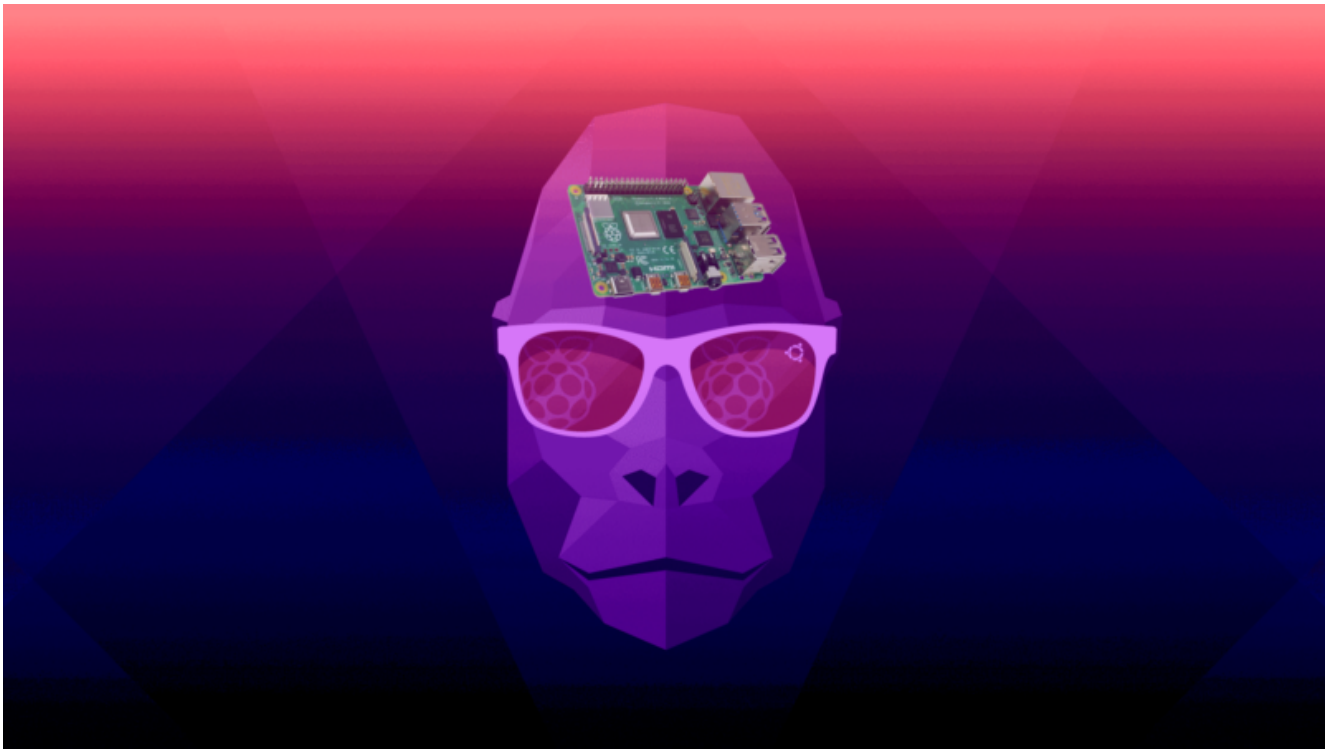
Ubuntu Groovy Gorilla adds Raspberry Pi as a “first class citizen”



Enlarge / This Groovy Gorilla doesn’t just have a Raspberry Pi 4 on his mind, he’s got a Raspberry Pi 4 *as* his mind.
Canonical / Raspberry Pi / Ars Technica

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Last week, Canonical released the latest intermediate version of Ubuntu, 20.10 “Groovy Gorilla”—which, for the first time, adds first-class platform support for the Raspberry Pi 4.

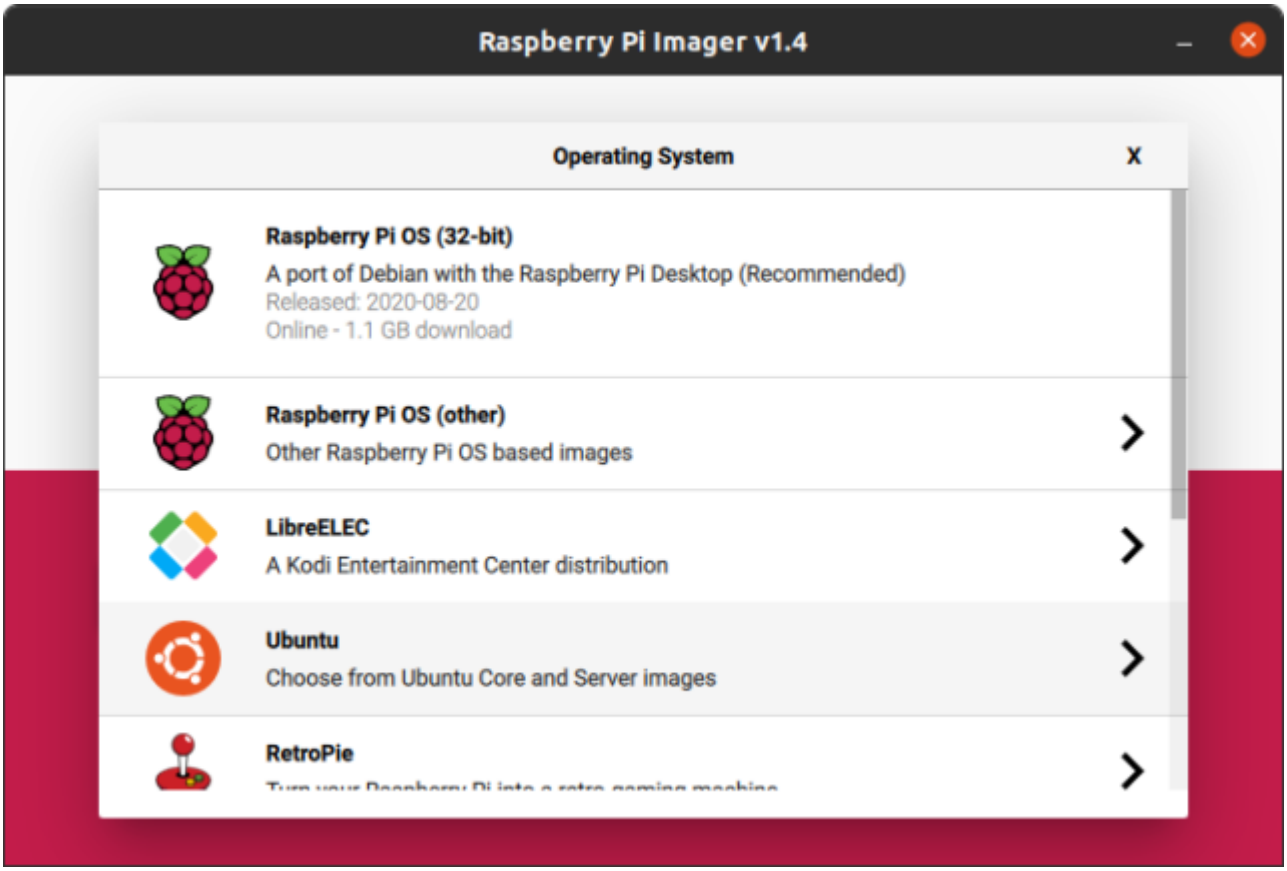
Groovy Gorilla itself is a pretty typical interim release, offering an updated GNOME version (3.38) with lots of bugfixes and small feature additions, such as drag-and-drop organization of folders and shortcuts in the Applications

grid. Support has also been added for Windows Active Directory in the Ubiquity OS installer itself.

Canonical embraces the Pi

While it has been possible for some time to install Ubuntu on Raspberry Pi hardware, up until now that has been strictly a community effort. The Pi itself ships with Raspberry Pi OS, a Debian-based distribution whose origins began with the Pi community, but which has since been officially adopted and supported by the Raspberry Pi Foundation itself. And while Canonical added the Pi as a supported platform in 20.04 Focal Fossa earlier this year, that support was only for the Ubuntu Server distribution—not Desktop.

With 20.10 Groovy Gorilla, Canonical has added full desktop support for the Pi 4. Martin Wimpress, Canonical's director of engineering for the Ubuntu Desktop, says this means the Pi is now a "first-class citizen." Canonical guarantees the same level of integration, QA, and support from kernel to userspace that it does for an x86 PC. The entire Ubuntu software repository—save for specifically architecture-targeted packages, which start with names like i386—is available and supported on the Pi.



Enlarge / Ubuntu 20.10 Desktop is an option in the standard Raspberry Pi imager tool now.

There are some caveats—if you want to install Ubuntu 20.10 Desktop on the Pi, you'll need a 4GiB or 8GiB Pi 4, not one of the earlier versions. As long as you meet the hardware requirements, the rest is a breeze—Ubuntu 20.10 Desktop is an option in the standard Raspberry Pi Imager now; the Imager itself is available for Linux, Windows, or Mac platforms. All you need to do is insert a 4GiB or larger SD card, run the imager, choose your OS, and click "write." A few minutes later, you can put your SD card in your Pi 4 and boot it up.

Raspberry Pi 4 as a desktop PC platform

In light of this new initiative, we spoke at some length to Wimpress and the Pi Foundation's founder, Eben Upton. The Raspberry Pi was not originally conceived as a real alternative to a traditional desktop PC. Instead, it was intended to serve as a vehicle for schoolchildren to learn

about “real computing”—primarily meaning programming, not consumption—on a device inexpensive enough for anyone to afford.

While the Pi has certainly served that educational purpose, its low cost, easy availability, and recognizable branding made it an immediate darling of the maker communities as well. Earlier versions of the Pi were not powerful platforms, but they were cheap, flexible, and ubiquitous—making them ideal for hacked-together little one-off projects for fun or convenience.

In much the same spirit that the maker community took a little educational device and turned it into their favorite general-purpose gadget, the Linux community has long been interested in trying to turn it into a desktop PC, with varying degrees of success. According to Upton, those efforts took on a dramatic uptick in March and April of this year in the UK. As both traditional PCs and Chromebooks became nearly unavailable due to demand for suddenly remote-schooled kids, the Raspberry Pi—which sells 600,000 to 700,000 units per month, making the Raspberry Pi Foundation one of the top-ten PC manufacturers—suddenly became a much more widely adopted alternative.

With a 64-bit quad-core Cortex A72 CPU at 1.5GHz, 4 or 8 GiB DDR4 RAM, 802.11ac Wi-Fi, and support for driving two 4K displays via micro-HDMI out—as well as hardware H.264 and H.265 decoding—the Pi 4 compares on paper pretty well with low-end traditional laptops. In fact, low-end laptops seem to be racing down to meet the Pi as fast as it’s rushing up to meet them, with cost-cutting measures like soldered RAM and eMMC storage.

Where the Pi 4 still comes up short for mainstream, non-geek appeal is the fact that it’s generally sold as a bare system board, which still needs an SD card, an operating system, and a case. But at $60—and in the midst of an otherwise supply-

starved pandemic—those drawbacks begin seeming less important.

Collaboration between Canonical and the Pi Foundation

Wimpress told us that Canonical has now devoted several teams directly to Raspberry Pi 4 support—including kernel engineering, foundations engineering, and desktop teams for that platform. All teams are working directly with engineers at the Pi Foundation.

Upton says that the Canonical engineers "sync up" with their Raspberry Pi Foundation counterparts every couple of weeks, and the collaboration helps the Foundation do things in a more standards-based way—meaning in part that the Foundation's own work adheres better to general Linux best practices, and in part that the work done to make Linux better on the Pi goes back upstream to the wider Linux community itself.

In addition to the general software engineering, Canonical brings significant hardware QA resources to the collaboration. With the Pi 4 now adopted as a first-class Ubuntu hardware platform, Canonical's massive Taipei-based hardware QA department (where regression tests are done on thousands of hardware units, looking for problems) now includes a fleet of Raspberry Pi devices.

The Pi Foundation, in turn, now provides Canonical with pre-release samples of new hardware models, helping make sure that Ubuntu support for new hardware is top-notch on launch day for those new models instead of needing to play catch-up for several months afterward.

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