

Linux is ready for the end of time

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On 03:14:08 Greenwich Mean Time (GMT, aka Coordinated Universal Time) January 19, 2038 (that's a Tuesday), the world ends. Well, not in the biblical Book of Revelations sense. But, what will happen is the value for time in 32-bit based Unix-based operating systems, like Linux and older versions of macOS, runs out of numbers and starts counting time with negative numbers. That's not good. We can expect 32-bit computers running these operating systems to have fits. Fortunately, Linux's developers already had a fix ready to go.

The problem starts with how Unix tells time. Unix, and its relations -- Linux, macOS, and other POSIX-compatible operating systems -- date the beginning of time from the Epoch: 00:00:00 GMT on January 1, 1970. The Unix family measures time by the number of seconds since the Epoch.

So far, so good. But, since Unix and family started out as 32-bit operating systems, time's value is kept as a single signed 32-bit integer number. Those are a lot of seconds, but just like the last century's Y2K bug, it's not enough.

[2]

[Linux](#)

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