modules used in NVIDIA drivers for the Linux kernel were open sourced in the spring of 2022 under the MIT and GPLv2 licenses, and the plan to use them by default was announced two months ago. We are only talking about switching the default driver package to existing open modules that were previously supplied as an option. Providing core firmware functionality and user-space components, such as libraries for CUDA, OpenGL and Vulkan, remain proprietary.

Until now, proprietary drivers included both open source and proprietary variants of modules that were updated synchronously, but the proprietary modules were used by default. The difference

between the available options comes down to the fact that open modules can only be used with GPUs equipped with a separate GSP (GPU System Processor) microcontroller, which made it possible to move the initialization and control operations of the GPU from the driver to the level of proprietary firmware. GSP comes in video cards based on microarchitectures such as Turing, Ampere, Ada and Hopper.

In addition to new GPUs, proprietary modules continue to support older GPUs that are not equipped with GSP, for example, GPUs based on Maxwell, Pascal and Volta microarchitectures. NVIDIA intends to stop implementing support for new GPUs in proprietary modules and focus only on the development of open ones. For example, support for new NVIDIA Grace Hopper and NVIDIA Blackwell platforms is already available in open modules, which are not supported in proprietary modules.

With the release of NVIDIA 560 drivers for regular GPUs starting with Turing, and for GPU virtualization starting with Ada, open versions of kernel modules

nvidia.ko, nvidia-modeset.ko, nvidia-uvm.ko, nvidia-drm.ko will be installed by default and nvidia-peermem.ko, in situations where their use is possible. In Ubuntu, Debian, SUSE and openSUSE distributions, it is recommended you use the "nvidia-open" package to install the open module version of NVIDIA drivers, and in RHEL-based distributions it is recommended to use the "nvidia-driver:open-dkms" module.

If you want to install proprietary kernel modules into the system, you will need to specify the "--kernel-module-type=proprietary" option when running the run-arch with NVIDIA drivers, or change the default parameters in the interface shown by the installer. In addition, the nvidia-driver-assistant package has been prepared separately, which simplifies the selection of the optimal variant of kernel modules.

<https://developer.nvidia.com/blog/nvidia-transitions-fully-towards-open-source-gpu-kernel-modules/>

APACHE FOUNDATION ANNOUNCES UPCOMING REBRANDING:

18/07/2024

The Apache Software Foundation, a non-profit organization that provides a neutral, vendor-neutral development platform for about 400 open source products, announced a decision to completely change its logo, removing the image of the feather that has been used as a symbol of Apache projects since 1997. They plan to present the new logo, which will be chosen by voting by members of the organization, on October 7 at the Community Over Code conference.

Natives in Tech organization, which defends the interests of indigenous peoples, is cited as the reason for stopping the use of the former symbols. In addition to changing the logo, Indian rights activists also demanded that the organization be renamed and the use of the word Apache stopped, but the community has so far limited itself to renaming the ApacheCon conference to Community Over Code, but refused

to rename the organization due to high costs and legal difficulties.

<https://news.apache.org/foundation/entry/evolving-the-asf-brand>

KDE CRASHES FIXED AND WAYLAND SUPPORT IMPROVED:

18/07/2024

Nate Graham, QA developer for the KDE project, has published another report on KDE development. The most important changes over the past two weeks include the elimination of the five most common causes of KDE Plasma crashes, which were caused by both errors in the KDE code and regressive changes in Qt. To identify problems that require fixing first, a new automatic system for sending notifications about problems was used, which made it possible to understand which failures users encounter most often.

In addition, work has been done to implement support for the "sticky keys" mechanism in KDE when using Wayland. This

mechanism allows people with impaired fine motor skills of their fingers to use keyboard combinations that require simultaneous pressing of several keys - in the "sticky keys" mode, modifier keys (Shift, Ctrl, Alt) can be pressed in advance, before pressing another key (the modifier press is remembered and applied to the next key).

<https://pointieststick.com/2024/07/19/this-past-two-weeks-in-kde-fixing-sticky-keys-and-the-worst-crashes/>

RELEASE OF KAOS 2024.07:

20/07/2024

KaOS 2024.07, a distribution with a rolling update model aimed at providing a desktop based on the latest releases of KDE and applications using Qt, is out. Distribution-specific design features include the placement of a vertical panel on the right side of the screen. The distribution is developed with an eye on Arch Linux, but maintains its own independent repository of more than 1,500 packages, and also

offers a number of its own graphical utilities. The default file system is XFS. Builds are published for x86_64 systems (3.7 GB).

<https://kaosx.us/news/2024/kaos07/>

RELEASE OF LABWC 0.7.4: 20/07/2024

A new release of the labwc 0.7.3 project (Lab Wayland Compositor) has been published. They are developing a composite server for Wayland with capabilities reminiscent of the Openbox window manager (the project is presented as an attempt to create an Openbox alternative for Wayland). Next, a corrective update 0.7.4 was published with hot fixes made. Among the features of labwc are minimalism, compact implementation, extensive customization options and high performance. The project code is written in C language and distributed under the GPLv2 license.

The basis is the wlroots library, developed by the developers of the Sway user environment and

providing basic functions for a composite manager based on Wayland. The extended Wayland protocols include; wlr-output-management for configuring output devices, layer-shell for the desktop shell, and foreign-toplevel for connecting custom panels and window switches.

You can connect add-ons to implement functions such as creating screenshots, displaying wallpaper on the desktop, placing panels and menus. Animated effects, gradients and icons are not supported at all. To run X11 applications in an environment based on the Wayland protocol, the use of the XWayland DDX component is supported. The theme, basic menu and hotkeys are configured through configuration files in xml format. There is built-in support for HiDPI screens.

In addition to the built-in root menu, you can connect third-party application menu implementations such as bemenu, fuzzel and wofi. You can use Waybar, sfwbar, Yambar or LavaLauncher as a panel. To manage connecting monitors and changing their parameters, it is suggested to use wlr-randr or kanshi. The screen is locked using

swaylock.

<https://github.com/labwc/labwc/releases>

OPENMANDRIVA ROME 24.07: 21/07/2024

The OpenMandriva project has published the release of OpenMandriva ROME 24.07, an edition of the OpenMandriva distribution that uses a rolling release model. The proposed edition allows you to gain access to new versions of packages developed for the OpenMandriva Lx 6 branch, without waiting for the classic distribution to be created. ISO images of 2.1-3.4 GB in size with KDE, GNOME and LXQt desktops that support loading in Live mode have been prepared for downloading. Builds for KDE and LXQt are prepared in x86_64 and "znver1" variants (build optimized for AMD Ryzen, ThreadRipper and EPYC processors) are available. Builds with KDE come in variants with Plasma 6 X11, Plasma 6 Wayland and Plasma 5. Builds for boards based on the ARM64 architecture are planned to be

published in the near future.

<https://www.openmandriva.org/en/news/article/openmandriva-rome-24-07-released>

RELEASE OF BLENDER 4.2: 21/07/2024

The Blender Foundation has published the release of Blender 4.2, a free 3D modeling package suitable for a variety of tasks related to 3D modeling, 3D graphics, computer game development, simulation, rendering, compositing, motion tracking, sculpting, animation and video editing. The code is distributed under the GPL license. Ready-made builds are created for Linux, Windows and macOS. The release has received extended life support (LTS) release status and will be supported until July 2026. The LTS branches of Blender 3.3 and 3.6 also continue to be supported, updates for which will be generated until September 2024 and June 2025.

<https://studio.blender.org/blog/new-geometry-nodes-features-in-blender-42/>

It's time to party!

Why you should organize Software Freedom Day!

Because it's fun!

So... what's your favorite piece of Free Software? How do you feel like thanking the developers for all the effort? Software Freedom Day is the ideal opportunity to thank all those volunteers and professionals for sharing us their skills.

So here's what you do! Gather some friends and organize a party. Invite a bunch people and tell them about your favorite software projects. Tell them about Software Freedom and explain those 4 Freedoms of GPL :



0. RUN



1. STUDY



2. SHARE



3. IMPROVE

At the end of the day, you'll have made new friends, rich encounters and probably discovered things about Software Freedom you didn't know yet!

Sat. 21 September 2024



Because it matters!

In 2004 Matt Oquist first started the project because he noticed how CDs in magazines only contained commercial software, and he saw how Free Software was *up to standards*.

Later on, we learned how Software Freedom was important to know what an application was actually doing. Only by having *access to the code*, you could prevent getting viruses or spyware. That's when Frederic Muller founded the Digital Freedom Foundation.

Nowadays, we keep getting confronted with *cloud services disappearing* on their users, pushing us into expensive plans for the same service.

Global event



digitalfreedoms.org/sfd



@dff@fosstodon.org

#SoftwareFreedomDay:matrix.org

Because you can!

Software Freedom Day has existed since 2004. Communities all over the world have organized Software Freedom Day in universities, libraries, hackerspaces, LUGs, shopping malls, an office space at work, or even just a local pub!

We all have some FOSS projects we're passionate about. Basically all we're doing is sharing our passion with friends (and sometimes strangers).

Some examples:

- Linux install party
- Introduction into Inkscape
- Battle of Wesnoth LAN party
- Presentation on the 4 freedoms
- Program a robot

7 easy steps

1. Gather a small **team**
2. Decide **what** you can do
3. **Register** (or not) on digitalfreedoms.org
4. **Spread the word** in your region and online
5. Find **volunteers**
6. **Prepare** the event
7. **Party!**



Digital Freedom Foundation



This weekend I had a chat with someone who had issues with his media box. Specifically, issues he attributed to SAMBA. When talking to him, I realised he knew very little about SAMBA. He was just expecting it to “work”, but it worked only when his firewall was off. Doing some basic troubleshooting with him, I had my CnC article series for the rest of the year. You see, I used to teach Linux+ and LPIC. Though I think the certification is not worth the price, I do respect it, as it did not have “nonsense” questions. (OK when I wrote it, it did not). The questions were practical, and though there were a few suspect ones, I cannot recall any dumb ones. You know, the type Microsoft uses in their exams; if you have a network in Los Angeles, and a network in Washington, and your Administrator is in Barbados, what color is the CEO’s socks?

Let me give you the run-down. If, and this is a big IF, I remember correctly, it was part of LPIC-2. First thing you have to remember is that SAMBA uses port 445. In the old

days, it ran on port 139, because of NETBIOS. I would suggest that any student who wishes to pass any IT exam, learn the basic ports by heart. You can use Anki – it works great on Ubuntu to make yourself some flashcards. If you are too lazy to do it, you don’t want the certification badly enough. SAMBA runs over TCP/IP, so no fire and forget. The other thing you must get an understanding of is the OSI model. SAMBA runs at the Application layer. SAMBA is a sort of unifying project, aiming to let Windows and Linux talk to each other. Server and workstation.

OK, now you take a piece of paper and pull out four facts from that paragraph.

What you also need to understand is that SAMBA is not only for file sharing, you can share printers with SAMBA as well. Why? Let’s go one step down and look at SMB (Server Message Blocks). The SMB protocol (“protocol” here is important) requires a response. It will send a request and will wait for a response. Now when we have

Windows in the mix, be it workstation or server, you need to read up on CIFS. (Common Internet File Service). A way to remember that the “C” in CIFS stands for common, is to remember that it needs a common way to talk to Linux. Not common as in found everywhere, but common as in shared. One thing to be aware of, if you are using older stuff at home, is that IPV6 should rather be avoided. For work and for the exam, however, know that IPV6 is supported, but only on port 445, here’s that number again. Now CIFS on IPV6 requires the IBM Data Ontap Library v 7.3.x (in other words, 1-onwards) to work. (https://documents.uow.edu.au/~blane/netapp/ontap/upgrade/upgrading/concept/c_oc_upg_revert_ipv6.html). Now with CIFS, there are UDP ports at play, 137 & 138, because of NETBIOS, but you should not get it as an exam question, but keep that info handy. Nine times out of ten, when someone mentions SAMBA, think SMB over TCP.

TIP: Just remember that

NETBIOS does not support IPV6.

Here is your reading for this section: <https://www.varonis.com/blog/smb-port> – don’t worry, it is very short.

TIP: If you use SAMBA for LDAP, the port you need to pay attention to is port 389, it is easy to remember, as the RDP port is 3389.

Let’s quickly talk about configuring SAMBA. I’ll break it up into a Linux section and a Windows section. Since we are Linux people, let’s talk about Linux configuration first.

Here comes the practical part. (what, you didn’t think you could do this as a mind experiment now?). Fire up Virtualbox and install Ubuntu server. <https://ubuntu.com/download/server>

I suggest you also grab the CLI cheat sheet. Just fill the form out with junk and once done, the cheat sheet will download, without you getting spam or your details leaked.

Obviously you will put in your own password on the next screen, and “next” through it.

You are going to do the same with the configuration, just “Done” through it.

Once completed, reboot and log in.

Your first order of business is going to be:

```
sudo apt install samba
```

and once done:

```
whereis samba
```

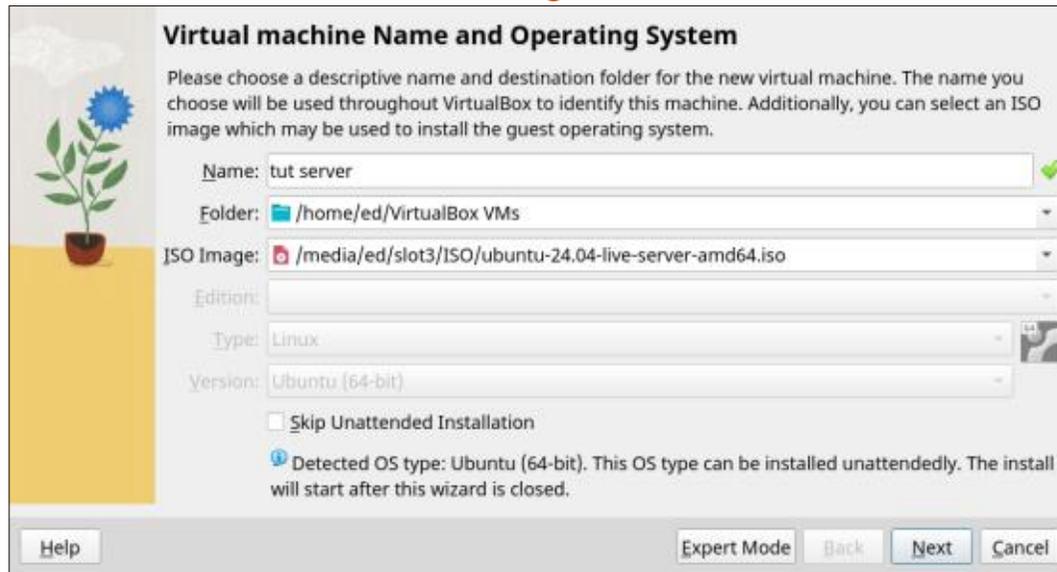
If you already have a server set up that you can use, you can check if the daemons are running:

```
systemctl status smbd
```

```
systemctl status nmbd
```

I’m just going to follow along here to get it done: <https://ubuntu.com/tutorials/install-and-configure-samba#3-setting-up-samba>

When we do the configuring, I will explain each bit so that a



newbie would get it, so for now, just go along as this is the easy part.

```
mkdir /home/<username>/sambashare/
```

```
sudo nano /etc/samba/smb.conf
```

at the end of the file, add:

```
[sambashare]
comment = Samba on Ubuntu
path = /home/<username>/sambashare
read only = no
browsable = yes
```

One, two, three, spaces, it does not matter, the indentation here is not white space sensitive.

As always, after any reconfiguration, restart the service:

```
sudo service smbd restart
```

or you can use:

```
systemctl restart smbd
```

If you use UFW, then you need to allow SAMBA to pass:

```
sudo ufw allow samba
```

Nothing fancy or difficult (and, as you can see, I made a mistake that I need to fix quick. This is why syntax highlighting is great!).

The catch here is read only = no is equivalent to writeable = yes

Now if you are like me and prone to type the wrong thing,

please type: testparm

It will check your config file for errors.

What you are looking for is, “Loaded services file OK.”

Just like that, we have our base that we will be working from. Join us in the next issue for adding a samba user and explaining a bit more, to paint out the picture.

If I explained anything badly, misc@fullcirclemagazine.org



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.



SIMPLE CALCULATOR IN PAGE

Greetings again fellow Sentient Lifeforms. Things here at landing pad 2997 on Terra haven't calmed down at all since last month. If anything, things are even busier. It looks like (at this time, Friday 5 July) that we will be having an unwanted visitor by the name of Hurricane Beryl. At this point, the chances are really good (or bad if you wish) that we will get at least a "drive by" visit. I'm going to have to get the ground crew to make sure the ship is lashed down and secure. However, I'm not going to let that keep me from sharing information with you.

This month, I'm going to take you through creating a simple calculator in PAGE 8.0, Tkinter. Why? Well, in the last month, I've seen two different articles about creating a simple calculator in straight Tkinter and in Wxpython, but nothing about using a great GUI designer like PAGE (and one of them was behind a paywall (ICK)),

so I thought I'd throw my two cents into the mix.

Within the article, I'll show you a couple of tricks that can be used within PAGE, or from just Tkinter if you want to "do it the hard way".

Just because I'm a nice guy (according to some people), I've set up a github repository for you that you can download the entire project which includes all the PAGE files and Python files – so you don't really have to deal with PAGE if you don't want to. The URL for the repository can be found at the end of the article.

BASIC REQUIREMENTS

So, the basic requirements for our project will be to create a "4 banger" calculator. Since the phrase "4 banger" goes back to the early days of electronic calculators (1970s), you might not be aware of what that means. Simply put, it's a calculator that does only addition, subtraction, multiplication and division. That's it. No mod function, no parentheses, not even a square

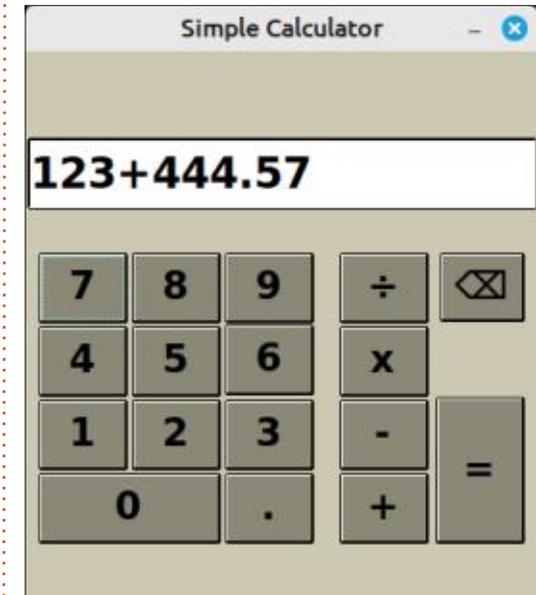
root function or percentage. Of course, you can add these functions yourself if you want, but I wanted to create a really quick project that wouldn't make my article take up half of the magazine.

Of course, since it's me, we will use PAGE 8.0 to design the GUI form. I'm not even going to go into depth on creating the form in PAGE, just some of the highlights. We won't be using any graphics, only text on the buttons. The only "special characters" we will be using are the "<X]" character for the clear key (U+232B), and the "÷" for the division key (U+00F7).

Since we will be using PAGE 8.0, we'll use one of the themes I created for it named "cornsilk-light". Since we will be concentrating more on the Python code instead of the PAGE portion, I'll give you a small function that will modify that theme to create a bold 18-point font that will apply to all the TButtons, and a slightly darker background to make them stand out from the background of the form a little bit.

Our callbacks for the buttons will be somewhat on the special side, since I'm going to use the lambda function to send a "key definition" via the command attribute for each of the TButtons.

The finished project should look something like this...



CREATING THE PAGE GUI

So, we'll need to create a folder to hold our PAGE project, and the

themes folder to hold the cornsilk-light theme files. Then copy from the PAGE 8.0 themes folder (or from the repository files) the cornsilk-light.tcl, and the entire cornsilk folder into a themes folder. Now, in a terminal window type

```
$ page calc1
```

Now, set your Toplevel form to width=359 and height to 467. Set the title to "Calc1". Make sure that you are in the Absolute mode so the form won't resize.

Add a TLabel widget at x=2, y=60, with a height of 50 and a width of 356. Set the background color to "white", the relief to 'sunken', anchor to "w", the textvar to "Display", and the font to 'DejaVu Sans', size=20 and weight=bold.

Next, place a TButton widget at x=10, y=140, height=49 and width=62. Then set the text to "7". Finally set the command attribute to "lambda : on_numKey(7)". The theme will take care of all of the other attributes, and we'll override some of those when we create our theme override later on in the _support module.

Now, add 10 more TButton widgets aligning them into a "keypad" orientation as in the image above. Set the text to the proper number for that key and the command to "lambda : on_numKey(X)" where X is the number of the key (or for the period key simply '.'. Be sure to use single quotes when using the PAGE command attribute text box).

Now, add 6 more TButtons, and set their text as seen in the image above. For the clear and divide keys, there's a file in the repo called symbols.txt that has the two symbols. Just copy each and paste them into the text attribute column.

At this point, the final step is to enter each of the command line attributes. The one for the Divide button would be "lambda : on_funcKey('Divide')". From there the text for the command attribute sets would be:

```
lambda : on_funcKey('Mult')
lambda : on_funcKey('Sub')
lambda : on_funcKey('Add')
lambda : on_funcKey('Equal')
lambda : on_funcKey('Clear')
```

Once you have all your keys defined, save your project as

"calc1" and generate the GUI.py file and the Support module.

Your Toplevel should look something like this...



You can close PAGE at this point. Again, none of the buttons have bold font or a background other than the cornsilk3 colour, which the theme contains.

THE CODE

Now we can begin to create our functions and callbacks in the support module ("calc1_support.py").

PAGE created the majority of the program for us, but we still need to flesh the skeletons out.

First, we need to add an import statement. Near the top of the file are all of the import statements. Just after the "from tkinter.constants import *" line, you need to add

```
from tkinter.font import Font
```

This is because we will be defining a "custom" font in a little bit.

Next, scroll down to the main function. PAGE already created this for us, but we need to run a few extra commands before the form is displayed to you or your user. Just before the last line of the main function, add a line that contains "startup()". I've included the function below with only the line to add in black (next page, top right).

At this point, we need to add the startup function code. I usually put this just after the main function.

The first task we do is clear the 'Display' Label widget by calling the .set() method of the Label

```
def startup():
    # Clear the display label widget
    _w1.Display.set("")
    global dbuf
    dbuf = ""
    set_button_fonts()
    _top1.title("Simple Calculator")
```

widget. Then we define a global variable named "dbuf" and set it to an empty string. After that, we call a function called `set_button_fonts()`, which will create a custom theme for our buttons and finally set the title for the form (code shown above).

Here is the `set_button_fonts()` function. As you can see from the comments, we create an instance of the `ttk.Style` object, define a new font using "DejaVu Sans", font size 18 points and weight bold, and assign that a name of "myFont". Then we call the `style.configuration` method to set the font to `myFont` and the background to "cornsilk4" to every `TButton` widget in the project. Finally we call the `update` function for the `Toplevel` to make sure it is done before we show it to the user.

At this point, we have only two more functions to deal with. They are the callbacks for the buttons

that make up the "numKey" group and for those that make up the "funcKey" group. The `on_numKey` callback is REALLY easy (below).

We simply append the value that is sent into the `on_numKey` function from the button to the variable `dbuf` and display that in the `TLabel` widget. When we set the command function for the number keys (and the period key), we use the lambda function that allows the command function to send a value into the callback. (Normally callbacks can not include any

```
def on_numKey(*args):
    global dbuf
    dbuf = dbuf + str(args[0])
    _w1.Display.set(dbuf)
```

```
def set_button_fonts():
    # Create an instance of the ttk style object.
    sty = ttk.Style()
    # Create the font definition
    myFont = Font(family="DejaVu Sans", size=18, weight="bold", slant="roman")
    # Apply the new font to all the TButtons along with a different background colour
    sty.configure("TButton", font=myFont, background="cornsilk4")
    # Update the entire Toplevel (just in case)
    _top1.update()
```

```
def main(*args):
    """Main entry point for the application."""
    global root
    root = tk.Tk()
    root.protocol("WM_DELETE_WINDOW", root.destroy)
    # Creates a toplevel widget.
    global _top1, _w1
    _top1 = root
    _w1 = calc1.Toplevel(_top1)
    startup()
    root.mainloop()
```

parameters. We can get around this by using the lambda function). So for the # 4 key, the command attribute would be...

```
lambda : on_numKey(4)
```

When it gets to the `on_numKey`, it is sent in to the `*args`, which contains all the arguments as a list. Since we are sending in only one value, it will come in as `args[0]`. That is converted into a string.

Unfortunately, the `on_funcKey` is a bit more complicated, but not horribly so. In fact it's more repetitive than complicated. Rather than the "normal" if | elif | else tree, I decided to use the newer match case tree.

The first thing we do is assign the incoming string from the button command to a variable called `which`. Then the match compares this value to each of the case statements. The cases for "Add", "Sub", "Mult" and "Divide"

HOWTO - PYTHON

are almost the same, just assigning a different character to match the function to the dbuf global variable. This time I decided to use the f-string method.

So for the "Add" function we add a "+" to the string and so on. Then we send it to the TLabel widget to show to the user.

For the Clear function, we simply set the TLabel widget and the dbuf variable to an empty string (shown right).

Now... the part of the function that makes everything work. That's the "Equal" case. When the user clicks on the Equal button, we simply take the string that we've been building all along and then use python's eval function.

So if the user clicks the buttons "2", "+", "2", and then presses the equal key, the dbuf variable would be "2+2" and the eval then can deal this as a math statement. Therefore, the answer is (of course) 4.

Simple, but in no way, shape or form is it bullet-proof. I didn't include any kind of error checking. I did say at the beginning that it was

a SIMPLE calculator program.

You can find the repository at <https://github.com/gregwa1953/FCM207> which contains all the information that you need to run the program, including the PAGE files, the theme folder and files, and the Python code.

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

```
def on_funcKey(*args):
    global dbuf
    which = args[0]
    match which:
        case "Add":
            dbuf = f"{dbuf}+"
            _w1.Display.set(dbuf)
        case "Sub":
            dbuf = f"{dbuf}-"
            _w1.Display.set(dbuf)
        case "Mult":
            dbuf = f"{dbuf}*"
            _w1.Display.set(dbuf)
        case "Divide":
            dbuf = f"{dbuf}/"
            _w1.Display.set(dbuf)
        case "Clear":
            _w1.Display.set("")
            dbuf = ""
        case "Equal":
            result = str(eval(dbuf))
            _w1.Display.set(result)
            _top1.update()
            dbuf = ""
```



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.



This month, as noted last time, we will take a look at Foocus, specifically looking at issues installing the program. Once I explain the issues I experienced, and workarounds, I will give you a quick taste of what can be done with this easy-to-use program.

Installation of Foocus can be more demanding on Linux. It installed correctly on 23.10 Kubuntu, but updating to 24.04 stopped it from working. It wouldn't work on a clean install either (Ubuntu as well), and others have had a similar issue. Perhaps it will be fixed in the future but, unless you go back to MS Windows which has a single installation file to download, you may want to temporarily find a different Linux distribution. I eventually installed Mint Linux which can create its own issues, but it does work with Foocus, and, no doubt, other distributions will also work.

To install Foocus, Github (<https://github.com/llyasviel/Foocus>) provides a variety of options. I used the Python Venv

version – simply because it had worked previously. (Python3 is required.) After opening your terminal, you will sequentially type and run each of the following commands (it was the install requirements which caused my previous problems):

```
git clone https://github.com/llyasviel/Foocus.git
```

```
cd Foocus
```

```
python3 -m venv foocus_env
```

```
source foocus_env/bin/activate
```

```
pip install -r requirements_versions.txt
```

During installation, you may find that various packages are not available on your OS, but code to install what is needed will be suggested. It can be a lengthy process as it will also download a variety of Nvidia files, a minimum of 4GB of video ram is required, but more is desirable. (For AMD video cards, additional instructions are provided.) When that has completed, you will want to create a launch file in the Foocus folder.

You can do this by creating a file named focus.sh using nano within the terminal, or Kate, or any suitable editor, with the following two lines:

```
source foocus_env/bin/activate
```

```
python entry_with_update.py
```

Once created, you need to make the file executable by typing in the terminal:

```
sudo chmod +x focus.sh
```

Alternatively, you can modify it by right-clicking on the focus.sh file, going into properties, selecting the permissions tab, and selecting the execute checkbox.

Finally, you can start Foocus in the terminal by running:

```
./focus.sh
```

This should open the program in the default browser.

When you first start loading Foocus, you will likely see an error message suggesting you are

running an older version of Gradio. (At the bottom of the Foocus interface window you will see a reference to 'Built with Gradio'.) Do not upgrade Gradio, it needs to use the previously installed version. It may also need some additional files, and some specifically for your graphics card – which it will start downloading. (That may require a reboot.) Also part of the process will be a download of the JuggernautXL.safesensor model, which is over 7 GB. Another issue you may experience is that, when initially starting to generate images, the software is waiting to start. Sometimes it will be downloading additional files and that must finish before file generation starts. Or restarting Foocus may solve that problem, and, as a general rule, restarting the Operating System solves most issues with the various versions of Stable Diffusion I have used.

The above answers some problems, but I thought I should also leave the reader with an example of what you can do after installation. First, I created an

HOWTO - STABLE DIFFUSION

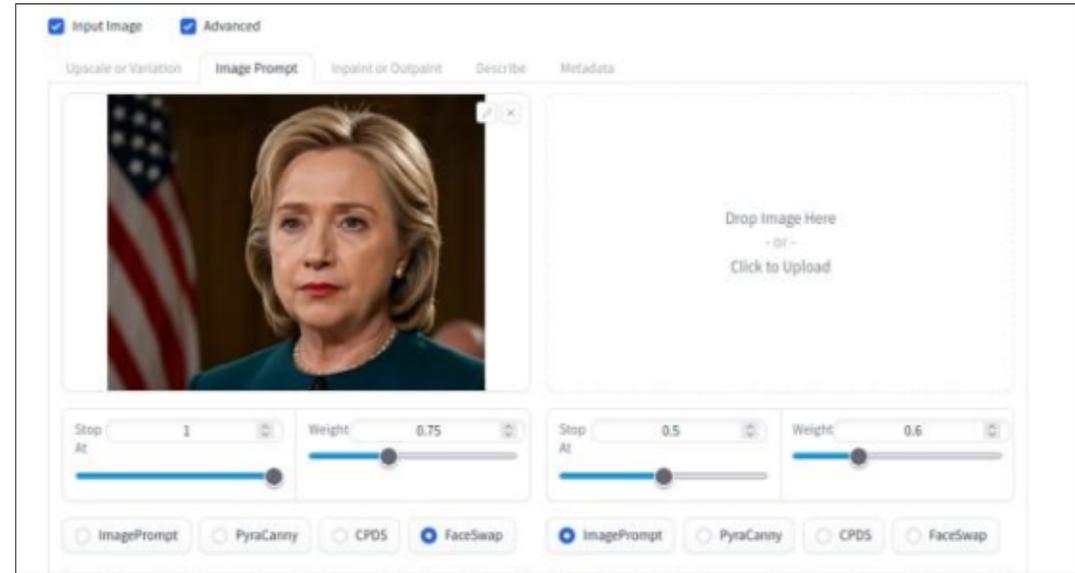
image of Hilary Clinton by simply using her name. The result is shown as the output seen in the History Log (with the Advanced checkbox checked, select the History Log on the lower right.)

You will notice the two word prompt was expanded significantly by Fooocus. In Fooocus, with the Image Input checkbox selected, you can drag the original output into the Image Prompt area by first selecting that Tab. Note that some browsers don't seem to allow that function, but you can save the output first and then Click to Upload that same image. Once the file has been selected, you can select the FaceSwap option.

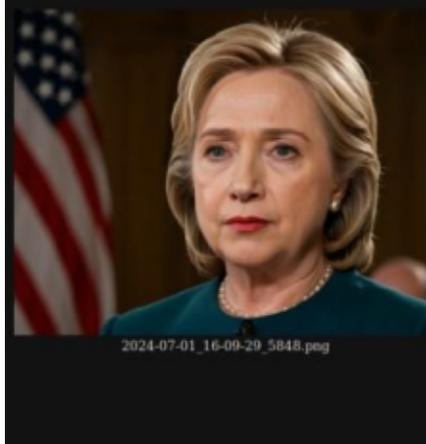
You can then modify the prompt as: ***Middle age woman as warrior in battle dress***

Then generate the image, and you might get something similar to what is shown.

Next time we will continue with Fooocus. We will also install and use DeFooocus, a modified version. Because it is modified and essentially the same, the examples will mostly be relevant to both. You can then decide which version works best for you.



Prompt	hillary clinton
Negative Prompt	
Fooocus V2 Expansion	hillary clinton, ambient light, sharp focus, elegant, int composition, beautiful, symmetry, perfect., expressive.
Styles	['Fooocus V2', 'Fooocus Enhance', 'Fooocus Sharp']
Performance	Speed
Resolution	(1152, 896)
Guidance Scale	4
Sharpness	2
ADM Guidance	(1.5, 0.8, 0.3)
Base Model	juggernautXL_v8Rundiffusion.safetensors
Refiner Model	None
Refiner Switch	0.5
CLIP Skip	2
Sampler	dpmpp_2m_sde_gpu
Scheduler	karras
VAE	Default (model)
Seed	4521416865145196518
LoRA 1	sd_xl_offset_example-lora_1.0.safetensors : 0.1
Metadata Scheme	False
Version	Fooocus v2.4.3
Full raw prompt	• Positive • Negative





HOW-TO

Written by Robert Boardman

Latex - Geometry

Welcome back to another adventure with Latex. This time we are going to explore the geometry package. Geometry is a page layout package. The user sets some dimensions of objects on each page of the document and the package can calculate the remaining values. Values are specified using key/value pairs which is advantageous for both clarity and uniformity with other packages. In most cases, there are a number of different sets of settings which can produce the same result. For example, setting the paper size, margin ratio and the left margin will determine the right margin; or setting the paper size, margin ratio and right margin will determine the left margin. Any key setting which violates one (or more) of the others will generate a warning and geometry will ignore one of the key settings.

Before we continue, a few words about paper sizes, which are the controlling factors in page design. Most countries in the world use A4 paper as the default paper size. Canada, the Philippines, and the

USA use a default paper size called "letter". A4 is part of a series of ISO-recognized paper sizes. A0 is the largest, an A0 sheet is one square metre (841mm x 1189mm, rounded to the closest mm). Each sheet size is exactly half of the previous largest size, actual size is determined by folding the larger size parallel to its shorter sides. So A1 is $\frac{1}{2}$ of A0, A2 is $\frac{1}{2}$ of A1, etc. A4 is 210mm x 297mm. Letter size is 216mm x 279mm, larger in the short dimension (usually the horizontal dimension). and smaller in the long dimension. The aspect ratio of all paper sizes generated from A0 is $\sqrt{2}$ or 1:1.41421 (short:long). The aspect ratio of letter size is 1:1.29.

The geometry package also accepts several other less frequently used paper sizes: b0paper – b6paper, c0paper – c6paper, b0j – b6j (Japanese sizes), as well as letterpaper (216mm x 279mm), legalpaper (216mm x 356mm), and executivepaper (184mm x 267mm) to accommodate North American standards. It is also possible to set paperwidth and

paperheight to specific dimensions if necessary or desirable.

Geometry supports either portrait (short dimension horizontal), or landscape (long dimension horizontal) orientation for paper. Portrait is default, and need not be specified. Geometry does not support changing orientation for specific pages in a document. If that is required then the lscape package is also required.

Geometry supports two-sided printing with the twoside Boolean key. If a document is to be printed two-sided, it may require extra space for the inner margin to allow for the space required for binding. This key is bindingoffset – which adds the specified amount to the inner margin.

I have set up some example pages to show a small part of the flexibility of the geometry package. Example one is a fairly standard page: [paper=letterpaper, lmargin=36mm, marginratio=1:1, headheight=25mm]. Since the left margin is set to 32.5mm and the

margin ratio is 1:1, the right margin will also be 32.5mm. (These settings are comparable to reasonably acceptable defaults for word processing.

One magazine I subscribe to has a final paper size of 19cm x 26cm. It has two columns of text printed on both sides of the page. The outside margin is 2.5cm, the inside margin is also 2.5cm including the space required for binding. The top margin is 2.3cm and the bottom margin is 3.3cm. The footer appears 2.5cm below the text block.

Geometry does not control what happens inside the text block, so setting for two columns and setting the space between columns is in the control of another package.

Settings for this magazine could be:

Example 2 settings:

```
[paperheight=26cm,
paperwidth=19cm, top=2.3cm,
bottom=2.3cm, left=2.5cm,
right=2.5cm].
```

This combination of settings is only one way to specify the layout for this magazine. The page designer could also work from

HOWTO - LATEX

letter size paper or A4 paper, and use the four margins to control the size of the text block. There are often two or more ways to use the many settings available in the geometry package to specify a layout.

Remember the goal of Latex / Tex is to generate a standard PDF file which can be read on screen, or printed. When doing page design, it is important to know what the readers expect. It may be desirable for some design elements to be different if the document is to be read on screen compared to being printed.

CHANGING GEOMETRY MID DOCUMENT (1)

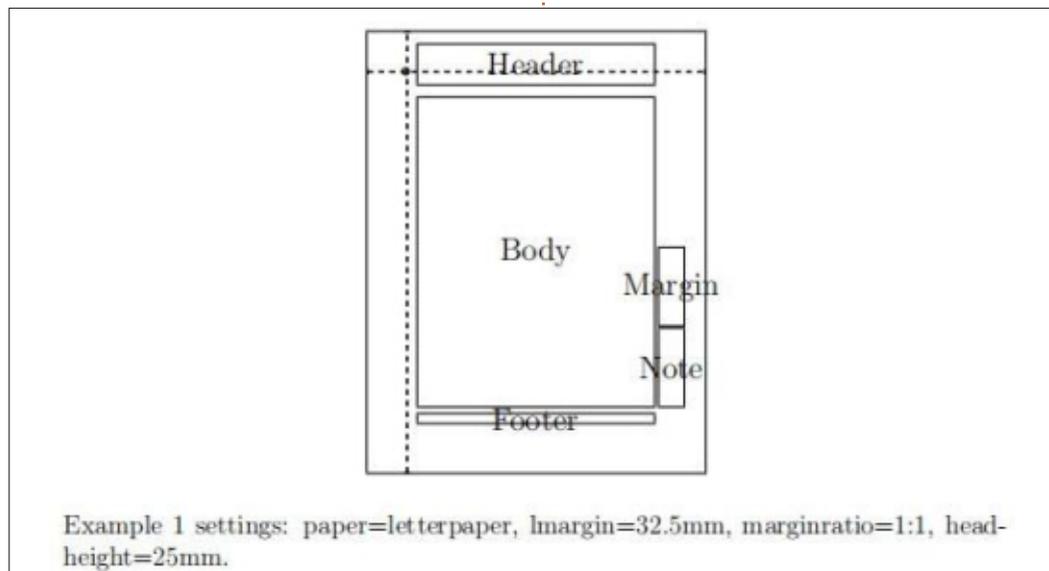
`\newgeometry{options}` changes the page layout mid-document. `\newgeometry` is almost similar to `\geometry` except that `\newgeometry` disables all the options specified by `\usepackage` and `\geometry` in the preamble and skips paper size-related options.

`\restoregeometry` restores the page layout specified in the preamble. This command has no arguments.

`\savegeometry{name}` saves the page dimensions as 'name' where you put this command. `\loadgeometry{name}` loads the page dimensions saved as 'name'.

Types of options for geometry are: Boolean (true – false), one option, (key=value) two option key={value1,value2}, three option (key={value1,value2, value3}). Two value options can be shortened to one value if both values are identical. For three-value options, all options must have a value or a null, (use * for null). You should specify at least one value. Setting all three values to null makes no sense.

OPTIONS AVAILABLE



There are five pages of options in five different categories in the documentation for the geometry package. The ones in this article are only a few of the common ones.

The papersize category includes all of the sizes I discussed at the beginning of this article plus others. Paperwidth and paperheight can be given using the papersize parameter with two values: width, height. The papersize category includes portrait, landscape, and screen. Screen is a special size for presentations: 225mm x 180mm. This gives an aspect ratio of 1.25:1 or 5:4 which is close to the old standard for screens of 640x480 or 4:3.

The layout size group has a small number of options useful to set layout sizes which are not dependent on paper size. This is another set of options for adjustments for the magazine whose final size is smaller than standard letter paper.

Next is a long list of parameters in the body size group. (Body refers to the text body, the container for the contents of the article, book, journal, etc.) This group is followed by margin size. I hope it is obvious that body size and margin size are dependent on each other. It is often possible to get the desired body size using appropriate margin sizes and vice versa.

Finally, there is a group called native size. These options can override the defaults built into Latex. For example, the default spaces allocated for headers and footers can be eliminated. For another example, look at either of the two images. There is space set aside in the right margin for margin notes (or outside margin in two-sided layouts). Using the `reversemarginpar` instruction puts that space in the left margin (or

inside margin in two-sided layouts).

CHANGING GEOMETRY MID-DOCUMENT (2)

The `newgeometry` command allows changing all options in the geometry package except page orientation (portrait, landscape) and paper size:

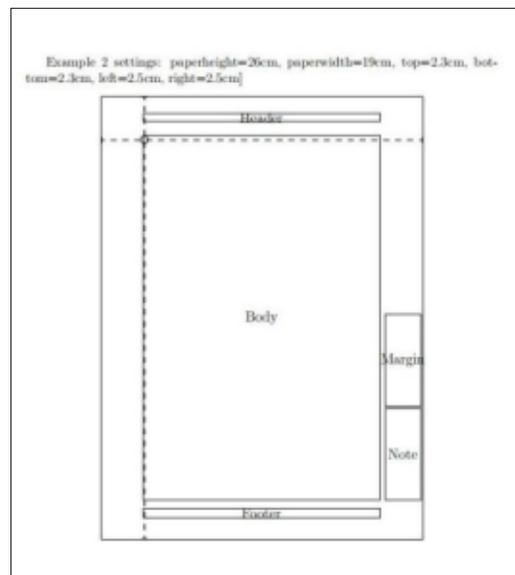
- If used it must appear after the `\begin{document}` command.
- It can contain changes to one or more of the parameters set originally in the preamble.
- The `newgeometry` command can be issued more than once in a document.
- To return to the original settings, issue the command `\restoregeometry` (which takes no parameters).
- Both `\newgeometry` and `\restoregeometry` issue `\newpage` commands before changing the page layout.

As mentioned above, it is also possible to build a collection, a library of geometry “styles” using the `\savegeometry{name}`. For example, assume you regularly published PDF files using two or more different page layouts. Assume they are called L1 and L2.

Start the document in the usual way and include the geometry package. After the `\begin{document}` command, issue the appropriate `\loadgeometry{L1}` command for an L1 layout. No need to remember what the various layout dimensions are. This ability would also allow for quick and easy use of different page layouts for pages with illustrations and pages without illustrations in the same document, for example.

DOCUMENTATION

I strongly urge you to read through the documentation for the geometry package (as I have done for all packages I have discussed). The first 17 pages contain all of the



information most users will need. The rest of the 42 pages gives the code and explanations. Pages 16-17 contain eleven annotated examples from simple to complex. There is probably at least one of them that can be the base for the page layout you wish to use.

SPECIAL NOTE:

To generate views of page layouts like those in this article, the following code is very useful. Place it in the preamble, i.e. before the `\begin{document}` instruction. This needs to be used with each command on a separate line; otherwise any command immediately after a percent sign will be treated as a comment – which will cause errors.

```
\usepackage{layouts}  
\newcommand\showpage{%  
  \setlayoutscales{0.5}%  
  \setlabelfont{\large}%  
  \printheadingsfalse  
  \printparametersfalse  
  \currentpage\pagedesign}
```

Put any parameters for the geometry package below these layouts package commands. In the body of the document, use the `\showpage` command to generate the view of the layout. If you set

the layout scale to 1, you will get an image that will be the finished size of the layout design. It can be saved as a PDF file and printed if desired. However the image will be shown or printed inside the margins of a standard page, and so will probably flow past the existing right and bottom margins.

Thanks again for reading and following along in my adventures with Latex. So far, it has been not only interesting but also educational. I have learned a lot and I hope you have too. Talk to you again in the next issue.

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.

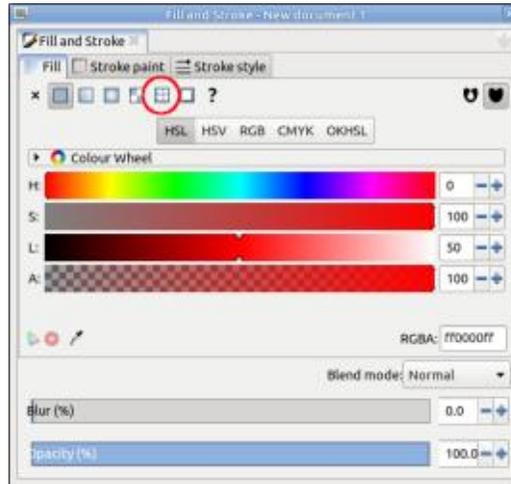
<https://retro.wtf/kilobytemagazine/>



One of the most welcome changes in Inkscape version 1.3 is the addition of a Pattern Editor in the Fill & Stroke dialog. It's definitely not without its issues, but it's such a vast improvement over the UI in earlier releases that I'm more than prepared to forgive a few UX missteps.

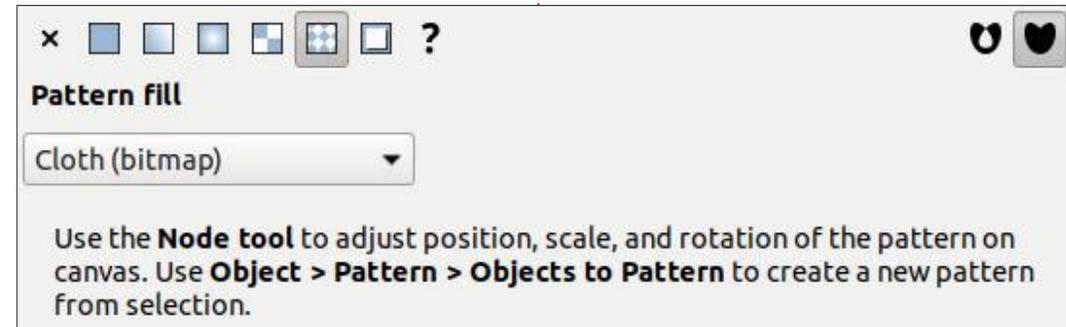
First a reminder about patterns in general, as they're not a feature that all users have a lot of experience with. The short, technical explanation is that a pattern is a section of SVG content that can be used in place of a color or gradient for the fill or stroke of an object, and which will automatically be tiled in both the horizontal and vertical directions if it's not large enough to fill the required space. Inkscape comes with a large number of built-in patterns, and it's those I'll focus on in this article. If you need something else, however, you can create your own patterns by selecting one or more objects in your image, and using the Object > Pattern > Objects to Pattern menu entry.

Let's look at adding a pattern to the fill of a rectangle. In this screenshot of the Fill & Stroke dialog, the object currently has a solid red fill. I've drawn a red circle around the button that switches from a flat color fill to a pattern fill, and there's a similar button on the 'Stroke paint' tab.



Clicking that button in an old Inkscape release produces a rather underwhelming UI, consisting of just a single pop-up selector and a lot of explanatory text.

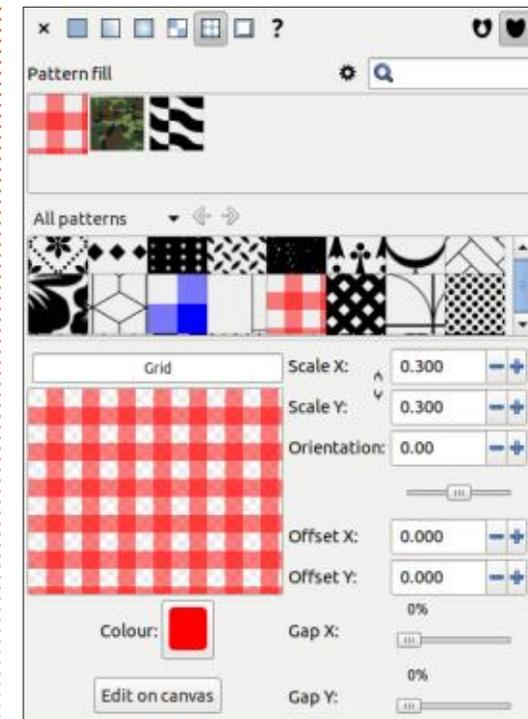
Opening that pop-up presents a long list of pattern names,



consisting mostly of stripes of different ratios, some polka dots, a few miscellaneous vector entries, and three bitmap designs. But one thing that's conspicuous by its absence is any sort of preview of each pattern – you have to just apply each of them to your shape in turn to see what they look like. That's it for the UI in the dialog. There are some on-canvas handles for repositioning and sizing the pattern (more on those later), but in terms of selecting a pattern you just pick the name from a list and hope for the best.

Compared with that sparse interface, 1.3 offers a wealth of controls and previews, to the point that it's almost overwhelming!

With so much more to show, you may find that there's even a

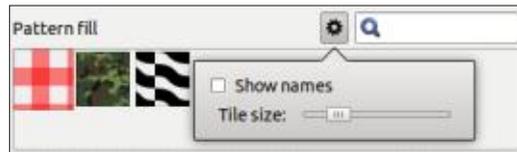


scrollbar to let you access all of it if you have the dialog sized too small. Below this UI you'll also find the Blend Mode, Blur, and Opacity controls that are common across all the fill types, so fitting the entire

HOWTO - INKSCAPE

Fill & Stroke UI on screen at once requires quite a bit of vertical space and is likely to require some scrolling up and down on a smaller screen.

Let's break down the various parts of this UI to make more sense of the features that are now exposed, starting from the top:



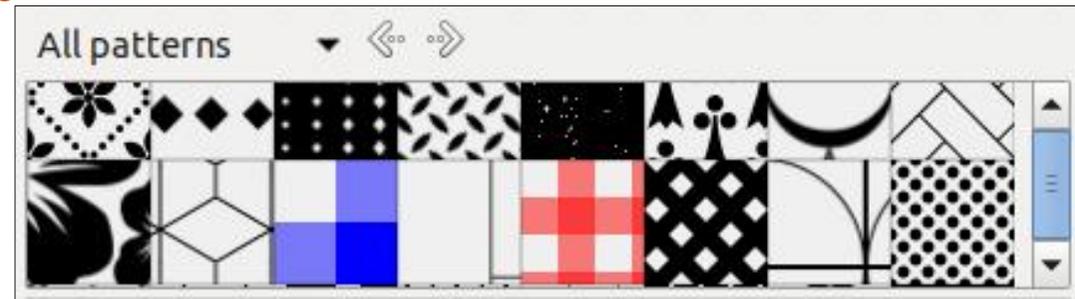
After the 'Pattern fill' label, the first actual control is a button with a gear icon which opens a pop-up with a couple of settings. The first of these is a checkbox to turn on or off the display of the pattern names below each swatch. Personally I find that displaying the names is largely useless, as you may see only the first few characters, which are often identical across multiple different patterns. Hovering over a swatch displays the full name in a tooltip, so if you just want to know or memorize the names of your most commonly used patterns, there's little need to have them permanently displayed.

With the slider in this pop-up you can adjust the size of the

pattern swatches (referred to as 'tiles'). Larger tiles show more of the pattern content (and more characters in the name, if you have enabled that option), but reduces the number of swatches that are visible at once. Inkscape tries to update the dialog live as you move this slider: on my machine this was jerky, hanging the UI for a second or two with each re-render. I advise dragging the slider very slowly to allow the application to keep up, especially when trying to finetune the tile size to your exact preference.

Next to the gear button is a search field for filtering the displayed swatches based on their name. With the number of patterns in Inkscape at the moment it seems unlikely that much use will be made of this feature. Perhaps if many more designs are added in a future release, this will make more sense.

The remainder of this top section is taken up by a box that shows a swatch for each pattern that is used in the current document. Note that this is one swatch per pattern, not per object using a pattern. If you use the exact same pattern on, say, five different objects it will still appear in here



only once. Clicking one of these swatches will apply the pattern to the currently selected object(s) – but make sure you read the rest of this article to understand the difference between picking a pattern here versus the next box of tiles, as they don't do quite the same thing.

That 'next box of tiles' is a similar region containing swatches for patterns, but this time it shows all the ones that are available in the application, rather than just those that are being used in the document (shown above).

At the top-left is a pop-up menu that lets you select between different categories of pattern. The categories are rather arbitrary – what makes a pattern 'Asian' rather than 'Decorative' or causes it to appear in the 'Geometrical' section, rather than the confusingly named 'Patterns' group? The real benefit to being able to view one group at a

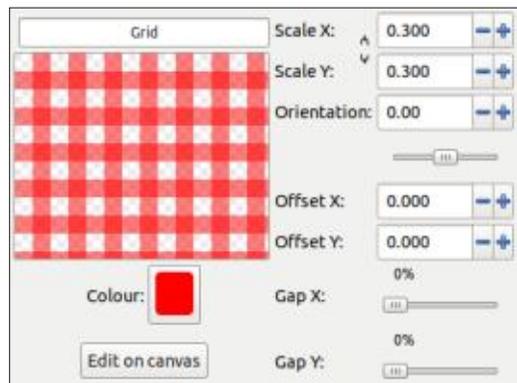
time is simply that it limits the number of patterns to display at once, in this scrollable letterbox view that is clearly too small for the purpose except on the largest of screens.

Next to the pop-up are arrows that simply step through the groups, offering little additional benefit. Furthermore, the stepping doesn't wrap around, so when you get to the last group you'll probably end up opening the pop-up anyway to jump back to the beginning.

Then we have the pattern swatches themselves. Clicking a swatch in here will apply it to the currently selected object(s), but again make sure to read to the end of this article. Whereas the top set of swatches is likely to have only a handful of entries at most, this one can potentially contain a huge number. Not only is this box often too small to practically scroll, but many of the patterns run into each

other in a way that sometimes makes it hard to distinguish them from each other. Inkscape devs: can we have an option for a gap between tiles, please?

Finally, we have the largest part of the dialog: the section for previewing and editing the currently selected pattern. This consists of a large preview box, with a number of fields and controls wrapped around it which affect the preview, as well as having a live effect on the pattern(s) on the canvas.



Top-left is a field that holds the name of the pattern. You can also edit the name here, though your changes don't take effect immediately, even if you press the Enter or Tab key. Instead you have to interact with some other control – one of the buttons in this dialog, or selecting a different object on

the canvas, for example. Only then does the change kick in, and the tooltip on the swatch will update.

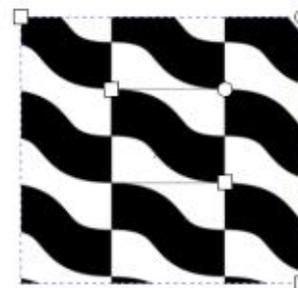
Running down the right are controls for changing the way the pattern appears. You can alter the scale in the x and y directions, with the '(un)broken chain' toggle that is common in many graphics programs being used to switch between proportional and free scaling. You can also rotate the pattern using either the 'Orientation' field or the unlabelled slider beneath it. 'Offset X' and 'Offset Y' are used to adjust the placement of the pattern within your fill or stroke.

All of these controls can also be changed graphically on the canvas. There are two ways to enable this mode: the first – which has been available in Inkscape for a long time – is to switch to the Node tool (F2) while an object with a pattern is selected; the second is simply to click the 'Edit on canvas' button in the Fill & Stroke dialog, which actually just switches you to the Node tool anyway.

Whichever approach you take, Inkscape will display a square or rectangle with three handles on the canvas which represents the outline

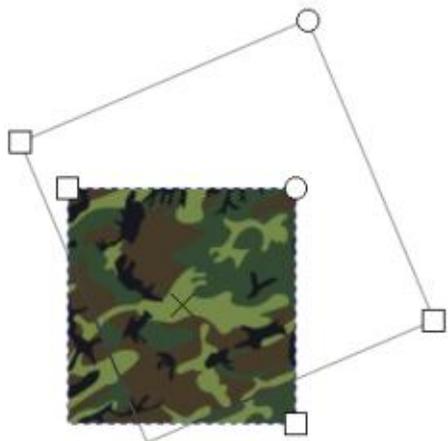
of a single tile of your pattern. In older releases, this rectangle always appeared at the top-left of your document, but 1.3 changes this so that it appears on the object you're editing. This makes a lot more sense, especially if you're trying to adjust the pattern on an element that's far from the top-left corner.

The style of the handles, however, is rather confusing. They look identical to the handles for editing a rectangle, such that it's easy to get them mixed up when they happen to be close together on the canvas. In this image you can see the rectangle's handles around the outside, and the pattern's handles inside the object – just imagine the confusion when the pattern is a similar size to the object, so that the handles start to overlap. Wouldn't it make so much more sense to render these handles with a different shape, color, or line thickness?



Dragging the top-left handle will reposition the pattern (equivalent to the 'Offset X' and 'Offset Y' controls). Dragging the bottom-right handle will resize the pattern (equivalent to 'Scale X' and 'Scale Y') – hold Ctrl at the same time for proportional scaling. When scaling proportionally, the handle fixes the aspect ratio that is currently set, rather than forcing x and y to the same value. This is a good thing, as it lets you set the aspect ratio for the pattern then adjust its actual size without that ratio changing, but there doesn't seem to be a shortcut to force it back to a 1:1 ratio, should you wish to, leaving you to edit the fields in the dialog instead. Finally, dragging the round handle at the top-right will rotate the pattern (equivalent to the 'Orientation' field and slider).

If your pattern is small enough to repeat within your shape, clicking within it will move the handles to the corresponding 'copy' of the pattern. If your pattern is larger than the shape it's applied to, the handles can appear outside the object, as in this example with a large rotated pattern.



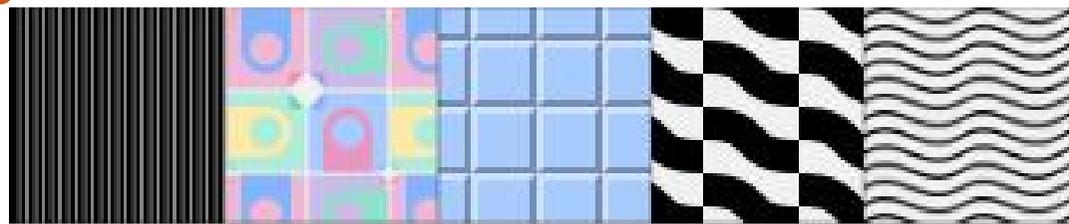
Within the dialog is also a pair of sliders labelled as 'Gap X' and 'Gap Y'. These allow you to add gaps between the copies of your pattern but, quite frankly, they feel like an afterthought. The size of the gap is represented on them as a percentage (of what?), but they allow steps of only 20% at a time – and there's no input field to enter an arbitrary value. Digging into the XML editor, I think that these actually set the 'width' and 'height' attributes on the <pattern> element (which is hidden away in the <defs> section), with the percentages being based on the width/height of the pattern content. They're certainly not stored as simple percentages in the XML, so if you want a value that doesn't fall on a 20% step, you'll have to do the math, or manually tweak the values in the XML editor,

until the result looks right.

Now that I've explained the bulk of the pattern editing controls, we get to one of those caveats I mentioned earlier. If you click on a swatch to select a pattern – even if it's the same one that's already been applied to your object – all those fields are reset to their defaults. On the one hand, this is a quick and easy way to revert all your changes if you've been playing around with the handles on the canvas, but on the other hand, it's a quick and easy way to accidentally revert some carefully curated changes in a way that you might not spot until it's too late for Edit > Undo to save you.

There's one final control I haven't described yet, which you might think I've skipped over because it's so obvious what it does: the 'Color' button (labelled 'Colour' in the screenshots from my British English installation). Unfortunately, while it is indeed obvious what it should do... it doesn't always do it.

With some patterns, selecting a color will change the pattern to that color, as you might expect. But with others, it doesn't have an

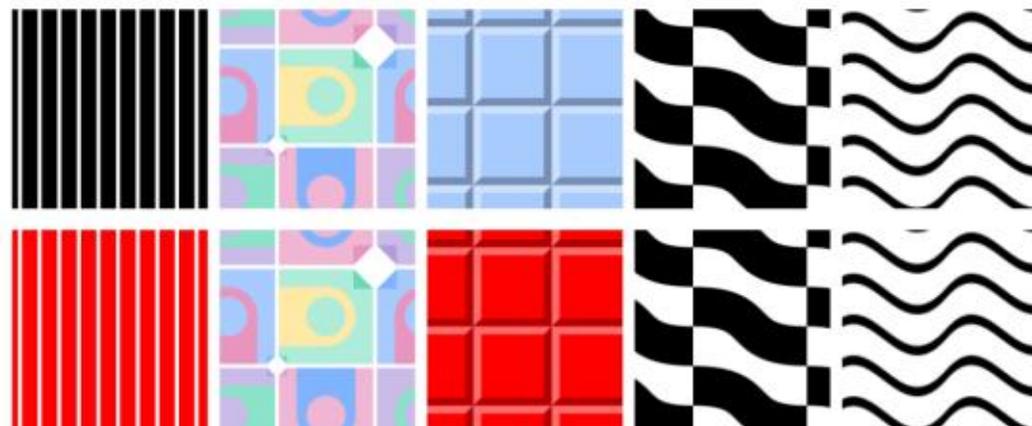


effect at all, or the button simply doesn't do anything (it's disabled, but although the label appears greyed out, the button itself doesn't look obviously inactive in any way). Take these five patterns – the last five of the 'Patterns' group – and see if you can predict how each one will behave when I try to apply the same color to them?

The first ("Stripes 13 (4:1)"), is a simple vector pattern, and accepts the color as you might expect. The second ("Table Cloth") disables the button, which I guess makes sense given the mixture of colors in the pattern. But although the third one ("Tiles") also appears to contain

multiple colors, it will happily accept a color change. The fourth pattern ("Tiles 2") will let you open the color picker and set a value, but then it still appears in only black. The last one ("Wavy"), despite looking like a simple vector pattern, also disables the button. Here are those results, in graphical form, with the default appearance in the top row, and the bottom showing all the patterns after (trying to) set them to pure red.

There's one more caveat to using this dialog, and it's a very, very important one. Depending on how you use it, Inkscape will sometimes create a copy of a



HOWTO - INKSCAPE

pattern, and sometimes it won't. This can have a huge effect on what happens when you play with the editing controls, and makes the result very hard to predict.

If you set a pattern fill by clicking on the top section of the dialog – i.e. choosing a pattern that has already been applied to another object in your document – both those objects use the same pattern definition. If you change the color on one of them, the other one will change as well.

If you now change the other pattern controls for one of those objects, such as the scale or orientation, Inkscape creates a new pattern which references the first, but applies its own position and transformation data. Other types of data are inherited from the referenced pattern though. This means that even though there are now two patterns, they still share the same color data, so changing the color of one will still also change the color of the other.

Now draw another shape and set a pattern on it. This time select it from the main section of the dialog, using the large list of grouped patterns. Even if you

select the same basic pattern as above, Inkscape creates a fresh copy of it, not just a reference. You can change the color of this one without it affecting anything else.

If this sounds confusing, it's because it is. Sometimes Inkscape creates a copy, sometimes it creates a reference to an existing pattern. There's some logic to it, but nothing that's very obvious from a user's perspective. I've distilled the complexity down into two rules, which should hopefully help you to make the right choice when setting a pattern:

1/ If you want an independent pattern for your object that will not be affected by changes to the pattern on other objects, make sure to select it from the main list of swatches, not from the top region that shows the ones already applied in the document.

2/ If you want objects to share the same pattern such that changing the color of one changes the others, select the pattern from those that are already in the document, using the top section of the dialog. The on-canvas controls for setting scale and orientation (or those at the bottom right of the

dialog) will still operate on each element separately though.



Mark uses Inkscape to create comics for the web (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

**CHECK UNDER
CAR FOR
PENGUINS**

MMM MUST BE
MECHANICS ...





REMOTE CONNECT TO RPI

Greetings again fellow Sentient Lifeforms. Things here at landing pad 2997 on Terra haven't calmed down at all since last month. If anything, things are even busier. But I'm not going to let that keep me from sharing information with you.

You might say that the RPi isn't a Microcontroller, it's a Single Board Computer (SBC). That's true, but in the spirit of 'Micro' it is a MicroProcessor, so it sort of fits.

You may have never had to connect to your RPi from another computer. You probably have a monitor connected to it and have never had to use it in any other way. But what happens if your monitor for the RPi dies?

I currently have three RPi 4Bs on my home network. One I have for my home media center (running Kodi) and one that I've configured as a "baby" NAS (Network Attached Storage). The other is there to test

various projects (PAGE, Python and other things). The RPi that is my "baby" NAS, basically runs as a headless server. There is no monitor attached to it. Usually I use ssh to do anything that needs to be done, like update the OS and so on. Without the ssh connection, I wouldn't be able to get into it without taking it down and moving it to a close monitor, do what I need to do and then move it back to its "normal" location. I've always been able to use RealVNC to attach to the desktop remotely which is something that I occasionally want to do – to easily view what's going on. And it works well.

Well, I got an email from the RealVNC company that basically said:

"In just a few days' time, on 17th June 2024, we are making changes to your Home subscription that will affect you."

Retiring our Home plan

Almost a year ago, we revamped our subscription options by

launching a wider range of tiered plans designed to better cater to more users. In line with these changes, and to maintain a cohesive set of subscription options, we are now retiring our Home plan."

This is a major disappointment for me, since RealVNC just works without a whole lot of fussing and cussing. There are a few other VNC packages out there, but none of them quite as easy as RealVNC to set up and run.

Now, the Raspberry Pi group has provided a solution called rpi-connect. This is available only in the latest version of Raspberry Pi OS (Bookworm) which uses Wayland window manager. When I first started writing this article, rpi-connect worked only on the RPi 5, RPi 4 and RPi 400, but they have now released a solution for all RPi devices like the RPi Zero-W and the older RPi 3 boards. Please note that, for the older devices, you need to use rpi-connect-lite which will allow you to use only the remote shell – and not the Shared

screen mode. But, hey, it's an easy way to get into your device.

FIRST STEPS

First, as I said, you need to install the latest version of Raspberry Pi OS. Since you are completely upgrading the OS, you will want to back up any files that you need to keep. I'm sure you know how to do this. You should also consider using a new SD card; that way you can have access to your previous OS image. Whether you use your old SD card, or a new card, you will need to write the new image to the card. The easiest way to do this is to use the Raspberry Pi Imager. If you don't have it, you can find it at <https://www.raspberrypi.com/software/>.

Choose your target device in the box on the left (remember, this will work on only RPi 5, RPi4 and RPi 400). Then choose the version you want in the center box.

Be sure that you select the 64-bit version of Debian Bookworm.



Finally, choose the device your SD card is mounted on. You might be asked if you want to “apply OS customisation settings”. These are things like your wireless access point, username and password, the name of the RPi device on the network, username and password for login to the Pi, and so on. You can also enable SSH from this screen.

Eventually, you will be asked if you are ready to write the data to the SD card. When you say Yes, the latest version of the requested OS will be downloaded from the

Internet and then written to the SD card.

Once that’s done, move the SD Card to your RPi and then power it on.

NEXT STEPS

Of course, you have your RPi connected to a monitor at this point. Once your RPi is up and running, as you should normally do, is to update the OS image so all your packages are the latest and greatest. Open a terminal and and

enter:

```
$ sudo apt update
```

```
$ sudo apt upgrade
```

Once you’ve done that, you need to install the connect software.

```
$ sudo apt install rpi-connect
```

If you are using an older RPi (pre-4b or Zero-W), you will need to install the “lite” version by using

```
$ sudo apt install rpi-connect-lite
```

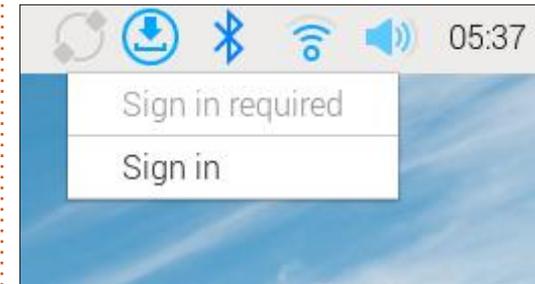
Once the install is finished, you will need to reboot your RPi.

USING CONNECT

Once your RPi has had a chance to reboot, rpi-connect SHOULD automatically start up and be waiting for you to connect through the browser of your choice on pretty much any machine on your local network. However, the first time, you will need to sign in on your Raspberry Pi.

In the upper right corner of your screen, you should see the rpi-

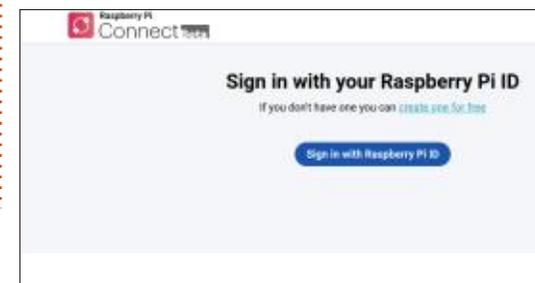
connect circle icon. Since you haven’t signed in yet, it will be grayed out. Click on it to get the ‘Sign in’ button and follow the prompts.

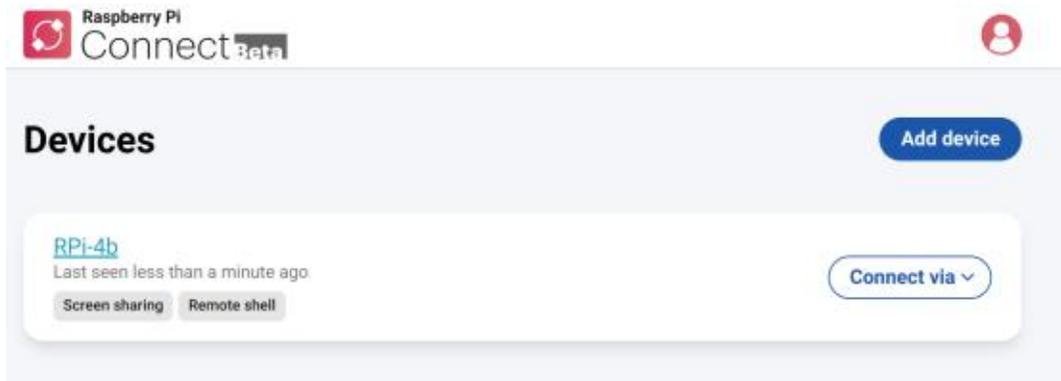


Be sure to remember the username, password and device ID you created. (These days, I need to write it all down, at least until I can create a shortcut.)

Now, on your desktop or laptop that you will be using to connect, open a browser (could be Firefox, Google Chrome, Vivaldi, or even Brave) and go to <https://connect.raspberrypi.com/devices>.

You should see a screen similar to this...





Sign in and select the device id of the RPi device.

When you get connected, you will see a screen that looks something like this...

On the left side of the screen, you will see the device that you are connected to and the type of connections that device will support. If your RPi device is either a 4B or 5 or 400, then you should see both "Screen sharing" and "Remote Shell". If you have an older device and you installed and set up the rpi-connect-lite program, then you will see only the "Remote shell" indicators.

Now, click on the right side button that says "Connect via". That will give you a dropdown that will allow you to connect to your RPi device. Assuming you are

connecting via the "Screen sharing" option, a new browser window will pop up and, in a moment, it will show something like this...

Shortly after that, you should see the desktop of the RPi device. At this point you are able to control the RPi device in a VNC-type

```
drwx----- 16 pi pi 4096 Jul 4 06:26 .
drwxr-xr-x 3 root root 4096 Mar 15 10:13 ..
-rw----- 1 pi pi 106 Jul 4 04:34 .bash_history
-rw-r--r-- 1 pi pi 220 Mar 15 10:00 .bash_logout
-rw-r--r-- 1 pi pi 3523 Mar 15 10:00 .bashrc
drwxr-xr-x 2 pi pi 4096 Mar 15 10:05 Bookshelf
drwx----- 7 pi pi 4096 Jun 28 04:23 .cache
drwx----- 12 pi pi 4096 Jun 28 04:32 .config
drwxr-xr-x 2 pi pi 4096 Mar 15 10:12 Desktop
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Documents
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Downloads
drwxr-xr-x 4 pi pi 4096 Mar 15 10:12 .local
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Music
drwxr-xr-x 2 pi pi 4096 Jul 4 06:13 Pictures
drwx----- 3 pi pi 4096 Jun 28 04:24 .pki
drwx----- 3 pi pi 4096 Jul 4 04:39 .pp_backup
-rw-r--r-- 1 pi pi 807 Mar 15 10:00 .profile
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Public
-rw-r--r-- 1 pi pi 0 Mar 15 10:13 .sudo_as_admin_successful
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Templates
drwxr-xr-x 2 pi pi 4096 Mar 15 10:13 Videos
-rw----- 1 pi pi 52 Jul 4 06:26 .Xauthority
-rw----- 1 pi pi 36958 Jul 5 04:41 .xsession-errors
-rw----- 1 pi pi 54590 Jul 4 06:25 .xsession-errors.old
pi@raspnas:~ $
```

window.

The other option, "Remote shell", is just like an ssh session.

To close the session, simply type "exit" in the terminal screen.

DOWNSIDERS

The biggest downside at this point is the lack of file transfer during the sessions. I am certain that this is very high on the RPi group's list of things to do. The buttons on the right side of the Screen Sharing window will copy and paste only TEXT.



If you want to try this, be sure to upgrade your OS to the latest Bookworm. The only other thing you need to remember is that if you are using a RPi device earlier than a RPi 4, you will need to install rpi-connect-lite rather than rpi-connect.

You can find a comprehensive step-by-step set of instructions at <https://www.raspberrypi.com/documentation/services/connect.html>

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.



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UBPORTS DEVICES

Written by UBports Team

INTERFACE:

The circular number pad to enter your passcode when unlocking your phone is now integrated into UT.

How to activate it:

- Settings/Security & Privacy/Locking & unlocking/Lock security//Passcode/Circle pattern

I don't know if it has been mentioned before but it is now possible to set different ringtones on your contacts. It is located under 'more fields' when creating or editing a contact. I think it has been mentioned in a Q&A...

It is possible to use more than 4 digits when using Passcode.

Thanks to Rondy for the above item.

You too can get an item into the newsletter, it really doesn't have to be anything long or complicated, just UBports or Ubuntu Touch based. Just send it to socials@ubports.com and we will

do the rest.

OPENING UP THE MOBILE ECOSYSTEM

Panel - Resizing the control of Big Tech through legislation and alternatives

Raoul Krammer took part in a discussion of the mobile ecosystem and how FOSS devices can help open up the current system. You can watch the discussion using this link.

FYI <https://conference.publicspaces.net/session/opening-up-the-mobile-ecosystem>

LOCK MESSAGE APP

Thanks to @pybodensee the Lock Message app is now available for Focal.

<https://forums.ubports.com/topic/10210/launching-lock-message-app>

This is a fork of the old Circle Message app and can be found in

the OpenStore. We are sure many of you will enjoy and find a use for this app. There is a forum thread open for discussion and comments. Please join in.



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THE DAILY WADDLE

A RIDING CROP?
NOOO ... I SAID
TRY BSD!

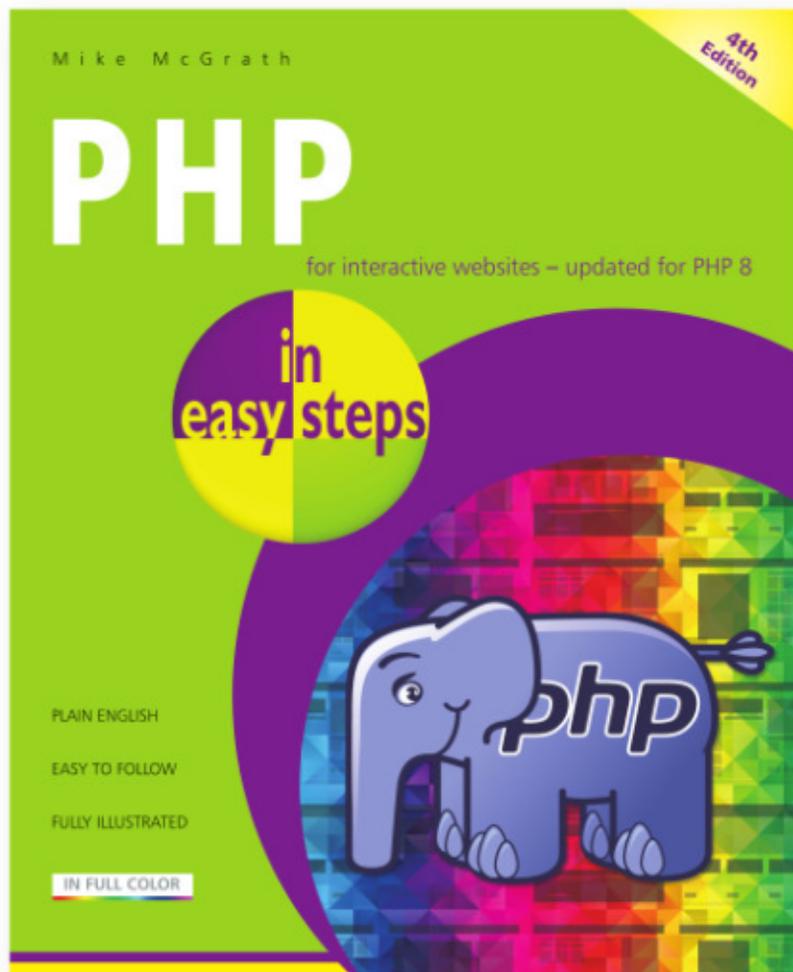




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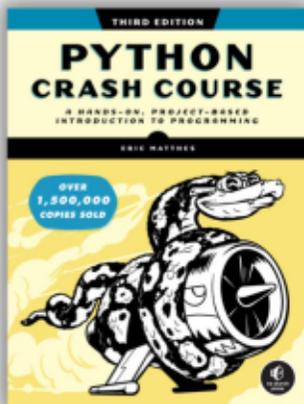
MY OPINION

Written by Erik

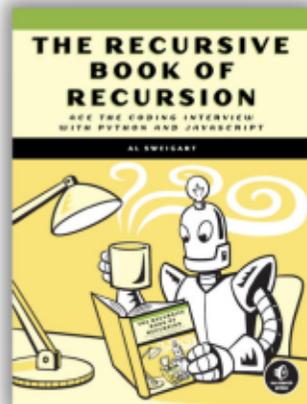
BACK NEXT MONTH
(if I get any submissions for it)



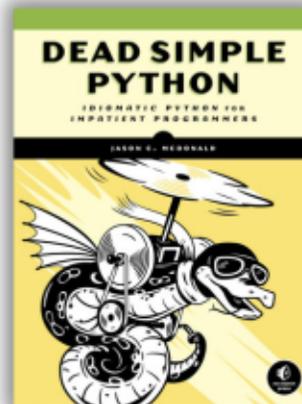
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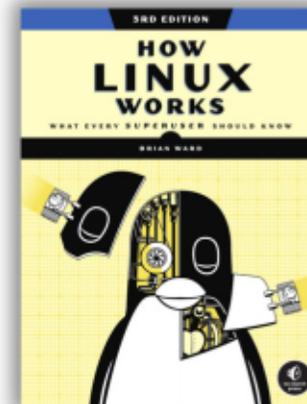
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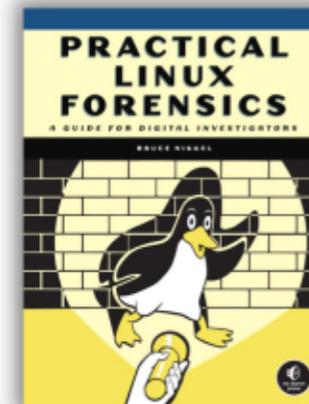
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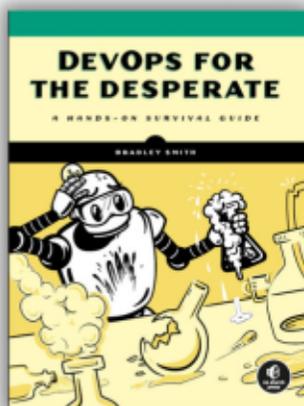
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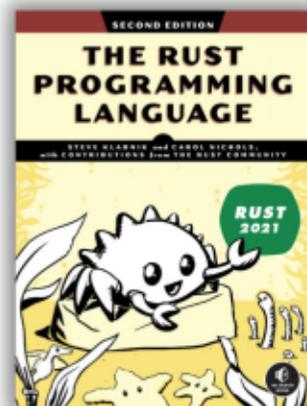
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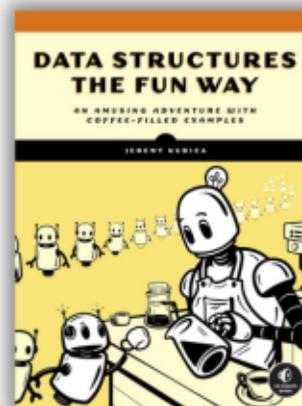
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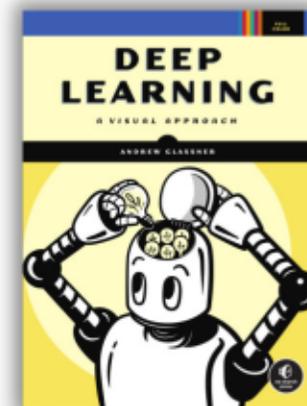
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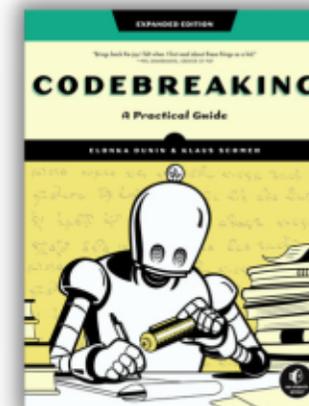
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HOW-TO

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

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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

Lubuntu 24.04 LTS

The latest long term support (LTS) release of Lubuntu arrived, along with all of the other flavors of Ubuntu, on 25 April, 2024. This is a much-anticipated release, as most Lubuntu users stick to the LTS versions for daily use and will upgrade to take advantage of the longer support period.

Lubuntu 24.04 LTS is the end-product of what has been a fairly quiet two-year development cycle and, surprisingly, it brings a list of new things here at the last minute.

This new LTS release is the 29th for Lubuntu overall and the 12th with the Qt toolkit-based LXQt desktop. Because this is an LTS, it comes with three years of support, until April 2027.

INSTALLATION

I downloaded the Lubuntu 24.04 LTS ISO file from the official source and carried out a command line SHA256 sum check on it to make sure the file was uncorrupted.

This download weighed in at 3.1 GB, a slight increase from the last release and a 24% increase in size since the last LTS version, Lubuntu 22.04 LTS, which was 2.5 GB. Even at 3.1 GB, Lubuntu 24.04 LTS is still half the size of the mainstream Ubuntu 24.04 LTS which is 6.1 GB.

As usual, I did not install Lubuntu 24.04 LTS but dropped it onto a USB stick equipped with Ventoy 1.0.97 and booted it up from there. Lubuntu is officially listed as supported by Ventoy and it worked just fine. Ventoy makes trying out Linux distributions fast

and painless.

SYSTEM REQUIREMENTS

Since the release of Lubuntu 18.10 six years ago, the Lubuntu developers no longer publish any minimum system specifications. That said, it should run on any relatively modern 64-bit hardware with at least 4 GB of RAM, although 8 GB would be better.

NEW

The changes start on the first

ISO boot-up where there is a brand new "try or install" screen that is actually nice and clear.

If you decide to go ahead and install Lubuntu, the newest version of the Calamares installer now includes a "customize" menu that gives users the option of a normal or a minimal installation. The new minimal option is of much the same philosophy as found in Xubuntu and Ubuntu. In Lubuntu's case, it is truly minimal, as it omits even snapd, the whole snap packaging system, and even a web browser. For people who like Lubuntu but not the inclusion of snap format packages, this will be a real boon, you just have to figure out how to get a web browser, since within the Ubuntu ecosystem both Firefox and Chromium are now snap packages. Additionally, there is a checkbox option to install any of the Krita painting programs, Thunderbird email client, the Virtual Machine Manager or the Element encrypted messenger.

Also new is an Original Equipment Manufacturer (OEM)



REVIEW

installation option designed for people shipping computers, new or used, to end users. This option allows a complete Ubuntu setup, with the end user able to boot it up and create their own system sign-in and password.

This version brings some welcome utility upgrades to Ubuntu. These finally include a better bluetooth manager, Blueman, which replaces the previously-supplied Bluedevil, which never worked well. Blueman is actually GTK-based but the Ubuntu developers have plans to rewrite the interface with the Qt toolkit to better fit Ubuntu's Qt-based desktop.

Further new utilities include an SDDM Configuration Editor that allows customizing the Ubuntu login screen, a brand new Ubuntu Software Updater, Redshift-Qt for night-day screen adjustments, and the Picom Configuration Utility for desktop effects which allows selecting window transparency, title bar transparency, shadows, and fade-in/fade-out effects.

The Ubuntu 24.04 LTS desktop is now LXQt version 1.4.0 which is based on the Qt 5.15.13 toolkit. Work has begun on Qt 6 basing, but the lack of a stable version of KF6 has further delayed this. Visually, 24.04 LTS still looks similar to the other recent LXQt releases and uses the same default, signature

Lubuntu Arc theme with blue Papyrus icons.

The included Linux kernel is version 6.8 with its improved new hardware support, and systemd 255.4 as the initialization system.

SETTINGS

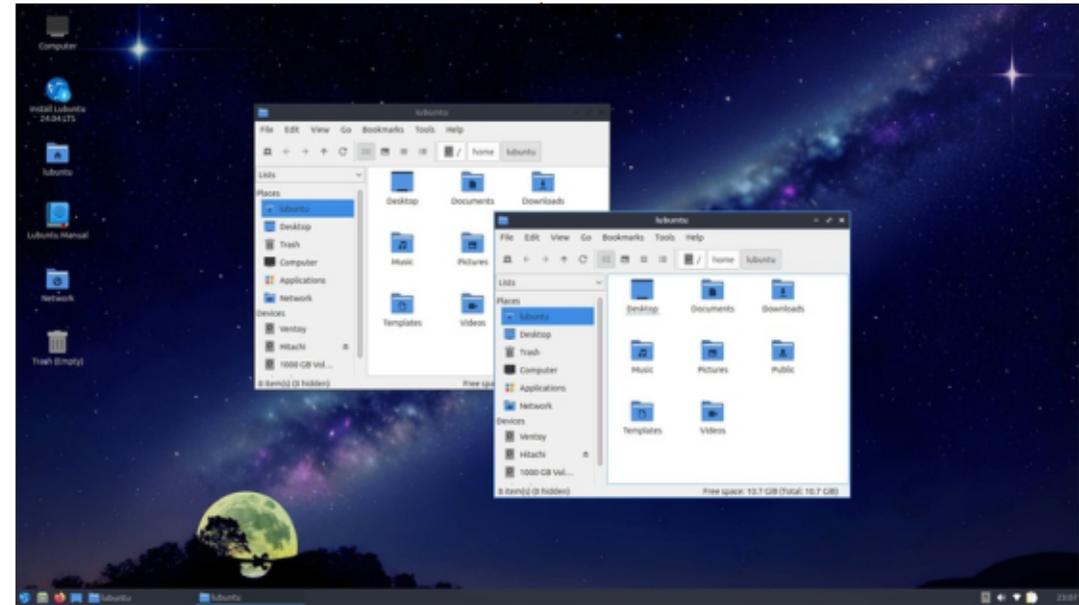
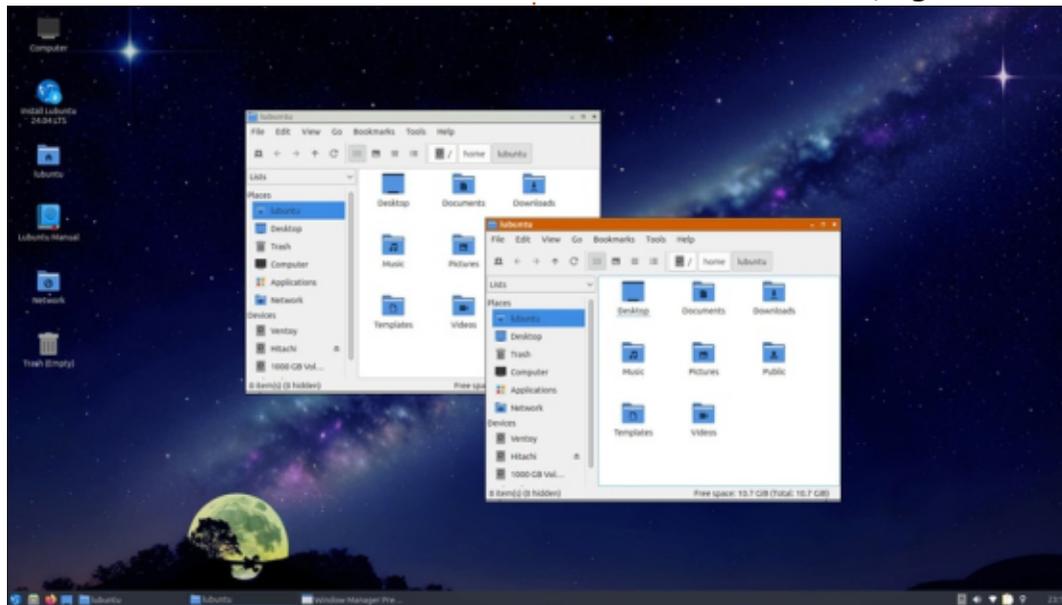
The new Ubuntu 24.04 LTS default wallpaper features a night sky Milky Way and rising full moon scene. Given that this release is codenamed Noble Numbat, after the Australian insectivore marsupial, there is also one very elegant numbat wallpaper. There are 16 additional wallpapers included, many of them from recent

Ubuntu releases.

Other setting choices include 19 window themes, 13 icon themes, 15 LXQt themes, 3 cursor themes, and 10 GTK3 and GTK2 themes – providing users with a really wide range of customization possibilities.

APPLICATIONS

Some of the applications included with Ubuntu 24.04 LTS normal installation are: 2048-qt 0.1.6 simple lightweight game* Blueman 2.3.5 bluetooth connector Discover Software Center 5.27.11 package management system* FeatherPad 1.4.1 text editor



REVIEW

Firefox 125.0.2 web browser**
ImageMagick 6.9.12.98 image editor*
Kcalc 23.08.5 calculator
KDE partition manager 23.08.5 partition manager
LibreOffice 24.2.2 office suite, Qt interface version
Lubuntu Update 1.0.0 software update notifier
LXImage-Qt 1.4.0 image viewer and screenshot tool
LXQt Archiver 0.9.1 archive manager
Noblenote 1.2.0 note taker*
Okular 23.08.5 PDF viewer
PCManFM-Qt 1.4.1 file manager
PipeWire 1.0.5 audio controller
Qlipper 5.1.2 clipboard manager*
QTerminal 1.4.0 terminal emulator
Qtransmission 4.0.5 BitTorrent

client, Qt interface version
Quassel 0.14.0 IRC client*
ScreenGrab 2.7.0 screenshot tool
Skanlite 23.08.5 scanning utility
Startup Disk Creator 0.3.17 (usb-creator-kde) USB boot disk maker*
VLC 3.0.20 media player*
Wget 1.21.4 command line webpage downloader
XScreenSaver 6.08 screensaver and screen locker

* Indicates the same version as used in Lubuntu 23.10
** supplied as a snap, so version depends on the upstream package manager

As far as application changes go, other than Blueman replacing Bluedevil, the Muon package

manager has been dropped entirely, and the PDF viewer has been changed from qPDFview to Okular from the KDE desktop.

CONCLUSIONS

Lubuntu 24.04 LTS is a good, solid release, with just enough improvements to keep Lubuntu users happy without changing too much. It does feel like progress, though.

The next release will be an interim one, Lubuntu 24.10, expected out in October 2024. This will kick off a new development

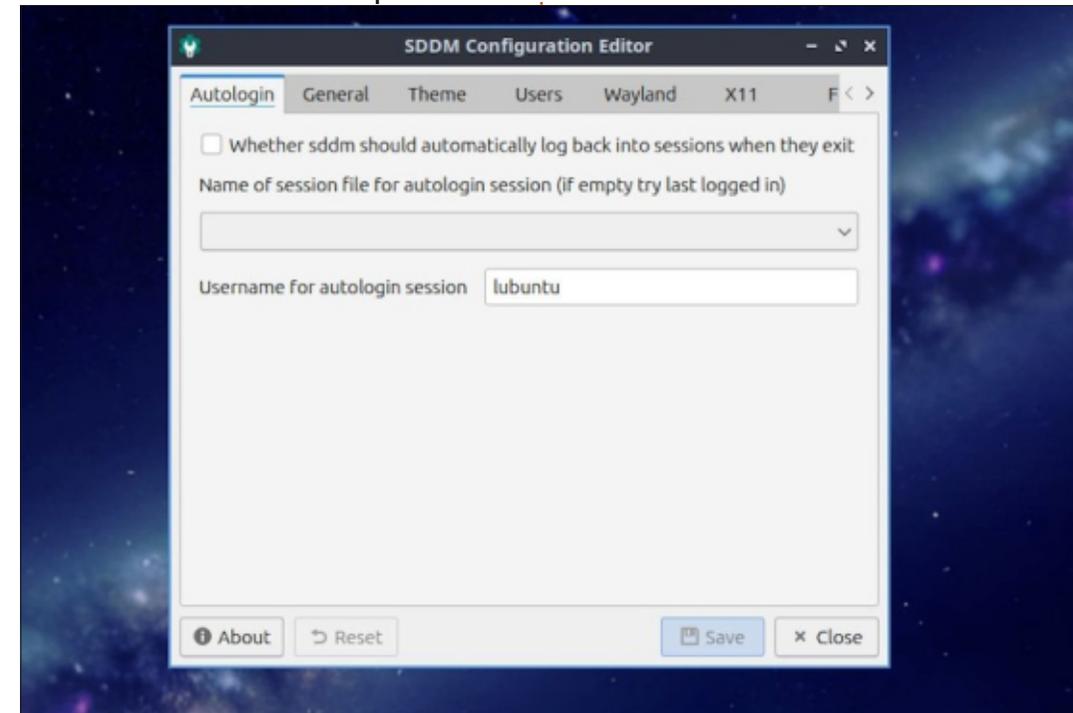
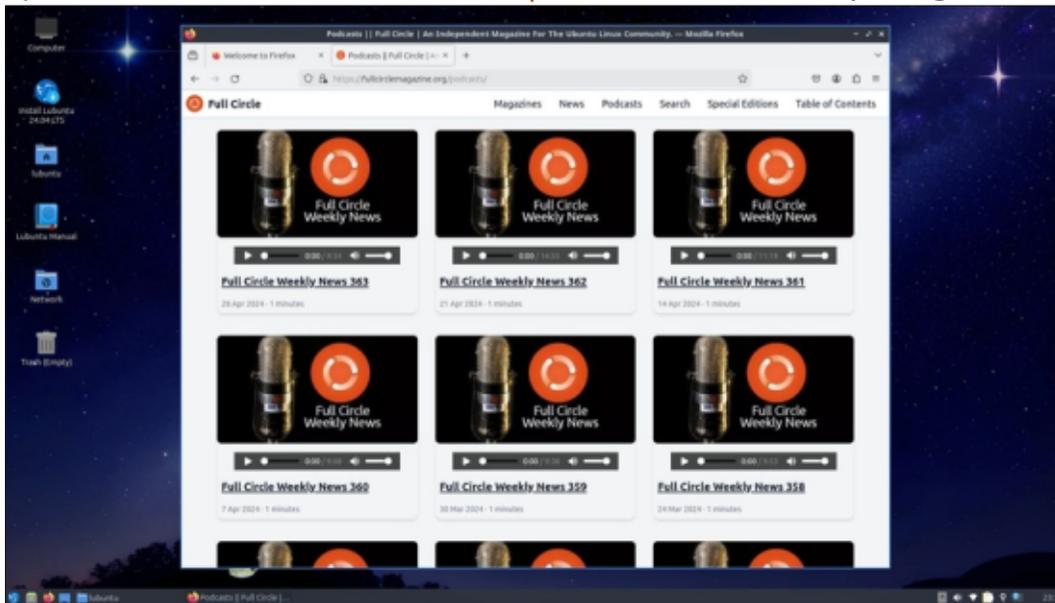
cycle which will lead to the next LTS release, Lubuntu 26.04 LTS, due in April 2026.

EXTERNAL LINKS

Official website:
<https://lubuntu.me/>



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

Xubuntu 24.04 LTS

Xubuntu 24.04 LTS is the latest long-term support release of this Ubuntu flavor that uses the Xfce desktop. Xubuntu has been around since 2006 and this is the 37th release of this popular operating system.

As an LTS release, it has three years of support, until April 2027.

The three interim releases that made up the development cycle since the last LTS each brought only some small changes, and this final LTS version is no different in that regard. There are lots of small changes, but not many that most desktop users will notice.

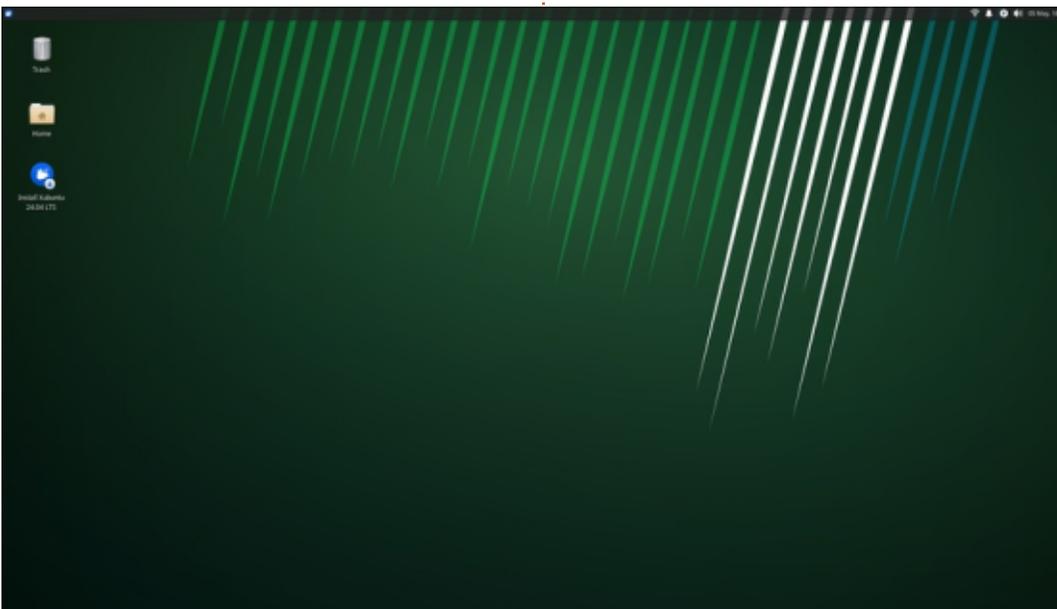
INSTALLATION

I downloaded a copy of the Xubuntu 24.04 LTS ISO file from the official source using BitTorrent and carried out a command line SHA256 sum check to make sure it was uncorrupted.

When downloading Xubuntu, you have a choice of two ISO files, xubuntu-24.04-desktop-amd64.iso

which provides the standard desktop and xubuntu-24.04-minimal-amd64.iso which is the “Xubuntu Minimal” installation leaving out most of the desktop applications. I downloaded the full desktop version. Xubuntu Minimal still includes snapd and snap packages.

I tested out Xubuntu 24.04 LTS in a series of live sessions using Ventoy 1.0.97 on a USB stick. Xubuntu is officially supported by Ventoy and it boots up and runs without any issues.



After booting up Xubuntu 24.04 LTS, I did discover one brand new annoyance in this release: the developers have disabled access to all drives, including USB devices. This makes it useless as a rescue disk and also complicates making screenshots for reviews. I normally take screenshots and then transfer them to a USB drive to get them off the live session. With no USB devices allowed, my workaround was to use Firefox to upload them to a cloud file service as a .zip file. Note to developers: if you want reviews of your releases, then please don't make it hard to do

screenshots. Is there any reason to disable access to all drives in live sessions? I can't think of any and the official release notes did not mention this new “feature”.

SYSTEM REQUIREMENTS

The recommended system requirements for Xubuntu 24.04 LTS have not changed since 21.04 and remain:

- 1.5 GHz dual-core processor
- 2 GB RAM
- 20 GB of hard-drive space

Just Firefox by itself will use two GB of RAM with just a few tabs open, so 8 GB of RAM is probably a more realistic minimum for decent performance these days. More RAM is always a good idea.

NEW

Like Xubuntu 23.10, 24.04 LTS uses the GTK-based Xfce 4.18 desktop, with some of its components now taken from GNOME 4.6 and MATE 1.26.

REVIEW

The included Linux kernel is version 6.8 and the initialization system is systemd 255.4.

Among some of the small improvements, the Xfce Power Manager and Screensaver have been updated to eliminate some identified screensaver issues. Many Xfce libraries, including garcon, libxfce4ui, tumbler and xfconf, have had bug fixes to correct race conditions and memory leaks, which should add up to a Xubuntu desktop that is more responsive and also has improved stability.

Xubuntu now has a new installer, the Flutter-based Ubuntu Installer, which replaces the older Ubiquity installer.

It is worth noting that Xubuntu does not yet have an OEM installation capability although it is under development and expected to be added to the ISO as a feature of point release 24.04.1. OEM installers allow setting up the operating system for shipping a new or used computer to an end user who can then create their own user sign-in and password.

Package management has changed in this Xubuntu release with a combination of the new Ubuntu App Center to handle snap packages plus Gdebi for installing random .deb files, replacing the previous Gnome Software package manager. Synaptic is still included

to install repository .deb files. This does seem like a complex plan for new users. More experienced users may just opt to take the easy way out and do all their package management from the command line, using a combination of APT and snap commands.

This release also adds the Ubuntu Firmware Updater as a separate utility, like Ubuntu does.

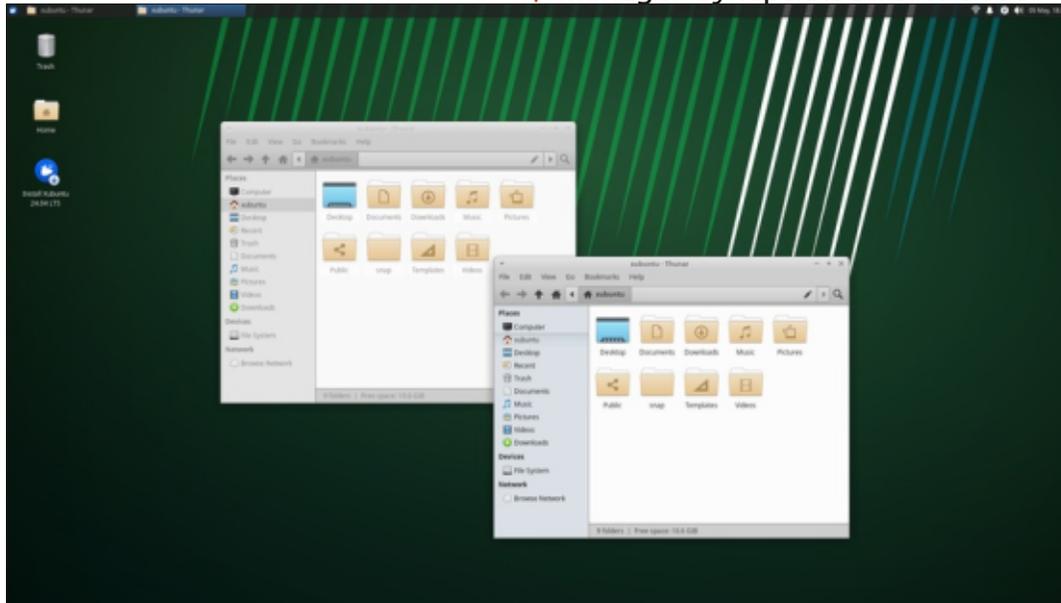
SETTINGS

As with all Xubuntu versions for a long time, this release uses Greybird as its default window color scheme, although it has been bumped up to version 3.23.3. It

does look better in recent years.

The settings now have more complete support for dark themes and will synchronize dark theme settings in those applications that support dark themes.

There are still six window themes provided in the "Appearance" manager: Adwaita, Adwaita-dark, Greybird, Greybird-dark, High Contrast, and Numix. The separate Window Manager also has 11 window themes: Daloa, Default-hdpi, Default-xhdpi, Greybird, Greybird-accessibility, Greybird-compact, Greybird-dark, Greybird-dark-accessibility, Kokodi, Moheli, and Numix. Some of the themes with the same names in two



REVIEW

different places are the same themes, while others are quite different, so if you want something other than the default Greybird, you might want to try both places for alternatives.

There are now 11 icon themes, three more than the previous release, with Elementary Xfce Darker still the default.

The default Xubuntu 23.10 wallpaper is a new design by Pasi Lallinaho, who has done all the release wallpapers since Xubuntu 9.04. It is very modernist, abstract design, and unusual for Xubuntu in that it is green and has teeth! If you don't like that one, there are also 12 other wallpapers provided, plus

all the old release wallpapers are now available in repository packages for installation as well, in case there is an old favorite you miss. Even though this release is code named "Noble Numbat", Xubuntu skipped that enticement and there are no numbat-themed wallpapers.

Just like all the past Xubuntu releases made in the last ten years since 14.04 LTS, this one employs the Whisker Menu as its menu system. Until now, Whisker was the main feature that made Xubuntu distinctive from the other Ubuntu flavors but, for some unexplained reason, in this release the Whisker Menu can no longer be resized. With this ability now gone, Whisker

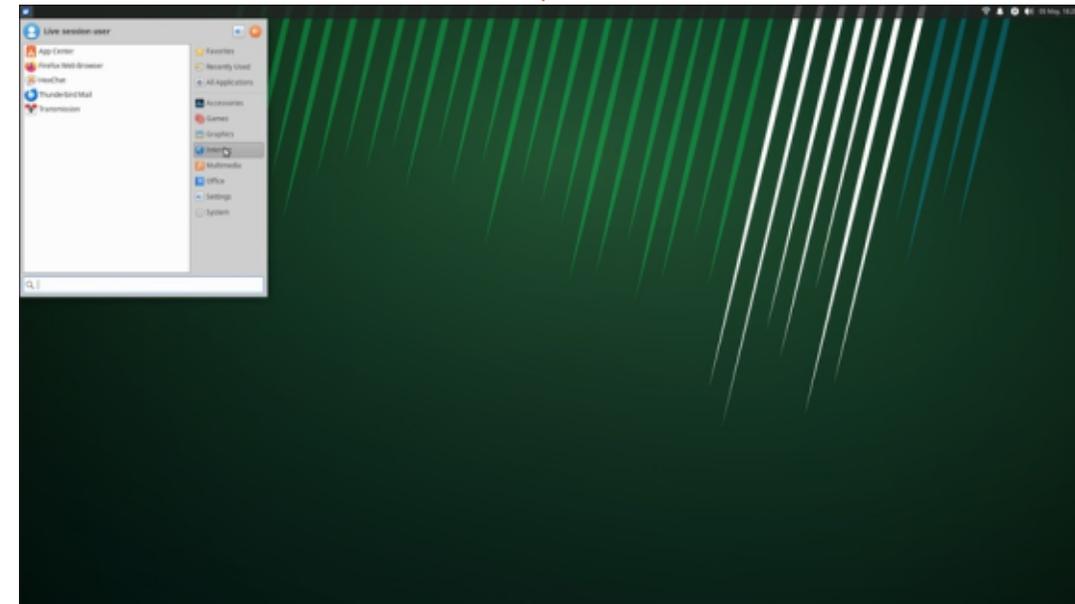
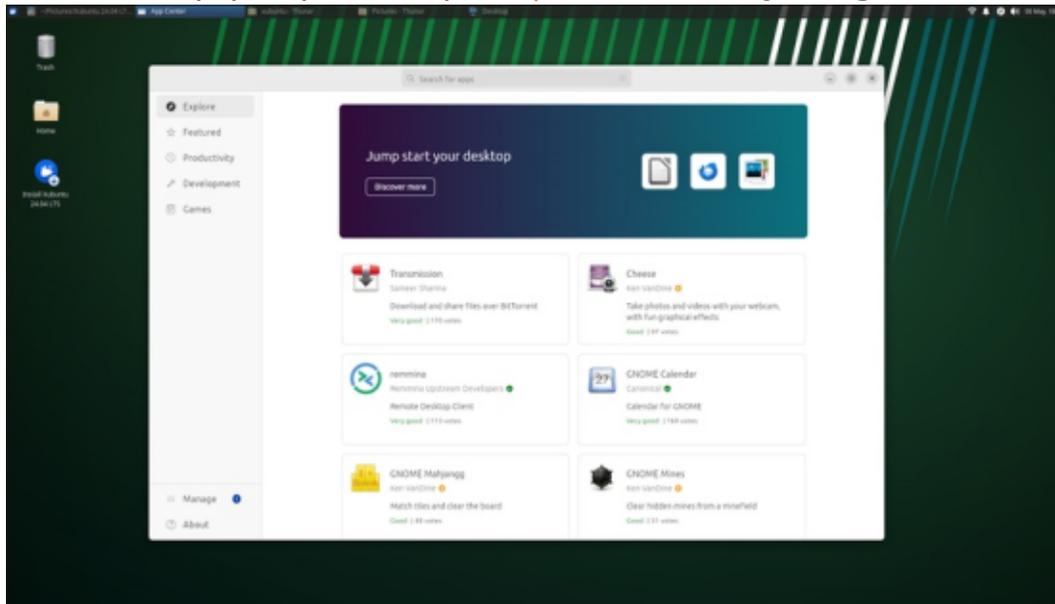
is now just like any other Linux menu.

APPLICATIONS

Some of the applications included with Xubuntu 24.04 LTS are:

- Atril 1.26.2 PDF viewer
- Blueman 2.3.5 bluetooth connector
- CUPS 2.4.7 printing system
- Catfish 4.16.4 desktop search*
- Document Scanner 46.0 (simple-scan) scanning utility
- Engrampa 1.26.2 file archiver
- Firefox 125.0.2 web browser**
- Firmware Updater 0+git.5007558 firmware updater**
- Gdebi 0.9.5.7 application installer
- GIMP 2.10.36 graphics editor

- GNOME Disk Utility 46.0 disk space and health monitor
- GNOME Disk Usage Analyzer 46.0 (baobab) disk display
- Gparted 1.5.0 partition editor
- Hexchat 2.16.2 IRC client
- LibreOffice 24.2.2 office suite
- MATE Calculator 1.26.0 calculator*
- Mousepad 0.6.1 text editor*
- Parole 4.18.1 media player
- Pipewire 1.0.4 audio controller
- Ristretto 0.13.1 image viewer*
- Rhythmbox 3.4.7 music player*
- Software Updater 24.04.6 (update-manager) software update manager
- Synaptic 0.91.3 package management system*
- Thunar 4.18.8 file manager
- Thunderbird 115.10.1 email client**
- Transmission 4.0.5 BitTorrent client



REVIEW

Ubuntu App Center 1.0.0 package management system**
Wget 1.21.4 command line webpage downloader
Xfburn 0.7.0 CD/DVD burner*
Xfce4 Panel 4.18.4 desktop panel*
Xfce4 Power Manager 4.18.3 system power manager
Xfce4 Screenshotter 1.10.5 screenshot tool
Xfce4 Terminal 1.1.3 terminal emulator

* indicates same application version as used in Xubuntu 23.10
** supplied as a snap, so version depends on the upstream package manager

Xubuntu continues to supply a very complete suite of default applications, with almost everything a desktop user might want, including the GIMP image editor. If you find that you end up removing many of them to reduce clutter, and then adding other applications instead, then perhaps using Xubuntu Minimal as a starting point would make for less work.

Many of the included applications are new versions with minor updates.

Mozilla's Thunderbird remains

the default email client, but has been switched from a .deb to a snap package, which will aid Mozilla keeping it up-to-date.

Xubuntu 24.04 LTS includes LibreOffice 24.2.2, which, as usual right across the Ubuntu world, is lacking only LibreOffice Base, the database application which is probably the least-used LibreOffice component.

Xfburn is still included in Xubuntu, making it one of the few Ubuntu flavors to still have a default CD/DVD burning application. Most other flavors dropped these a while back, as it has been many years since new computers have been delivered

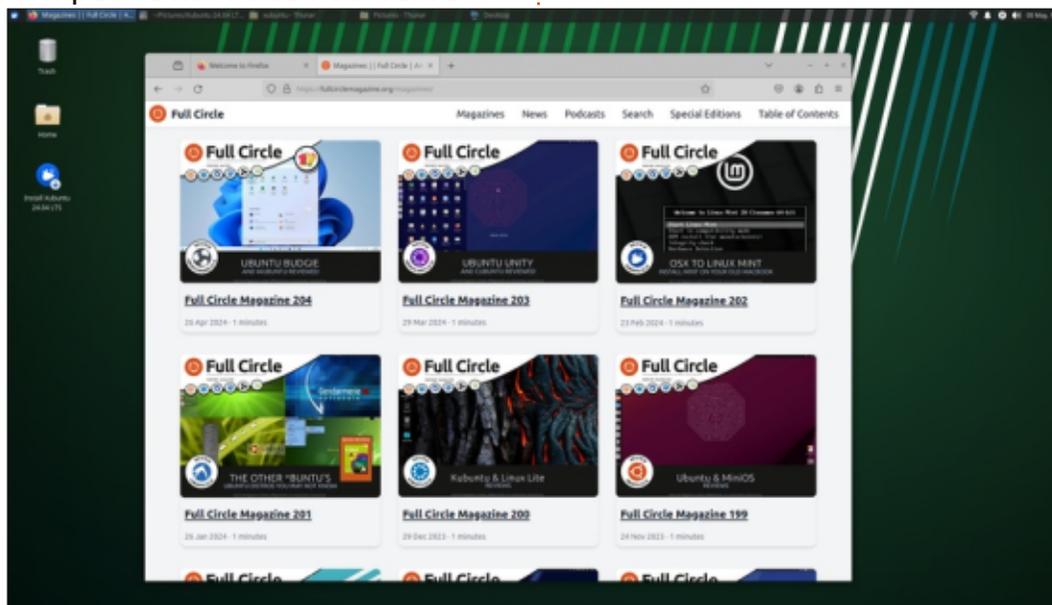
with CD/DVD drives. It will be interesting to see at which point Xubuntu decides to follow suit and leave it out of its default installation.

CONCLUSIONS

Xubuntu 24.04 LTS will probably keep most fans happy for the next few years. It will be interesting to see how many will miss the Whisker Menu resizing feature, though.

EXTERNAL LINKS

Official website:
<https://xubuntu.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 Ronnie Tucker

ASUS TUF GAMING laptop

Argos UK: £759 (also available elsewhere)

Argos package includes laptop, mouse, rucksack and 3 months Xbox Game Pass

My Entroware all-in-one desktop PC was beginning to show its age and I was getting more and more limited as to what I could install on it from Steam (as it has no GPU). Time for a change. Now, I'm not a fan of laptops and their

keyboards, but they're space savers, and that's what I need. Space. Oh, and a GPU. Having looked through many gaming laptops, I decided upon the ASUS TUF GAMING laptop. I bought mine from Argos who had a deal on it where you get the laptop, a mouse, and a rucksack for £759. There's also a 3 month Xbox Game Pass with it, but I'm not interested in that. Also not interested in Windows 11.



ASUS TUF GAMING Laptop

SPECS:

CPU, Memory and Operating System:

Intel Core i5 - 11400H processor. Hex core processor.

2.7GHz processor speed with a burst speed of 4.5GHz.

16GB RAM DDR4.

1TB SSD storage.

Operating System: Windows 11 Home (Pre-Installed).

Display features:

15.6 inch screen.

Full HD Display.

Resolution 1920 x 1080 pixels.

Graphics:

NVIDIA RTX 30 Series GeForce RTX 3050 graphics card with 4GB RAM GDDR6.

Shared graphics card.

Dedicated graphics card.

Interfaces and connectivity:

4 USB 3.2 ports.

1 USB Type-C port.

Ethernet port Ethernet port//

Ethernet ports.



REVIEW

Headphones jack.
Bluetooth.
Wi-Fi enabled.
Multimedia features:
HD webcam.
Built-in mic.
Backlit keyboard.
Built-in audio sound system.
30 day trial.
Microsoft 365 Personal.
Model number: FX506HCB-
HN216W

FIRST BOOT

I do love it when I get a new PC and Windows doesn't even get one boot. I used F2 then F8 to boot Linux Mint from a USB stick. Everything was detected and

working out of the (USB) box. Time to install!

Normally I would make a partition for the OS and one for /home, but since I've been using a 1TB external USB drive for my files, I just did a vanilla install of Mint.

THE REAL FIRST BOOT

With the install finished, I booted up the laptop and up came Mint.

The screenshot shows the system with nothing running. Boot time is about 15 secs (at most) from power on to login. From login to desktop is about 2 secs.

TESTING TESTING

Let's see... I need something to test this with.

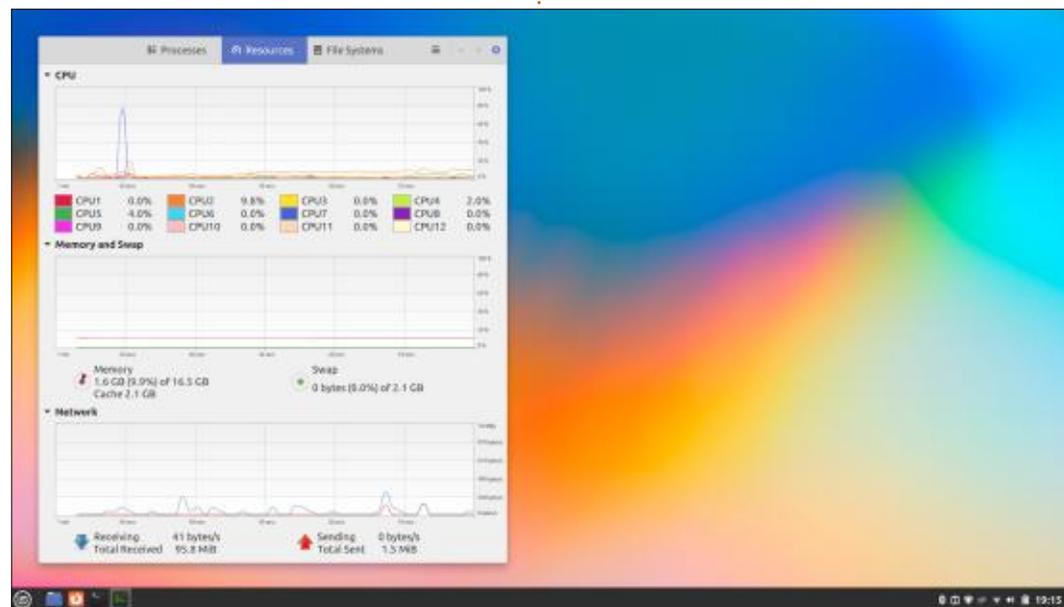
Ah, my beloved Euro Truck Simulator 2. Weighs in at about 20GB, but it's as smooth as silk on the ASUS TUF. It probably plays better here than it did on my old desktop from years ago that did have a GPU.

Even world creation in Dwarf Fortress is fast. And that's saying something.

I'm very impressed with the ASUS TUF. It's got a good spec and at a good price. Especially since it came with a mouse and rucksack. The build quality is good, and everything works perfectly in Linux Mint. All the key combos for function (FN) and brightness, sound, and keyboard glow all work fine.

The only reason I'm dropping it from a 5 to a 4 is because you get only about 4.5hrs at most. For me that's not a problem, as it charges pretty quickly, but I think it would be for some.

CONCLUSIONS





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-  ubuntuforums.org/forumdisplay.php?f=270

SNAP EVIL

I noticed two things that I thought probably needed clarification.

First, in Q&A (FCM#206, p.61), EriktheUnready suggests using /forcefsck. Unfortunately, apparently due to systemd, that is no longer supported in Ubuntu. Although /forcefsck is deleted on reboot, it doesn't perform a check. More information including workarounds here: <https://ubuntuforums.org/showthread.php?t=2476474>

Second, in "My Opinion" (FCM#206, p.44), Erik says, "It's no secret that people do not like Snap packages." My immediate reaction was, "Which people?" I would suggest a rewording: "It's no secret that a voluble small minority of people don't like snap packages."

In general, snap packages work just fine, especially for Ubuntu's target market, which is "normal" (i.e. non-technical) people, businesses, and other

organisations.

Do snap packages have some problems? Yes, one or two — just as do apt, flaptak, appimage, etc. Did Canonical release snap before it was ready? Yes, that was a stupid move on Canonical's part, but those initial teething problems (including the equally stupidly long first-time start-up after a reboot) have been fixed.

I'm so weary of seeing the knee-jerk "snap evil" polluting the forums. It's just software, not the Devil's own spawn. At least it makes a change from the knee-jerk "Microsoft evil". Nothing stops you from using flatpak if you want; that's what I do, a mixture of apt, snap, and flatpak according to needs.

Paddy Landau

Ronnie says: *Thanks for your input. I admit that I'm one of the people who hate snap files. I just don't see the need for them. It's almost like Canonical is creating a problem for no real reason. An*

example I'd use is the one which made me dump Ubuntu: I installed GIMP. As a 'normal' user, I'm probably clueless as to what DEB and SNAP files are. So just click INSTALL and I've got GIMP installed. Now I want to install the Gmic plugin. I need to put the file into the .gimp folder in my /home directory. I can't. There's no .gimp folder. GIMP is a snap. So how do I install my plugin? The 'normal' user is now wondering what on earth is going on and (quite rightly) gets disgruntled and now probably hates Linux and/or Ubuntu.

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.

I appreciate the work you have accomplished over the years. Thank you.

Suggestions that I would find useful, if you have time to cover them:

- Reviews of software for specific tasks, eg: note-taking (Joplin), screenshots, Linux to Android apps.
- Reviews of hardware, eg: curved monitors, how to repurpose obsolete equipment using Linux (iPads, Apple music players, computers, etc.)

Step-by-step tutorials:

- Setting up a simple home network to exchange files between machines.
- How to set up a Pi-hole and maintain it.
- Update home routers.
- How to use SSH (eg: Putty)
- Tutorials for Darktable.
- How to choose a refurbished computer to save money and the environment.
- What is the OS software stack, and why should I care?
- How to set up simple cloud

backups using Linux.

Todd Winters

Ronnie says: *Thank you for the kind words, Todd. So, dear readers, can you help with writing a tutorial or two on any of the above subjects? If you can, please email it to me at: ronnie@fullcirclemagazine.org*



Q&A

Compiled by EriktheUnready

If you have a Linux question, email it to: 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.

When I was at school, we had a History teacher enter the class with his fly open. He was wearing red underpants under his Khaki shorts. It did not take long for someone to notice and giggle. Giggles breed more giggles in teenagers, and he eventually stood in the centre of class, where everyone could see him and proclaim: there is an ugly thing poking its head out in this class! Obviously the result was disastrous. Kids were laughing so hard, some fell out of their desks to roll on the

floor. Efforts to stem the tide of laughter was met with more laughter as he said it a second and third time, as if by now there wasn't a kid who had not noticed. The end result was that all the kids got punished severely. Who would you say was at fault here? I notice that a lot of people on Github and random forums are quick to go "hey developer...." Others will compare open source software with proprietary crap, where you have NO say in anything and rag on the open source equivalent. The answer is simple, if you give the money you were giving Adobe monthly to GIMP or Blender, and I am damn sure it will rise to meet the other paid product... And you have a say or direct line to the developer(s). But you don't... So how can you complain? Again, who is at fault here?

Q: I am installing Ubuntu 22.04 on a Dell 5593 i7 with 16GB RAM and I am using my trusty Ventoy stick. I have done it before many times, but I just have the worst time with Ubuntu. I have now

tried Ubuntu 24.04 and it still sucks. Once the installation finishes and it reboots, I get a minimal shell. The kicker is, when I put the Ventoy stick back in, it boots normally. I have no idea what that is all about. My Ventoy install is up to date, btw. Can you tell me what I'm doing wrong? Ubuntu download is verified.

A: I hope it is not your laptop, for what I'm about to say. It is a craptop! I know that model well. The worst part about it is its BIOS/UEFI – it has no option to unset cached boot, like the more premium models. You have to enter the BIOS again and select "ubuntu" as the BIOS boot option, if that fails, select the SSD as the first boot option. It should be peachy afterwards (until you boot from anywhere else).

Q: I have a laptop I purchased second-hand. It came with Windows and I'm not interested in Windows. I tried to load Ubuntu 24.04, and the new installer stops, telling me the windows drive is

bitlocker protected and I need to unlock it first. It then displays a QR code and refuses to format the machine. It is a machine from Cashies, so no idea what the admin password is. Why can't Ubuntu just trash Windows? Why is there no erase drive and continue?

A: I did not know about that, but I found this: <https://help.ubuntu.com/wip/bitlocker/>

Honestly, just download Debian, do an install that wipes the drive, then install Ubuntu over that. I'll tell you why: I went through the slog of installing windoze, encrypting it and trying Ubuntu for you. As you said, I also did not see a continue option, so I used a Spiral Linux ISO I had lying around to do the formatting via the installer (5 minutes) and then it installed Ubuntu 22.04 Vanilla just fine.

Q: I did an update via the update manager and restarted, to find my Ubuntu Gnome laptop colors inverted. Firefox icon was blue and Thunderbird Icon was orange. The

Q&A

internet suggested that I remove my color profile, but it did not work. <removed> <removed> <removed>

A: Inverted colours usually signal faulty hardware to me, boot with a bootable Ubuntu first, to confirm. Start with Tweaks, disable all gnome extensions, reboot, and see if it fixes. If it does, turn each one on until you find the culprit. Alternatively, look for an updated Nvidia driver. (If it was recently updated, downgrade it.) Another thing you could try is to log in with a Wayland if in X11, or X11 if in Wayland, as this is still murky ground. Also check that the cables are in, properly.

Q: My display is totally messed up. I think I went and chose the wrong options; is there a way to go back to defaults? Instead of booting properly, the system comes to rest at a terminal prompt. I don't have any proprietary drivers installed, and my Ubuntu install is only about a month old.

A: I am not 100% on what you mean by "back to default"; however you can re-setup everything again with: `sudo dpkg --reconfigure -a`. (that is two dashes,

no space).

Q: Hi there, I am running Ubuntu, but not with KDE or Gnome or XFCE. Is there a way for me to check the filesystem of my mounted drives straight from the terminal? I Googled it, but everything points to `fsck` instead of info on the partition.

A: There are probably many ways, but the way I used to do it was:

```
lsblk -f
```

Q: Can Ubuntu have a corrupt profile like Windows does? I am asking, because when I log in, the screen goes black and then drops me back to the login screen.

A: Yes it can, however, it is more likely that you need to force a `fsck` on your drive or log into another TTY and run `a: sudo apt update && sudo apt upgrade -y` or even choose X11 or Wayland session.

Q: I have Kubuntu running on a low end i3 with 2GB RAM, as like a media laptop, playing series

on our TV. It is Kubuntu 24.04, and works reasonably, but not great, as it has a hard drive – not a SSD. Booting takes ages and sign-in takes ages, so we don't want to restart it. We have it on auto login, but it does what it wants. I need it to be on X11 before I start a video or it is sometimes pink. Without me having to log out, can I see if it is in X11?

A: You can open a terminal and look at the `xdg_session` variable:

```
echo $XDG_SESSION_TYPE
```

Q: I am running Ubuntu 24.04, and I am having issues with the latest version of Virtualbox 7.12 on it. I previously ran Ubuntu 22.04 and virtualbox 7, maybe 01.

I keep Ubuntu as a VM with my other VMs, but lately I just can't set up some. Things that worked previously now just won't install, or give errors saying "unsupported Hypervisor". Should I switch to Vmware rather, now that it is free, or will I have the same issues?

A: Oof, this is vague. Honestly, I can't say. However, things are

changing in the VM space in response to distro / technology changes. If it is older distros you are trying, I suggest changing VMSVGA to VboxVGA and try again. No one is stopping you from trying Vmware either.

Q: Is it possible to get IntelliJ CE without having to install flatpak on my system? I just don't want any snap or flatpak eating up my 128GB SSD. If so, how can I get it please, step-by-step?

A: HI, there is a way, the `xtradedb` repository. Though I have not tested it myself, You should not have issues. (<https://launchpad.net/~xtradedb/+archive/ubuntu/apps/+index?batch=75&memo=75&start=75>)

```
sudo add-apt-repository  
ppa:xtradedb/apps -y
```

```
sudo apt update
```

```
sudo apt install intelliij-  
idea-community
```

Q: My laptop is old and it has a ATI radeon card with 256MB memory in it. I want to install the old ATI drivers to accelerate it so I can play games using the ATI card

Q&A

instead of the crappy intel cpu graphics card. I have tried so many things, but it never works out or ruins the install. Can you help me?

A: My suggestion is to use the open source MESA drivers. I'll tell you why. The libraries and other bits 'n pieces that those old drivers depend on, are no longer supported by modern Ubuntu systems. Secondly, as far as I know, the MESA driver outperforms the old proprietary drivers. I'm not aware of any communities that have formed around those old cards either, but I may be wrong.

Q: I am installing Ubuntu on my PC through bootable pen drive; it shows partitioning failed. I am too new to know what to do now. Could you please tell me how to proceed? Thanks a lot in advance

A: You will need to verify a few things first. You need to verify the downloaded ISO. (<https://ubuntu.com/tutorials/how-to-verify-ubuntu#1-overview>). You will also need to verify your pen drive, I suggest just using another. Once written, with Rufus or Balena Etcher, you need to tick the "verify" there too. The last thing you need

to verify is the drive you are installing on to. It may have a bad sector or something similar. Next time, give us the specs of your machine and if you are using UEFI boot.

Q: I know one can try different desktops so thought I would try KDE. Which I tried but it did not work out as planned. I'm not able to go back to gnome. I just got the console based login. I've tried installing gnome and KDE again, but all I get is the console.

A: What happens when you type:

```
startx -??
```

Though this is possible, I usually do not recommend newbies do it. Remember it also now installs all the Gnome and KDE files that run in the background. If it was Windows, you would say it was "bloated". This is the thinking behind containerised applications like Snap and Flatpak, where it contains all those other files without "contaminating" your installed operating system. Quickest way to get sorted is reinstall Ubuntu from scratch.



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.



Price: £15

Steam: https://store.steampowered.com/app/1416960/Everafter_Falls/

Stop me if you've heard this one before: you've inherited a plot of rundown farm land within a village, and you need to craft and farm the land. Oh and meet the villagers, run tasks, and buy stuff from the shops.

Stardew what? No, no. This is

Everafter Falls.

STARDEW CROSSING

You awake from a coma, or something, and have to reacquaint yourself with your village neighbours. Unlike Stardew Valley, the villagers are animals. Wait, that reminds me of another game. Ani... I don't know. I can't remember.

You have your little house, and your plot of land which is full of weeds, trees and rocks. You use your sword to swoosh the weeds away, and your hatchet and pickaxe

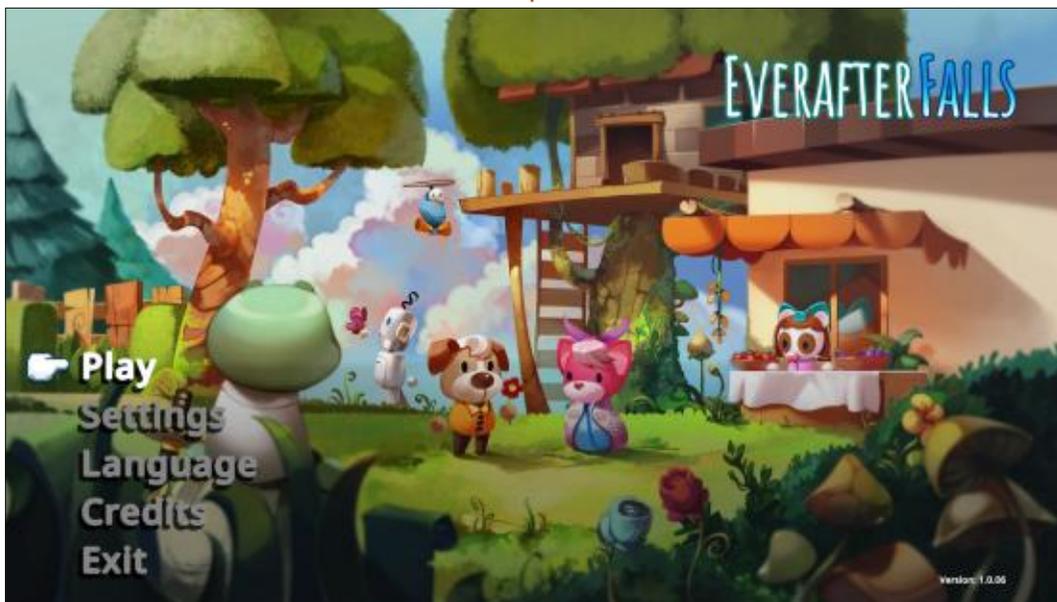
to remove the trees, stumps and rocks. Yes, you even enter mines to fight nasties and get more goodies.

Once you've gathered some resources, you can start to craft items for your little farm. Of course, the villagers send you on quests which inevitably involve you running from one end of the village to the other. Then you have the museum and aquarium to stock.

There are only so many hours in a day though, so, after a certain time, you need to retreat to bed. This is your save point.

ANIMAL VALLEY

It's not all a carbon copy though. The graphics are not pixelated, which is nice, and you're quickly given a pet which can do some of your farming work. Later, I read, you can get a drone to also do your bidding. Upgrades to your inventory is done through your character eating cards that they're given. No, I don't know why your character is eating cards. The game doesn't seem to know either. Apparently some of them taste really bad.



CONCLUSIONS

Let's go through some ups and downs (as of this writing, June 2024, where a patch is due any day now):

Ups:

- Cheap. £15 is a nice price for a game with a big map and plenty of characters.
- Has Linux support (as it's made in Unity).
- It is quite addictive. Waking up after a save I quite often did another day. Then another day. Then another...
- The addition of the pet and drone is a nice upgrade. Not sure if

they're really needed though. We'll see...

- The dev is very active and releasing patches quite often with patch notes to view.

Downs:

- No tutorial to speak of (coming soon I read somewhere). This was a big downer. No idea why it's missing from the initial release. You really need a tutorial to show you what keys to press and how you craft and where your inventory is. You find things out only after you inevitably start chatting to villagers.
- Fishing is/was weird. From the upcoming patch it can now be disabled. Again, having no tutorial meant you had no clue what to do when presented with the fishing

screen.

In short: it's a nice little game at a good price point. I prefer that it has animals to humans. Think of it as the illegitimate love-child from when Animal Crossing and Stardew Valley had some 'Netflix and chill' time.



Ronnie is the founder of Full Circle and, somehow, still editing this thing. He also paints, draws and does woodcarving in his spare time.





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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.

A big thank you to all those who've used Patreon and the PayPal button. It's a HUGE help.





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FCM#208

Deadline:

Sunday 11th Aug. 2024

Release:

Friday 30th Aug. 2024.



Full Circle Team



Editor - Ronnie Tucker

ronnie@fullcirclemagazine.org

Webmaster -

admin@fullcirclemagazine.org

Editing & Proofreading

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

Our thanks go to Canonical, the many translation teams around the world and **Thorsten Wilms** for the FCM logo.

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