

Arch Linux Planet - Latest News

- [Rust edition 2024 annotated](#) (2025/02/23 00:00)
Last Thursday Rust 1.85 was released, and with it, edition 2024 has dropped. The new edition is significantly larger than the two editions that preceded it, and contains many small but significant quality of life improvements to the language. In this post, I'd like to explain what an edition is, and summarize all the changes that were made to the language I love. If you need the details, I recommend reading the edition guide, but for a general overview, read on.
- [Cleaning up old repositories](#) (2025/02/17 00:00)
Around two years ago, we've merged the [community] repository into [extra] as part of the git migration. In order to not break user setups, we kept these repositories around in an unused and empty state. We're going to clean up these old repositories on 2025-03-01. On systems where /etc/pacman.conf still references the old [community] repository, pacman -Sy will return an error on trying to sync repository metadata. The following deprecated repositories will be removed: [community], [community-testing], [testing], [testing-debug], [staging], [staging-debug]. Please make sure to remove all use of the aforementioned repositories from your /etc/pacman.conf (for which a .pacnew was shipped with pacman>=6.0.2-7)!
- [Infrastructure as Advent of Code](#) (2025/02/04 00:00)
In the cold of December we have but one thing to keep us warm: our laptops, trying to solve Advent of Code puzzles with inefficient algorithms. This year, 2024, is the tenth edition, and the puzzles are filled with more Easter eggs than ever before. Unfortunately, I'm not interested in Easter eggs, or solving the puzzles. I am a DevOps engineer, and I'm going to apply Infrastructure as Code principles to Advent of Code.
- [Glibc 2.41 corrupting Discord installation](#) (2025/02/03 00:00)
We plan to move glibc and its friends to stable later today, Feb 3. After installing the update, the Discord client will show a red warning that the installation is corrupt. This issue has been fixed in the Discord canary build. If you rely on audio connectivity, please use the canary build, login via browser or the flatpak version until the fix hits the stable Discord release. There have been no reports that (written) chat connectivity is affected.
- [Critical rsync security release 3.4.0](#) (2025/01/16 00:00)
We'd like to raise awareness about the rsync security release version 3.4.0-1 as described in our advisory ASA-202501-1. An attacker only requires anonymous read access to a vulnerable rsync server, such as a public mirror, to execute arbitrary code on the machine the server is running on. Additionally, attackers can take control of an affected server and read/write arbitrary files of any connected client. Sensitive data can be extracted, such as OpenPGP and SSH keys, and malicious code can be executed by overwriting files such as ~/.bashrc or ~/.popt. We highly advise anyone who runs an rsync daemon or client prior to version 3.4.0-1 to upgrade and reboot their systems immediately. As Arch Linux mirrors are mostly synchronized using rsync, we highly advise any mirror administrator to act immediately, even though the hosted package files themselves are cryptographically signed. All infrastructure servers and mirrors maintained by Arch Linux have already been updated.
- [2024 wrapped](#) (2024/12/31 00:00)

Dear blog. This post is inspired by an old friend of mine who has been writing these for the past few years. I meant to do this for a while now, but ended up not preparing anything, so this post is me writing it from memory. There's likely stuff I forgot, me being gentle with myself I'll probably just permit myself to complete this list the next couple of days. I hate bragging, I try to not depend on external validation as much as possible, and being the anti-capitalist that I am, I try to be content with knowing I'm ...

- [Goodbye, Sam](#) (2024/12/24 00:00)

A eulogy for the greatest dog of all, and a friend I will never forget.

- [How I set up this blog](#) (2024/12/23 00:00)

Like my blog? Here is how I set it up.

- [Providing a license for package sources](#) (2024/11/19 00:00)

Arch Linux hasn't had a license for any package sources (such as PKGBUILD files) in the past, which is potentially problematic. Providing a license will preempt that uncertainty. In RFC 40 we agreed to change all package sources to be licensed under the very liberal 0BSD license. This change will not limit what you can do with package sources. Check out the RFC for more on the rationale and prior discussion. Before we make this change, we will provide contributors with a way to voice any objections they might have. Starting on 2024-11-19, over the course of a week, contributors will receive a single notification email listing all their contributions. If you receive an email and agree to this change, there is no action required from your side. If you do not agree, please reply to the email and we'll find a solution together. If you contributed to Arch Linux packages before but didn't receive an email, please contact us at package-sources-licensing@archlinux.org.

- [Can't trust any VPN these days](#) (2024/10/16 00:00)

After Turkey banned Discord, I had to jump through some hoops, fix my VPN, and learn a bit about how DNS works.

- [Facts](#) (2024/10/04 00:00)

A collection of facts about yours truly. Guaranteed to be as accurate as my memory.

- [Manual intervention for pacman 7.0.0 and local repositories required](#) (2024/09/14 00:00)

With the release of version 7.0.0 pacman has added support for downloading packages as a separate user with dropped privileges. For users with local repos however this might imply that the download user does not have access to the files in question, which can be fixed by assigning the files and folder to the alpm group and ensuring the executable bit (+x) is set on the folders in question. `$ chown :alpm -R /path/to/local/repo` Remember to merge the .pacnew files to apply the new default. Pacman also introduced a change to improve checksum stability for git repos that utilize .gitattributes files. This might require a one-time checksum change for PKGBUILDs that use git sources.

- [Why I started livestreaming as a Rust developer?](#) (2024/09/06 00:00)

Some thoughts on why I started livestreaming my open-source development sessions and my future plans.

- [Reproducible Arch images with mkosi](#) (2024/08/31 00:00)

In the previous article I investigated how to create a reproducible image but ended up with only managing to create two identical image directories. In this article we'll end up with a fully bit-by-bit reproducible filesystem image! Some things have changed since the last post, mkosi now no longer creates ...

- [SSH CA with device and identity attestation: ssh-tpm-ca-authority](#) (2024/08/31 00:00)

The past year I have been hacking around on tools utilizing TPMs, and one of the features I have been interested to learn more about is the

device attestation features. After being a bit inspired by some ideas from people at work, the hackerspace and toots on mastodon, I figure out a SSH certificate authority would be a cool small project to hack on. Last year I wrote an SSH agent with TPM bound keys so this would nicely fit into the existing tooling.

- [August](#) (2024/08/29 00:00)

Arch Linux in August 2024 # Staff # We would like to welcome Quentin Michaud as part of the Arch Linux Package Maintainer team. RFC # A previously proposed Distribution Developer Manual RFC has been accepted with the intention to document how to run the distribution while leveraging GitLab's collaboration features and streamlined workflows for maintaining and evolving the resulting specifications. We have proposed an RFC to license all Arch Linux package sources under the terms of the Zero-Clause BSD license.

- [Deleting emails will not save the planet](#) (2024/08/24 00:00)

A while ago I saw a post on LinkedIn that piqued my interest, not because it was any good, but because it was impressively wrong. It claimed that, to quote, "if every email user deleted just 10 emails, it would save enough electricity to power millions of households each year". This is not only wrong, it is obviously wrong. In this post, I'd like to dive into why it's wrong, how one might come to think it's right, and perhaps what better message you could put out there to save the planet.

- [Investigating creating reproducible images with mkosi](#) (2024/08/18 00:00)

I've blogged before about creating vagrant images using mkosi as part of an investigation to move image creation to mkosi but also as I will be giving a talk at All Systems Go about Arch Linux images mkosi and reproducibility. With reproducible images in this article I mean that anyone ...

- [July](#) (2024/07/29 00:00)

Arch Linux in July 2024 # Pacman # Pacman v7.0.0 has been released as a major feature version. A new DownloadUser configuration option allows for dropping privileges when downloading files to a temporary directory. On top of this security measure, the new Landlock sandbox also prevents writing outside the restricted download directory. Additionally, makepkg removes GITFLAGS support, as it required breaking changes to git source handling. Furthermore this release addresses unstable git checksumming influenced by specific user configuration. On top, it now prevents PKGBUILD from overriding BUILDENV to avoid undesired side effects.

- [Building vagrant images with mkosi](#) (2024/07/27 00:00)

Last FOSDEM, there were some talks around mkosi using it for kernel hacking and systemd integration tests. These talks got me interested in mkosi, a systemd project for building OS images. After chatting some more with the maintainers, I considered the idea of moving the arch-boxes project to mkosi. (note ...

- [The sshd service needs to be restarted after upgrading to openssh-9.8p1](#) (2024/07/01 00:00)

After upgrading to openssh-9.8p1, the existing SSH daemon will be unable to accept new connections (see <https://gitlab.archlinux.org/archlinux/packaging/packages/openssh/-/issues/5>). When upgrading remote hosts, please make sure to restart the sshd service using `systemctl try-restart sshd` right after upgrading. We are evaluating the possibility to automatically apply a restart of the sshd service on upgrade in a future release of the openssh-9.8p1 package.

- [June](#) (2024/06/29 00:00)

Arch Linux in June 2024 # archinstall # The archinstall v2.8.1 update has been released, featuring several bug fixes and improvements to partitioning and desktop profiles, along with the introduction of experimental LVM support and the addition of Finnish translation. ArchWeb #

ArchWeb 2024-06-12 has been rolled out, which includes an update to Django's latest major version, Django 5.0 as well as small improvements within our Ruff configuration used as our Python linter.

- [May \(2024/05/29 00:00\)](#)

Arch Linux in May 2024 # Staff # We would like to welcome Bert Peters (bertptrs) as well as Giovanni Harting (anonfunc) as part of the Arch Linux Package Maintainer team. RFC # An RFC has been accepted to introduce "Arch Linux Ports" as testbed for unofficial architectures until they are integrated in the main Arch Linux repositories. devtools # We have released devtools v1.2.0, featuring several new enhancements and improvements. This release includes distro flag changes, notably the addition of no-omit-frame-pointer flags and `_FORTIFY_SOURCE` level 3.

- [Gnome Search Provider: Emacs Integration \(2024/05/23 00:00\)](#)

Rationale Emacs users try to avoid leaving their editor for other tasks. There is an shell (Eshell: The Emacs Shell), an integration into Secret Service API (Emacs auth-source Library 0.3) and countless other integrations. Search is a central element of the Gnome desktop environment. Many applications implement the Search Provider dbus interface to provide suitable results. The aim of this package is to make these search results also available within the Emacs editor.

- [The Name Quest \(2024/05/03 00:00\)](#)

I went on a trip to Mongolia to find out the meaning behind my name.

- [April \(2024/04/29 00:00\)](#)

Arch Linux in April 2024 # Staff # Project Leader Election # Recently, we held our Arch Linux Project Leader election, and the current Project Leader, Levente "anthraxx" Polyák, was the sole nominee. As per our election rules, he has been re-elected for another term. Congratulations to Levente, and we wish him continued success in his leadership! RFC # An RFC has been accepted to grant all Arch Linux staff members, not limited to those in packaging roles, the privilege to initiate RFCs directly, aligning with the broad range of topics these documents encompass.

- [Arch Linux 2024 Leader Election Results \(2024/04/15 00:00\)](#)

Recently we held our leader election, and the previous Project Leader Levente "anthraxx" Polyák ran again while no other people were nominated for the role. As per our election rules he is re-elected for a new term. The role of of the project lead within Arch Linux is connected to a few responsibilities regarding decision making (when no consensus can be reached), handling financial matters with SPI and overall project management tasks. Congratulations to Levente and all the best wishes for another successful term! ☐

- [Ratatui Received Funding: What's Next? \(2024/04/08 00:00\)](#)

Let's delve into the realm of open source funding along with Ratatui's journey.

- [Increasing the default vm.max_map_count value \(2024/04/07 00:00\)](#)

The `vm.max_map_count` paramater will be increased from the default 65530 value to 1048576. This change should help address performance, crash or start-up issues for a number of memory intensive applications, particularly for (but not limited to) some Windows games played through Wine/Steam Proton. Overall, end users should have a smoother experience out of the box with no expressed concerns about potential downsides in the related proposal on arch-dev-public mailing list. This `vm.max_map_count` increase is introduced in the 2024.04.07-1 release of the filesystem package and will be effective right after the upgrade. Before upgrading, in case you are already setting your own value for that parameter in a `sysctl.d` configuration file, either remove it (to switch to the new default value) or make sure your configuration file will be read with a higher priority than the `/usr/lib/sysctl.d/10-arch.conf` file (to supersede the new default value).

- [NixOS is not reproducible](#) (2024/04/02 00:00)
Okay, sorry for the clickbait. NixOS is not reproducible according to the Reproducible Builds definition. I keep reading people making this claim repeatedly on orange-site, even LWN.net made a similar claim when writing about Nix and Guix earlier this week.¹ Along with their recently launched wiki. So, what is the Reproducible Builds definition?² When is a build reproducible? A build is reproducible if given the same source code, build environment and build instructions, any party can recreate bit-by-bit identical copies of all specified artifacts.
- [March](#) (2024/03/29 00:00)
Arch Linux in March 2024 # Staff # We would like to welcome Carl Smedstad as part of the Arch Linux Package Maintainer team. Furthermore, we would like to welcome svartkanin as Support Staff for the archinstall project, assisting with issue tracking and handling of merge requests. Project Leader Election # The 2024 Arch Linux Project Leader election process has started, with the nomination period now officially open for candidate submissions.
- [The xz package has been backdoored](#) (2024/03/29 00:00)
TL;DR: Upgrade your systems and container images now! As many of you may have already read (one), the upstream release tarballs for xz in version 5.6.0 and 5.6.1 contain malicious code which adds a backdoor. This vulnerability is tracked in the Arch Linux security tracker (two). The xz packages prior to version 5.6.1-2 (specifically 5.6.0-1 and 5.6.1-1) contain this backdoor. The following release artifacts contain the compromised xz: installation medium 2024.03.01 virtual machine images 20240301.218094 and 20240315.221711 container images created between and including 2024-02-24 and 2024-03-28 The affected release artifacts have been removed ...
- [xz Package Backdoor](#) (2024/03/29 00:00)
Please see the Arch main page announcement and take appropriate action. [https://archlinux.org/news/the-xz-packa ... ackdoored/](https://archlinux.org/news/the-xz-packa...ackdoored/)
- [Changes to Moderation Staff](#) (2024/03/29 00:00)
Please join me in extending our profound "Thank you"s to 2ManyDogs who has hung up their ban hammer and now joins other former moderators in the infamous Fellows Taco Lounge. In addition, it is my extreme pleasure to welcome Schard as our newest moderation team member.
- [Join the Arch Testing Team - Call for participation](#) (2024/03/05 00:00)
We hope y'all had a good start in the new year of 2024 — With the new year usually come new resolutions. If you don't have any so far, we have one for you: What if you decided to give Arch a bit of help with testing package updates this year? Arch uses testing repositories as a buffer for core/critical package updates (or any other package updates that would benefit from being tested first) before entering the stable repositories. Testing these package updates helps us to catch more bugs upfront and ensures flawless updates for the stable repos, and that is where you can help! By joining the official Arch Linux Testing Team, you'll get the ability to "sign off" packages in testing after vouching for their correctness (or reporting a bug otherwise). This helps Arch Package Maintainers catching eventual bugs upfront and helps to move packages out of the testing repositories faster and more efficiently. We are not necessarily looking for in depth testing. Verifying that a program launches correctly and that you're able to perform your usual routine with it is already a good test on its own. You can also check the general testing guidelines. This is a very effective and rather easy way to contribute to Arch Linux. The more testers we have, the more reliable packages updates will be. We hope to see some of you there, also join us on IRC on Libera in #archlinux-testing!
- [mkinitcpio hook migration and early microcode](#) (2024/03/04 00:00)

With the release of mkinitcpio v38, several hooks previously provided by Arch packages have been moved to the mkinitcpio upstream project. The hooks are: systemd, udev, encrypt, sd-encrypt, lvm2 and mdadm_udev. To ensure no breakage of users' setup occurs, temporary conflicts have been introduced into the respective packages to prevent installing packages that are no longer compatible. The following packages need to be upgraded together: mkinitcpio 38-2 systemd 255.4-2 lvm2 2.03.23-3 mdadm 4.3-2 cryptsetup 2.7.0-3 Please note that the mkinitcpio flag `--microcode`, and the `microcode` option in the preset files, has been deprecated in favour of a new `microcode` hook. This also allows you to drop the `microcode` `initrd` lines from your boot configuration as they are now packed together with the main `initramfs` image.

- [February \(2024/02/29 00:00\)](#)

Arch Linux in February 2024 # Staff # We would like to welcome Vincent Dahmen (wahrwolf) as Arch Linux Support Staff with their new role as Mirror Admin. On top we would like to welcome andreymal and codingkooa to their new role as ArchWiki Maintainers. Additionally, we would like to congratulate Christian Heusel (gromit) on his promotion to a full DevOps member. Testing Team # In early February, we issued a call for participation about joining the Arch Testing Team which was also shared on the Forum, Mastodon, Reddit and IRC. The response was overwhelmingly positive, with over 60 new testing accounts created, significantly extending our capacity for more reliable package update testing! For those who haven't joined yet, there's still time! ☐

- [My FOSDEM 2024 Experience \(2024/02/05 00:00\)](#)

Sharing my experience after giving a talk at FOSDEM 2024!

- [January \(2024/01/31 00:00\)](#)

Arch Linux in January 2024 # Staff # We would like to welcome Vladimir LAVALLADE (Erus Iluvatar) to their new role as ArchWiki Administrator. Infrastructure # The DevOps team has recently provisioned a new EPYC 9454P build server for Arch Linux packaging. This high-performance server is meant to streamline the packaging process, ensuring more efficient building of resource hungry package builds. mkinitcpio # mkinitcpio v37.2 and v37.3 have been released.

- [GNOME battery charge control \(2024/01/28 00:00\)](#)

As someone who has to use a laptop for work, I keep my laptop plugged in 8 hours or more a day, 7 days a week. The laptop's battery during these days would discharge and charge, slowly degrading the battery because only the last ~ 20% would be charged and discharged ...

- [Why stdout is faster than stderr? \(2024/01/10 00:00\)](#)

I recently realized `stdout` is much faster than `stderr` for Rust. Here are my findings after diving deep into this rabbit hole.

- [Making dbus-broker our default D-Bus daemon \(2024/01/09 00:00\)](#)

We are making `dbus-broker` our default implementation of D-Bus, for improved performance, reliability and integration with `systemd`. For the foreseeable future we will still support the use of `dbus-daemon`, the previous implementation. Pacman will ask you whether to install `dbus-broker-units` or `dbus-daemon-units`. We recommend picking the default. For a more detailed rationale, please see our RFC 25.

- [Stream to chromecast with resolved, vlc and bash \(2024/01/06 00:00\)](#)

Chromecast is one of those devices I just generally use a lot. They are small practical and enables me to stream video or music to my TV from multiple devices. But it also requires you to have a supported browser or video player. This is obviously a bit boring. There has been multiple command line chromecast streamers through the years. But their `ffmpeg` usage has been shoddy at best with no hardware decoding support and usually quite bad implementations.

- [Advent of Code 2023: Let it snow](#) (2024/01/02 00:00)
For the ninth December in a row, I'm playing with Advent of Code. Advent of Code is a series of 50 puzzles published by Eric Wastl, where you try to solve Christmas from some far-fetched horror. Every day from December 1st to December 25th, two puzzles become available, but the second is revealed only after you provide the answer to the first. In this post I will go over how you can solve them, and hopefully some interesting concepts along the way.
- [December](#) (2023/12/31 00:00)
Arch Linux in December 2023 # Staff # We would like to welcome Jakub Klinkovský (lahwaacz) as part of the Arch Linux Package Maintainer team. User meetup # During the 37th Chaos Communication Congress (37C3), we hosted a user meetup. At this event, we presented our latest achievements and developments. Additionally, we held an open Q&A session to engage and connect with our community. dbscripts # We performed a thorough cleanup of the codebase, removing all legacy SVN functionality that is no longer necessary.
- [November](#) (2023/12/03 00:00)
Arch Linux in November 2023 # Arch Summit 2023 # The Arch Summit took place in Hamburg, Germany, on November 4th and 5th, bringing together Arch Linux staff and invited guests. The summit provided an opportunity for the staff to connect, socialize, and delve into discussions regarding various aspects of our distro. A range of topics were explored including but not limited to infrastructure and mirror management, rebuilders for packages, signing enclave, mkinitcpio, packaging tooling improvements, and community building.
- [Bugtracker migration to GitLab completed](#) (2023/12/03 00:00)
We are happy to announce that the migration of the bugtracker to GitLab is done! ☑ Thanks to everyone who has helped during the migration! This means the issue tracker and merge requests on the GitLab package repos are now enabled. The old bugtracker will subsequently be closed down. For archiving reasons there will be a static copy so that links (for example the randomly picked Task #56716) are still stable, migrated bugs have a closing comment pointing to the new URL on GitLab. Packaging bugs are now opened on the repo hosting the corresponding packaging sources, the "Add a new Bug" button on the package page on archlinux.org will automatically direct you to the correct place to open the issue. The workflow afterwards is mostly the same, first our Bug Wranglers will have a look at the issues and triage them, and then they will be handed over to the respective Package Maintainers to fix. A list of all issues can be found here. If you do not have an account for GitLab already (which authenticates against our SSO service), please write us a mail with your desired username to accountsupport@archlinux.org as advised in the banner.
- [October](#) (2023/11/22 00:00)
Arch Linux in October 2023 # Staff # We would like to welcome Christian Heusel (gromit) to the Arch Linux DevOps team, expanding his responsibilities. bugbuddy # The initial version of Bugbuddy, our GitLab bug bot, has been introduced. This tool assigns package maintainers to confirmed GitLab issues in the packaging group. Notably, the code has undergone substantial improvement, now operating as a daemon process that can promptly respond to GitLab webhook calls.
- [Operating System Bias in Next Generation Internet and NLnet](#) (2023/11/16 00:00)
In Grants for Operating Systems I discussed my journey through the grant application writing business since beginning of last year. To keep things light and somewhat focused, I left out a topic, that I would like to write about in more detail in the following sections. It's about selection bias in grants provided by Next Generation Internet (NGI), that can be applied for directly or through NLnet. Read more... (11 min remaining to

read)

- [Grants for Operating Systems](#) (2023/11/14 00:00)

Over the past years I have written (unsuccessful) funding applications for free software projects, associated with the Arch Linux Operating System. This article is about my experiences with applying for numerous funds and my advice for people trying to get their work funded. TL;DR: Writing funding applications is extremely tedious and the selection process mostly intransparent and discouraging. Depending on what you apply for and who you apply with, you may never get funding due to other, additional factors. Read more... (8 min remaining to read)

- [Incoming changes in JDK / JRE 21 packages may require manual intervention](#) (2023/11/02 00:00)

We are introducing a change in JDK/JRE packages of our distro. This is triggered from the way a JRE is build in modern versions of Java (>9). We are introducing this change in Java 21. To sum it up instead of having JDK and JRE packages coexist in the same system we will be making them conflict. The JDK variant package includes the runtime environment to execute Java applications so if one needs compilation and runtime of Java they need only the JDK package in the future. If, on the other hand, they need just runtime of Java then JRE (or jre-headless) will work. This will (potentially) require a manual user action during upgrade: If you have both JDK and JRE installed you can manually install the JDK with `pacman -Syu jdk-openjdk` and this removes the JRE related packages. If you have both JRE and JRE-headless you will need to choose one of them and install it manually since they would conflict each other now. If you only have one of the JDK/JRE/JRE-headless `pacman` should resolve dependencies normally and no action is needed. At the moment this is only valid for the upcoming JDK 21 release.

- [Fully Automated Releases for Rust Projects](#) (2023/10/24 00:00)

Here is how you can publish a Rust project with a single click of a button and automate everything.

- [September](#) (2023/10/22 00:00)

Arch Linux in September 2023 # Staff # We would like to welcome Fabian Bornschein (fabiscae) as part of the Arch Linux Package Maintainer team. Bug weekend # During the 1st to 3rd of September, we conducted a bug weekend with the aim of resolving old bugs and implementing proposed solutions. This effort not only reduced the backlog but also contributed to streamlining the upcoming bug tracker migration, resulting in the resolution of approximately 200 bugs.

- [Store ssh keys inside the TPM: ssh-tpm-agent](#) (2023/10/04 00:00)

After writing `age-plugin-tpm` a friend of mine at the hackerspace was super excited to finally have easy file encryption with TPM sealed keys, all without having to rely on `gnupg`. "This is great!" he said. "I wish I could have my SSH keys sealed in a TPM just as easily". We should have left it at that. I shouldn't have replied with a random assortment of facts like "I know `google/go-tpm` now", or "but `Go` has a `ssh-agent` protocol implementation" followed-up with "Filippo has already implemented `yubikey-agent`, it can't be that hard".

- [Changes to default password hashing algorithm and umask settings](#) (2023/09/22 00:00)

With `shadow` \geq 4.14.0, Arch Linux's default password hashing algorithm changed from SHA512 to `yescrypt`. Furthermore, the `umask` settings are now configured in `/etc/login.defs` instead of `/etc/profile`. This should not require any manual intervention. Reasons for `Yescrypt` The password-based key derivation function (KDF) and password hashing scheme `yescrypt` has been chosen due to its adoption (readily available in `libxcrypt`, which is used by `pam`) and its stronger resilience towards password cracking attempts over SHA512. Although the winner of the Password Hashing Competition has been `argon2`, this algorithm is not yet available in `libxcrypt` ...

- [Phosh now available on Arch Linux](#) (2023/09/10 00:00)

Having a full Linux mobile or tablet device has always interested me, to have an alternative to Android and use Arch Linux everywhere. Realistically I won't be able to give up Android on my phone, but what about tablet's? Phosh was developed to be a graphical user interface for mobile ...

- [July](#) (2023/09/10 00:00)

Arch Linux in August 2023 # Staff # We would like to welcome Tomaz Canabrava (tcanabrava) as part of the Arch Linux Package Maintainer team. AURWeb # In AURWeb v6.2.7, we primarily focused on bug fixes while revamping Prometheus metrics. We introduced new measures like request tracking and cache-hit/miss ratios for search queries, enhancing our ability to make development decisions and aiding the AUR moderation team in identifying trends.

- [Weechat With SSH Tunneling](#) (2023/09/08 00:00)

In the past, I have used Weechat with Weechat and IRC relays. Since, I have switched to ChromeOS, I disabled the IRC relay, because I switched to the Weechat Android App on ChromeOS. Nevertheless, I was never 100% happy with the Weechat relay. The relay usually works via a shared password and access to this relay is equal to SSH access. Hence, I have decided to switch to SSH tunneling. With SSH tunneling, I am able to use SSH keys for authentication.

- [From tui-rs to Ratatui: 6 Months of Cooking Up Rust TUIs](#) (2023/08/28 00:00)

Let's take a look at what is new in the new version of "Ratatui" and how it became the successor of tui-rs.

- [ansible-core >= 2.15.3-1 update may require manual intervention](#) (2023/08/19 00:00)

As of ansible-core 2.15.3, upstream moved documentation and examples to a separate dedicated repository (see the related changelogs). This means that, starting from version 2.15.3 the ansible-core package will stop shipping documentation and a default configuration example under /etc/ansible/ansible.cfg. Regarding the documentation, it is available online: <https://docs.ansible.com/> As for the configuration file, as explained in the wiki, a base config can be generated with the following command: `ansible-config init --disabled > ansible.cfg` After updating from ansible-core <= 2.15.2-1 to >= 2.15.3-1, everyone using a custom global Ansible configuration file stored under /etc/ansible/ansible.cfg will have their configuration saved as a pacsave file. To restore it, run the following command: `mv /etc/ansible/ansible.cfg.pacsave /etc/ansible/ansible.cfg`

- [How to host a static Next.js website with Nginx](#) (2023/08/17 00:00)

Next.js is a fairly nice way of building a multi-page, mostly statically rendered website with React and making it make sense. It actually solves the problem of "what if a React app was not a Single Page Application" pretty well, but it's somewhat particular about how it wants to be deployed.

- [budgie-desktop >= 10.7.2-6 update requires manual intervention](#) (2023/08/11 00:00)

When upgrading from budgie-desktop 10.7.2-5 to 10.7.2-6, the package mutter43 must be replaced with magpie-wm, which currently depends on mutter. As mutter43 conflicts with mutter, manual intervention is required to complete the upgrade. First remove mutter43, then immediately perform the upgrade. Do not relog or reboot between these steps. `pacman -Rdd mutter43 pacman -Syu`

- [Mount Block Devices in ChromeOS](#) (2023/08/05 00:00)

I am a big fan of LUKS encrypted USB sticks. They are easy to make and easy to handle on most Linux systems. ChromeOS is one of these systems, where I had trouble with LUKS encrypted USB sticks or block devices in general. Although ChromeOS is capable to mount a various number of filesystems, it has no idea what to do with a LUKS encrypted USB stick. The first idea most people have is launching a Crostini

container and decrypting the USB stick via cryptsetup.

- [Yubikey in Crostini](#) (2023/08/05 00:00)

Hello friend, long ago I have ditched Arch Linux for my main operating systems and switched to ChromeOS with Arch Linux in Crostini. For a long time this setup worked fine, until I encountered a few issues with Arch Linux and Yubikeys. In this article, I would like to show you how I setup my Yubikey on Arch Linux running in Crostini within ChromeOS. First, we have to ensure that `/etc/polkit-1/rules`.

- [July](#) (2023/08/01 00:00)

Arch Linux in July 2023 # Staff # We would like to welcome Mario Oenning (moson) as new Arch Linux Support Staff Member. devtools # arch-nspawn is now utilizing a distinct scope name instead of the previous `--keep-unit` approach. This allows for the creation of a dedicated scope, placing the container within a slice hierarchy which allows a more precise resource control. This enhancement will be part of the next release.

- [Generating terminal user interfaces with Ratatui + ChatGPT](#) (2023/07/17 00:00)

"Ratatui" is a Rust library for building rich terminal user interfaces. In this post, I'm sharing what's new in the latest version and also a fun way to easily create terminal user interfaces in a jiffy.

- [Store age identities inside the TPM: age-plugin-tpm](#) (2023/07/17 00:00)

The past year I have been trying to learn more about the Trusted Platform Module (TPM). This is a small device found on most modern laptops that has several cool security features like key creation, sealing and attestation, however I have been struggling to find a small project where I can learn more about it. To my surprised I learned a couple of months ago that nobody has written a TPM plugin for age!

- [Zig Bits 0x4: Building an HTTP client/server from scratch](#) (2023/07/11 00:00)

Let's experiment with the `std.http` module of Zig ≥ 0.11 and create an HTTP server/client from scratch (along with some benchmarks)!

- [June](#) (2023/07/01 00:00)

Arch Linux in June 2023 # packaging # We have now enabled all packagers to have default access to the multilib and unstable desktop (GNOME/KDE) repositories. This decision removes artificial gates and simplifies the process for packagers to contribute to different aspects of the distro's packaging. By granting wider access by default, we encourage easier participation and collaboration within our distro packaging team. devtools # We released version v1.0.3 of devtools which focused on bug fixes.

- [Wayland is pretty good, actually](#) (2023/06/29 00:00)

I started working on Flyaway with the intention of becoming familiar with Wayland, its protocols and extensions, and the wlroots library. Instead, I ended up genuinely liking all three.

- [TeX Live package reorganization](#) (2023/06/18 00:00)

Starting from version 2023.66594-9, TeX Live packages have been reorganized to mirror upstream collections. Even though the new `texlive-basic` replaces the old `texlive-core`, many of the `texlive-core` contents (including language specific files) are now split between different packages. To find out which Arch package contains a specific CTAN package, you can use the `tlmgr` utility, eg. `$ tlmgr info euler | grep collection collection: collection-latexrecommended` which means the `euler` CTAN package is contained in `texlive-latexrecommended`. You may also use `pacman -F` to query for specific files. A new metapackage `texlive-meta` is available to install all subpackages (except for language specific ones), and the new `texlive-doc` package provides the full documentation for offline use.

- [OpenBLAS \$\geq 0.3.23-2\$ update requires manual intervention](#) (2023/06/14 00:00)

The openblas package prior to version 0.3.23-2 doesn't ship optimized LAPACK routine and CBLAS/LAPACKE interfaces for compatibility. This decision has been reverted now, and the ability to choose a different default system BLAS/LAPACK implementation while keeping openblas installed is now provided to allow future co-installation of BLIS, ATLAS, etc. The default BLAS implementation will be used for most packages like NumPy or R. Please install "blas-openblas" and "blas64-openblas" to make OpenBLAS the default BLAS implementation, just like the old behavior. Unfortunately you will get errors on updating if you currently have OpenBLAS installed as the default BLAS implementation: error: failed to prepare transaction (could not satisfy dependencies) :: installing openblas (0.3.23-2) breaks dependency 'blas' required by cblas :: installing openblas (0.3.23-2) breaks dependency 'blas' required by lapack Please append your preferred default BLAS implementation to the regular -Syu command line to get around it. For example: pacman -Syu blas-openblas or pacman -Syu blas

- [May \(2023/06/01 00:00\)](#)

Arch Linux in May 2023 # Staff # We would like to welcome Anton Hvarnum (torxed) and Christian Heusel (gromit) among the Arch Linux Package Maintainers. On top we would like to welcome Leonidas Spyropoulos (artafinde) to their new additional duties as Arch Linux Developer Git packaging # We are thrilled to announce the successful migration of our packaging ecosystem to Git, with package sources now accessible on GitLab. As part of this transition, we have developed a powerful new tool called pkgctl, available through devtools, offering a user-centric design and streamlined user experience for interacting with all aspects of Arch Linux packaging for users and packagers alike.

- [Ratatui: Build rich terminal user interfaces using Rust \(2023/05/29 00:00\)](#)

Ratatui came a long way since its transition from the original tui-rs crate. In this post, let's take a look at what's new in the latest version.

- [Git migration completed \(2023/05/21 00:00\)](#)

We are proud to announce that the migration to Git packaging succeeded! ☑ Thanks to everyone who has helped during the migration! Package sources are now available on GitLab. Note that the bugtracker is still flyspray and that merge requests are not accepted as of now. We intend to open the issue tracker and merge requests on the Gitlab package repos in the near future. Mirrors are syncing again, but it may take a bit of time until your mirror of choice has caught up. For users Update your system and merge the pacman pacnew /etc/pacman.conf.pacnew file. This is ...

- [Git migration completed \(2023/05/21 00:00\)](#)

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- [Taking Rust to the Cloud: Blazingly Fast File Sharing \(2023/05/17 00:00\)](#)

"rustypaste" is a self-hosted and minimal file upload/pastebin service written in Rust. In this post, I will be talking about its features and telling the story behind how I deployed it to shuttle.rs to make it publicly available for free use.

- [Git migration announcement \(2023/05/16 00:00\)](#)

This Friday morning (2023-05-19) the Git packaging migration will start until Sunday (2023-05-21). The Arch Linux packaging team will not be able to update packages in any of the repositories during this period. Notification when the migration starts, and when it is completed, will be published on the [arch-dev-public] mailing list. How does this impact Arch Linux users?The [testing] repository will be split into [core-testing] and

[extra-testing], the [staging] repository will be split into [core-staging] and [extra-staging]. The [community] repository will be merged into [extra] and will therefore be empty after the migration. All affected repositories will be provided as empty repositories for a transition period after the migration. For regular users, this means that everything works as before. Note: After the migration is done, users that have the testing repositories enabled need to include the new repositories ([core-testing] and [extra-testing] instead of [testing]) in their pacman.conf before updating their system. Other changes: SVN access is discontinued and will disappear. The svn2git mirror will no longer be updated. asp, which relies on the svn2git mirror, will stop working. It is replaced by pkgctl repo clone. How does this impact Arch Linux tier 1 mirrors? During the migration rsync and HTTP access will be shut down. We will send an email notification to arch-mirrors once everything has been finished. How does this impact Arch Linux packagers? Packagers will not be able to patch and update their packages. The internal Tier 0 mirror is also going to be disabled for the duration of this migration.

- [Git migration announcement](#) (2023/05/15 00:00)

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- [April](#) (2023/05/01 00:00)

Arch Linux in April 2023 # project management # We've create a GitLab Board [0] to track all tasks related to project management and project leadership. This Board allows us to visualize the exact state of tasks using different lanes and labels, making it easier to keep track of ongoing progress. Additionally, tasks will receive comments and lane updates to reflect the latest developments. This is another step towards providing increased transparency, structure, and visibility for our staff and users alike.

- [How does async Rust work](#) (2023/04/27 00:00)

Rust has a burgeoning async system. If your application is heavy on IO, you should simply "use async" and everything will work efficiently. You can have async fn, .await whenever that could be worked on in the background while the CPU does something useful. Then you learn to add Tokio for it to do anything and things may seem like magic. Fortunately, computers do not work by magic yet, so we can try to simplify things and get a better understanding. Today I want to do just that.

- [Golang crypto/ecdh and the TPM](#) (2023/04/24 00:00)

I have lately been trying to learn more about the Trusted Platform Module (TPM) as they are capable of key creation and sealing secrets in a

secure manner. They are common hardware these days and make for a reasonable ways to store secrets. age is a file encryption/decryption tool from Filippo Valsorda which a lot of people have been using to replace GnuPG for things like password-store. It has a few plugins doing things like storing keys on Yubikey, Trezor hardware wallets or the Apple Secure Enclave, however it doesn't have a TPM plugin.

- [Zig Bits 0x3: Mastering project management in Zig](#) (2023/04/19 00:00)

In this post, I'm sharing tips & tricks about managing/maintaining an open-source Zig project and mentioning the commonly used practices. I'm also giving a brief introduction to my first-ever Zig project "linuxwave" which led to the writing of this series.

- [March](#) (2023/04/08 00:00)

Arch Linux in March 2023 # Git packaging sources # We have improved a lot of pieces in pkgctl according to the feedback from the sandbox environment. Most notably it is possible to provide GitLab tokens via the DEVTOOLS_GITLAB_TOKEN environment variable, pass nocheck to the build command for bootstrap builds, handle subrelease pkgrels as well as several bugfixes. We are doing another round of testing and would like to proceed with the rollout afterwards.

- [Writing a Linux executable from scratch with x86_64-unknown-none and Rust](#) (2023/03/28 00:00)

I recently mentioned on the internet I did work in this direction and a friend of mine asked me to write a blogpost on this. I didn't blog for a long time (keeping all the goodness for myself hehe), so here we go. ☐ To set the scene, let's assume we want to make an executable binary for x86_64 Linux that's supposed to be extremely portable. It should work on both Debian and Arch Linux. It should work on systems without glibc like Alpine Linux. It should even work in a FROM scratch Docker container. In a more serious setting ...

- [Setting up a packaging environment for Alpine Linux \(introducing alpkg\)](#) (2023/03/27 00:00)

Recently I have been interested in Alpine Linux and thought it would be nice to maintain some Rust packages in their repositories. In this post, I will share my notes/adventures on setting up a packaging environment and a tool called "alpkg" for automating this process.

- [Zig Bits 0x2: Using defer to defeat memory leaks](#) (2023/03/21 00:00)

Let's talk about how to detect memory leaks in Zig and avoid them by using the defer statement.

- [February](#) (2023/03/18 00:00)

Arch Linux in February 2023 # Git packaging sources # All major workflow and usability requirements for the pkgctl tooling have been finished and a experimental devtools-git-poc package has been put into the repositories. Furthermore the proof of concept sandbox environment has been set up and rolled out to anyone interested in testing. In the current phase we will collect feedback to catch bugs and further usability improvements [0]. We are still very eagerly seeking for more testers.

- [If you have one project and you keep bragging about it, just stop.](#) (2023/03/13 00:00)

Some thoughts on projects and ego management.

- [Introducing runst: Handle desktop notifications neatly on Linux!](#) (2023/03/05 00:00)

runst is a dead simple notification daemon ☐ In this post, I'm introducing the project and giving different usage examples that will improve your Linux desktop experience.

- [Disassembling the KingFast F6 PRO](#) (2023/02/21 00:00)

This is the KingFast F6 Pro 240 GB SSD. Despite its name, it is neither King nor Fast. I suspect the name might have been chosen for its similarity to Kingston's brand. It is said the disk is so slow using it qualifies as inhuman punishment under the UN's Universal Declaration of Human Rights.

Yet somehow a copy of them has found their way into my hands. Today, I'd like to figure out what makes it so slow, and take you along on my journey.

- [Zig Bits 0x1: Returning slices from functions](#) (2023/02/17 00:00)

I decided to start a new blog series called "Zig Bits" where I share interesting bits of information about the Zig programming language. It is written especially for beginners because I'm also a beginner.

- [Switch to the base-level meta package requires manual intervention](#) (2023/02/12 00:00)

On February 2nd, the base-devel package group has been replaced by a meta package of the same name. If you installed the base-devel package group prior to this date, explicitly re-install it to get the new base-devel package installed on the system: `pacman -Syu base-devel`

- [Call for participation: Git packaging POC](#) (2023/02/02 00:00)

[https://lists.archlinux.org/archives/li ... WE6GFWUJN/](https://lists.archlinux.org/archives/li...WE6GFWUJN/) Hi everyone! Levente and I have been busy preparing a test environment for the new git package workflow, which is going to replace the svn repository. To test the new git package setup install `devtools-git-poc` from the [community] repository and use the new `pkgctl` utility. Please check each time if there is a new upgrade before playing around. The goal of the testing is to figure out UX issues, bugs and larger issues that would need to be dealt with before a git migration can happen. It's therefore very important that people sit down and play around ...

- [January](#) (2023/01/31 00:00)

Arch Linux in January 2023 # Git packaging sources # We have announced the state of the art of the Git packaging migration to arch-dev-public [0] including a first item on our distro roadmap to track the remaining effort [1]. We have prepared most of the necessary settings, configurations and the corresponding machine for the new test environment for the Git package workflow. The test phase is expected to start at the beginning of February.

- [Packaging Rust Applications for the NPM Registry](#) (2023/01/24 00:00)

Recently I packaged my project git-cliff (changelog generator written in Rust) for NPM with the help of my friend @atlj. I thought this would be an interesting topic for a blog post since it has a certain technical depth about distributing binaries and frankly it still amazes me how the whole thing works so smoothly. So let's create a simple Rust project, package it for NPM and fully automate the release process via GitHub Actions.

- [How to enable developer mode on Chrome OS Flex](#) (2023/01/14 00:00)

I have recently switched to Chrome OS Flex as main operating system. The experience so far is really great. It does everything what it should do. I can browse the internet with it, game with it (in the past Google Stadia, now Xbox Cloud), answer my mails and even work on Arch Linux. Even printing worked pretty much out of the box. What does not work properly at the moment is scanning over wifi with my very old HP DeskJet 2540 printer with embedded scanner.

- [PHP 8.2 update and introduction of legacy branch](#) (2023/01/13 00:00)

The php packages have been updated to the latest version 8.2. In addition to this, a new set of php-legacy packages have been introduced. These will follow the oldest but still actively supported PHP branch. This enables users to install the latest version but also introduces the option to use third party applications that might rely on an older version. Both branches will be kept up to date following our rolling release model. php and php-legacy can be installed at the same time as the latter uses a -legacy suffix for its binaries and configuration files. In addition to this, the php7 packages have been removed as they reached end of life. The imap extension will no longer be provided as it relies on the c-client library

which has been abandoned for many years.

- [In memory of Jonathon Fernyhough](#) (2023/01/12 00:00)

Arch Linux mourns the sudden loss of Jonathon Fernyhough, known in our community as jonathon, who passed away on Saturday night. Jonathon was an active participant and contributor to Arch Linux, several derived distributions, the AUR and through personal repositories. He was enthusiastic, helpful and eager to contribute towards improving the free and open source software community as a whole. On behalf of the wider Arch Linux community, our condolences go out to his family and friends.

- [Zero-dependency random number generation in Rust](#) (2023/01/03 00:00)

Let's investigate how to generate random numbers without external dependencies in Rust.

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