

Graphics: AMDGPU, Linux FreeSync/Adaptive-Sync, TensorFlow 2.0 With GPU and Radeon

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[AMDGPU Performance In Linux 5.4 Is Now Faster With "Bulk Moves" Landed](#) [2]

Linux 5.4 is already exciting with its many new features and changes but was made even more so on Friday night with the honoring of the latest DRM fixes pull request that includes the "fix" of enabling LRU bulk moves for the AMDGPU DRM driver!

The LRU bulk moves functionality is the code we mentioned earlier this week that would be sent in as a "fix" to Linux 5.4 to restore behavior reverted back during the Linux 5.0 cycle. The bulk moves is the feature Valve developers noted can help with performance in demanding Linux games and can also help other Vulkan and OpenCL workloads.

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[It Looks Like HDMI FreeSync/VRR For Linux + Wayland Support Will Eventually Come For AMD](#) [3]

AMD provided an update on their Linux FreeSync/Adaptive-Sync support at this week's X.Org Developers Conference event in Montreal. There's good news both for HDMI and Wayland Linux users with Radeon graphics.

Harry Wentland, a longtime member of the AMD Linux graphics team and patch wrangler around the DC display code, was the presenter at XDC2019. One of the big complaints of the AMD FreeSync/Adaptive-Sync Linux support to date has been the lack of supporting HDMI outputs... Wentland explained that on Windows, AMD uses a proprietary AMD-developed protocol for enabling FreeSync on HDMI. Obviously that won't fly for the open-source AMDGPU kernel driver. But as for the formal HDMI Variable Rate Refresh (VRR) support, they note it's "pending" but held up by a HDMI VRR conformance test suite being released. So hopefully once that CTS is available, HDMI VRR will be flipped on for Linux users

wishing to enjoy Adaptive-Sync/VRR functionality for HDMI displays.

- [TensorFlow 2.0 with GPU on Debian/sid \[4\]](#)

Some time ago I have been written about how to get Tensorflow (1.x) running on current Debian/sid back then. It turned out that this isn't correct anymore and needs an update, so here it is, getting the most uptodate TensorFlow 2.0 running with nVidia support running on Debian/sid.

- [The ACO Radeon Compiler Alternative To AMDGPU LLVM Looks Good But Work Isn't Done Yet \[5\]](#)

In addition to Intel announcing their work on the new "IBC" compiler back-end for their OpenGL/Vulkan drivers, the developers working on the Radeon "ACO" in cooperation with Valve were presenting the latest work on their compiler back-end at this week's XDC 2019 event in Canada.

For those that missed it, this Valve-funded ACO shader compiler landed in Mesa 19.3-devel last month after being announced earlier in the year. This compiler back-end is an alternative to the existing AMDGPU LLVM compiler back-end used currently by both the OpenGL and Vulkan drivers. ACO is focused on better gaming performance and also quicker shader compile times over LLVM. So far though ACO has just been plumbed into RADV and not the AMDVLK driver or RadeonSI OpenGL.

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