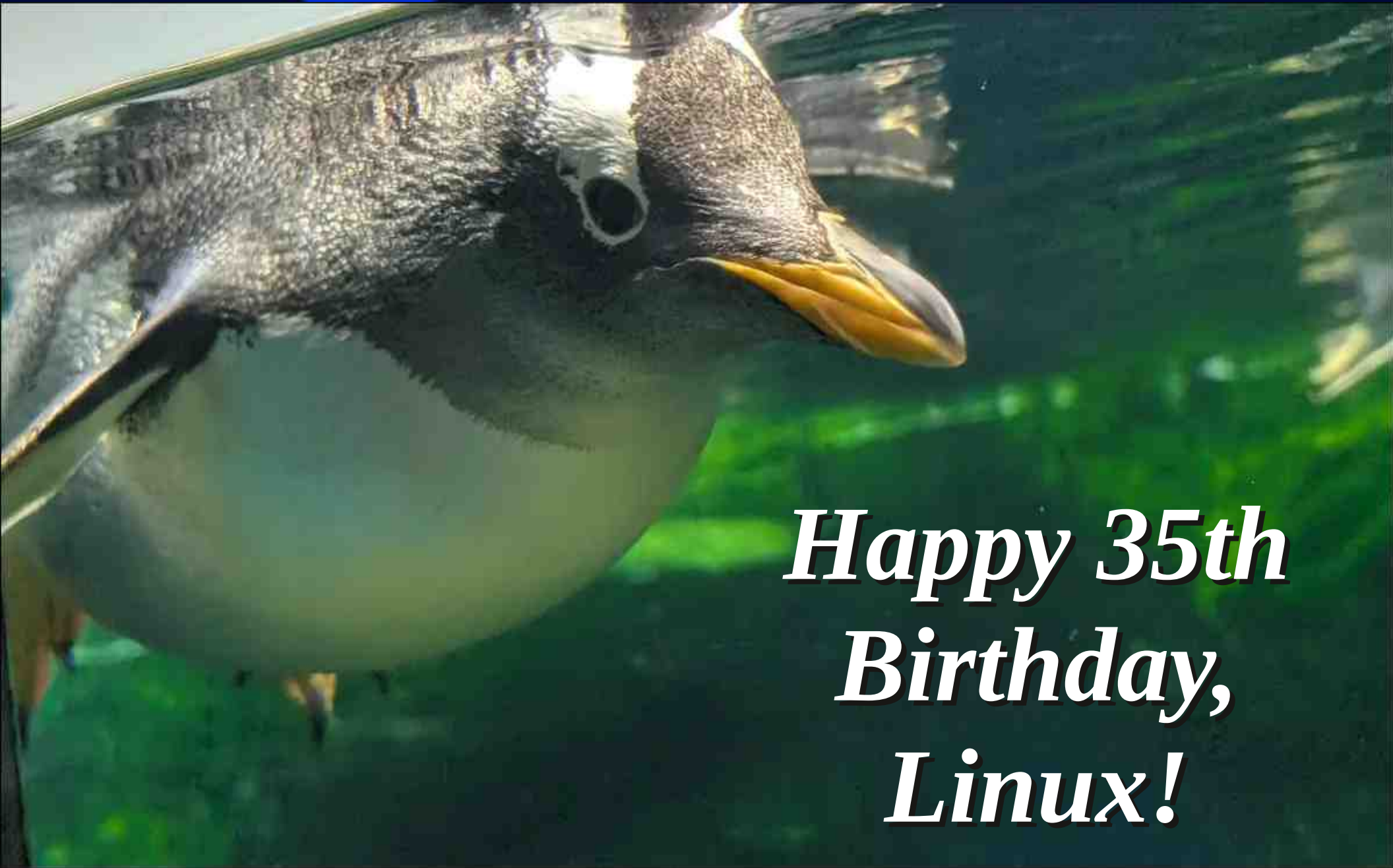


The PCLinuxOS magazine

Volume 235

August, 2026



*Happy 35th
Birthday,
Linux!*

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Visit us online at <https://pclosmag.com>.

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From The Chief Editor's Desk

Wow! Things have sure been busy around here!

I spent 10 days at Scout camp with my son, Ryan. To top it off, it was through the middle of an extreme heat wave. We had to prepare the July issue earlier than we normally do, since I was going to be mostly disconnected from ... well, almost everything. At Scout camp, I really didn't have much "connectivity," and certainly no computer.

Then, when I got back on July 2, it was a race to get the July issue released.

Walk? We walked for what felt like forever. Everything was a long walk. Just going to the dining hall was a half-mile walk ... each way. And the ceremonial campfire ring? That was one mile away ... each way. During our 10 days at camp, I calculated that we walked about 51.5 miles in total, according to the step counter app on my smartphone.

But, Ryan excelled. He signed up to attempt to get six different merit badges: Lifesaving (required for Eagle Scout), rifle shooting, mammal studies, soil and water conservation, basketry, and wood carving. He was successful in obtaining all six of the merit badges he signed up for.

To top it all off, the rifle range staff selected Ryan as the "Camper of the Session" for their lodge. Surprised? Absolutely! And talk about



one proud dad watching his son receive some overdue recognition for all the effort he put in.

Some of his fellow Scouts weren't able to complete their Lifesaving merit badge. One of the requirements was to swim FIVE LAPS around the pool perimeter, utilizing four different swim strokes ... all without a rest. The first lap was to be done swimming with a front crawl stroke. The second lap was to be done swimming the breast stroke. The third lap was to be done swimming the backstroke. The fourth lap was to be done swimming the sidestroke.

The fifth lap was to be done using any stroke (or combination of strokes) of his choice. And, that was all on the first day of a "six day" merit badge. The rest of his time earning his Lifesaving merit badge was spent learning how to safely perform different "water rescues."

Next year ought to be interesting. Ryan's sister, Lexi, will be transferring from the Cub Scout pack in February to the Scout troop. So, next year, we'll have two Scouts at Scout camp. My and I are already planning to share the time at

Scout camp, with me going down for the first half of camp, and her coming down for the second half of camp. After all, someone needs to be here to take care of the animals (five cats, 12 chickens, and two leopard geckos).

This month's cover image was shot by my wife, Laura, during a recent trip to the Kansas City Zoo. I felt it made a perfect magazine cover image, given how August represents the 35th "birthday" of Linux.

Until next month, I bid you peace, happiness, serenity, prosperity, and continued good health!

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spyware slowing
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Screenshot Showcase



Posted by parnote, July 8, 2026, running Xfce.

JayDot, Longtime PCLinuxOS User & Forum Moderator, Passes On At 80 Years Of Age

This sad news is from a [post](#) in the PCLinuxOS forum by Texstar.

JayDot was a PCLinuxOS user and forum moderator for many years. She was a beautiful and kind soul. She has been sick for the past year and her lungs finally gave out. She will be missed by everyone who knew her.

Here is a wonderful tribute from her dear friend Jojo Mehta.

I'm thinking about DEATH and JOY.

One of my oldest and dearest friends, the utterly unique Jan (pictured here in 1999), died a couple of days ago. She had no immediate family (I was her designated next-of-kin), no possessions to speak of, and lived like a hermit in a Kilburn basement which she loved, full of Linux computers, crime novels and small cabinets on wheels (everything was on wheels), with visiting foxes, cats and squirrels – mostly in the garden but not infrequently in the house.

She smoked like a chimney most of her life (yes, her lungs gave up in the end) but was otherwise healthy and sharp as a tack, right up until she departed last Friday (July 17, 2026). She asked me to remind her how old she was (80) and told the hospital doctors: "Had enough now. I'm off soon." And she was.



We met at a book stall when I was 12. Over the decades, she met all my family and close friends. She vetted - but never vetoed - my boyfriends (she was a big believer in making one's own mistakes and completely avoiding taking responsibility for anyone else's), and engaged everyone – especially kids – as equals and fellow investigators of the world.

She was a fabulous conversationalist, master of the much underrated art of curiosity, of following intriguing tangents – an excellent tonic for the mind and one that caused me to miss many a train home as a teenager.

She was bed-bound for at least a year before she died (yes, the lungs). She would watch the tall lime trees at the bottom of her rewilded-by-

default garden change with the seasons and drop their leaves, and the fox-cubs play in the undergrowth.

She also spent endless hours on the internet watching kung-fu movies and stand-up comedy, podcasts and how-to videos about anything and everything. When I turned up and let myself in, she would yell delightedly down the corridor: “Hello my darling girl!”

Jan lived on next to nothing. But when, with another dear friend (the remarkable Polly Higgins, 1968-2019), I started what is now Stop Ecocide International, she threw in a couple of grand to our seed fund, just because she believed in me.

To me, she was London’s best-kept secret, woven into my life like a – well, not so much a fairy godmother, more a kind of joyful, nerdy elf.

I’m posting this because I feel like everyone should have a Jan.

Mischievous, eccentric, generous, sparklingly intelligent, always interested, never precious. Someone perceived by the system as a little crazy, who brilliantly demonstrates that it’s actually the other way around.

So here she is.



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Screenshot Showcase



Posted by luikki, July 7, 2026, running KDE.

ICYMI: ShinyHunters Steals 297GB Of Data From Council of Europe

by Paul Arnote



Google is updating privacy settings for how some of its apps collect, save, and use your search data — including to train its AI models, according to an [article](#) from Lifehacker. Search Services History will include any media you upload, such as audio, video, and files used in your interactions. You can keep Google from saving your media via Search Services History while still allowing other data to inform your search results and recommendations. You can [customize](#) Search Services History specifically and turn Personalized Recommendations on or off from your Google Account under **Data & privacy** > **Personalization settings**.

IT researchers have discovered security vulnerabilities in the popular phpBB forum software that allow, for example, logging in with any user account, according to an [article](#) from Heise. The entire board can thus be taken over. An update is available, which admins should apply quickly. The leak has been in the software for ten years, [writes](#) the provider of the AI pentesting tool used in an analysis. As Aikido employees explain, the default configuration is vulnerable, making thousands of forums

susceptible to attacks. Independently, Dan Stefan Alexandru has also [uncovered](#) the vulnerability and another one. The [phpBB team](#) has released version 3.3.17 “Young Bertie,” which closes this and other vulnerabilities and asks forum admins for a swift update of the software. In total, the release patches four security vulnerabilities.

Cybernews researchers found an exposed database with 24 billion credential records, raising fresh risks from password reuse and credential stuffing, according to an [article](#) from TechRepublic. A massive collection of stolen login credentials containing roughly 24 billion records was briefly exposed online, according to cybersecurity researchers at Cybernews. Researchers say the publicly accessible Elasticsearch cluster contained usernames, email addresses, plaintext passwords, and login URLs linked to a wide range of online services. The database was taken offline after its discovery, but the scale of the collection has raised concerns about how much stolen credential data is circulating within cybercriminal ecosystems. While it’s unclear who assembled the database or how many unique victims are represented, the findings highlight a growing problem: infostealer malware and credential reuse continue to provide attackers with vast quantities of account data that can be weaponized long after an initial compromise.



Image by [Leo](#) from [Pixabay](#)

ShinyHunters has put the Council of Europe on the clock, claiming it stole 297GB of sensitive data and threatening to publish it unless its demands are met, according to an [article](#) from TechRepublic. The cyber extortion group says the data includes payroll records, medical information, employee data, and thousands of resumes spanning 16 years. The group has given the Council of Europe until June 16, 2026, to comply with ransom demands or risk having the alleged data exposed online. The organization has not confirmed a breach and says it is investigating the claims. If verified, the incident would expose one of

Europe's most prominent international institutions to the same threat actor linked to attacks targeting Oracle customers and other major organizations. The claim also highlights the growing use of data theft and public leak threats as leverage in modern ransomware-style extortion campaigns.

Titles like Microsoft Flight Simulator can offer truly gorgeous visual experiences, but there's an awful lot of simulation involved before you get to the flight. You have to learn a lot about cockpit controls, take-offs and landings, and other simulator-y stuff before you're allowed to soar into the sky and see the planet from a bird's eye view. **That's one of the reasons that the flight simulator mode that just launched in Google Earth on the web is likely to be so popular** — in just a couple of clicks, you can be zooming through canyons or across cities, without worrying about what kind of plane you're in or how your flaps are set, according to an [article](#) from Lifehacker. As Google mentions, this isn't a completely new experience. It's actually been ported over from the Google Earth desktop app, but there, it's rather hidden—more of an Easter egg than a full-blown feature—and offers much more of a flight simulator feel. For example, you need to choose a plane, and figure out how to take off in it, before you get to the eye-popping visuals. Now that this simplified version is available in the web app for free, and it can be run instantly without any flight training, it's likely to be much more popular. To test it out yourself, point your browser towards [Google Earth](#) on the web, then click **Explore Earth**. Find somewhere you want to fly through, then choose **Tools > Flight simulator**.

Have I Been Pwned has added a massive collection of infostealer malware records containing 124 million passwords and 56 million email accounts, according to an [article](#) from TechRepublic. The credentials came from stealer logs created by malware that harvests sensitive information from infected devices. The dataset offers a snapshot of how cybercriminal tactics are evolving. As [infostealer malware](#) becomes more widespread, attackers are increasingly bypassing organizations altogether and collecting credentials directly from users, creating fresh and simpler opportunities for [account takeovers](#) and broader cyberattacks.



NASA

After nearly two decades of development, \$4.3 billion and the labor of hundreds of scientists and engineers, the Nancy Grace Roman Space Telescope is less than three months from launch, according to an [article](#) from NBC News. From a point roughly 1 million miles from Earth, the telescope is expected to survey the cosmos, capturing panoramas of hundreds of millions of stars and billions of galaxies. With this observatory,

NASA hopes to unravel the secrets of dark matter and dark energy and discover thousands of planets beyond our solar system. That's because Roman will be able to survey and map more of the sky than ever before, at a pace hundreds of times faster. Julie McEnery, the senior project scientist for the Roman telescope here at NASA's Goddard Space Flight Center, said that in just one month of data collection, Roman will be able to peer at underexplored parts of the Milky Way to study stars across a deep slice of the galaxy, building an astronomical catalog far larger than any that exists today.

Windows 10 users just got more breathing room. Microsoft has extended its Windows 10 Extended Security Updates program for personal devices by another year, moving coverage to October 12, 2027, according to an [article](#) from TechRepublic. The change gives consumers more time to move to Windows 11 or buy a new PC while still receiving critical security patches. It also highlights a stubborn upgrade problem: many users and small businesses remain on Windows 10 due to hardware requirements, device costs, and slower PC replacement cycles.

Apple's "Hide My Email" feature reportedly has a flaw that can expose your real email address to bad actors, according to an [article](#) from Lifehacker. According to [404 Media](#), bad actors can use free people-search sites to quickly learn your real email address from the Hide My Email alias. Hide My Email lets you generate an alias to share with others, and forwards all messages to your main inbox, without revealing

your real email address. Apple also plans to change Hide My Email in the near future, and, in the process, make it less effective.



Image by [NoName_13](#) from [Pixabay](#)

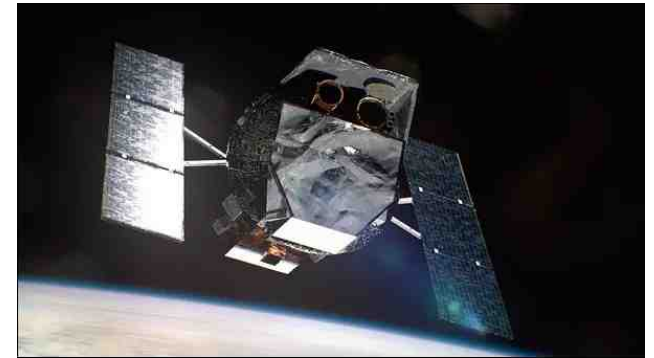
Coffee consumption has been linked to a number of health benefits, such as reduced risks of dementia, head and neck cancer, and all-cause and cardiovascular mortality, according to an [article](#) from MedPageToday. According to [data](#) from the U.K. Biobank, a higher intake of coffee was associated with lower risks of cirrhosis, hepatocellular carcinoma, and liver-related mortality. These associations persisted for both caffeinated and decaffeinated coffee, and for unsweetened and sweetened coffee.

Roadside cameras are no longer just watching cars. Your device is next in line. **Defense contractor Leonardo has begun marketing SignalTrace, its upgraded Automatic License Plate Reader (ALPR) system that adds**

wireless sensing capabilities, enabling law enforcement to record nearby smart device identifiers alongside vehicle information, according to an [article](#) from TechRepublic. The company says aggregated observations will enable investigators to identify crime suspects more effectively. The approach broadens what roadside surveillance networks can collect without changing how license plate readers operate. The technology brings its own caveats, too, from potential security implications to privacy concerns; it will have to prove that the advantages outweigh these worries.

Eighteen bugs, four of them critical, and one browser update stand between your computer and a bad time, according to an [article](#) from TechRepublic. Google pushed out Chrome 149 last week, rolling the Stable channel to version 149.0.7827.196/197 on Windows and Mac, and 149.0.7827.196 on Linux. The update fixes 18 security issues in total: four critical-severity flaws and 14 rated high. Chrome for Android also picked up the patch, landing on version 149.0.7827.197. The two most attention-grabbing flaws live in WebGL, the technology websites use to render interactive 2D and 3D graphics in your browser. Both CVE-2026-13028 and CVE-2026-13032 are “use after free” bugs, a type of memory error in which a program continues to access memory that has already been freed. Attackers can exploit that mistake to break out of Chrome’s sandbox, potentially, the protective bubble meant to keep anything malicious confined to the browser, using nothing more than a rigged webpage. The other two critical issues hit Chrome’s Autofill feature (another use-after-free

flaw, CVE-2026-13038) and a component called Blink>InterestGroups, where an out-of-bounds read bug, CVE-2026-13033, was found. Beyond the critical four, the 14 high-severity fixes touch a wide swath of Chrome’s plumbing, including GPU handling, Bluetooth, DevTools, passwords, web authentication, and Chrome’s WebView component, among others. Altogether, roughly 10 of the 18 patched bugs across both severity tiers are use-after-free issues.



Chris Smith (KBRwyle)/NASA's Goddard Space Flight Center

A robotic tugboat is launching to pull a decades-old space telescope to safety, according to an [article](#) from Science News. Soon, a private spacecraft called LINK will launch to rescue NASA’s Swift space telescope from a fiery death in Earth’s atmosphere. The Neil Gehrels Swift Observatory launched in 2004 to study gamma-ray bursts and other cosmic events. It has been enormously successful and is still making new discoveries. But all satellites eventually succumb to gravity, and most burn up in Earth’s atmosphere before they reach the ground. In early 2025, NASA scientists realized Swift was losing altitude faster than expected: Strong solar activity

starting in 2024 had given Earth's atmosphere an energy boost, expanding it slightly and putting more drag on objects in low orbits. The extra drag meant Swift would reenter and break up sometime in mid-2026 if nothing was done.

Google's Android fight in Europe is over. Its €4.1 billion fine still stands, according to an [article](#) from TechRepublic. The European Court of Justice dismissed Google's and parent company Alphabet's final appeal, closing a case over Android app agreements and mobile search dominance. Regulators accused the search giant of using licensing terms and pre-installation deals to favor its own services on Android devices. Users may see another Big Tech penalty. Developers and smaller rivals, however, are more likely to see a fight over access, including which services appear first on a phone and which ones must win attention later.

Getty is scrapping its \$3.7 billion merger with Shutterstock after UK regulators required Shutterstock to sell its editorial business, according to an [article](#) from TechRepublic. Getty Images' Shutterstock merger cleared US antitrust review, but it could not get past the UK's. Getty plans to terminate its merger agreement with Shutterstock after the UK's Competition and Markets Authority required Shutterstock to sell its global editorial business as a condition for approval. The blocked path keeps competition concerns around image licensing, editorial photo access, and pricing pressure front and center for the UK media market. The collapse also shows how regional regulators can reshape global technology and

media deals, even after companies clear a major US review.



Image by [Shawn Suttle](#) from [Pixabay](#)

It used to be easy to tell when a face was generated with artificial intelligence (AI). Whether it was a distinctive uncanny sheen, impossibly smooth skin, eyes that didn't quite make sense or a conspicuous third ear, older AI models' facsimiles of human faces were simple to spot and easy to dismiss. That's just not true anymore. Now, AI image generators can produce portraits so convincing that even careful observers struggle to distinguish fact from figment. That's why apps such as Zoom and Tinder allow their users to submit biometric identification, such as retinal scans, to help prove that a real person exists behind a profile picture. **But a new study suggests you can train your brain to get better at spotting fakes**, according to an [article](#) from Scientific American. Past attempts to teach people to spot AI faces have focused on training viewers to look for visual glitches or statistical fingerprints left behind by a particular image generator, such as a wonky ear or an eye with two pupils. The problem is that those clues can disappear with a software update or by simply using a different

prompt. "The AI is getting too good," said Amy Dawel, an associate professor at Australian National University and the lead author on the study, in a press release. "And fraudsters may avoid using pictures with obvious flaws anyway." The result is an endless technological arms race humanity seems destined to lose. Instead, the researchers taught the participants how to recognize broader patterns in how AI systems generate images. "Our training directs people's attention to global qualities that differ between AI and human faces," Dawel said. This BBC [article](#) takes a deeper look into how to spot deepfake AI images.

A quick Google Lens search or voice query may now come with a bigger privacy tradeoff, according to an [article](#) from TechRepublic. Google has updated its Search services settings so that saved media such as images, files, audio, and video from user interactions may be used to improve Google's AI models and technologies unless users opt out. The uncomfortable part is how ordinary those uploads can be: a work screenshot, a translated document, a product photo, or a voice query that was never meant to become AI training material. For businesses, the issue is not only what Google changed. It is how easily employees can move sensitive information into consumer search tools while trying to solve a routine problem. In a support [document](#), Google said that Search services include Search, Maps, Shopping, Flights, Hotels, Translate, and News. The company also adds that the new settings are "rolling out gradually over the next few months", and users who do not see the updated

controls are still managed through Web & App Activity.

An incident at AssuranceAmerica exposed nearly 7 million individuals' insurance information, including driver's license numbers, according to an [article](#) from Lifehacker. Scammers can use your number to open financial accounts in your name, create fake IDs, change your mailing address, or generate an entirely new identity. Take precautions, such as monitoring your accounts, freezing your credit, and ordering a background check and driving record to catch suspicious activity.



Image by [Joshgmit](#) from [Pixabay](#)

A cybercrime crew left one of its own servers wide open on the internet for three weeks, and it exposed the operation's inner

workings: the hacking tools, the activity logs, and target lists naming more than 1.4 million websites, according to an [article](#) from The Hacker News. Far fewer were actually broken into, but the exposed files showed researchers how a mass site-hacking operation runs from the inside. The operation, now tracked as **WP-SHELLSTORM**, is what [SOCRadar](#) calls a webshell access brokerage: a crew that breaks into sites at scale, plants a hidden backdoor (a "webshell") on each, and packages that access for resale. The strongest activity hit WordPress sites running out-of-date plugins. If you run WordPress or Joomla, the two flaws that mattered most were in the Breeze caching plugin and Joomla's JCE editor; skip to the checklist below if that's you.

Linus Torvalds no longer sees himself as a programmer, according to an [article](#) from ZDNet. "Let's be entirely honest. I hardly read code at all anymore. I'm not a programmer, I'm a development lead." He still writes small patches, but they're more guidance than authority: "I still write code in the sense that I send people patches... but then I make it very clear that, hey, this is a suggestion. This is untested... I expect the maintainers of the code to be the ones who then send me the fix back. So I very seldom commit my own code anymore." What matters most to him is understanding intent: "When I do a pull request, I want to understand the bigger picture. It's one of the reasons I ask for pull requests with very good explanations: I will read them. I want to understand what's going on." He said he dives into code mainly when something forces his attention, like build breaks or merge conflicts: "I've done so many conflict

resolutions over the years that I could probably do them in my sleep... Quite often at that point, when I look at the code, I sometimes find issues."

This sounds like a complete and total privacy nightmare. **Meta is reportedly working on a pair of smart glasses that would take photos and record audio every few seconds, enabling its AI service to become more aware of its surroundings and help the wearer recall things,** according to an [article](#) from eWeek. In tests of the prototype, the red LED light on the corner of the glasses does not turn on, meaning non-wearers would not know when the glasses are recording. This has reportedly caused internal friction at Meta due to the obvious privacy concerns. Meta CEO Mark Zuckerberg has said he wants the company's smart glasses



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*We are interested in general articles
about Linux, and (of course),
articles specific to PCLinuxOS.*

to act more like an agent for the wearer, rather than just a pair of glasses that can take photos and videos. Adding more ambient awareness could make the glasses more useful, increase usage time, and potentially turn them into a more credible alternative to the smartphone.

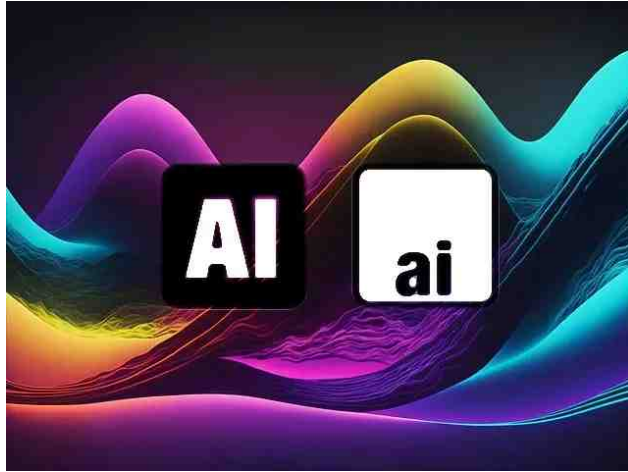


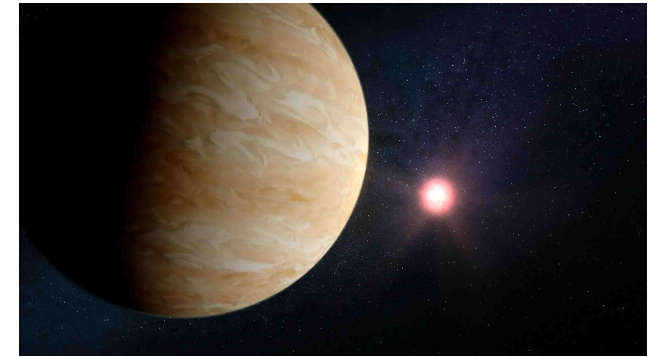
Image background by [Pete Linforth](#) from [Pixabay](#)

IFPI, RIAA, A2IM, WIN, IMPALA, The Grammys, SAG-AFTRA & Human Artistry Campaign, representing a broad spectrum of recorded music creators and companies around the world, **announced a unified approach to voluntary track labeling to give fans clearer information about the use of generative AI (GenAI) in sound recordings**, according to a [press release](#) from the RIAA. Distinguishing between “AI-Generated” and “AI-Assisted,” the labels are conceived with broad, global adoption in mind, across digital music services and other partners. The labeling is designed to evolve as technology and requirements change. The GenAI labels announced build on the important work of other partners to provide a harmonized and fan-friendly approach designed to support

broad adoption of an industry standard across the music ecosystem.

A natural sugar found in raspberries and used in fake tan lotions has been detected in an enormous cloud of dust and gas that lurks near the heart of the Milky Way, according to an [article](#) from The Guardian. The discovery does not suggest that the galaxy revolves around a distant civilisation of pale, safety-conscious frugivores, but shows that compounds important for life can form in the frigid expanse between the stars. The simple sugar erythrulose appears to be produced through chemical reactions on tiny interstellar dust grains, which then rain down on nearby worlds or reach them after being incorporated into comets that eventually clatter into planets.

New research has revealed that tau, a protein best known for its connection to Alzheimer's disease, is also essential for creating long lasting memories, according to an [article](#) from Science Daily. The discovery provides new insight into how healthy memory works and could help guide future efforts to develop treatments for dementia. The study, led by Flinders University in partnership with researchers from the University of New South Wales and Macquarie University, was published in Nature Communications. It found that tau helps organize and stabilize memories so they can be retained over time.



NASA, ESA, CSA, Dani Player (STScI)

The Solar System gives us a familiar catalogue of planets: small rocky worlds close to the Sun, then gas and ice giants farther out, according to an [article](#) from Space Daily. For a long time, that local inventory shaped the imagination. A planet could be Earth-like, Mars-like, Jupiter-like, Neptune-like. Then exoplanet surveys began finding something that sits awkwardly between those categories. These worlds are often called sub-Neptunes, or sometimes grouped with super-Earths depending on their size and mass. They are larger than Earth but smaller than Neptune. They appear again and again in data from missions such as Kepler, yet there is no example of one orbiting the Sun. A review by Jacob Bean, Sean Raymond and James Owen put the problem plainly: planets between Earth and Neptune are among the most common types revealed by exoplanet [surveys](#), but the Solar System gives astronomers no nearby specimen to inspect. That absence is part of the difficulty. We can measure some of these planets' sizes and, for a smaller set, their masses. But a radius between Earth and Neptune does not by itself tell us whether the planet is a rocky core with a

thin hydrogen envelope, a water-rich world under high pressure, a mini-Neptune with a deep atmosphere, or something more complicated. The category is observationally common and physically unresolved.

New observations show that the supermassive black hole at the center of the Milky Way does not consume nearby dust objects as previously thought, according to an [article](#) from SciTechDaily. Near the heart of the Milky Way, where the supermassive black hole Sagittarius A* bends nearby space with immense gravity, astronomers have been watching several strange dusty objects for signs of destruction. Earlier studies suggested that some of them might be stretched apart and swallowed. New observations now show a different outcome. An international research team led by PD Dr Florian Peißker at the University of Cologne used ERIIS (Enhanced Resolution Imager and Spectrograph) at the Very Large Telescope (VLT) facility in Chile to track these objects in detail. The data show that several dusty objects are following stable paths around Sagittarius A*, the black hole at the center of our galaxy. The results were published in *Astronomy & Astrophysics*.

When Italian and German researchers modeled a square-meter array of 1,482 neodymium magnets, the simulation showed roughly a fifth of incoming low-energy solar protons being deflected — without any power supply, cryogenic cooling, or moving parts, according to an [article](#) from Space Daily. The work, published as a 2026 preprint, revives a long-standing engineering question: whether

simple permanent magnets could shoulder part of the radiation-protection burden that currently forces deep-space mission designers to choose between bulky mass shielding and complex, power-hungry active systems.



The James Webb Space Telescope (JWST) is celebrating its fourth birthday, and like PetaPixel did two years ago, it's the perfect opportunity to look at the 25 best space photos Webb has captured thus far, according to an [article](#) from PetaPixel. The \$10 billion NASA/ESA/CSA JWST has produced a great deal of exceptional scientific work in its first four years of operation, much of which is utterly groundbreaking. However, that alone is not enough to warrant a photo's inclusion. While scientific value is important, a Webb image featured here must also be beautiful. If you're a space enthusiast, this is a great chance to grab some awesome new wallpapers.

While the world drowns in plastic, researchers are on the hunt for practical materials that are lightweight, tough, and biodegradable. In recent years, scientists have increasingly turned to the natural world for inspiration – with a whole lot of research focusing on the impressive features of spider silk. **But there's another promising alternative hiding in plain sight: bee silk**, according to an [article](#) from Science Alert. If you're scratching your head right now, you're not alone. Most people have never heard of bee silk. Earlier this year, Wasserman and his team [became the first](#) to create a film of a specific type of bee silk – an important first step in harnessing the power of the incredible material.

Brown University chemists have provided direct evidence that upends the textbook explanation of how triple chemical bonds work in heavy elements, according to a [press release](#) from Brown University. In a [study](#) published in *Science*, the researchers show evidence that when atomic nuclei are sufficiently heavy, the principles described in Einstein's theory of relativity change the structure of triple bonds — blurring the lines between the two separate types of bonds

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The **PCLinuxOS** magazine

involved in textbook triple bonding. Using a technique called photoelectron spectroscopy, the Brown team showed bonds created by carbon and the heavy element bismuth have the telltale signature of relativistic bonds.



Image by [Gerd Altmann](#) from [Pixabay](#)

According to an [article](#) from eWeek, **more than 200 prominent economists, researchers, and technology executives have signed a statement warning that increasingly capable AI could disrupt employment on a scale that demands government action**, The New York Times [reported](#). The signatories include Nobel Prize-winning economists and leaders associated with Google, OpenAI, Anthropic, and other major technology companies. "A.I. may become radically more powerful over the next 10 years," the researchers wrote in a statement. They noted that the technology could lead to "large-scale job displacement" while also indicating that it could create positive opportunities, such as major gains in living standards. The statement does not predict that mass unemployment is inevitable. Instead, it

argues that policymakers should establish safeguards now to reduce the risk of large-scale job displacement as AI systems become more capable. Visit [here](#) to view the full statement and the list of signatories.

Ireland's data centers consumed 7,663 gigawatt-hours of electricity in 2025, nearly as much as all homes in the country combined, according to an [article](#) from eWeek. Figures released by Ireland's Central Statistics Office show demand increased 10% from the previous year and now accounts for 23% of metered electricity consumption. Growth at this pace is testing whether the country can build new energy supplies quickly enough to support its digital economy without passing higher costs or tighter grid constraints on households and businesses.

Xanthan gum is found almost everywhere. This food additive has thickening, stabilizing, and gelling properties and is one of the most widely used by the food industry to adjust the consistency of ice cream, yogurt, cakes, sauces, and gluten-free pasta. It is also used to prepare beverages for people with dysphagia, or difficulty swallowing. **However, a study conducted at the Federal University of São Paulo (UNIFESP) in Brazil raised an important red flag by demonstrating that chronic xanthan gum consumption caused colon inflammation, altered gut microbiota, and led to intestinal barrier integrity loss in an experimental model**, according to an [article](#) from News-Medical. In the study, which was supported by FAPESP, rats were fed xanthan gum chronically for ten weeks. "This isn't about

demonizing xanthan gum. Rather, it's about emphasizing the need to invest in translational studies involving humans. It's possible that occasional use in small amounts as an additive doesn't harm health. The concern is with daily use as an ingredient and the cumulative effect of the thickener," explains Alessandra Rischitelli, the nutritionist and speech-language pathologist who conducted the study. The study was described in an article published in the journal PLOS One.



Image by [OpenClipart-Vectors](#) from [Pixabay](#)

The AI spending boom produced an unexpected casualty: the global smartphone market, according to an [article](#) from

TechRepublic. Global smartphone shipments fell 11% year over year in the second quarter of 2026, the lowest ever since 2013. Counterpoint attributed much of the slowdown to memory suppliers shifting more production toward higher-margin AI demand, which pushed up DRAM and NAND prices for smartphone makers. Despite the decline in shipments, certain brands still reported positive metrics. Counterpoint Research reported that Samsung holds the top market share, while Apple bucked the trend with a slight but noticeable growth in shipments while maintaining a sizable market share. This reflects stronger demand for premium smartphones.

Here's something that should make you happy to be a Linux user. **Microsoft's July 2026 Patch Tuesday provides security updates for a record-breaking 570 flaws, including two zero-day vulnerabilities exploited in attacks and one publicly disclosed**, according to an [article](#) from BleepingComputer. Patch Tuesday addresses 59 "Critical" vulnerabilities, 48 of which are remote code execution, 9 are elevation of privilege, 1 is a security bypass, and 1 is a spoofing. The approximate number of bugs in each vulnerability category is listed here: 254 Elevation of Privilege Vulnerabilities, 17 Security Feature Bypass Vulnerabilities, 145 Remote Code Execution Vulnerabilities, 102 Information Disclosure Vulnerabilities, 35 Denial of Service Vulnerabilities, and 16 Spoofing Vulnerabilities.

Chief penguinista Linus Torvalds has declared that Linux is not an "anti-AI" project, telling contributors who object they

can either walk away or fork the kernel, according to an [article](#) from The Register. On [lore.kernel.org](#), the archive for Linux kernel mailing lists, reformed potty mouth Linus was responding to a discussion about some negative sentiments toward AI. It is one area where Torvalds said he was willing to "absolutely put my foot down as the top-level maintainer ... Linux is not one of those anti-AI projects, and if somebody has issues with that they can do the open-source thing and fork it." "Or just walk away." Ever the pragmatist, Torvalds described AI as a tool, "just like other tools we use. And it's clearly a useful one. It may not have been that 'clearly' even just a year ago, but it's no longer in question today. "Anybody who doubts that clearly hasn't actually used it." In October 2024, the Linux kingpin branded 90 percent of AI as [marketing hype](#), saying he hated the hoopla generated by the tech industry. He said at

the time: "I really don't want to go there, so my approach to AI right now is I will basically ignore it."



Image by [Gordon Johnson](#) from [Pixabay](#)



An Alzheimer's drug could prevent dementia before symptoms show, with research suggesting it could clear toxic brain plaques in just three months, according to an [article](#) from The Telegraph (UK). Trontinemab, a medicine given as a monthly infusion, will be offered to about 1,600 people with no memory problems who are at high risk of the disease to see whether it can stave off symptoms. Scientists said the landmark trial could be a "game changer", raising the prospect of "statins for the brain" being routinely offered to people in mid-life. The phase III trial – the final pre-approval testing stage for a new treatment – will

use blood tests to identify those most likely to benefit from taking part. People aged 55 and over who are “cognitively unimpaired” but have biomarkers linked to the development of Alzheimer’s will be invited to take part. Trontinemab, manufactured by Swiss pharmaceutical firm Roche, works by removing sticky amyloid plaques that aggregate in the brain and cause the degenerative disease.

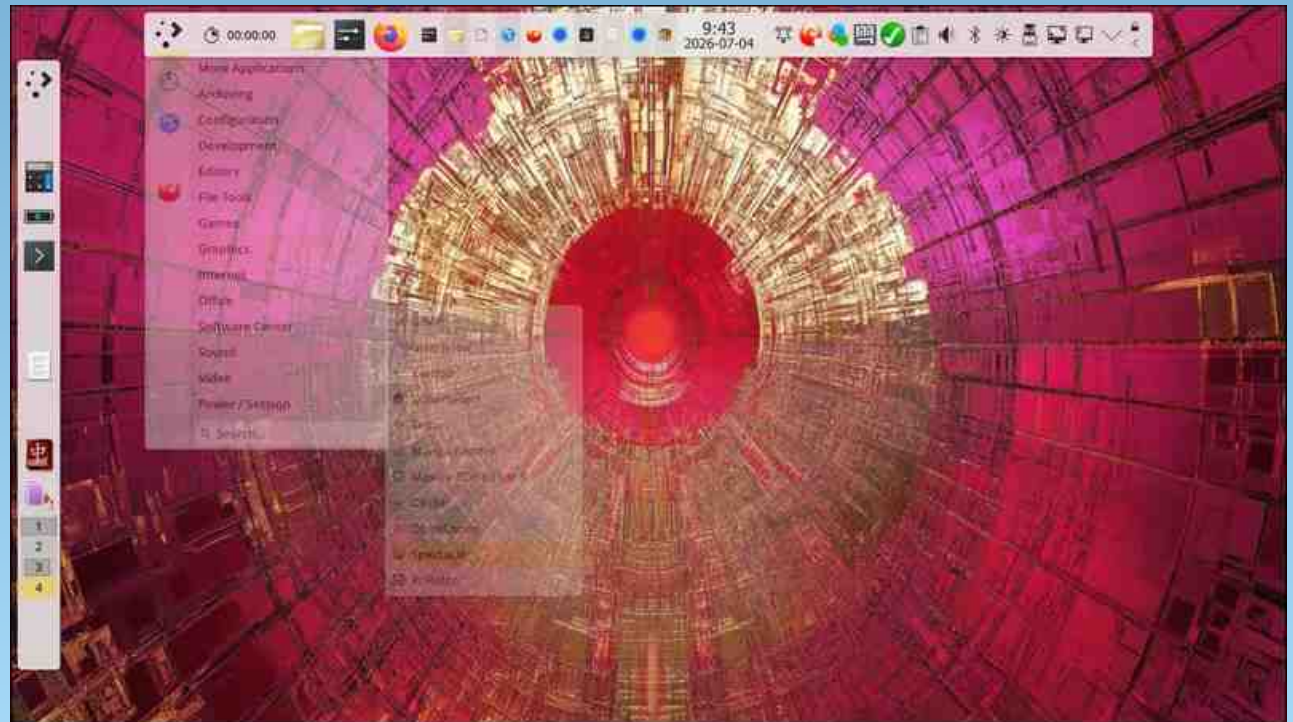
A new formulation of chewable gummies loaded with bacteria has just been tested in a Japanese study and might offer an innovative way to maintain good gum health, according to an [article](#) from ScienceAlert. Researchers led by a team from the Institute of Science Tokyo in Japan wanted to see if there was a way to ward off damaging gum disease (or periodontitis) beyond the basics of daily brushing and flossing. They discovered that snacking on gummy chews loaded with beneficial bacteria could reduce gum bleeding and improve health markers in people with mild gingivitis (where the gums bleed and swell, often leading to periodontitis).

LastPass is warning users about an ongoing phishing campaign that is using fake security notices to direct them to fraudulent websites, according to an [article](#) from BleepingComputer. The phishing emails are crafted to resemble legitimate corporate communications, notifying recipients of updated security policies and directing them to a landing page that impersonates DocuSign and claiming to provide a document for review. LastPass emphasizes that its systems have not been compromised and that the phishing emails did not originate from

its infrastructure, despite the attackers using domains designed to appear as legitimate company services. BleepingComputer has found that Bitwarden users are targeted by similar

emails sent from 'hello@bitwardennewsletter.com' and redirecting them to bitwardencompliance[.]com.

Screenshot Showcase



Posted by bliss, July 4, 2026, running KDE.

PCLinuxOS Recipe Corner



Asian Chicken & Rice

Serves: 6

INGREDIENTS:

1/3 cup warm water
1/4 cup packed brown sugar
2 tablespoons orange juice
2 tablespoons soy sauce
2 tablespoons ketchup
1 tablespoon white vinegar
4 cloves garlic, minced
1/2 teaspoon crushed red pepper flakes
1/4 teaspoon Chinese five-spice powder
1 teaspoon grated orange peel
2 tablespoons olive oil
1 1/2 pounds skinless, boneless chicken breast halves, cubed
2 cups water
1 cup uncooked white rice
2 teaspoons cornstarch
2 tablespoons cold water
chopped green onions for garnish

DIRECTIONS:

In a bowl, stir together warm water, brown sugar, orange juice, soy sauce, ketchup, white vinegar, garlic, red pepper flakes, five-spice powder, and orange peel until the sugar has dissolved and the mixture is well combined.

Heat the olive oil in a large skillet or wok over medium heat, and cook and stir the chicken until the outside is golden brown and the inside is no longer pink, 10 to 12 minutes. Pour the sauce mixture over the chicken, bring to a boil, reduce heat to medium-low, and cover the skillet. Simmer for 30 minutes, stirring occasionally.

While the chicken and sauce are simmering, bring the rice and water to a boil in a saucepan over high heat. Reduce heat to medium-low, cover, and simmer until the rice is tender, and the liquid has been absorbed, 20 to 25 minutes. Set the rice aside and keep warm.

Whisk the cornstarch and 2 tablespoons of cold water in a small bowl until smooth, and stir into the chicken and sauce, a few teaspoons at a time. Let the chicken and sauce cook for about 2 minutes to thicken, then serve over hot cooked rice, sprinkled with green onion.

NUTRITION:

Calories: 347	Carbs: 38g	Fiber: 1g
Sodium: 424mg	Protein: 28g	



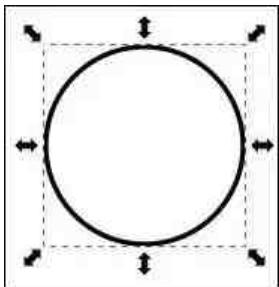
Inkscape Tutorial: More Path Effects

by Meemaw

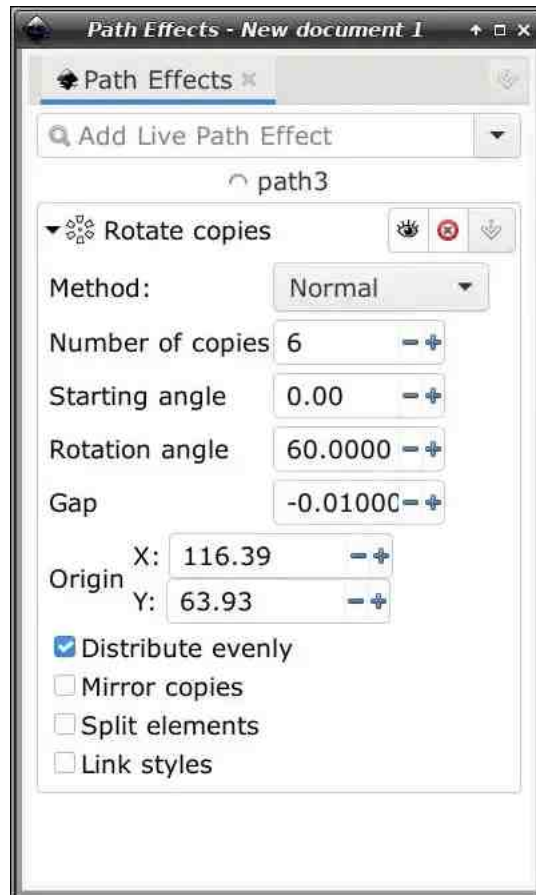
I was playing with Inkscape the other day and tried some of the Live Path Effects in the menu. I covered some of them in [2024](#) and [2025](#). We haven't covered them all yet, so let's play.

Rotate Copies

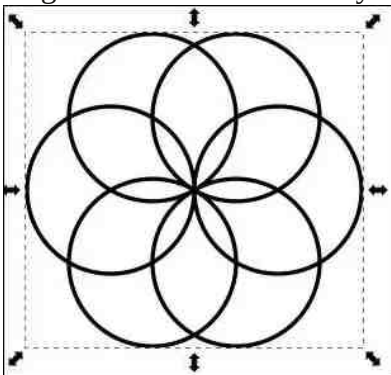
This effect does a few cool things! If you want a pattern of interlocked rings, you can do it here. I used a simple circle for this.



Opening the Path Effects menu (I've shown the menu [before](#)) and adding Rotate Copies, you get this window (center, top):



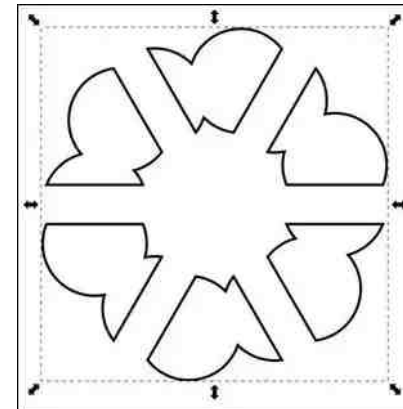
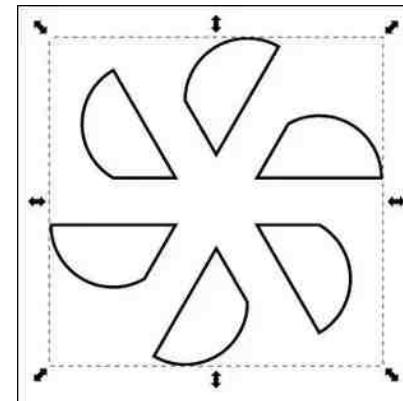
Using the **Normal** method (just under the name of the effect), you'll get interlocking circles. In the summary I read in the Inkscape manual, using a Gap of something small & negative (the default is -0.010000) will even up the



connections so they are aligned.

However, using the **Kaleidoscope** method, it's a bit different. I changed the Gap to 20 (right, top).

Also, using the **Fuse Paths** method it's a bit more different. I changed the Gap to 15 (right).

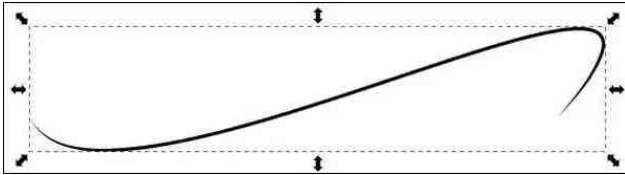


I'm sure it will look different if you use a different shape.

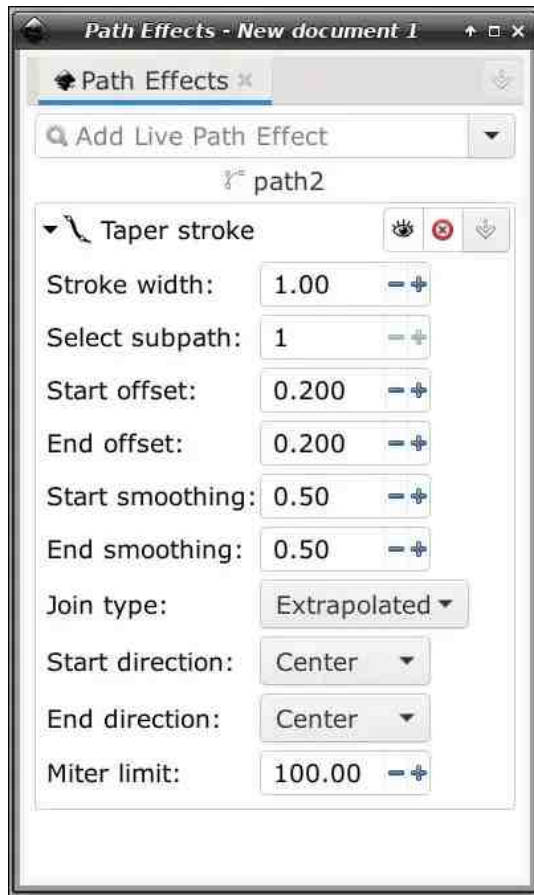
Taper Stroke

I was watching another tutorial when I saw this one. You can draw a line with your pen tool, and it will make it thicker in the middle. I'm sure the stroke settings do a lot of this, but this is really

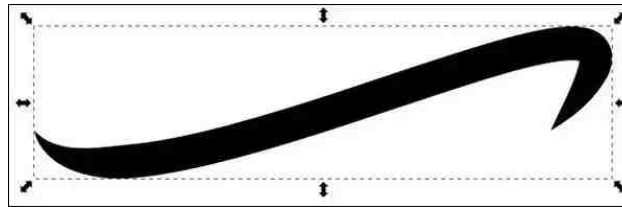
easy. I made a straight line with my pen tool, then moved some nodes to give it a curve.



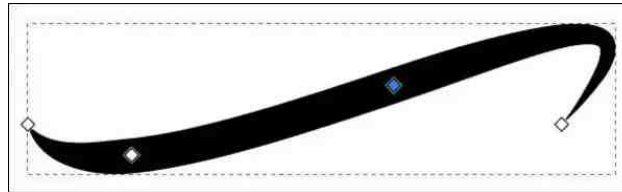
Choosing the Taper Stroke effect, I get this window.



I used the defaults, but changed the stroke width to 20 or 25.

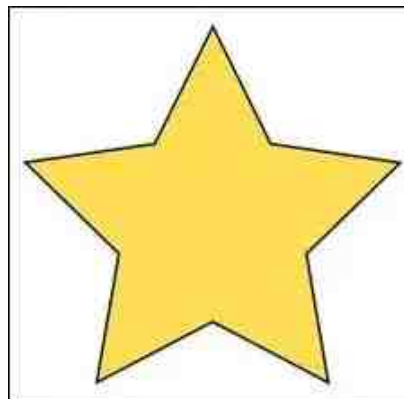


Adjust the stroke width however you want. You can also try changing to the nodes tool. There will be two nodes in the middle of your line, which you can adjust in and out to give you the result you want.

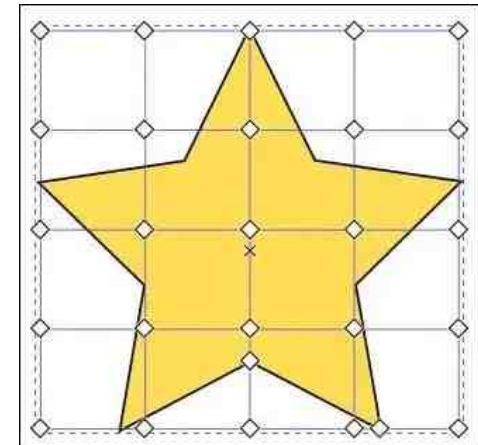


Lattice Deformation

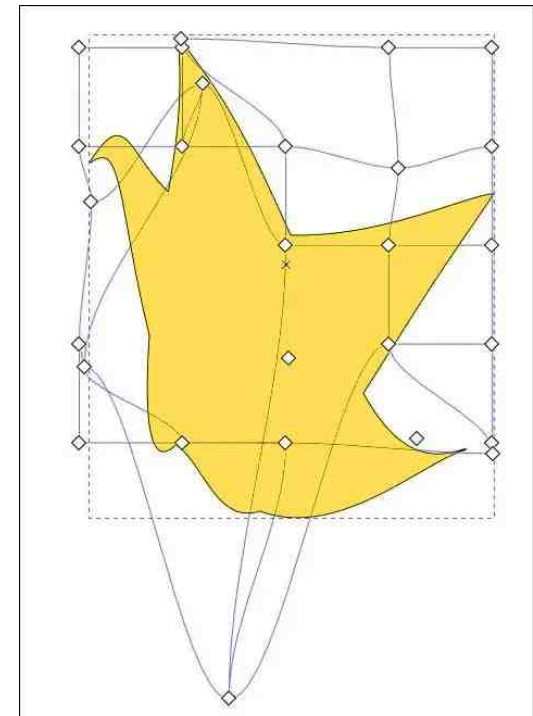
This is a neat little tool! It draws a grid around your object and lets you change it pretty much however you want to. I used a star.



Choosing Lattice Deformation in the path effects menu draws a grid around the object. You won't see it until you change to the Nodes tool.



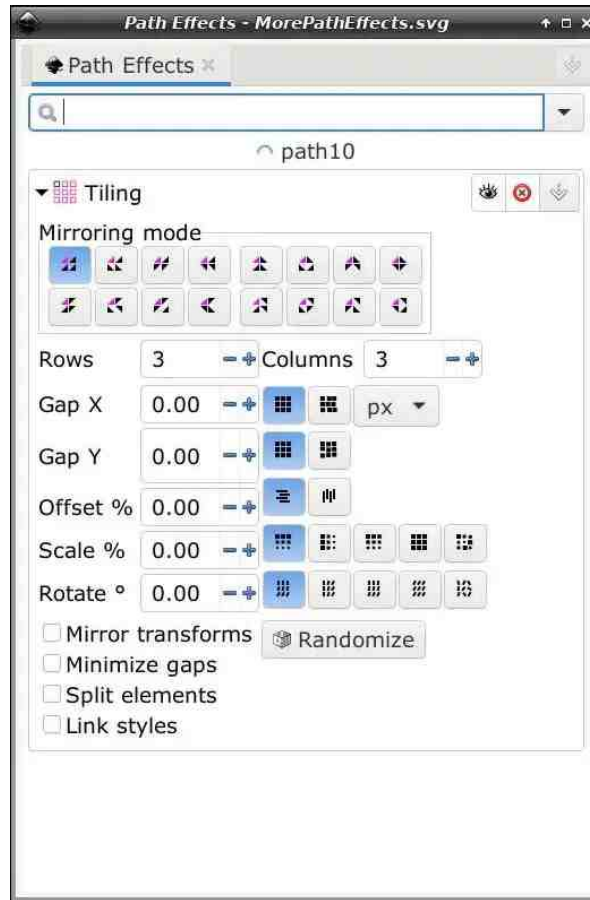
Using all these nodes, you can change the form of your object however you want. I only did a little bit. I'm sure you can make something really cool.



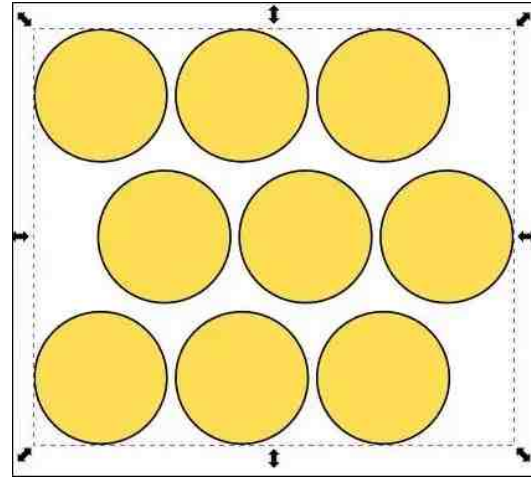
Tiling

This tool works well, too. You can do some of this with the Clone tool as well (which just goes to show that there is more than one way to do something).

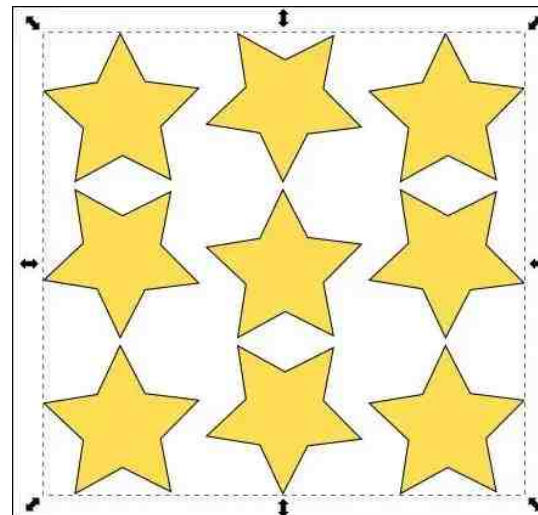
I started with my circle again, but this time I chose Tiling. As soon as the window comes up it's already done with whatever settings were there (the default setting is a 3x3 grid with no gap between objects). The window looks like this.



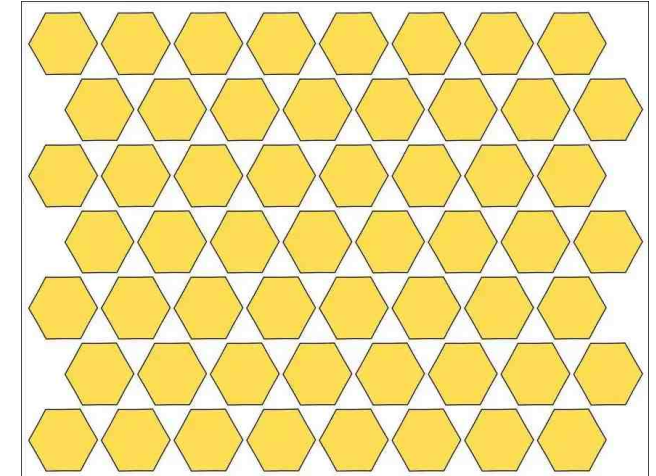
The buttons at the top are pre-programmed mirroring modes. The top left one is the default which shows the default settings. The others flip and rotate what you have. Before I tried them, I experimented with the Gap settings, and the Offset setting. I made both Gaps 10 px, and the Offset 40 or 50%.



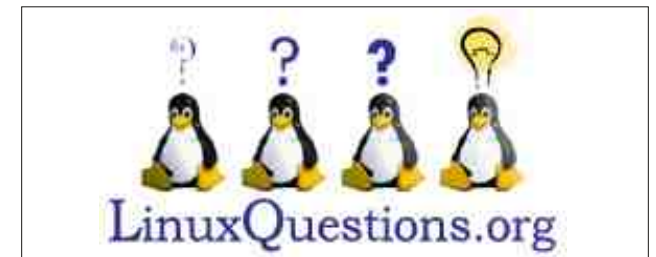
I changed to a star and left the Gaps at 10 px, but chose one of the other mirroring modes.

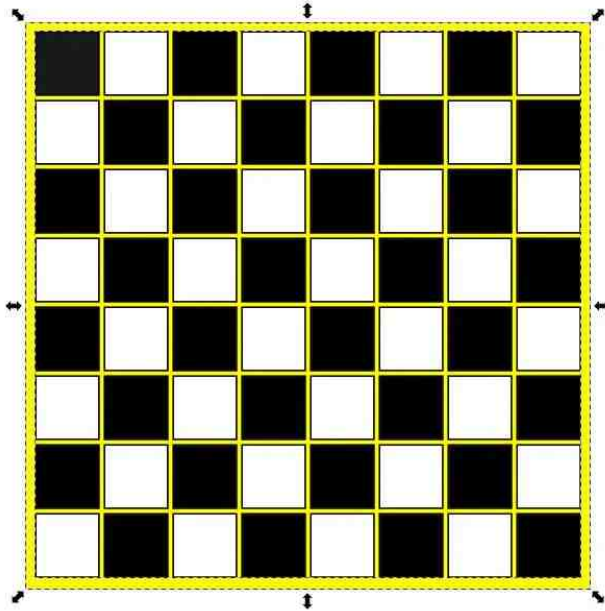


Then I changed to a hexagon, altered the rows and columns to fill the page, left the Gaps at 10 px, and changed the offset to 50%.



I then got the idea for a checkerboard. I'm sure there are many checkerboard images, but it sounded fun. I made an 8x8 grid of squares with Gaps of 10 px. When I got finished with that, I experimented with what command would separate the objects. I remembered that Path > Fracture Path would separate the grid into separate squares. Selecting half of them, I changed the fill to black, then drew a larger square around the group, filled it with yellow, and sent it under the group. I finished by grouping everything together (next page, top left).





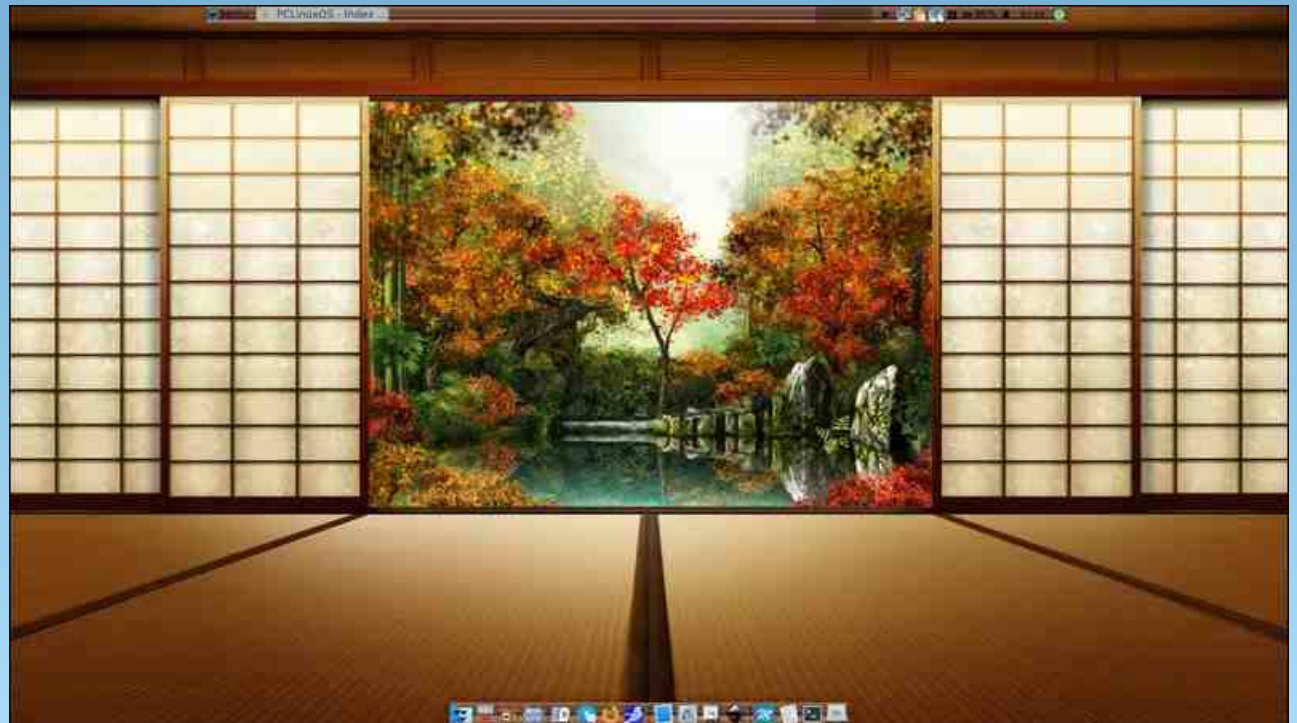
I'm sure that with a bit of experimentation, you can make something awesome. We'll do more path effects later.



PCLinuxOS Magazine Graphics Special Edition, Volumes 1 - 4

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Screenshot Showcase



Posted by monsee, May 7, 2026, running Xfce.

Happy 35th Birthday, Linux!

by Paul Arnote (parnote)

Reprint from the August 2021 issue

Updated for the August 2026 issue

Thirty-five years ago, on August 25, the computing landscape changed. Forever. The date is easy for me to remember. Linux and I share the same birthday.

Enrolled in the University of Helsinki, a young Linus Torvalds had gotten his hands on a 386 computer – state of the art in its day. It was Intel's first 32-bit processor, and he wanted to be able to unlock its potential. There was a Unix operating system available for free, but only for educational purposes. It was called Minix. Its creator would not allow its source code to be altered, and largely ignored user requests for features. Minix featured, among other things, a modular kernel, in the belief that it would be easier to maintain. Unfortunately, it was only a 16 bit design, and its creator was reluctant to make a 32 bit version. All other Unix systems available for the new 32-bit platform were prohibitively expensive for regular, individual users.

Thus, Linus Torvalds set out to make his own free kernel. At first, he built Linux on a computer running Minix, but ensured that Linux was free of proprietary Minix code. The rest of the story has been told and retold over the years, and is easily found on the internet.



So, for Linux's birthday, I want to rerun the brunt of an article we ran in 2016. About a year after releasing Linux to the public, Linus Torvalds gathered up many of the Usenet posts and correspondence from the time around Linux's release. What follows is Linus Torvald's account of Linux History, in the form of the communications that took place at the time.

LINUX's History

Note: The following text was written by Linus on July 31 1992. It is a collection of various artifacts from the period in which Linux first began to take shape.

This is just a sentimental journey into some of the first posts concerning linux, so you can happily press 'n' now if you actually thought you'd get anything technical.

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: Gcc-1.40 and a posix-question
Message-ID:
Date: 3 Jul 91 10:00:50 GMT

Hello netlanders,

Due to a project I'm working on (in minix), I'm interested in the posix standard definition. Could somebody please point me to a (preferably) machine-readable format of the latest posix rules? Ftp-sites would be nice.

The project was obviously linux, so by July 3rd I had started to think about actual user-level things: some of the device drivers were ready, and the harddisk actually worked. Not too much else.

As an aside for all using gcc on minix -
[deleted]

Just a success-report on porting gcc-1.40 to minix using the 1.37 version made by Alan W Black & co.

Linus Torvalds
torvalds@kruuna.helsinki.fi

PS. Could someone please try to finger me from overseas, as I've installed a

"changing .plan" (made by your's truly), and I'm not certain it works from outside? It should report a new plan every time.

So I was clueless - had just learned about named pipes. Sue me. This part of the post got a lot more response than the actual POSIX query, but the query did lure out arl from the woodwork, and we mailed around for a bit, resulting in the Linux subdirectory on nic.funet.fi.

Then, almost two months later, I actually had something working: I made sources for version 0.01 available on nic sometimes around this time. 0.01 sources weren't actually runnable: they were just a token gesture to arl who had probably started to despair about ever getting anything. This next post must have been from just a couple of weeks before that release.

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: What would you like to see most in minix?
Summary: small poll for my new operating system
Message-ID:
Date: 25 Aug 91 20:57:08 GMT
Organization: University of Helsinki

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things

people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi)

PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-).

Judging from the post, 0.01 wasn't actually out yet, but it's close. I'd guess the first version went out in the middle of September -91. I got some responses to this (most by mail, which I haven't saved), and I even got a few mails asking to be beta-testers for linux. After that just a few general answers to questions on the net:

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: Re: What would you like to see most in minix?
Summary: yes - it's nonportable
Message-ID:

Date: 26 Aug 91 11:06:02 GMT
Organization: University of Helsinki

In article jkp@cs.HUT.FI (Jyrki Kuoppala) writes:

>> [re: my post about my new OS]
>
> Tell us more! Does it need a MMU?

Yes, it needs a MMU (sorry everybody), and it specifically needs a 386/486 MMU (see later).

>
>> PS. Yes - it's free of any minix code, and it has a multi-threaded fs.
>> It is NOT protable (uses 386 task switching etc)
>
> How much of it is in C? What difficulties will there be in porting?
> Nobody will believe you about non-portability ;-), and I for one would
> like to port it to my Amiga (Mach needs a MMU and Minix is not free).

Simply, I'd say that porting is impossible. It's mostly in C, but most people wouldn't call what I write C. It uses every conceivable feature of the 386 I could find, as it was also a project to teach me about the 386. As already mentioned, it uses a MMU, for both paging (not to disk yet) and segmentation. It's the segmentation that makes it REALLY 386 dependent (every task has a 64Mb segment for code & data - max 64 tasks in 4Gb. Anybody who needs more than 64Mb/task -

tough cookies).

It also uses every feature of gcc I could find, specifically the `__asm__` directive, so that I wouldn't need so much assembly language objects. Some of my "C"-files (specifically `mm.c`) are almost as much assembler as C. It would be "interesting" even to port it to another compiler (though why anybody would want to use anything other than gcc is a mystery).

Note: linux has in fact gotten more portable with newer versions: there was a lot more assembly in the early versions. It has in fact been ported to other architectures by now.

Unlike minix, I also happen to LIKE interrupts, so interrupts are handled without trying to hide the reason behind them (I especially like my hard-disk-driver. Anybody else make interrupts drive a state-machine?). All in all it's a porters nightmare.

>As for the features; well, pseudo ttys, BSD sockets, user-mode
>filesystems (so I can say `cat /dev/tcp/kruuna.helsinki.fi/finger`),
>window size in the tty structure, system calls capable of supporting
>POSIX.1.0h, and bsd-style long file names.

Most of these seem possible (the tty structure already has stubs for window size), except maybe for the user-mode filesystems. As to POSIX, I'd be delighted

to have it, but posix wants money for their papers, so that's not currently an option. In any case these are things that won't be supported for some time yet (first I'll make it a simple minix-lookalike, keyword SIMPLE).

Linus (torvalds@kruuna.helsinki.fi)

PS. To make things really clear - yes I can run gcc on it, and bash, and most of the gnu [bin/file]utilities, but it's not very debugged, and the library is really minimal. It doesn't even support floppy-disks yet. It won't be ready for distribution for a couple of months. Even then it probably won't be able to do much more than minix, and much less in some respects. It will be free though (probably under gnu-license or similar).



Well, obviously something worked on my machine: I doubt I had yet gotten gcc to compile itself under linux (or I would have been too proud of it not to mention it). Still before any release-date.

Then, October 5th, I seem to have released 0.02. As I already mentioned, 0.01 didn't actually

come with any binaries: it was just source code for people interested in what linux looked like. Note the lack of announcement for 0.01: I wasn't too proud of it, so I think I only sent a note to everybody who had shown interest.

From: torvalds@klaava.helsinki.fi (Linus Benedict Torvalds)

Newsgroups: comp.os.minix

Subject: Free minix-like kernel sources for 386-AT

Message-ID:

Date: 5 Oct 91 05:41:06 GMT

Organization: University of Helsinki

Do you pine for the nice days of minix-1.1, when men were men and wrote their own device drivers? Are you without a nice project and just dying to cut your teeth on a OS you can try to modify for your needs? Are you finding it frustrating when everything works on minix? No more all-nighters to get a nifty program working? Then this post might be just for you :-)

As I mentioned a month(?) ago, I'm working on a free version of a minix-lookalike for AT-386 computers. It has finally reached the stage where it's even usable (though may not be depending on what you want), and I am willing to put out the sources for wider distribution. It is just version 0.02 (+1 (very small) patch already), but I've successfully run bash/gcc/gnu-make/gnu-sed/compress etc under it.

Sources for this pet project of mine can be found at nic.funet.fi (128.214.6.100) in

the directory /pub/OS/Linux. The directory also contains some README-file and a couple of binaries to work under linux (bash, update and gcc, what more can you ask for :-). Full kernel source is provided, as no minix code has been used. Library sources are only partially free, so that cannot be distributed currently. The system is able to compile "as-is" and has been known to work. Heh. Sources to the binaries (bash and gcc) can be found at the same place in /pub/gnu.

ALERT! WARNING! NOTE! These sources still need minix-386 to be compiled (and gcc-1.40, possibly 1.37.1, haven't tested), and you need minix to set it up if you want to run it, so it is not yet a standalone system for those of you without minix. I'm working on it. You also need to be something of a hacker to set it up (?), so for those hoping for an alternative to minix-386, please ignore me. It is currently meant for hackers interested in operating systems and 386's with access to minix.

The system needs an AT-compatible harddisk (IDE is fine) and EGA/VGA. If you are still interested, please ftp the README/RELNOTES, and/or mail me for additional info.

I can (well, almost) hear you asking yourselves "why?". Hurd will be out in a year (or two, or next month, who knows), and I've already got minix. This is a program for hackers by a hacker. I've enjoyed doing it, and somebody might enjoy

looking at it and even modifying it for their own needs. It is still small enough to understand, use and modify, and I'm looking forward to any comments you might have.

I'm also interested in hearing from anybody who has written any of the utilities/library functions for minix. If your efforts are freely distributable (under copyright or even public domain), I'd like to hear from you, so I can add them to the system. I'm using Earl Chews estdio right now (thanks for a nice and working system Earl), and similar works will be very wellcome. Your (C)'s will of course be left intact. Drop me a line if you are willing to let me use your code.

Linus

PS. to PHIL NELSON! I'm unable to get through to you, and keep getting "forward error - strawberry unknown domain" or something.

Well, it doesn't sound like much of a system, does it? It did work, and some people even tried it out. There were several bad bugs (and there was no floppy-driver, no VM, no nothing), and 0.02 wasn't really very usable.

0.03 got released shortly thereafter (max 2-3 weeks was the time between releases even back then), and 0.03 was pretty usable. The next version was numbered 0.10, as things actually started to work pretty well. The next post gives some idea of what had happened in two more months...

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: Re: Status of LINUX?
Summary: Still in beta
Message-ID:
Date: 19 Dec 91 23:35:45 GMT
Organization: University of Helsinki

In article miquels@maestro.htsa.aha.nl (Miquel van Smoorenburg) writes:
>Hello *,
>I know some people are working on a FREE O/S for the 386/486,
>under the name Linux. I checked nic.funet.fi now and then, to see what was >happening. However, for the time being I am without FTP access so I don't >know what is going on at the moment. Could someone please inform me about it?
>It's maybe best to follow up to this article, as I think that there are >a lot of potential interested people reading this group. Note, that I don't >really *have* a >= 386, but I'm sure in time I will.

Linux is still in beta (although available for brave souls by ftp), and has reached the version 0.11. It's still not as comprehensive as 386-minix, but better in some respects. The "Linux info-sheet" should be posted here some day by the person that keeps that up to date. In the meantime, I'll give some small pointers.

First the bad news:

- Still no SCSI: people are working on that, but no date yet. Thus you need a AT-interface disk (I have one report that it works on an EISA 486 with a SCSI disk that emulates the AT-interface, but that's more of a fluke than anything else: ISA+AT-disk is currently the hardware setup)

As you can see, 0.11 had already a small following. It wasn't much, but it did work.

- still no init/login: you get into bash as root upon bootup.

That was still standard in the next release.

- although I have a somewhat working VM (paging to disk), it's not ready yet. Thus linux needs at least 4M to be able to run the GNU binaries (especially gcc). It boots up in 2M, but you cannot compile.

I actually released a 0.11+VM version just before Christmas -91: I didn't need it myself, but people were trying to compile the kernel in 2MB and failing, so I had to implement it. The 0.11+VM version was available only to a small number of people that wanted to test it out: I'm still surprised it worked as well as it did.

- minix still has a lot more users: better support.

- it hasn't got years of testing by thousands of people, so there are probably quite a few bugs yet.

Then for the good things..

- It's free (copyright by me, but freely distributable under a very lenient copyright)

The early copyright was in fact much more restrictive than the GNU copyleft: I didn't allow any money at all to change hands due to linux. That changed with 0.12.

- it's fun to hack on.

- /real/ multithreading filesystem.

- uses the 386-features. Thus locked into the 386/486 family, but it makes things clearer when you don't have to cater to other chips.

- a lot more... read my plan.

/I/ think it's better than minix, but I'm a bit prejudiced. It will never be the kind of professional OS that Hurd will be (in the next century or so :), but it's a nice learning tool (even more so than minix, IMHO), and it was/is fun working on it.

Linus (torvalds@kruuna.helsinki.fi)

----- my plan -----
Free UNIX for the 386 - coming 4QR 91 or 1QR 92.

The current version of linux is 0.11 - it has most things a unix kernel needs, and will probably be released as 1.0 as soon as it gets a little more testing, and we can

get a init/login going. Currently you get dumped into a shell as root upon bootup.

Linux can be gotten by anonymous ftp from 'nic.funet.fi' (128.214.6.100) in the directory '/pub/OS/Linux'. The same directory also contains some binary files to run under Linux. Currently gcc, bash, update, uemacs, tar, make and fileutils. Several people have gotten a running system, but it's still a hackers kernel.

Linux still requires a AT-compatible disk to be useful: people are working on a SCSI-driver, but I don't know when it will be ready.

There are now a couple of other sites containing linux, as people have had difficulties with connecting to nic. The sites are:

Tupac-Amaru.Informatik.RWTH-Aachen.DE
(137.226.112.31):
directory /pub/msdos/replace

tsx-11.mit.edu (18.172.1.2):
directory /pub/linux

There is also a mailing list set up 'Linux-activists@niksula.hut.fi'. To join, mail a request to 'Linux-activists-request@niksula.hut.fi'. It's no use mailing me: I have no actual contact with the mailing-list (other than being on it, naturally).

Mail me for more info:

Linus (torvalds@kruuna.helsinki.fi)

0.11 has these new things:

- demand loading
- code/data sharing between unrelated processes
- much better floppy drivers (they actually work mostly)
- bug-corrections
- support for Hercules/MDA/CGA/EGA/VGA
- the console also beeps (Wow! Wonder-kernel :-)
- mkfs/fsck/fdisk
- US/German/French/Finnish keyboards
- settable line-speeds for com1/2

As you can see: 0.11 was actually stand-alone: I wrote the first mkfs/fsck/fdisk programs for it, so that you didn't need minix anymore to set it up. Also, serial lines had been hard-coded to 2400bps, as that was all I had.

Still lacking:

- init/login
- rename system call
- named pipes
- symbolic links

Well, they are all there now: init/login didn't quite make it to 0.12, and rename() was implemented as a patch somewhere between 0.12 and 0.95. Symlinks were in 0.95, but named pipes didn't make it until 0.96.

Note: The version number went directly from 0.12 to 0.95, as the follow-on to 0.12 was getting feature-full enough to deserve a number in the 0.90's

0.12 will probably be out in January (15th or so), and will have:

- POSIX job control (by tytso)
- VM (paging to disk)
- Minor corrections



Actually, 0.12 was out January 5th, and contained major corrections. It was in fact a very stable kernel: it worked on a lot of new hardware, and there was no need for patches for a long time. 0.12 was also the kernel that "made it": that's when Linux started to spread a lot faster. Earlier kernel releases were very much only for hackers: 0.12 actually worked quite well.

Note: The following document is a reply by Linus Torvalds, creator of Linux, in which he talks about his experiences in the early stages of Linux development

To: Linux-Activists@BLOOM-PICAYUNE.MIT.EDU
From: torvalds@klaava.helsinki.fi (Linus Benedict Torvalds)
Subject: Re: Writing an OS - questions !!
Date: 5 May 92 07:58:17 GMT

In articlenani@td2cad.intel.com (V. Narayanan) writes:

Hi folks,

For quite some time this "novice" has been wondering as to how one goes about the task of writing an OS from "scratch". So here are some questions, and I would appreciate if you could take time to answer 'em.

Well, I see someone else already answered, but I thought I'd take on the linux-specific parts. Just my personal experiences, and I don't know how normal those are.

1) How would you typically debug the kernel during the development phase?

Depends on both the machine and how far you have gotten on the kernel: on more simple systems it's generally easier to set up. Here's what I had to do on a 386 in protected mode.

The worst part is starting off: after you have even a minimal system you can use printf etc, but moving to protected mode on a 386 isn't fun, especially if you at first don't know the architecture very well. It's distressingly easy to reboot the system at this stage: if the 386 notices something is wrong, it shuts down and reboots - you don't even get a chance to see what's wrong.

Printf() isn't very useful - a reboot also clears the screen, and anyway, you have to have access to video-mem, which might fail if your segments are incorrect etc. Don't even think about debuggers: no debugger I know of can follow a 386 into protected mode. A 386 emulator might do the job, or some heavy hardware, but that isn't usually feasible.

What I used was a simple killing-loop: I put in statements like

```
die: jmp die
```

at strategic places. If it locked up, you were ok, if it rebooted, you knew at least it happened before the die-loop.

Alternatively, you might use the sound io ports for some sound-clues, but as I had no experience with PC hardware, I didn't even use that. I'm not saying this is the only way: I didn't start off to write a kernel, I just wanted to explore the 386 task-switching primitives etc, and that's how I started off (in about April-91).

After you have a minimal system up and can use the screen for output, it gets a bit easier, but that's when you have to enable interrupts. Bang, instant reboot, and back to the old way. All in all, it took about 2 months for me to get all the 386 things pretty well sorted out so that I no longer had to count on avoiding rebooting at once, and having the basic things set up (paging, timer-interrupt and a simple task-switcher to test out the segments etc).

2) Can you test the kernel functionality by running it as a process on a different OS? Wouldn't the OS(the development environment) generate exceptions in cases when the kernel (of the new OS) tries to modify 'privileged' registers?

Yes, it's generally possible for some things, but eg device drivers usually have to be tested out on the bare machine. I used minix to develop linux, so I had no access to IO registers, interrupts etc. Under DOS it would have been possible to get access to all these, but then you don't have 32-bit mode. Intel isn't that great - it would probably have been much easier on a 68040 or similar.

So after getting a simple task-switcher (it switched between two processes that printed AAAA...and BBBB...respectively by using the timer-interrupt - Gods I was proud over that), I still had to continue debugging basically by using printf. The first thing written was the keyboard driver: that's the reason it's still written completely in assembler (I didn't dare move to C yet - I was still debugging at about instruction-level).

After that I wrote the serial drivers, and voila, I had a simple terminal program running (well, not that simple actually). It was still the same two processes (AAA..), but now they read and wrote to the console/serial lines instead. I had to reboot to get out of it all, but it was a simple kernel.

After that it was plain sailing: hairy coding still, but I had some devices, and debugging was easier. I started using C at this stage, and it certainly speeds up development. This is also when I start to get serious about my megalomaniac ideas to make "a better minix that minix". I was hoping I'd be able to recompile gcc under linux some day...

The harddisk driver was more of the same: this time the problems with bad documentation started to crop up. The PC may be the most used architecture in the world right now, but that doesn't mean the docs are any better: in fact I haven't seen /any/ book even mentioning the weird 386-

387 coupling in an AT etc (Thanks Bruce).

After that, a small filesystem, and voila, you have a minimal unix. Two months for basic setups, but then only slightly longer until I had a disk-driver (seriously buggy, but it happened to work on my machine) and a small filesystem. That was about when I made 0.01 available (late august-91? Something like that): it wasn't pretty, it had no floppy driver, and it couldn't do much anything. I don't think anybody ever compiled that version. But by then I was hooked, and didn't want to stop until I could chuck out minix.

3) Would new linkers and loaders have to be written before you get a basic kernel running?

All versions up to about 0.11 were cross-compiled under minix386 - as were the user programs. I got bash and gcc eventually working under 0.02, and while a race-condition in the buffer-cache code prevented me from recompiling gcc with itself, I was able to tackle smaller compiles. 0.03 (October?) was able to recompile gcc under itself, and I think that's the first version that anybody else actually used. Still no floppies, but most of the basic things worked.

After 0.03 I decided that the next version was actually useable (it was, kind of, but boy is X under 0.96 more impressive), and I called the next version 0.10 (November?). It still had a rather serious bug in the

buffer-cache handling code, but after patching that, it was pretty ok. 0.11 (December) had the first floppy driver, and was the point where I started doing linux developement under itself. Quite as well, as I trashed my minix386 partition by mistake when trying to autodial /dev/hd2.

By that time others were actually using linux, and running out of memory. Especially sad was the fact that gcc wouldn't work on a 2MB machine, and although c386 was ported, it didn't do everything gcc did, and couldn't recompile the kernel. So I had to implement disk-paging: 0.12 came out in January (?) and had paging by me as well as job control by tytso (and other patches: pmacdona had started on VC's etc). It was the first release that started to have "non-essential" features, and being partly written by others. It was also the first release that actually did many things better than minix, and by now people started to really get interested.

Then it was 0.95 in March, bugfixes in April, and soon 0.96. It's certainly been fun (and I trust will continue to be so) - reactions have been mostly very positive, and you do learn a lot doing this type of thing (on the other hand, your studies suffer in other respects :)

Linus

 **FREE SOFTWARE**
FOUNDATION

PCLinuxOS

Users Don't
Text
Phone
Web Surf
Facebook
Tweet
Instagram
Video
Take Pictures
Email
Chat
While Driving.

Put Down Your
Phone & Arrive
Alive.

Linux Birthday Trivia & Fun Facts

by **Paul Arnote (parnote)**

Reprint from August 2016 issue

Updated for the August 2026 issue

Here are some interesting facts and tidbits about our favorite operating system, certain to tickle the curiosity of even the most casual Linux user.

The original name wasn't what we know today. Linux had been previously considered and rejected by Linus Torvalds as possibly being seen as too egotistical. The original name was to be Freax, formed by the words free and freak (the latter an homage to the name applied to computer nerds of the day), with the "x" alluding to Unix.

The name change from Freax to Linux came about when Ari Lemmke, a coworker of Linus Torvalds at the Helsinki University of Technology and a volunteer administrator of the FTP server, didn't think "Freax" was a good name. So, without consulting Torvalds, he changed the name of the project to "Linux" on the server. Linus later consented to the name change.

The first release of the Linux kernel, 0.01, contained 10,239 lines of code.

The latest Linux kernel (7.2) has over 43,000,000 (yes, million) lines of code, contributed by over 4,000 corporations, individuals and maintainers. But not all of those lines are compiled into the kernel. Some sections are old and unused, others exist to facilitate portability, some are experimental, and others just aren't needed for every system.



The Linux kernel source code, being as large as it is, has its share of "bad words." The latest count, which goes up through kernel 4.5.4, kind of goes like this. (Note: this is the latest count of this type that I'm aware of). There are 179 incidences of a word that refers to human excrement (rhymes with map), and 136 that refer to another word for human excrement (rhymes with bit). There are 41 occurrences of another word referring to coitus (rhymes with truck), 24 occurrences of another word that refers to an illegitimate male child (rhymes with mastered), and six occurrences of another word that refers to urination (rhymes with miss).

Similarly, the Linux kernel has its share of "good words." Once again, the latest count goes up through kernel 4.5.4 (again, the latest count of this type that I'm aware of). There are 4,332 occurrences of the word "good" in the Linux kernel. The word "nice" shows up 1,363 times. The word "love" occurs 658 times, while "kiss" appears 229 times, and "sweet" appears 71 times.

Linux isn't just developed by aging nerds hacking away in their parent's basement. Over 80% of Linux development comes from paid developers working for a number of corporate entities.

Some of those corporate contributors to Linux development include some surprises. Microsoft has even contributed to Linux development, to help ensure that Linux users are able to utilize Azure and Hyper-V efficiently. Other top corporate contributors include Red Hat, Suse, Novell, Oracle, Linaro, Samsung, HP, Broadcom, IBM, and Intel among the mix.

Microsoft's contribution of 22,000 lines of code to the Linux kernel in 2009 wasn't so much an altruistic move (as is commonly portrayed), as it was a move to help Microsoft avoid legal troubles. It was discovered that Microsoft had used GPL code in a closed source Hyper-V

network driver, which is in direct violation of the GPL. To remedy the situation, Microsoft contributed the drivers to Linux. It was portrayed by Microsoft as a charitable act, but was more intended to help Microsoft avoid legal entanglements.

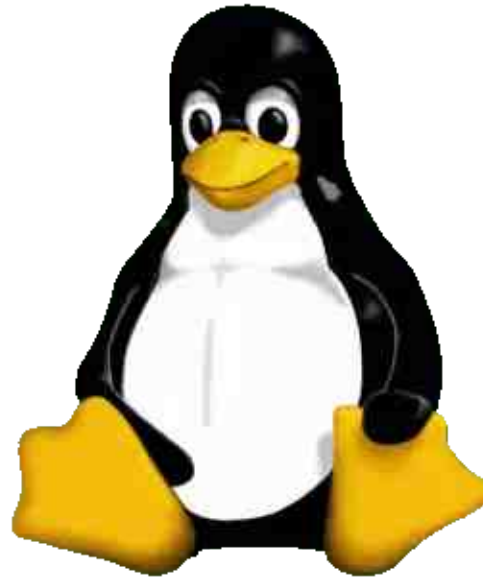
In 2009, the 22,000 lines of code contributed to the Linux kernel made Microsoft one of the largest contributors. By 2011, they had fallen to 17th. By 2015, they were no longer even in the top 30 contributors.

The animosity between Microsoft and the Linux community is nothing short of legendary. The tension climaxed between 1998 and 2004 when internal confidential Microsoft documents, known as the [Halloween Documents](#), were released. These documents branded Linux a threat to the Microsoft platform and their business model. You can read them, in their entirety and with annotations, by following the link included above. Even the infamous Steve Ballmer branded Linux a “cancer” and “communist.”

Correctly or not (a hotly debated topic), those Halloween Documents assert that Linux’s market penetration is greater than that of Apple’s Macintosh computers, and that there are more Linux users than Mac users.

In 1996, Linus Torvalds announced that a penguin would be the official mascot of Linux.

He decided on a penguin after being bitten on the finger by a small penguin at the National Zoo & Aquarium in Canberra, Australia.



Tux, the Linux mascot, was created by Larry Ewing when, as he states, he should have been studying for finals at college. Ewing is a developer on the Gimp team, and assists with the development of F-Spot, Evolution, and GtkHTML. You can view his story about the creation of Tux [here](#). Ewing, who lives in Austin, Texas, created Tux in Gimp 0.54. Neal Tucker created a scalable graphics version of Tux based on the black and white version that was drawn in Gimp. PC World also ran an article in 2003 (although I can no longer find a link to the article) about Tux becoming the logo/mascot for Linux.

Over 95% of the world’s supercomputers run Linux.

Android, Google’s mobile operating system based on Linux, is fast becoming the world’s most popular operating system. Besides Android, the Google Chrome operating system that runs on Chromebooks runs on the Linux kernel.

Chances are high that the menu system in your DVD player, BluRay player, and modern TV are run by an embedded Linux operating system. Linux is also making huge inroads on IoT (Internet of Things) appliances. Furthermore, you’re likely to see Linux in your new cars in the very near future, as most major automotive manufacturers have embraced a new, robust “automotive Linux” standard.

Linux forms the backbone of the internet, with over 95% of servers (overall) running Linux, and with over 57% of websites running on Linux servers.

Thanks to the security built into Linux, there are NO viruses in the wild for Linux. Occasionally, security vulnerabilities are found (there is no such thing as a 100% secure operating system), but those vulnerabilities are typically patched and closed within just a few days of their discovery. All Linux virus reports are simply “proof of concept” viruses conducted in a laboratory, and typically don’t exist in the wild.

In the lab, certain criteria must be met in order for the virus to even have a chance to infect a system, and that criteria would almost never exist in the wild (hence the reason to NEVER run your computer as root, except for periodic maintenance tasks).

Distrowatch [lists](#) 467 different Linux distros. PCLinuxOS currently ranks as the 37th “most popular” Linux distro.

As of 2006, Linus Torvalds had written about two percent of the Linux kernel code. Despite the seemingly small percentage, it makes him one of the largest contributors, considering that thousands of people have made contributions. Today, he is the maintainer of the Linux kernel, merging code into the kernel from other contributors. Torvalds has final say over what gets included, what is omitted, and what is eliminated.

Linus Torvalds was granted the trademark to the Linux name after several people from different countries attempted to trademark the name in 1994 and 1995. Torvalds subsequently transferred the Linux trademark to Linux International. Today, the trademarked name is protected by the Linux Mark Institute.

Linus Torvalds has become a legend not only for creating Linux, but also for his responses to Linux kernel contributors on the Linux kernel mailing list. In person, he’s not much better.

Let’s just say that Torvalds isn’t afraid to say the first thing that pops into his head, and ... well ... simply doesn’t have much of a filter. He simply isn’t afraid to call it as he sees it. Whether you agree or disagree with his tactfulness (or lack thereof), it certainly keeps things interesting.

Since its inception on the Intel 386 processor in 1991, Linux has been ported to most every other computer platform.

The [corporate membership](#) of the Linux Foundation reads like a who’s who of leading corporations from across many walks and disciplines. They include IBM, NEC, Google, Adobe, Mazda, Hitachi, Samsung, Toshiba, Toyota, AMD, Intel, Bosch, Denso, Honda, Epson, Cisco, HP, Fujitsu and many, many others. There are over 2,200 corporations and entities that have signed on as sponsors of Linux.

The Linux kernel is released under the GNU GPLv2 license. Torvalds and many of the other kernel developers decided against adopting the newer GNU GPLv3 license when it was released in 2007.



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Using Geany As A Typst Editor

by David Pardue (kalwisti)

Introduction

In the Typst community, the general consensus is that the official [Typst web app](#) and/or VSCode [VSCodium] plus the Tinymist extension offer the smoothest writing experience. (VSCodium with the Tinymist extension bundles everything you need, and it is updated frequently. It includes instant preview, monitors your source file for changes and a jump-to-location feature which allows you to jump between the Typst source file and the corresponding location in the Preview pane.) However, if you have a [local Typst installation](#), you may use other editors if you wish. One alternative is [vim with the Typst plugin](#). I will discuss another option in this article: Geany in conjunction with the Typst CLI (Command-Line Interface).

Geany is a popular, versatile text editor and IDE (Integrated Development Environment) based on the GTK3 toolkit. Geany does not have native support for Typst files at the moment. User [elextr](#) on GitHub [explained](#) that file types for new programming languages are not added to Geany by plugins; rather, they are built in. Although it is possible to customize a file type if an existing markup is "close enough" to the syntax, but for a markup language with its own syntax — like Typst — such customization is difficult and probably unlikely. Nevertheless,

the procedure described below offers a writing environment with less distractions that some users might find appealing.

This method uses Geany along with the Typst CLI, and a separate PDF viewer (as the external Preview app), to edit your local Typst files. The preview is asynchronous, i.e., not simultaneous, but after you make an edit in Geany and save your file, the PDF will auto-update.

If you make a syntax error in your Typst source file, the PDF will not compile. You can then check output in the Terminal (where the Typst CLI is running) for detailed error messages about the problem and how to fix it.

Prerequisites

Check that you already have these packages installed on your system:

- The Typst pre-built [binary](#). (You should download and install the most recent version, 0.15.1, released on July 17, 2026.) My [previous article](#) explains how to install the Typst compiler locally on PCLinuxOS.
- Geany
- A PDF viewer (such as Okular, Evince, Atril, etc.)

Note: This procedure was tested within PCLinuxOS MATE and Openbox. However, it should work identically with the KDE Plasma and Xfce editions.

Steps to Follow

- First, generate a PDF file by opening your Typst source file in a Terminal, and issuing the command:

```
typst compile your-filename.typ
```

- Leave the Terminal open after the PDF is compiled.
- Open the Typst-generated PDF with your favorite PDF Viewer (Evince, Atril, Okular).
- Leave the PDF Viewer open on your desktop.
- Open your Typst source file in Geany.

Optional: If you wish to add a bit of color syntax highlighting to the displayed source file, you can set the document's filetype to **Markdown source file**. The syntax highlighting is minimal compared to the detailed highlighting that you see in VSCode; however, it adds some welcome visual contrast to the Typst source file (personal opinion).

To do this, from Geany's **Document** menu > choose **Set Filetype** > then select **Markup**

Using Geany As A Typst Editor

Languages > and click the radio button beside Markdown source file.

- Go back to your open Terminal and issue the command:

```
typst watch your-filename.typ
```

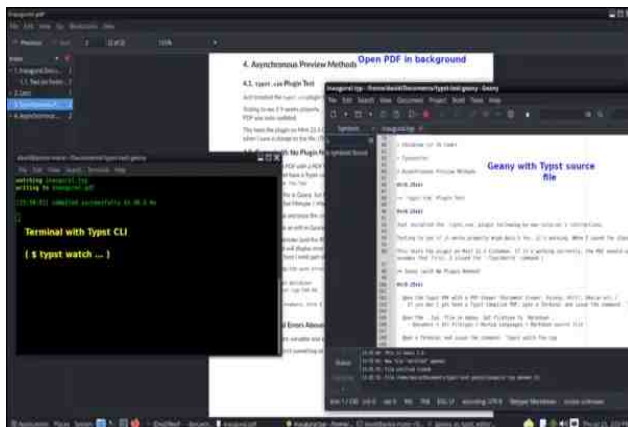
You should see output similar to this:

```
watching your-filename.typ
writing to your-filename.pdf
[18:55:54] compiled successfully in
5.59 ms
```

The **watch** command monitors the input file and its dependencies for changes and automatically recompiles to PDF.

- Continue to leave your Terminal open.
- When you make an edit in Geany and save your file, the PDF will auto-update.

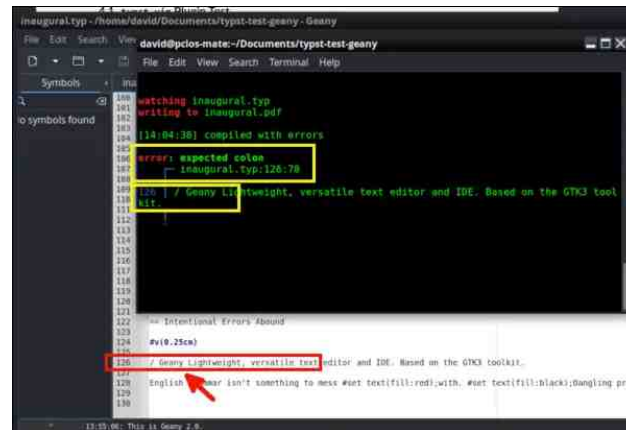
The screenshot below gives you an idea of how this arrangement looks. (To reduce clutter, you can minimize windows as needed.)



Dealing with Errors

If you make a syntax error in your Typst source file, the PDF will not compile. You can then check output in the Terminal (where the Typst CLI is running) for detailed error messages about the problem and how to fix it.

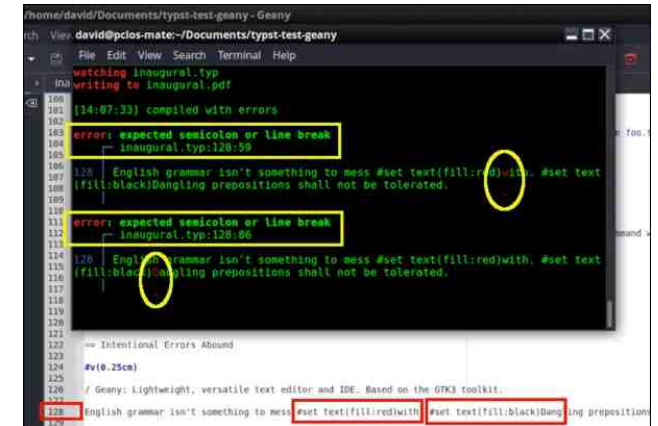
In the example below, I intentionally omitted the required colon in the term list. (It should be " / **Geany**:" rather than " / **Geany**"). The Terminal output displays an error message "expected colon" as well as indicating the line number (126) of the error:



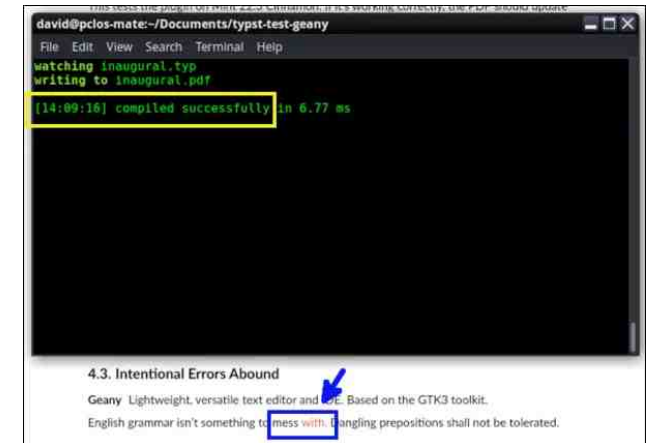
A more complicated example shows that error messages sometimes flag the precise location within a line. The **#set** command to change the text color to red should end with a semicolon in this instance: **#set text(fill:red);**with (instead of the incorrect " **#set text(fill:red)**with ").

Another **#set** command switches the text color back to black.

The Terminal output helpfully displays the location of the missing semicolons:



Once you have corrected these two minor mistakes and saved your change, the Typst source file will compile successfully to PDF:



Conclusion

Although editing Typst files with Geany sounds cumbersome and lacks real-time preview, it

works well. Some users may find it less distracting than working with VSCode/VSCodeium.

This approach has the advantages that no external utilities — such as the Tynmist extension — are needed; in addition, people who feel intimidated by vi(m) may appreciate a user-friendly, GUI text editor such as Geany.



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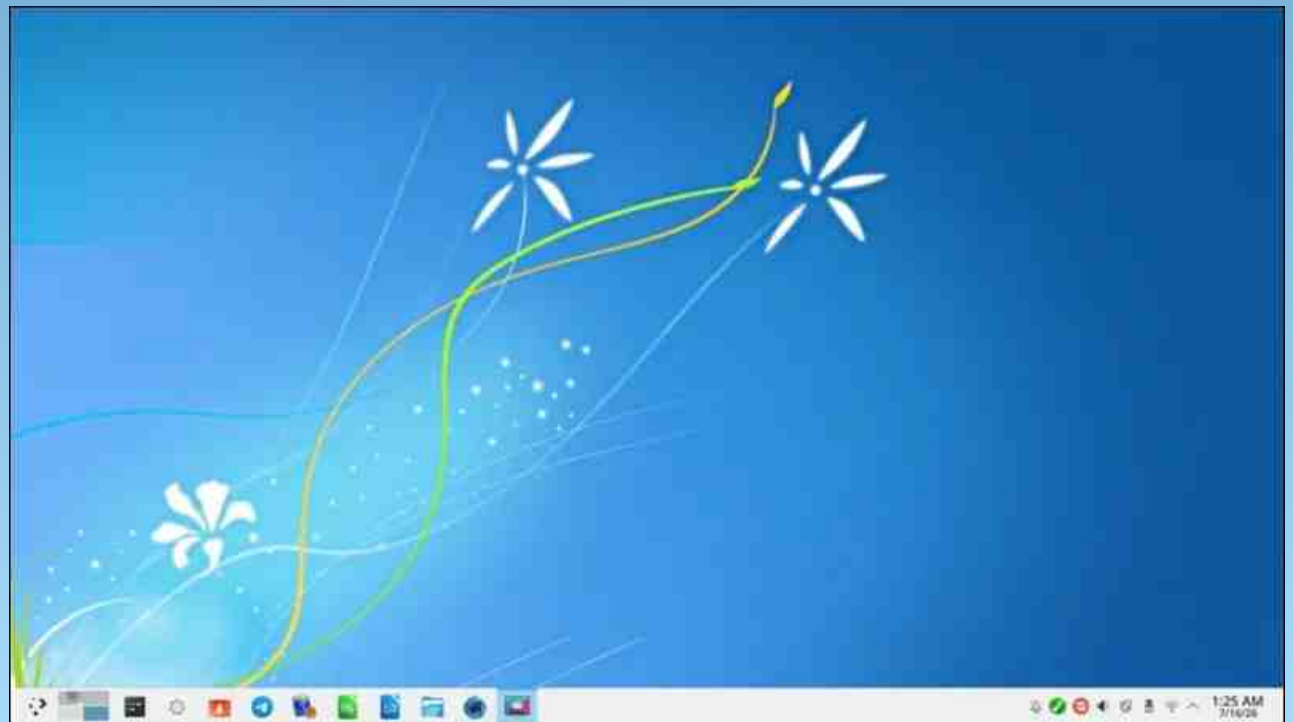
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Screenshot Showcase



Posted by Edward, July 16, 2026, running KDE.

The MP4 Patent Has Expired!

by Alessandro Ebersol (Agent Smith)

Yay!!! The MP4 patent has expired!!! But it's not quite that simple...



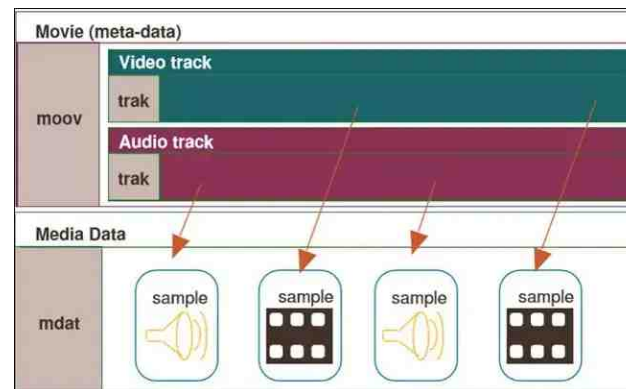
The world's most widely used video codec, MPEG-4, saw its patents expire on July 19, 2026, in Brazil—the last country where those patents were still valid.

Is this cause for celebration? Undoubtedly, but let's not get too carried away—we need to make a few distinctions here. It's great news, but it's not quite what you, dear reader, are thinking. So that we can understand what happened and what might still happen, we need to look at the history of MP4 and what it is.

What is the MP4 format?

MP4, short for MPEG-4 Part 14, is not just a file extension: it is a revolutionary container format

that has transformed the way we store and share multimedia content. Unlike traditional formats that focus exclusively on video or audio, MP4 is a versatile container that can store various types of data, including video, audio, images, and subtitles. Think of it as a digital Swiss Army knife, capable of encapsulating all the elements needed for a seamless multimedia experience. In other words, a file with the .mp4 extension is a container, just like the Matroska (MKV) format.



MP4 file structure

How did MP4 come about?

As we saw above, MP4 is a container format, not a codec. As a container, it supports various codecs: VP9, H.264, AV1, and others.

The MP4 format originated from Apple's QuickTime format, which was adapted and standardized by ISO as part of the MPEG-4 specification. The initial standard, ISO/IEC

14496-14, was published in 2003 and built upon the ISO Base Media File Format. This shared foundation means that MP4, MOV, and 3GP files are structurally similar.

MP4 achieved dominance in the mid-2000s, when H.264 video compression became the standard for web video, Blu-ray discs, and mobile devices. YouTube, Netflix, and virtually all streaming platforms adopted MP4 with H.264 as their primary distribution format. The introduction of H.265/HEVC in 2013 brought further compression improvements, cutting file sizes in half while maintaining the same quality.

The MP4 standard was managed by the MPEG LA consortium, a private, independent company founded in 1996 with the goal of licensing MPEG patents. In 2023, MPEG LA was acquired by [VIA Licensing Group](#), which now controls the MP4 patents.

However, don't get too excited. The MP4 standard whose patent has expired isn't the one everyone uses today. Once again, we need to explain how the MP4 standard is structured.

The various MP4 files

There are two different MPEG-4 video standards, and their patent statuses are completely different:

MPEG-4 Part 2 (ISO/IEC 14496-2) is the codec used by **DivX, Xvid, and Nero Digital**. It was standardized in 1999 and uses block-based motion compensation with the discrete cosine transform. This is the codec whose patents expired on July 19, 2026. It is now completely patent-free.

MPEG-4 Part 10 (ISO/IEC 14496-10), also known as **H.264 or AVC**, is a completely different codec, standardized in 2003. It is currently the most widely used video codec, found on Blu-ray discs, streaming services, and television broadcasts. H.264 is still largely protected by patents and managed by the Via Licensing Alliance. Its patents will not fully expire until the 2030s.

In other words, the patent that expired was for the DivX and Xvid codecs—a family of codecs that fell out of use after the advent of the H.264 codec and, more recently, H.265.

On July 19, 2026, the patents related to MPEG-4 Part 2 expired. The last one to expire belonged to **Siemens AG** and was in effect only in **Brazil**. The VIA Licensing Alliance has already taken down the webpage dedicated to it, which remained online until July 18, one day before the expiration date.

What Can We Expect Now from Audio and Video Patents?

The expiration of the MPEG-4 Part 2 patent is just one event in a series of events to come.

H.264/AVC, which replaced it, has its own patent portfolio; the last major H.264 patent in the U.S.—US 7826532—is set to expire on or around **November 29, 2027**. This does not mean that H.264 will immediately become free of restrictions everywhere; just as with MPEG-4 Part 2, some jurisdictions will take time to catch up with this change, and the exact geography of the expiration will need to be tracked on a patent-by-patent basis.

HEVC/H.265, which offers a bit rate reduction of approximately 40 to 50 percent compared to H.264 at the same quality, presents a substantially more complex patent landscape. Several consortia manage HEVC patents, including Access Advance, Via Licensing, and Velos Media, with the Access Advance consortium alone covering more than 27,000 patents. Access Advance has imposed a 25% increase in fees for new licensees effective January 2026. HEVC patents extend well **beyond 2030**.

Since the transmission of multimedia content was crucial to the development of the internet, a consortium, the Alliance for Open Media, was created, supported by companies such as Google, Mozilla, Amazon, and Netflix, which declared AV1 royalty-free. There is a Sisvel patent pool, but as of mid-2026, no user relying solely on software had been charged royalties for AV1. For active streaming and encoding work, H.264/AVC remains the de facto standard in the short term, with AV1 becoming the preferred option in cases where both bandwidth efficiency and royalty-free status are required.

AV1 was developed specifically to circumvent this cycle, incorporating only techniques that are old enough to no longer be protected by patents or that were contributed royalty-free by AOM members. The tension between HEVC's technical efficiency and its complexity in terms of patents, compared to AV1's royalty-free status and its nearly comparable efficiency, has shaped streaming platforms' codec choices in recent years and will continue to do so throughout the extended term of HEVC's patents.

So, are we going to do a lot of encoding with DivX/Xvid now?

Although the expiration of the DivX/Xvid codec patents is good news, these codecs have long since been technically surpassed by the H.264/H.265 codecs, to the point where it is no longer advantageous to encode new videos with them. However, this isn't always the case. There are situations where the DivX/Xvid codec can still be used today.

Use DivX/Xvid when you need compatibility with older devices that only support DivX or Xvid playback, you're archiving content for older hardware, or you're maintaining media servers that serve outdated smart TVs and DVD players. A drawer full of DivX-certified DVD players that only recognize this codec is a common scenario. The codec is also useful for testing and development scenarios where a simple, well-known encoding target is required.

Good Words, Good Deeds, Good News

compiled by Meemaw

Firefighter Saves Three Children Trapped Under A Boat



Firefighter Jason was spending time with his daughter at a Texas lake on July 4th when he noticed two other boats in the water, and people waving to him. When he swam over to them, he noticed a third boat, which was overturned, and the people yelling, “Our babies are under there!”

He swam under the boat and found two children, one responsive and one not, so he dragged them out and began CPR on the non-responsive child. He was then told there was an additional child, which he didn’t find. By then some other Good Samaritans had arrived and found the third child, unresponsive. Jason began

CPR on him, and Emergency Services got them all to the hospital, where it’s reported that they have all recovered.

10-Year-Old California Girl Hailed a Hero for Saving Entire Family from House Fire



Ten-year-old Lizzie woke up when the power went out. Looking around, she saw that the house was on fire, and she started screaming, waking everyone up. Her brother Lucas also started screaming and helping get everyone out.

The fire department believes that the fire started on the porch and climbed up the power lines, catching the rest of the house quickly.

Lizzie’s mother went on to say that the fire destroyed nearly everything they owned. “Fourteen years, dude. Everything’s gone,” she

said through tears. “All of the pictures, all of my kids’ school pictures, their baby pictures, their sonograms. My wedding pictures are gone. Just everything’s gone.”

All seven relatives — four adults and three children — escaped the home safely, but the house fire completely destroyed the residence and killed the family’s dogs and one cat.

Remains Of Pearl Harbor Sailor Finally Buried



Fireman 3rd Class Royle Luker was buried at the end of May in his hometown of Plainview, Arkansas, where he grew up before enlisting in June 1941.



Luker, who was the son of a World War I veteran, will be buried with full military honors at New Bethel Cemetery, and his remains are being returned home more than 84 years after his death, per [Fox News](#). The outlet noted that modern forensic testing and DNA analysis confirmed his identity through living relatives.

Luker was aboard the USS West Virginia during the attack that killed 105 of its crew members on December 7, 1941. The vessel was hit by several torpedoes and sank at Ford Island, the Stripes article continued, citing a press release from the Navy.

According to the Fox article, Luker reportedly received several military honors for his sacrifice. Those included the Purple Heart and the Navy Presidential Unit Citation which recognizes extraordinary heroism.

The men in the battleships were trapped inside with live ammunition and the technology of the day had no provisions for their rescue. Rescue crews had to stand by helplessly while their shipmates perished.

Over the years, as technology has improved, soldiers interred as Unknown in Hawaii have been exhumed, identified, and returned home for proper burial.

Teacher Adopts Former Student

When Jackie was teaching at an elementary school a few years ago, she met eleven-year-old



Jaden. During the year, she got to know him and learned that he was in foster care, but he wasn't eligible for adoption until 2025.

She was determined to adopt him, and so she completed all the paperwork necessary to be ready when he could be adopted.

The little boy expressed his feelings over becoming part of the Coombe family by stating, "I got a mom!"

"While the adoption process may be challenging, the outcome is worth it. Whether it's welcoming your first child or expanding your family, joy knows no bounds. Each day as a parent becomes brighter, and the future brims with promise with the addition of a child," the [All For Kids](#) site reads.

Social Media Star Raises \$680,000 For Woman



Debbie and Spencer in the overgrown lawn credit, SB Mowing, via GoFundMe

Once a week, Spencer from SB Mowing mows an overgrown yard for free and puts the video on social media. In June, he met Debbie, who had been through a series of misfortunes. Her husband died from cancer, after she was his caregiver for several months. She hired a contractor to trim some trees, giving him a \$2,000 deposit, and he never showed up. Then her neighbor wrecked her car and didn't pay for it. Then she fell behind on her rent, and she went without food and medicine because she couldn't afford it, or food for her dog.

According to [KAKE News](#) in Wichita, an Uber driver who took Debbie home from the grocery store reached out to Spencer and explained the elderly woman's situation.

Into this mess of misfortune and overgrown grass went Spencer, who listened to her story and, with his father's help, proceeded to clean up her yard for free. After that, he started a

[GoFundMe](#) for Debbie to help her get up-to-date on her bills. The money goes into a trust which has Debbie as the beneficiary. In addition, he took a chest of items she had packed to sell, gave it to Habitat for Humanity, and brought her back the money.

Editor's Note: I saw this video on social media and was really touched by the kindness shown to Debbie and the generosity of the people who donated.



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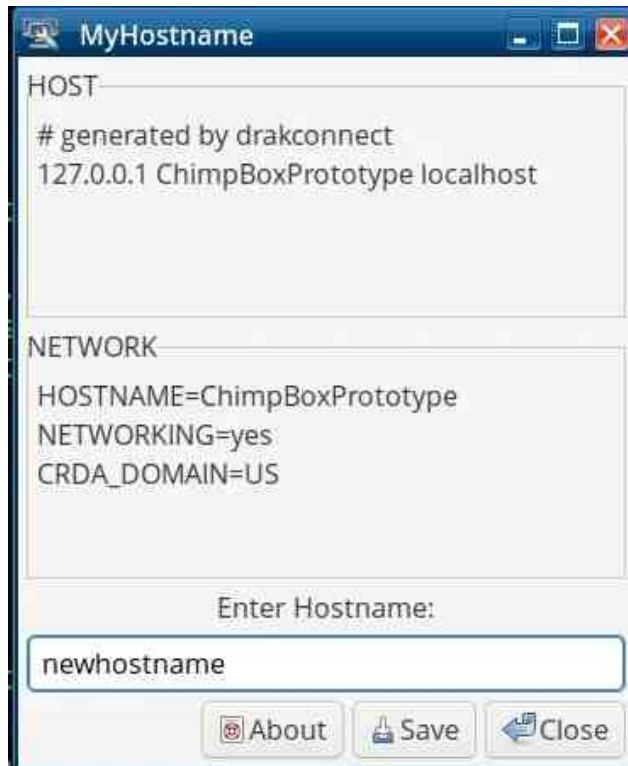
Posted by Texstar, July 12, 2026, running KDE.

Wiki Pick: How To Change Your Hostname In PCLinuxOS

Applies to all versions of PCLinuxOS

The easiest way to change your host name in PCLinuxOS is by installing the file called **myhostname** in Synaptic.

Once installed you can run the program from the PCLOS menu, select **Configuration** and then click on **Configure your hostname**.



Now enter your new hostname in the **Enter Hostname** box and then click **SAVE**. Your

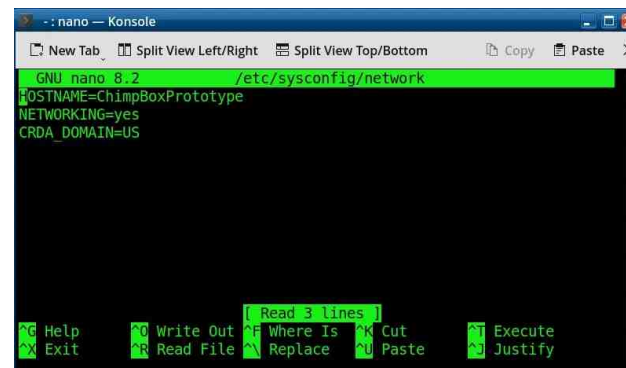
changes will appear the next time your system is started.

Another way using the CLI aka Terminal Window

Open a terminal window as the root user and then using nano (or your favorite text editor) enter:

nano /etc/sysconfig/network

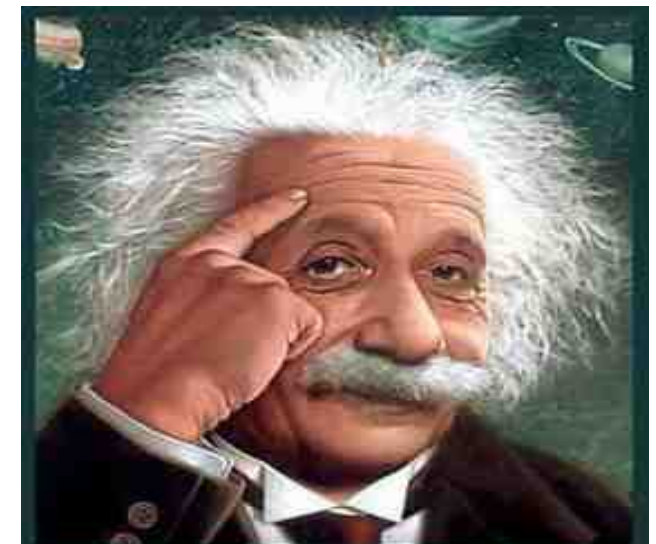
You should see something similar to the following:



Now you can edit the HOSTNAME= to what ever name you would like. When you are done editing the file, simply press the **<CTRL>** and **X** at the same time to exit. It will then ask if you want to **save modified buffer** type in a **y** and press return, it will then display **File Name to Write: /etc/sysconfig/network** simply press the enter key once again. It will write the new data

and return you to the main terminal window. You can now close the terminal window. Now, your new hostname will be displayed the next time you reboot or start your computer.

You can view this PCLinuxOS Knowledgebase Wiki article [here](#).



*It's easier than E=mc2
It's elemental
It's light years ahead
It's a wise choice
It's Radically Simple
It's ...*



PCLinuxOS Recipe Corner Bonus



Bacon Mushroom Swiss Meatloaf

Serves: 6

INGREDIENTS:

12 ounces bacon strips, chopped and divided
1 small white onion, chopped
5 button mushrooms, chopped
1 ½ pounds extra-lean ground beef
¼ cup evaporated milk
1 large egg
6 ounces Swiss cheese, shredded and divided
½ cup corn flake crumbs

DIRECTIONS:

Gather all ingredients. Preheat the oven to 350 degrees F (175 degrees C). Place ingredients in bowls for meatloaf preparation.

Cook and stir bacon in a skillet over medium heat until browned. Transfer to a paper-towel-

lined plate with a slotted spoon; set aside 1 tablespoon bacon. Discard all but 1 tablespoon drippings from the skillet.

Add onion and mushrooms to the skillet; cook until soft.

Combine beef, milk, and egg in a large bowl. Stir in onion and mushrooms. Add about 4 ounces Swiss cheese and all but 1 tablespoon bacon; stir to combine. Stir in cornflake crumbs until well blended.

Shape into a loaf; place in a meatloaf pan.

Bake in the preheated oven for 1 hour. Drain fat; sprinkle with remaining 2 ounces Swiss cheese and reserved 1 tablespoon bacon. Continue baking until the cheese is melted, about 5 minutes.

Let the meatloaf rest for a few minutes to make it easier to slice. Enjoy!

NUTRITION:

Calories: 696	Carbs: 11g	Fiber: 0g
Sodium: 683mg	Protein: 38g	



*The PCLinuxOS
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PCLinuxOS Puzzled Partitions

	3		4				7	
	8				3		6	9
				2				8
6			8				2	3
7							9	
				5	7			
1				4	6			5
						9		
	7		5				4	

SUDOKU RULES: There is only one valid solution to each Sudoku puzzle. The only way the puzzle can be considered solved correctly is when all 81 boxes contain numbers and the other Sudoku rules have been followed.

When you start a game of Sudoku, some blocks will be pre-filled for you. You cannot change these numbers in the course of the game.

Each column must contain all of the numbers 1 through 9 and no two numbers in the same column of a Sudoku puzzle can be the same. Each row must contain all of the numbers 1 through 9 and no two numbers in the same row of a Sudoku puzzle can be the same.

Each block must contain all of the numbers 1 through 9 and no two numbers in the same block of a Sudoku puzzle can be the same.



SCRAPPLER RULES:

1. Follow the rules of Scrabble®. You can view them [here](#). You have seven (7) letter tiles with which to make as long of a word as you possibly can. Words are based on the English language. Non-English language words are NOT allowed.

2. Red letters are scored double points. Green letters are scored triple points.

3. Add up the score of all the letters that you used. Unused letters are not scored. For red or green letters, apply the multiplier when tallying up your score. Next, apply any additional scoring multipliers, such as double or triple word score.

4. An additional 50 points is added for using all seven (7) of your tiles in a set to make your word. You will not necessarily be able to use all seven (7) of the letters in your set to form a "legal" word.

5. In case you are having difficulty seeing the point value on the letter tiles, here is a list of how they are scored:

0 points: 2 blank tiles

1 point: E, A, I, O, N, R, T, L, S, U

2 points: D, G

3 points: B, C, M, P

4 points: F, H, V, W, Y

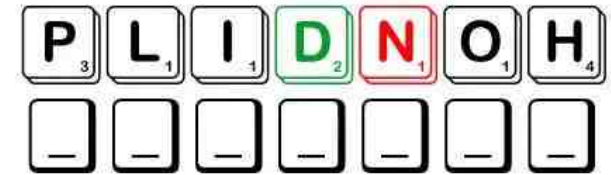
5 points: K

8 points: J, X

10 points: Q, Z

6. Optionally, a time limit of 60 minutes should apply to the game, averaging to 12 minutes per letter tile set.

7. Have fun! It's only a game!



Triple Word



Double Word



Possible score 247, average score 173.

Download Puzzle Solutions Here

August 2026 Word Find

Swimming Strokes

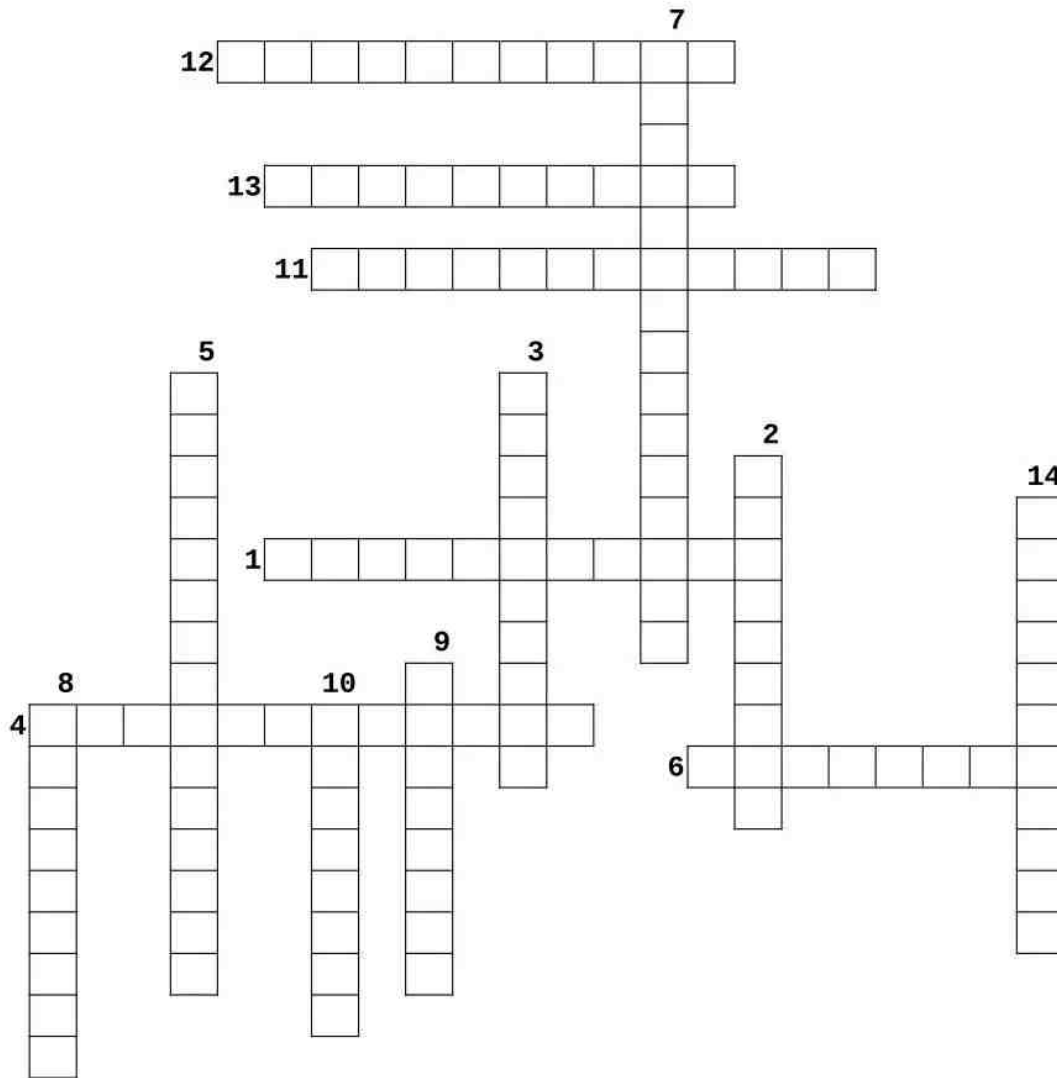
M H A H I N T C P G E K O R T S E D I S A I G R O E G K J J
 H J C F X D Y J Y X E X M U L D P Z G Z Y G K S O H T C A L
 T A F L S N D N E F V F C C M E S X X D Y R T Y Y Y J I R Q
 N V D M J I Z L F L U T T E R K I C K N S C Y C Z D C K E P
 H O M E P F Y B F L K V X A O W I U V T X E R J I O P R T Z
 S V Y D A T I G N I M M I W S M E D N A T A Q X S W N O A I
 M H E L S A D E L I E W Z U S O L K K O W Z M X S L O S W N
 F R V E F F G S J X O S F E P O Z N J L F B W Z B W J S G D
 P O E Y H F K C T E M Q T T G N K B S E O K M V J A P I N I
 I R V R G Q E B G T P I G F J E K T K M R U Y C J R Y C I V
 F R I E T C O R K S C R E W S T R O K E W V Z M R C E S D I
 L F D L L L K H C N E S Y M D O R A I C A E F Q Y S K D A D
 L Y G A A D E W I B Y T L O K T G Z F J R N I F X A O W E U
 O P N Y E Z G S K P O E L E S P B S C Y D N A X F X R B R A
 C U I G N O I J Y U T P B E D A U W Q L C V X J M E T R T L
 O T C J T P B Q E H H B D O L U A D N F R D Q G H T S E J M
 M A A D N S D B K I L I G D G S M E J R A C Y F A U T A E E
 O O R G N Q E K N Z S G N Q V T V R W E W K M Z N N S S G D
 T L K I K Y W K O M Y G I A V R S F S T L R W E D N A T G L
 I F G C V K I J D P G I L Y B A C K S T R O K E O E E S B E
 V H G E L C Y I A C T M L C V L U J A U L X Z O V L R T E Y
 E S Z F K G P D O O K K U C E I I G V B B D A B E S B R A E
 D I E T R U D G E O N U K R O A B W Q O C B P Q R W D O T K
 R F L Z G L P E Y C C G S M T N R Z C E G H K A H I E K E T
 I Y N A E L G I Y N K M H D K C W D W A E N B V A M T E R V
 L L Z S C M F R S Y Q D I I D R G C Q T N K H T N M R H K J
 L L P T A H F Y Y B J T A R Z A N S W I M Q S K D I E P I Z
 U E Y T U O V S G L I L B B O W H Z V M E V A N M N V E C K
 J J S K D X T S I V E K B X P L I G O V V R X T Q G N T K F
 O J Q K R F L I P T U R N Y J P F Y Z T P W Z S T H I A D E

AUSTRALIAN CRAWL	BACKSTROKE
BREAST STROKE	BUTTERFLY
CORKSCREW STROKE	CRAWL STROKE
DOGGY PADDLE	DOLPHIN KICK
DONKEY KICK	EGG BEATER KICK
FLIPTURN	FLUTTER KICK
FORWARD CRAWL	FREESTYLE
GEORGIA SIDESTROKE	HAND OVER HAND
INDIVIDUAL MEDLEY	TUNNEL SWIMMING
INVERTED BREASTSTROKE	
JELLYFISH FLOAT	LOCOMOTIVE DRILL
MEDLEY RELAY	RACING DIVE
SCISSOR KICK	SIDESTROKE
SKULLING	TANDEM SWIMMING
TARZAN SWIM	TEXAS CRAWL
TREADING WATER	TRUDGEON

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August 2026 Crossword

Swimming Strokes



1. A style of swimming where the swimmer moves their arms in an alternating fashion while performing a flutter kick with their legs.
2. Swimming race in which the participants can use any stroke they want.
3. A stroke executed on the back and usually consisting of alternating circular arm pulls and a flutter kick.
4. A stroke performed lying face down in the water in which swimmers use a frog kick and a wide sweeping arm movement.
5. A stroke in which the swimmer kicks twice with one leg for each stroke of the opposite arm.
6. A turn in swimming in which one does a somersault just before reaching an end of the pool so that only the feet make contact with the wall.
7. Alternating between front crawl and backstroke every arm, creating a twisting motion.
8. A stroke in which the arms are thrown forward together out of the water while the feet kick up and down together.
9. A swimming style characterized by alternating overarm movements combined with a scissors kick.
10. Types of arm drills used by competitive swimmers to help build strength and technique.
11. A stroke in which swimmers assume a face-down position while doing a flutter kick with their legs.
12. A swimming kick in which the legs make fast up-and-down movements one after the other.
13. A swimming technique where the swimmer lies on their side, using asymmetric arm and leg motions, with the arms sweeping downward and backward while the legs perform a scissor kick.

[Download Puzzle Solutions Here](#)

Mixed-Up-Meme Scrambler



SYRTT

_ _ _ _

CUROC

_ _ _

KOVINE

_ _ _ _

REPUPA

 _ _ _ _ _

When the boaters landed in the middle
of the lake, they were ...

_ _ the _ _ _ _

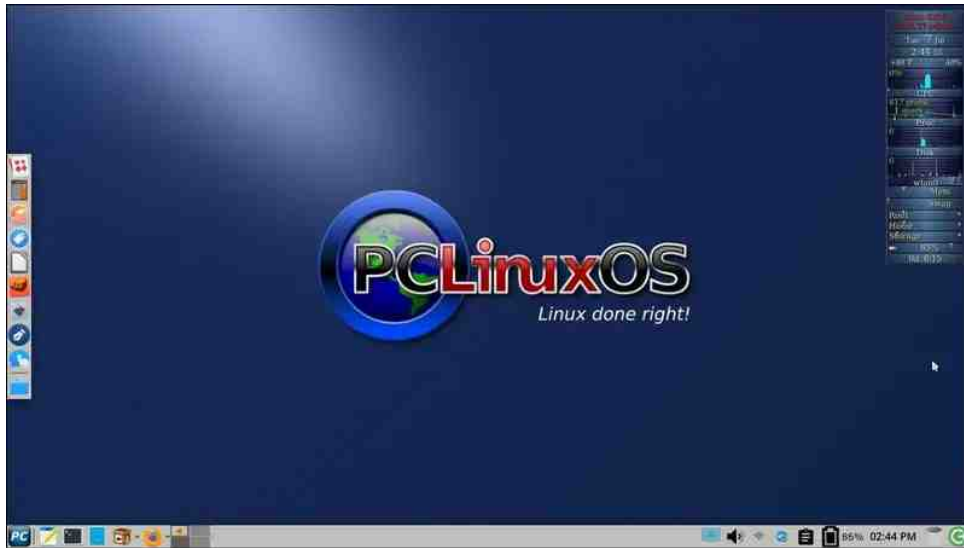
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Inspiration & Motivation

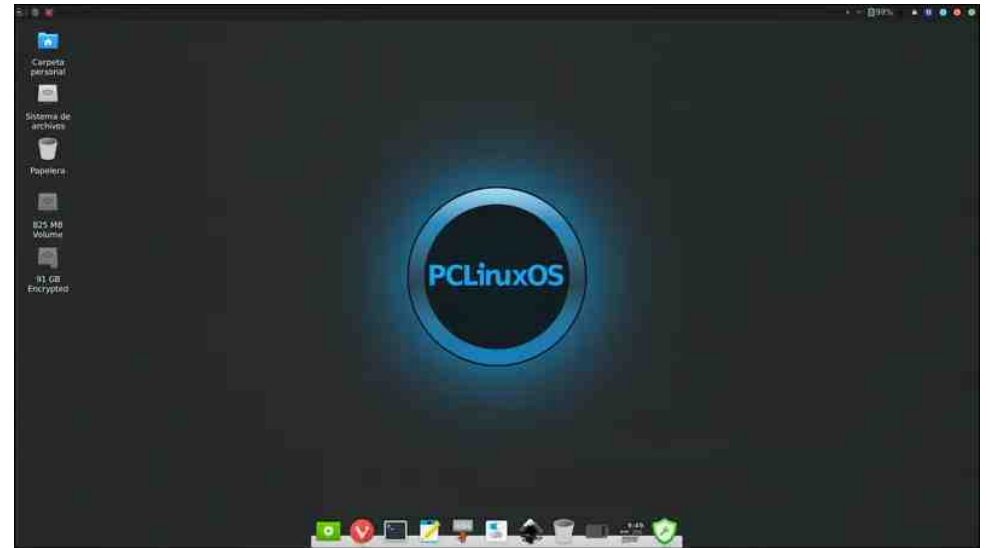


Image by Vilius Kukanauskas from Pixabay

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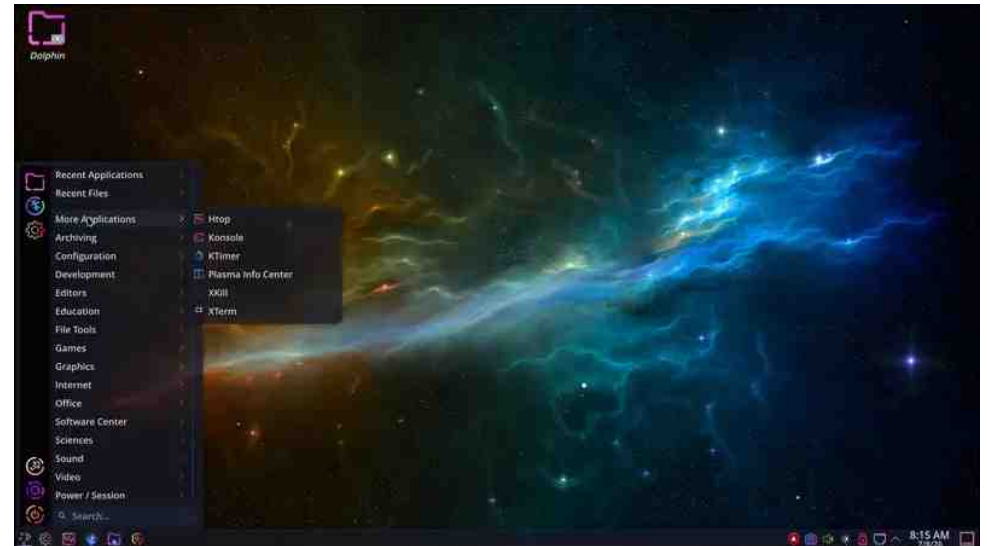
Posted by Meemaw, July 7, 2026, running Xfce.



Posted by secondchancelemon, July 7, 2026, running Xfce.



Posted by parnote, July 7, 2026, running Xfce.



Posted by Zoid, July 8, 2026, running KDE.