

# Linux and Graphics: Kernel Headers, Linux 5.5, NUVIA and Wayland

By *Roy Schestowitz*

Created 16/11/2019 - 3:06am

Submitted by Roy Schestowitz on Saturday 16th of November 2019 03:06:37 AM Filed under [Graphics/Benchmarks](#)

[1] [Linux](#) [2]

- [What's a kernel headers package anyway](#) [3]

I've written before about what goes into Fedora's kernel-devel package. Briefly, it consists of files that come out of the kernel's build process that are needed to build kernel modules.

In contrast to kernel-devel, the headers package is for userspace programs. This package provides #defines and structure definitions for use by userspace programs to be compatible with the kernel. The system libc comes with a set of headers for platform independent libc purposes (think printf and the like) whereas the kernel headers are more focused on providing for the kernel API. There's often some overlap for things like system calls which are tied to both the libc and the kernel. Sometimes the decision to support them in one place vs the other comes down to developer choices.

While the in-kernel API is not guaranteed to be stable, the userspace API must not be broken. There was an effort a few years ago to have a strict split between headers that are part of the userspace API and those that are for in-kernel use only.

Unlike how kernel-devel gets packaged, there are proper make targets to generate the kernel-headers (thankfully). make headers\_install will take care of all the magic. These headers get installed under /usr/include

-

## [Linux 5.5 To Finally Kill The Async Block Cipher API In Favor Of SKCIPHER](#) [4]

The crypto code within the Linux kernel for the upcoming 5.5 cycle finishes converting the drivers to making full use of the four-year-old SKCIPHER interface so that the old ABLKCIPHER code can be removed.

SKCIPHER was introduced in 2015 to the mainline kernel to ultimately replace BLKCIPHER/ABLKIPHER. This "symmetric key cipher" interface is a generic encrypt/decrypt wrapper for ciphers.

- [NUVIA To Make Serious Play For New CPUs In The Datacenter, Hires Linux/OSS Veteran](#) [5]

Making waves this afternoon is word of the NUVIA server CPU start-up landing its series A funding round and thus making more information known on this new silicon start-up.

- [WXRC Is The Wayland XR Compositor For VR Headsets](#) [6]

Drew DeVault of Sway/WL-ROOTS notoriety and longtime Wayland developer Simon Ser have started development on WXRC, a new Wayland compositor.

WXRC is the Wayland XR Compositor and is based on OpenXR and the open-source Monado implementation. This is better than the past Linux VR desktop efforts we've recently seen that relied on SteamVR. As of this week, WXRC has working 3D Wayland clients.

## [Graphics/Benchmarks Linux](#)

---

Source URL: <http://www.tuxmachines.org/node/130551>

### Links:

[1] <http://www.tuxmachines.org/taxonomy/term/148>

[2] <http://www.tuxmachines.org/taxonomy/term/63>

[3] <https://www.labbott.name/blog/2019/11/15/what-s-a-kernel-headers-package-anyway/>

[4] [https://www.phoronix.com/scan.php?page=news\\_item&px=Linux-5.5-Finishes-SKCIPHER](https://www.phoronix.com/scan.php?page=news_item&px=Linux-5.5-Finishes-SKCIPHER)

[5] [https://www.phoronix.com/scan.php?page=news\\_item&px=NUVIA-Announces-Series-A](https://www.phoronix.com/scan.php?page=news_item&px=NUVIA-Announces-Series-A)

[6] [https://www.phoronix.com/scan.php?page=news\\_item&px=WXRC-Wayland-XR-Compositor](https://www.phoronix.com/scan.php?page=news_item&px=WXRC-Wayland-XR-Compositor)