HotPicks

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Alexander Tolstoy has a secret trick for correctly spelling the name of this month's opening *HotPick*…

DUPLICATE FILE REMOVER

Czkawka

Version: 3.2.0 **Web:** https://github.com/qarmin/czkawka

Sooner or later most of us will experience a hard drive running out of space. This may be due to the ever-growing assets under the home directory, the abundance of downloaded Linux ISO files, or simply because of too many Flatpaks and Snaps that are known to devour disk space.
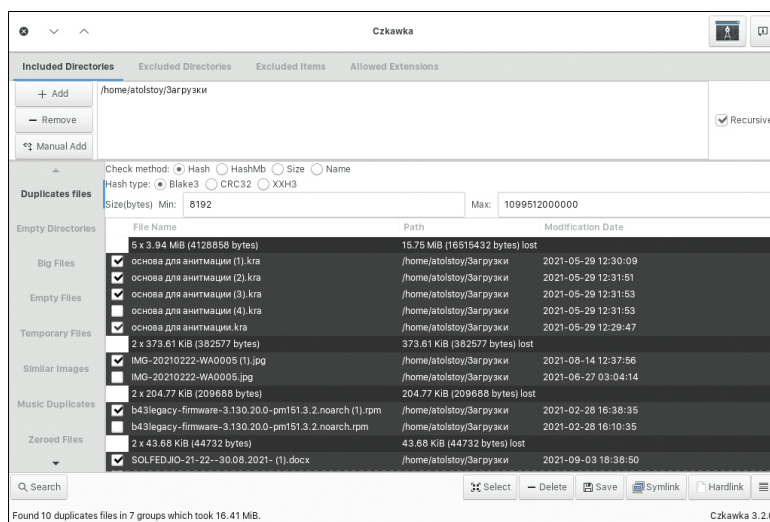
No matter the reason, it's time to figure out what exactly occupies so much space, and as such we're going to go a bit further then simply analysing disk usage with *Baobab* or *Filelight*. *Czkawka* is designed to track down unnecessary files. It enables you to remove file duplicates, large files, empty directories and other stuff that you probably don't need anymore.

The *Czkawka* window has lot of tabs and buttons, yet it doesn't take long to figure out how to use the program. Under the Included Directories column you can add at least one location where *Czkawka* will search for duplicates. Note that you can define how exactly the application will detect similar files: by name, size, or one of several hashing algorithms.

The left-most column in *Czkawka* has categories for other search targets including empty files and directories, big objects, temporary files, zero-size files, broken files and more. One of the more interesting options is Music Duplicates, which helps locate audio tracks that have identical tags. These are not necessarily file duplicates – you may have various versions and performances of the same songs in your music library – but it's still a useful feature.
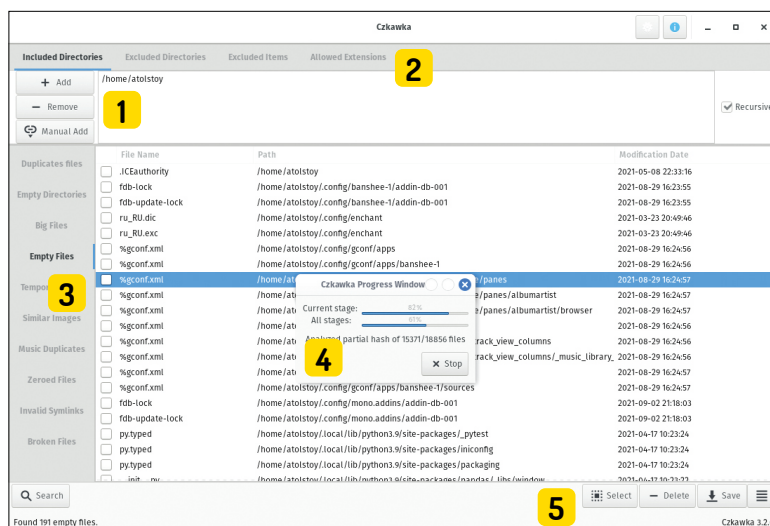
Whatever search target you decide to use, you can further fine-tune *Czkawka* and manually exclude certain directories or items, and even use the whitelist with permitted file extensions. Everything is completely safe since any search query is just a 'dry-run': *Czkawka* will only delete files after you explicitly select them in the search results panel and press Delete. If unsure, press Save and review the search results later on.

With such a solid set of features, *Czkawka* is hands down the best file sweeper available for Linux!

We bet you didn't know your /home dir had so many useless files!

GET TO KNOW THE CZKAWKA INTERFACE

1 Places to search
Add directories where the program will search for files. The Home directory is a good universal variant.

2 Fine-tune the scope
It's possible to exclude files or directories from searching, and also limit the scope by explicitly whitelisting allowed file types.

3 Not just duplicates…
Czkawka supports many search criteria and is able to detect oversized, zero-sized, broken, temporary and many other file types lurking within your system.

4 Perform the scan process
Large directories take a while for Czkawka to chew through, but at least you can keep an eye on the progress window.

5 Time to take action!
The left-most Search button triggers the scan process while the buttons to the right enable you to take action against search results: select, delete, save the list and more.

Cozy

Version: 1.1.2
Web: https://github.com/geigi/cozy

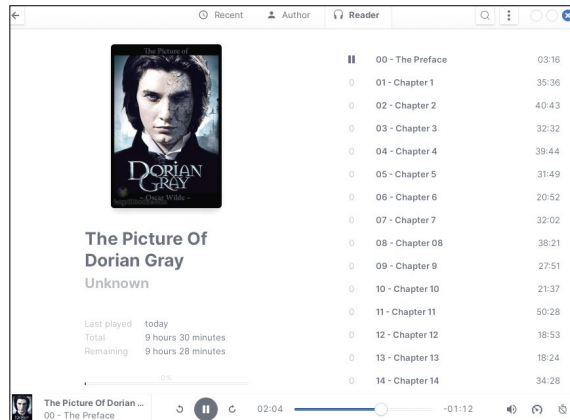Populate your library with audio books and get the most of Cozy, the friendly and polite book reader.

We first treated *Cozy* as yet another audio player as many people listen to audio books with their favourite media player, such as *VLC*, and there's nothing wrong with that. However, *Cozy* ships with a couple of features that were designed specifically for books. You can rewind or skip forward parts of the book by a duration of your choosing.

Cozy is also equipped with a sleep timer. The idea is that if you listen to a book for a long time and eventually fall asleep, *Cozy* will automatically stop after the chapter is over. Additionally, it can suspend or power off your Linux computer when this occurs.

Cozy makes a great effort to gather end users' feedback. When you first launch the application it asks if you want to provide reports in case of errors, and how detailed such reports should be – drag the slider to set the appropriate level.

Next, *Cozy* takes you to the main screen and suggests that you may want to either drag an audio file over the program's window, or specify the directory where your audio books are stored. The application

leaves a distinct feeling of being cozy – not just in its name but also in various details that show the commitment of the development team to improve the user experience.

The *Cozy* interface is optimised for storing lots of books, and much like an advanced music player it has dedicated features to run a music library. There are three main view modes: Recent, Author and Reader. Each mode lists thumbnails of your audio books, and we recommend to make sure you that you have the cover artwork available: either embedded inside audio files, or stored separately. Book covers enhance the whole Cozy experience, and they also help you identify a book more quickly. It's possible to store books in any folder, or in several different folders. *Cozy's* Preferences dialog makes it possible to add as many folders as you like.

Tomatoid5

Version: 0.1
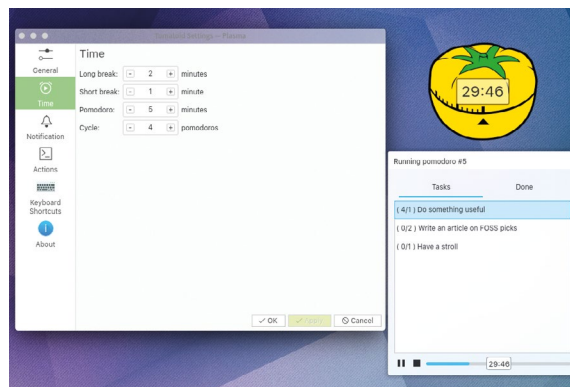**Web:** www.pling.com/p/1574941

Easily manage current and archived tasks, and adjust the work/ rest periods with the assistance of Tomatoid5.

Have you ever found yourself unwilling to start an important project and instead have postponed it? If so, then you're suffering from a bad case of procrastination (*Oh, hi Jonni – Ed*). This is a mildly negative character trait that can be addressed by several techniques.

One such approach is the Pomodoro Technique, created by Francesco Cirillo in the 1980s. He suggested combating those self-initiated delaying tactics by breaking the time into periods of focused work, followed by breaks. A focused work period usually lasts for 25 minutes – something that anyone can measure with a kitchen timer, like the tomato-styled one Cirillo used himself. In this month's *HotPicks* we'll be implementing the Pomodoro technique using the *Tomatoid5* widget for the Plasma desktop without delay!

Tomatoid5 is the long-awaited Plasma 5 port of the original *Tomatoid* widget that used to exist for KDE4. It looks like a red tomato that you can place at any place on your desktop, inside a panel, or in the Latte Dock. Click the tomato to bring up the task list. Here you can

add as many tasks as you wish, but for each one it's important to provide the estimated number of 'pomodoros' that you think will be required to complete the task. Each 'pomodoro' comprises 25 minutes of work and five minutes of rest. The fifth pomodoro assumes that you take a longer break of 20 minutes.

We found *Tomatoid5* to be a fully featured Pomodoro implementation for Linux. You can adjust the duration of periods and tell the widget if it should start a new 'pomodoro' after a break in auto mode. The presentation is also superb. When in the focused mode, *Tomatoid5* changes its colour to yellow and starts ticking. When it's time to have a rest, the widget turns green and displays the relevant desktop notification. Access the Settings>Time section to adjust the lengths of work/rest periods, and the maximum number of iterations that *Tomatoid5* will perform.

Scrcpy

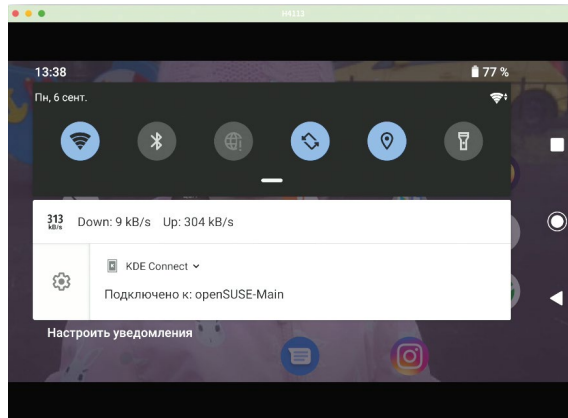**Version:** 1.18 **Web:** https://github.com/Genymobile/scrcpy

View and control your Android phone right from the Linux desktop.

There are several technologies that help pair an Android smart phone with a Linux desktop. So far we can mount and browse the phones' contents when it's connected via USB, and enjoy the glorious KDE Connect features for remote control, messaging, shared notifications and more.

The only missing feature was screen sharing, but if you need to show the desktop screen on a mobile phone, you'll probably use *Deskreen* (**LXF274**). This time we'll be trying a program that does the opposite: it shares the Android screen for Linux. *Scrcpy* (short for 'screen copy') is a command-line utility with a solid collection of debug options and features aimed at Android app developers. However, it's also useful for mere mortals who just want to see their phone's screen without going away from their Linux box.

Scrcpy is included with most Linux distributions, so installation is straightforward. In order to run *Scrcpy* on the Linux side, make sure you have the *android-tools* (or similarly named) package installed. On the phone side the only requirement is the enabled remote ADB debug

in the Android settings. No rooting, hacking or tweaking is required. Plug your phone with a USB cable, run `scrcpy` and tap OK on the phone to enable the connection. So far this is enough for instant screen sharing via USB. *Scrcpy* also works flawlessly via Wi-Fi, provided that you enable wireless debug. Before unplugging the USB cable, issue this command:

```
$ adb tcpip 5555
```
Then find out the phone's IP address:
```
$ adb shell ip route | awk '{print $9}'
```
Finally, unplug the cable and tell ADB to connect via WiFi with:
```
$ adb connect 192.168.X.X:5555 # use your real IP
```
Now run `scrcpy` as usual to see your phone's screen. *Scrcpy* not just displays, but also controls your phone and has a range of cool tricks, too!
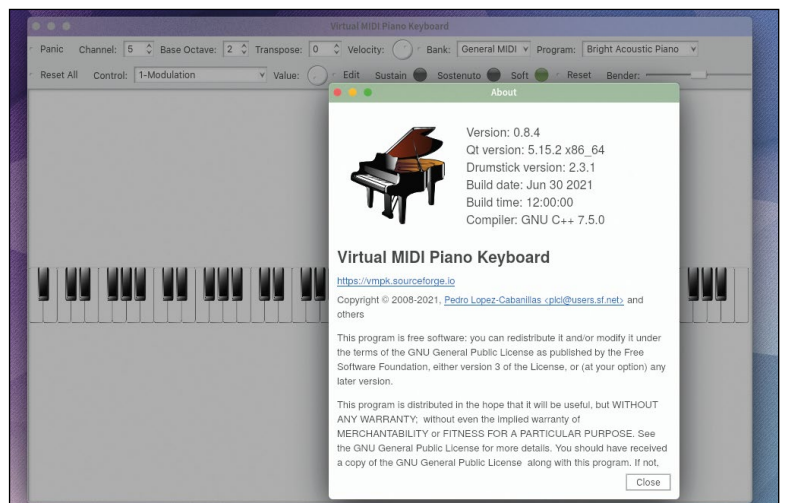
VMPK

Version: 0.8.4 **Web:** https://github.com/pedrolcl/VMPK

Enjoy a responsive virtual piano with dozens of instruments, sustain, note editing and more.

We're always pleased to see an open source tool compete with well-known commercial products. A good example is *Virtual Midi Piano Keyboard*, or *VMPK* for short. This is a spectacular application for musicians and also for everyone else who enjoys piano music. *VMPK* doesn't produce any sounds itself, but does provide a user-friendly interface between you and the MIDI subsystem in Linux. Naturally, those people who own real piano synthesisers will be most interested in *VMPK*. This tool is superb for digital music recording once you connect the piano keyboard to your Linux machine. Even the standard MIDI bank (aka 'General MIDI') has a vast selection of instruments to choose from, and you can attach custom banks, too.

You can play on a digital synthesiser and have an editable MIDI recording, or edit an existing .mid file in *VMPK*. You even don't need to have a physical instrument to make use of *VMPK*. The standard piano keyboard responds to computer keys just fine – it's just a matter of setting key bindings to make playing piano using a QWERTY keyboard convenient. *VMPK* is

configurable, and you can change key mappings under the Edit menu and then save or import existing configurations. Moreover, *VMPK* is capable of preparing multi-track compositions, adding drums, bass lines and more thanks to the SoundFont support. You can try out your musical skills right after *VMPK* launches.

There are many cases where *VMPK* can prove to be helpful as a MIDI generator and receiver. Apart from recording and editing music, it can help in online teaching by displaying the tutor's keyboard on the screen. And if you run *VMPK* on a device with a touch screen, you can learn how to play a piano right away. Search for *VMPK* using your favourite package manager.

Biblioteq

Version: 2021.08.08 **Web:** https://github.com/textbrowser/biblioteq

Fancy running a cool GUI for SQLite focused on storing books and disks? Then don't overlook Biblioteq!

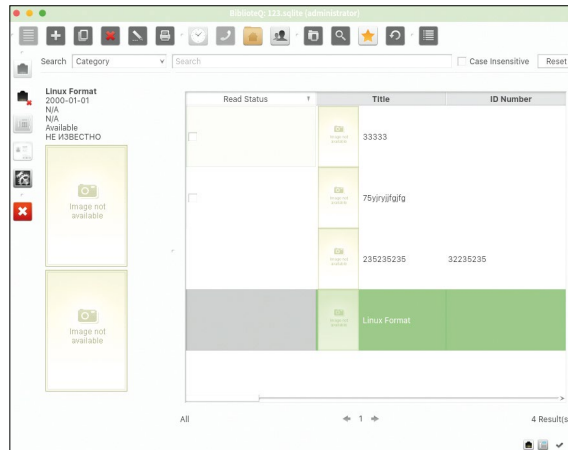**W**hen we write about archiving we usually mean data compression software, but in the case of *Biblioteq* we're referring to library software. Imagine that you've built up a collection of DVDs, magazines (*what now?!–Ed*), books, video games and other physical items that you want to catalogue and store – much like in a real-world library. *Biblioteq* is a feature-rich graphical shell for those who want to meticulously keep their collections perfectly organised.

From a technical standpoint, *Biblioteq* is a front-end to the SQLite database engine. You can build and maintain sophisticated SQLite databases with cross references and dozens of tables, all without any specific knowledge in database administration.

When you fire up *Biblioteq* it first asks you to connect to a database. You may not have any, so feel free to go to File>New SQLite DB and create a new database. Once you've done, connect to it and you're ready to go. Press the + button to create a new element based on suggested templates. Each one assumes that you need to fill in the item's card and provide a detailed description. Not just name, author/artist and year, but a dozen other pieces of information, including keywords, ISBN number, language, region, duration and more. And of course you can add covers, attach extra files and link other items to better track down a particular item in the future.

Biblioteq provides all the necessary options required to run a real-world library. As such, you can create lists of readers, countries, languages and other entities, manage links and cross-references, perform book reservations, search for items by their details and much more (including support for direct SQL queries to the DB). So, if you happen to run your own library, keep in mind that *Biblioteq* covers all possible requirements, and it's totally free, too.
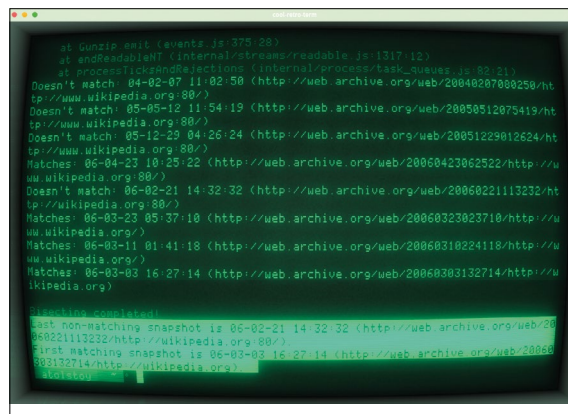
Timefind

Version: 1.0 **Web:** https://github.com/Cykelero/timefind

With Timefind we made sure Wikipedia had reached the one million articles count 15 years ago!

The internet remembers everything – so they say. In fact the web is more like a river and we all sit on a wooden platform that drifts with the current. We see what happens today and what had happened in the not-so-distant past, whereas older things often become swamped under torrents of content, or even lost forever. That's where the Internet Archive, aka the Wayback Machine comes into play. Of course you can go to its web site and manually roll back time to see how a web page used to look before, but we've got a tool that does it better. *Timefind* is a NodeJS-based utility that automates Web Archive searches in such a way that you can quickly find out the first and the last appearance of a word or a phrase.

Timefind flips through saved snapshots of the web site you choose and searches for valid occurrences of the string provided. To install the application make sure you have NodeJS set up and then fire up this command:

```
$ npm install -g timefind
```

Using *Timefind* is also easy. Here we try to find out the first mention of 'community' on the Elm page:

```
$ timefind elm-lang.org community
```

It's also possible to use regular expressions. Let's find out when Wikipedia reached one million articles:

```
$ timefind wikipedia.org -r '\\d \\d{3} \\d{3}'
```

Timefind's default behaviour is to look for a string being added, and then never removed, for the complete lifetime of the page. Therefore, *Timefind's* result is presented as a 'bisection' with two points: one for 'Last non-matching snapshot' and another for 'First matching snapshot'. Normally both refer to similar dates. The accuracy depends on several criteria, such as the site's popularity and the string occurrence on its main page. You'll probably get the best results searching inside well-indexed places of the internet, such as CNN or Wikipedia that have hundreds of thousands of snapshots available at the Internet Archive cache.

RACING GAME

SuperTuxKart

Version: 1.3 RC
Web: https://supertuxkart.net

S uperTuxKart is the best open source penguin-based carting game on Earth. We took a sneak peek at its release candidate and spent numerous hours playing this addictive "karter".

SuperTuxKart 1.3 RC has some new exciting additions. In particular, the new version features two new maps: Ancient Colosseum Labyrinth that resembles the Roman colosseum; and Alien Signal, which was inspired by the real-world location of the extra-terrestrial SETI programme. The new graphics settings under the Options menu make it easier to adjust the game to suit your hardware. SuperTuxKart can look drastically different depending on your video card. The low-graphics mode disables most of high-res eye candy such as dynamic lighting, particles and texture smoothing in order to maintain a comfortable FPS. If your graphics card is up to the job, feel free to max out the game's graphics settings.

First-time SuperTuxKart gamers may want to complete the in-game tutorial before they're dropped into the story-mode race. It's always good to first learn how to use power-ups, such as nitro bottles that enable extra acceleration for a brief time, look behind, or return to the track after accidentally getting stuck.

SuperTuxKart is all about cheating: collect the present boxes along the way and shoot your competitors, place obstacles on their way, or protect yourself from their attacks using shield bubbles. SuperTuxKart has become a much more complex game with plenty of play modes, various challenges, scores, championships and other cool tricks other than the usual competition between you and AI players. If you feel like it's still not enough, check out extra content under the Addons section of the game's main menu. There are plenty of extra carts, tracks, arenas and user-created artwork to choose from. You'll never get bored with SuperTuxKart!

Choose your new challenge by wheeling around the dedicated land of different stories and play modes.
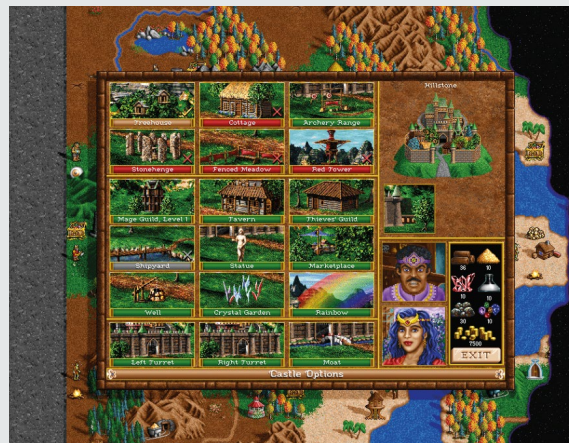
STRATEGY GAME

Fheroes2

Version: 0.9.7 **Web:** https://github.com/ihhub/fheroes2

Improve your castle to discover extra abilities that will help you win in skirmishes.

T he open source project Fheroes2 is advancing towards its first major release. We decided to play the latest version 0.9.7 and found out that it's already a near-perfect recreation of the original Heroes of Might and Magic 2 (HoMM2). Moreover, Fheroes2 adds high-resolution support and dozens of UI improvements together with a much improved AI when playing standard campaigns against computer-driven enemies. It looks like Fheroes2 is actually more playable than the original commercial game that we once had to emulate or run under a virtual machine on Windows.

Very much like Julius for Caesar III (see **LXF233**), Fheroes2 provide a completely reverse-engineered engine with the game's mechanics for HoMM2. This means you still need to have the original game copy with all its artwork. However, the Fheroes2 build comes with the **demo_unix.sh** script, which downloads the demo package of HoMM2: Succession Wars and sets things up in such a way that the game instantly works. Effectively, the game copy is abandonware, so it's entirely legal for personal use.

The game itself brings back warm memories of the original HoMM2. The standard game drops you at the front of your castle where you have one mounted unit with a couple of sprites. You can explore the surroundings and travel around the map to collect resources (wood and gold, say) and locate your opponents. Don't try to fight anyone during these early days since most other players will outmatch you. Collect as many resources as possible and use your castle to build extra units, then upgrade them.

The game has a complex system of characters that you may develop and improve. Learn new spells, collect wisdom and provide your characters with better armour. Elves, golems and more are just waiting for your word to launch an attack!

Reptyr

Version: 0.8 **Web:** https://github.com/nelhage/reptyr

Process transplantation done swiftly thanks to Reptyr!

This is an amazing Linux trick that enables you to steal a process's terminal output and reconnect it to another terminal session. *Reptyr* can perform 're-pty-ing' of any process in Linux and thus makes it possible to detach a process from one PTY/TTY terminal session and attach it to another. The idea makes use of the 'leading terminal' concept, which is key to Linux. As such, every process in a session has the same controlling terminal, and each terminal belongs to at most one session. If a terminal fails, its child process is killed too, which is best avoided.

Perhaps the best example is running something inside an SSH session and getting disconnected. *Reptyr* enables you to leave the child process running even if its host terminal is killed. That's a fairly common situation: you may want to reboot the server or disconnect from the SSH session and go home without losing things that were running in the terminal. Let's take a look at the example. We'll run a conversion command inside an SSH session, something like this:

`$ ffmpeg -i input.mp4 output.mkv`

As long as this is going to take a while, let's reparent this process to another terminal. Log in to the same server via SSH again and run:

`$ reptyr $(pgrep ffmpeg)`

Now that the first terminal is released, you can safely kill the SSH session and stay confident that the process will continue to run on the remote server. *Reptyr's* potential is revealed when used together with terminal multiplexers, such as *Tmux*. It enables the detaching and reattaching of remote processes between sessions, together with their actual output. For improved security we advised you to transplant a process more gently by sending it to background (Ctrl+Z), resuming (`$ bg`) and detaching from the parent terminal (`$ disown <process name>`).
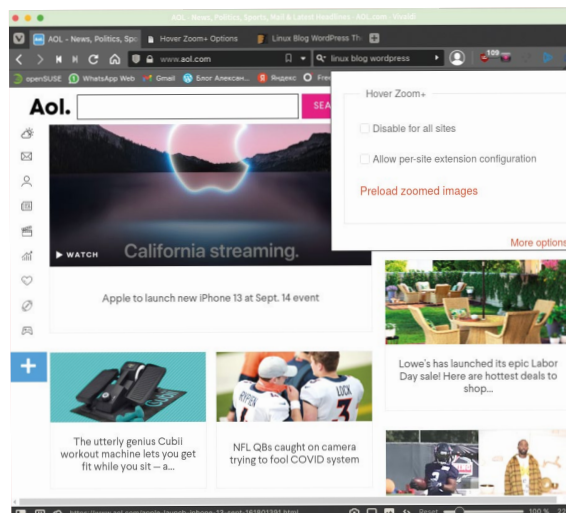
Hover Zoom+

Version: 1.0.180 **Web:** https://github.com/extesy/hoverzoom

Click the extension button to access its settings and optionally preload all images on the current page.

Many of us spend most of our screen time using a web browser. Why not enhance the browsing experience with some open source browser extensions? This time we'll address the issue of content scaling, which seems to be a frequent complaint from high DPI screen users. Even if the UI fonts and other desktop elements scale up correctly, the content rendered by web browsers is a different story.

Instead of zooming in and out the entire web page manually, why not bring select images closer on demand? That's what the *Hover Zoom+* extension does. Hover the mouse over any image on a web site and the extension will enlarge the image to its full size, or make it even larger if you increase the scaling factor in the extension's settings. The enlarged image will always fit the page view and never exceed it, therefore the actual scaling factor may be lower for already large images.

Accessing *Hover Zoom+'s* Options dialog reveals many extra configuration settings. The extension can zoom into images and video, and it can alter audio volume or mute videos, configure delays, show/fade animation duration and more. Customising the *Hover Zoom+* settings allows for a fine-grain per-site control (see the Sites section), including the whitelist mode.

In our tests *Hover Zoom+* worked fine with almost all sites, with a few exceptions. This was because the extension relies on a list of supported domains and site building frameworks, which you can review under the Plugins section. The list covers many news sites and other popular online destinations.

Hover Zoom+ is available for *Firefox*, *Chrome* and *Edge* browsers. Other *Chromium*-based browsers such as *Vivaldi* and *Opera* also support it via their *Chrome* Web Store integration. **LXF**