

#### Security

# Intel's management engine - in most CPUs since 2008 - can be p0wned over USB

Creator of OS on the chip calls out Chipzilla for keeping his work secret

By Richard Chirgwin 9 Nov 2017 at 05:11 28 ☐ SHARE ▼

Positive Technologies, which in September said it has a way to attack the Intel Management Engine, has dropped more details on how its exploit works.

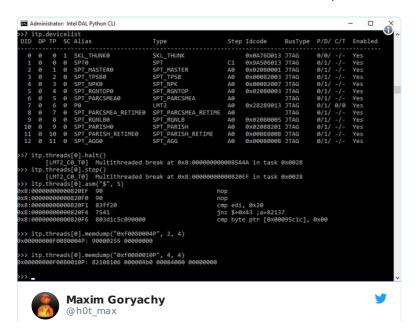
The firm has already promised to demonstrate God-mode hack in December 2017, saying the bug "allows an attacker of the machine to run unsigned code in the Platform Controller Hub on any motherboard".

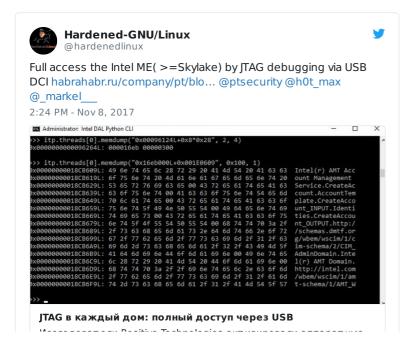
For some details, we'll have to wait, but what's known is bad enough: Intel Management Engine (IME) talks to standard Joint Test Action Group (JTAG) debugging ports. As does does USB, so Positive Technologies researchers put the two together and crafted a way to access IME from the USB port.

IME's problems first emerged in May, when researchers noticed you could access the Active Management Technology running on the microcontroller with an empty login string.

That was patchable, but the IME - a microcontroller that's got full control over hardware and networking, independently of the operating system - remained in place.

The latest attack came to Vulture South's attention via a couple of Tweets:





The linked blog post [in Russian] explains that since Skylake, the PCH – Intel's Platform Controller Hub, which manages chip-level communications – has offered USB access to JTAG interfaces that used to need specialised equipment. The new capability is DCI, Direct Connect Interface.

Any attack needs access to USB which as we know is really difficult.

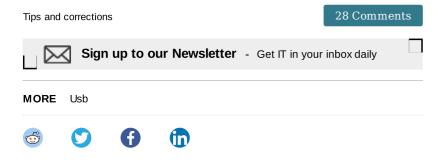
We still don't know all the details Positive Technologies will show off at Black Hat, but their trailers are sure fun to watch. ®

**Bootnote**: The IME is able to control a computer because it runs an OS of its own, namely MINIX. And it turns out that while Intel talked to MINIX's creator about using it, the company never got around to saying it had put it into every CPU it makes.

Which has MINIX's creator, Andrew S. Tanenbaum, just a bit miffed. As Tanenbaum wrote this week in an open letter to Intel CEO Brian Krzanich:

The only thing that would have been nice is that after the project had been finished and the chip deployed, that someone from Intel would have told me, just as a courtesy, that MINIX was now probably the most widely used operating system in the world on x86 computers. That certainly wasn't required in any way, but I think it would have been polite to give me a heads up, that's all.

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