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NixOS 19.09 Released With Xfce 4.14 Packages, GNOME 3 Updates

We are hitting the autumn Linux distribution update season and out today is NixOS 19.09 as the latest installment for this operating system built around the functional Nix package manager.

41 Minutes Ago - [Operating Systems](#) - NixOS 19.09 - [Add A Comment](#)

RMS: No Radical Changes In GNU Project

With Stallman sticking around as head of the GNU and with that the Free Software Foundation re-evaluating their GNU relationship, Richard Stallman is already saying there will be no major changes to the project he founded.

85 Minutes Ago - [GNU](#) - RMS Talks - [3 Comments](#)

The Mitigation Impact Difference On AMD Ryzen 9 3900X vs. Intel Core i9 9900K Performance

Last week I shared benchmark results of the AMD Ryzen 9 3900X vs. Intel Core i9 9900K in 400+ benchmarks in the largest comparison ever for these two competing ~\$500 USD processors. If that wasn't enough, I repeated the hundreds of CPU/system benchmarks again but without any of the recent CPU security mitigations in place to see how the situation would have played out pre-2018.

3 Hours Ago - [Processors](#) - [2 Comments](#)

Qt 5.14 Rolls To Beta Stage With Graphics API Independent Scenegraph Renderer

The Qt Company has shipped Qt 5.14 beta as the newest version of the Qt5 tool-kit and their last real feature update as Qt 5.15 will focus more on bug fixes as development is shifting towards Qt 6.0 due out in one year's time.

4 Hours Ago - [Qt](#) - Vulkan Support - [1 Comment](#)

KDE + Qt 5.14 To Better Behave With Context Loss Around NVIDIA's Driver

Currently when resuming from systemd suspend or switching back to the KDE desktop from an alternate VT, it's possible with the NVIDIA proprietary driver to see screen corruption or leakage of previous screen contents to areas of the lock screen / desktop. This annoying issue is now being better addressed with Qt 5.14.

5 Hours Ago - [KDE](#) - NVIDIA Context Loss - [3 Comments](#)

Ubuntu 19.10 Makes It So Easy To Have Your Desktop Running Off A ZFS File-System

As we reported this weekend, the Ubuntu desktop installer "Ubiquity" has landed the much anticipated ZFS install support. That's now propagated through to the Ubuntu 19.10 daily ISOs and does indeed make for a quick and easy setup of Ubuntu Eoan running off a root ZFS file-system.

7 Hours Ago - [Ubuntu](#) - Ubuntu 19.10 + ZFS - [18 Comments](#)

Intel Adds GPU-Accelerated Memory Copy Support To FFmpeg

Intel engineers have contributed GPU-accelerated memory copy support to FFmpeg when making use of their preferred video decode implementation.

7 Hours Ago - [Intel](#) - GPU Memory Copies - [11 Comments](#)

[Intel ANV & Radeon RADV Vulkan Drivers Tacking On More Extensions With Mesa 19.3](#)

There still is another month until the feature freeze for Mesa 19.3 to end out 2019 and it will be a big one.

7 Hours Ago - [Mesa](#) - Mesa 19.3 - [1 Comment](#)

[GNOME Shell & Mutter 3.34.1 Deliver On Their Prominent Fixes](#)

There weren't out in time for yesterday's formal GNOME 3.34.1 point release, but GNOME Shell and Mutter have out their prominent point releases today that are exciting on the correction front.

8 Hours Ago - [GNOME](#) - GNOME Shell + Mutter - [14 Comments](#)

[Amlogic Video Decode Driver Nearly Ready With H.264 Support](#)

The in-kernel staging Amlogic Meson video decode driver could soon handle H.264 support as soon as Linux 5.5.

13 Hours Ago - [Hardware](#) - H.264 For Amlogic - [5 Comments](#)

8 October

[RadeonSI Adds Zeroing vRAM Workaround To Help Rocket League Players](#)

For those annoyed by random textures appearing when launching the popular Rocket League game with the RadeonSI Gallium3D driver, a workaround has landed in Mesa 19.3-devel Git while also marked for back-porting to currently supported stable series.

8 October 07:20 PM EDT - [Radeon](#) - Rocket League Workaround - [29 Comments](#)

[Linux 5.5 To Advertise RDPRU Support For AMD Zen 2 CPUs Via /proc/cpuinfo](#)

RDPRU is one of the new instruction set extensions of AMD "Zen 2" CPUs that is for reading a processor register that is typically limited to privilege level zero. RDPRU allows for reading select registers at any privilege level. With Linux 5.5, the RDPRU presence will be advertised by the CPU features.

8 October 12:23 PM EDT - [AMD](#) - AMD RDPRU - [8 Comments](#)

[Firefox 69 + Chrome 77 On Windows 10 vs. Ubuntu / Clear Linux Benchmarks](#)

With running some fresh cross-OS benchmarks now that Ubuntu 19.10 is imminent followed by Ubuntu 19.10, a new Windows 10 update coming in the days ahead, and also the release of macOS 10.15, a lot of fun benchmarks are ahead. In today's article is a quick look at the Windows 10 vs. Ubuntu 19.10 vs. Clear Linux web browser performance for both Mozilla Firefox and Google Chrome.

8 October 09:51 AM EDT - [Operating Systems](#) - [9 Comments](#)

[Navi 14 AMDGPU Firmware Lands In The Linux-Firmware.Git Tree](#)

Just one day after announcing the Radeon RX 5500 series as the first Navi 14 GPUs, AMD has submitted the firmware binaries to the linux-firmware.git tree that are required for usage with the open-source Linux graphics driver.

8 October 07:34 AM EDT - [Radeon](#) - Navi 14 Firmware - [5 Comments](#)

[KDE's KWin To Still Pursue X11 Composite Unredirect, More Wayland Improvements](#)

KDE developer Roman Gilg attended the X.Org Developer's Conference last week in Montreal. At XDC2019 he provided the X11/Wayland developers with an overview of KWin's architecture as both an X11 window manager and Wayland compositor along with talking of some of the future plans.

8 October 06:47 AM EDT - [KDE](#) - KWin Improvements - [10 Comments](#)

[GNOME 3.34.1 Released With Latest Fixes](#)

GNOME 3.34.1 is out as the first point release to last month's big GNOME 3.34 desktop debut.

8 October 06:18 AM EDT - [GNOME](#) - GNOME 3.34.1 - [17 Comments](#)

[BeOS-Inspired Haiku Making Progress On ARM, Various Kernel Improvements](#)

Just last week marked the one year anniversary since shipping the Haiku R1 beta release for this BeOS-inspired open-source operating system. The developers remain though as busy as ever with advancing this interesting open-source project.

8 October 03:37 AM EDT - [Operating Systems](#) - Haiku September Report - [11 Comments](#)

[Firefox 71 Landing Wayland DMA-BUF Textures Support](#)

Firefox 71 is bringing another important Wayland improvement!

8 October 12:29 AM EDT - [Fedora](#) - Mozilla Graphics Work - [42 Comments](#)

[Fedora 31 Won't Add An Official POWER Desktop Spin](#)

While Fedora recently began spinning workstation/live images for POWER (PPC64LE) at least as a work-in-progress, it won't be made a formal feature of the upcoming Fedora 31.

8 October 12:00 AM EDT - [Fedora](#) - Fedora PPC64LE Desktop - [14 Comments](#)

7 October

[NVIDIA Begins Funding Blender Development](#)

NVIDIA is the latest high profile company now contributing significant funds for advancing the open-source Blender 3D modeling software.

7 October 05:38 PM EDT - [NVIDIA](#) - NVIDIA + Blender - [24 Comments](#)

[Imad Sousou Steps Down As Head Of Intel's Open-Source Efforts](#)

After an incredible 25 year journey at Intel and having founded the Open-Source Technology Center, Imad Sousou announced today he is stepping away from Intel.

7 October 04:46 PM EDT - [Intel](#) - Intel Open-Source Technology - [7 Comments](#)

[Intel Readies Another Big Graphics Driver Push With Linux 5.5 - Lots For Tigerlake/Gen12](#)

While just one week past the Linux 5.4 merge window cut-off and now with XDC 2019 out of the day, Intel's open-source graphics driver team sent in their first batch of new material they will be targeting for the Linux 5.5 cycle.

7 October 01:09 PM EDT - [Intel](#) - Linux 5.5 Driver Changes - [4 Comments](#)

[PostgreSQL 12 Performance With AMD EPYC 7742 vs. Intel Xeon Platinum 8280 Benchmarks](#)

One of the areas of performance I had been meaning to look more at following the recent AMD EPYC 7002 series launch was for database servers. With the original EPYC 7000 series performance, the performance came up short in competing with Intel Xeon CPUs, but for the EPYC Rome processors it ends up being a very different story. Given the launch last week of PostgreSQL 12, I've been trying out this new database server release on both EPYC and Xeon processors.

7 October 10:18 AM EDT - [Software](#) - [5 Comments](#)

[Intel Lowers Costs On New Xeon W-2200 Series & Cuts Core 9000 F-Series CPU Pricing](#)

In addition to The Cascadelake X-Series CPUs launching at a much lower price, Intel announced the Xeon W-2200 series today also at lower pricing while cutting prices on their existing Core 9000 F-series desktop CPUs too.

7 October 09:30 AM EDT - [Intel](#) - Cheaper Intel CPUs - [16 Comments](#)

[AMD Announces Navi 14 Based Radeon RX 5500 Series](#)

AMD today lifted the lid on the Radeon RX 5500 series as their first Navi 14 based graphics card. This is the soft launch with no units shipping yet but expected to starting in November.

7 October 09:22 AM EDT - [AMD](#) - Radeon RX 5500 - [40 Comments](#)

[NVIDIA Still Working On A Generic Allocator - Has Working Open-Source Implementation](#)

For those wondering, NVIDIA is still pursuing a generic allocator / Unix device memory allocator that has been talked about for years and a potential successor to the likes of the Generic Buffer Manager (GBM). They now have an implementation of their proposed allocator working for the open-source NVIDIA (Nouveau) driver though there still is a lot of work ahead.

7 October 07:42 AM EDT - [NVIDIA](#) - Unix Device Memory Allocator - [20 Comments](#)

[The FSF Is Re-Evaluating Its Relationship With The GNU](#)

With RMS resigning as head of the FSF but ultimately is remaining as head of the GNU, the Free Software Foundation is now publicly re-evaluating its relationship with the GNU.

7 October 06:40 AM EDT - [GNU](#) - FSF + GNU = Love? - [74 Comments](#)

[GDB Debugger Lands CTF Support](#)

The GNU Debugger (GDB) now has support for the Compact C Type Format following support for this debugging information format having been added to the GCC compiler and Binutils.

7 October 06:32 AM EDT - [GNU](#) - GDB CTF - [3 Comments](#)

[Meson 0.52 Released With Better Support For Solaris/Illumos](#)

While popularity in Solaris-based operating systems may be on the decline, for Meson to ultimately replace other build systems it will need good support for said operating systems where Automake, CMake, and others are well supported. As such, with this weekend's Meson 0.52 release comes with better support for Solaris and the OpenSolaris-derived Illumos platforms.

7 October 01:05 AM EDT - [Programming](#) - Meson 0.52 - [11 Comments](#)

[JACK2 1.9.13 Released As First Update In Nearly 2 Years For The Low-Latency Audio Server](#)

While Red Hat is pursuing Pipewire with plans to fill the use-cases provided by the JACK(2) low-latency audio server, JACK2 isn't letting up and Sunday marked version 1.9.13 for the project and their first release since December 2017.

7 October 12:02 AM EDT - [Multimedia](#) - JACK2 1.9.13 - [7 Comments](#)

6 October

[Vulkan 1.1.124 Released With Shader Clock & Timeline Semaphore Extensions](#)

Vulkan 1.1.124 is out this Sunday evening with two new extensions.

6 October 08:02 PM EDT - [Vulkan](#) - Vulkan 1.1.124 - [Add A Comment](#)

[Linux 5.4-rc2 Released As The "Nesting Opossum"](#)

Linus Torvalds is back on his Sunday release regiment with having just declared the Linux 5.4-rc2 test release and also took the opportunity to have some fun by shifting the kernel's codename to be the Nesting Opossum, replacing the Bobtail Squid.

6 October 05:45 PM EDT - [Linux Kernel](#) - Linux 5.4 - [5 Comments](#)

[Linux 5.4 Radeon Performance Rises Slightly Higher With Bulk Moves Enabled](#)

With the bit of a surprise this past week of AMD flipping LRU bulk moves back on as a "fix" for Linux 5.4 and this now having landed in Linux 5.4 Git, here are some preliminary benchmarks of this feature being enabled on the newest 5.4 kernel builds since Friday.

6 October 02:38 PM EDT - [Display Drivers](#) - [9 Comments](#)

[Godot 3.2 Enters Alpha With Many Improvements](#)

While we are eager to see Godot 4.0 with its new Vulkan renderer and other improvements, Godot 3.2 is coming out first and this weekend marks the alpha release for this latest update to this leading open-source, cross-platform game engine.

6 October 11:38 AM EDT - [Linux Gaming](#) - Godot 3.2 - [3 Comments](#)

[Linux 5.5 Staging To Add New "WFX" WiFi Driver For Low-Power IoT Hardware](#)

WFX is a new WiFi driver being added to the staging area with the Linux 5.5 cycle coming up in a few months.

6 October 10:53 AM EDT - [Hardware](#) - WFX WiFi - [Add A Comment](#)

[AdaCore Has Been Developing A GNAT/Ada Front-End To LLVM](#)

While the GNAT Ada front-end for GCC is in quite good shape, AdaCore has been experimenting with bringing their GNAT front-end to LLVM for allowing Ada code compilation with the LLVM compiler stack.

6 October 10:18 AM EDT - [LLVM](#) - Ada LLVM - [25 Comments](#)
[Intel Tiger Lake Support Lands In Their NEO OpenCL/Compute Stack](#)

In addition to the Tigerlake support being plumbed within the Linux kernel and other areas of the open-source Linux software stack, this week they pushed out their initial Gen12 Tiger Lake support into the NEO compute run-time that is for providing OpenCL support as well as the ongoing SYCL enablement and other work around their forthcoming oneAPI model.

6 October 08:10 AM EDT - [Intel](#) - Tigerlake Compute - [3 Comments](#)
[Qt 3D Studio 2.5 Beta Brings Stereoscopic Support, Better Content Controls](#)

The Qt Company this week released the public beta of the forthcoming Qt 3D Studio for this development tool focused on creating rich 3D user interfaces with the Qt tool-kit.

6 October 07:45 AM EDT - [Qt](#) - Qt 3D Studio 2.5 - [4 Comments](#)
[Intel MKL-DNN Deep Neural Network Library Benchmarks On Xeon & EPYC](#)

This week Intel released MKL-DNN 1.1 as their open-source deep learning library. They also rebranded the software project as the "Deep Neural Network Library" (DNNL) though its focus remains the same. I ran some initial benchmarks on MKL-DNN/DNNL 1.1 on AMD EPYC and Intel Xeon hardware for reference.

6 October 07:24 AM EDT - [Intel](#) - MKL-DNN 1.1 - [12 Comments](#)
[KDE Kicked Off October With Dolphin Improvements, Continued HiDPI Work](#)

KDE developers spent the first week of October working on improvements to their Dolphin file manager, seemingly never-ending work on HiDPI support, and a variety of other enhancements for this leading open-source desktop.

6 October 07:04 AM EDT - [KDE](#) - KDE Progress - [40 Comments](#)
[GTK4 Now Allows More Efficient Usage With Its Vulkan Renderer](#)

This week the GTK 4.0 development code picked up support for making use of the VK_KHR_incremental_present extension with its Vulkan renderer in order to allow much more efficient behavior.

6 October 12:03 AM EDT - [GNOME](#) - GTK4 + VK_KHR_incremental_present - [25 Comments](#)

5 October

[Radeon RADV "ACO" Performance On Mesa 19.3 Looking Good](#)

With the ACO shader compiler back-end merged for Mesa 19.3 as of mid-September and more improvements merged since then, it's now very easy to try out this alternative to AMD's longstanding AMDGPU LLVM compiler back-end. ACO, which is developed by Valve and their contractors outside

of AMD, is looking quite good not only for quicker shader compilation (more punctual game load times) but also helping the performance of some Vulkan-powered games. Here are our latest ACO benchmarks.

5 October 08:17 PM EDT - [Display Drivers](#) - [32 Comments](#)

[DAV1D vs. LIBGAV1 Performance - Benchmarking Google's New AV1 Video Decoder](#)

With the surprise code drop of Google developing a new open-source AV1 video decoder as "libgav1", I set out this Saturday to run benchmarks on various systems for seeing how the performance is looking for this CPU-based decoder in relation to the more well known DAV1D decoder.

5 October 03:13 PM EDT - [Multimedia](#) - AV1 Video Benchmarks - [43 Comments](#)

["LIBOUTPUT" Proposed As New Library For Helping To Bring Up New Compositors & More](#)

Coming out of informal discussions from this week's X.Org Developers Conference in Montreal, a "liboutput" library has been proposed as a theoretical new library for helping to bring up Wayland compositors, X11 window managers, and anything else wanting to interface with DRM/KMS kernel interfaces.

5 October 02:51 PM EDT - [X.Org](#) - LIBOUTPUT - [20 Comments](#)

[Google Uncovers CPU Bug For Geminilake, Affecting At Least Firefox & Chrome](#)

We were alerted this morning to a CPU bug resulting in crashes for Intel Geminilake processors. At least Chrome and Firefox are affected but sounds like other software may be affected too, just that Google has enough engineering resources for investigating the issue.

5 October 10:48 AM EDT - [Intel](#) - Intel Geminilake - [33 Comments](#)

[Radeon ROCm 2.9 Released With New "RALI" Library, rocTX](#)

Just one week after the release of Radeon Open Compute 2.8, AMD has now released ROCm 2.9 as the newest feature release for this open-source GPU Linux compute stack for Radeon hardware.

5 October 09:26 AM EDT - [AMD](#) - ROCm 2.9 - [13 Comments](#)

[Ubuntu Desktop ZFS Install Support Lands In Ubiquity Installer](#)

With less than two weeks to go until the Ubuntu 19.10 release, on Friday the experimental ZFS root file-system install support was merged into the Ubuntu desktop "Ubiquity" installer.

5 October 08:05 AM EDT - [Ubuntu](#) - Ubuntu ZFS Install - [25 Comments](#)

[Intel OpenCL Stack Updated Against LLVM/Clang 9.0](#)

Intel's open-source crew on Friday released version 19.39.14278 of their compute/OpenCL runtime.

5 October 07:15 AM EDT - [Intel](#) - Compute 19.39.14278 - [3 Comments](#)

[Google Has Been Developing "libgav1" As New AV1 Decoder](#)

While there exists DAV1D as one of the most promising AV1 decoders to date, Google has been developing libgav1 as its own AV1 decoder and focused on Arm-powered Android devices but also x86_64 desktop CPUs as well.

5 October 06:59 AM EDT - [Google](#) - GAV1D - [14 Comments](#)

[Zink's OpenGL Over Vulkan Implementation Aiming For Mesa 19.3 Integration](#)

For the past year "Zink" has been in development as the OpenGL API implemented over Vulkan and done as a Gallium3D driver. That code by Collabora's Erik Faye-Lund will likely be merged to Mesa 19.3 in the coming weeks.

5 October 12:18 AM EDT - [Mesa](#) - Zink - [14 Comments](#)

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