

Meltdown and Spectre

SNAFU or FUBAR

Agenda

Meltdown

Spectre

What can we do about it?

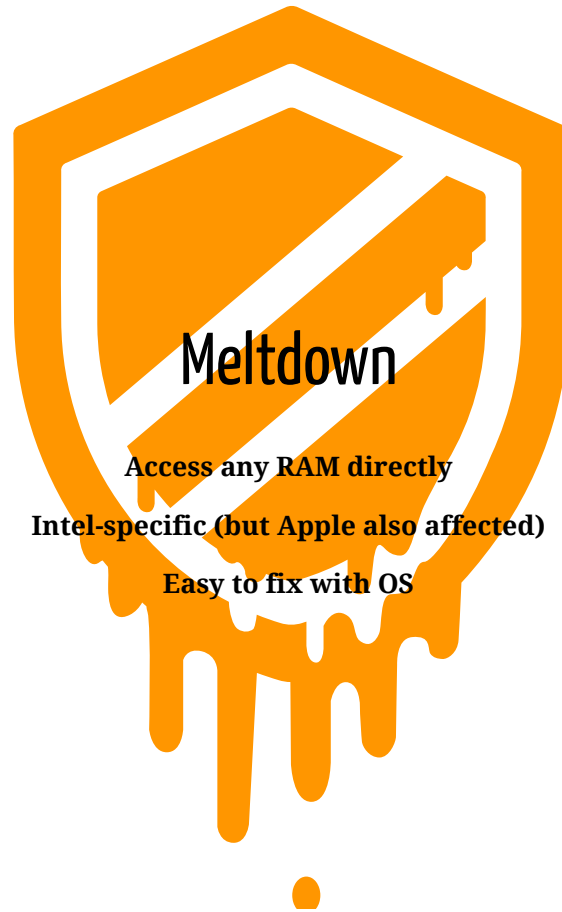
Under the hood

Processor caches

Out-of-order execution

Branch prediction

Speculative execution

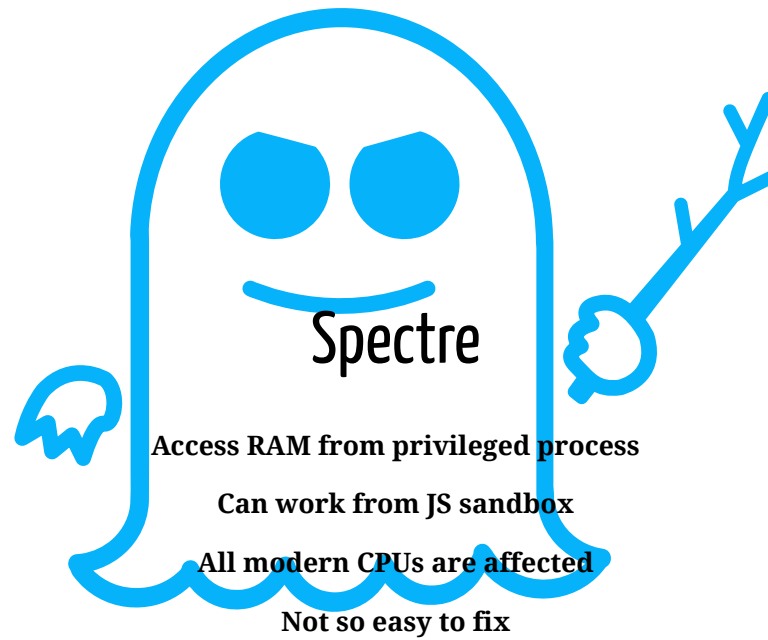


Meltdown

Access any RAM directly

Intel-specific (but Apple also affected)

Easy to fix with OS



SPECTRE

What can we do about it?

OS patches (KAISER)

Update browsers Firefox and Chrome have been fixed

What can we do about it?

Performance cost

Docker and Virtualization affected

So what now?

Military situational indicators progression

SNAFU

Situation Normal, All Fucked Up

Things are running normally.

TARFUNK

Things Are Really Fucked Up Now

Houston, we have a problem.

FUBAR

Fucked Up Beyond All Recognition

Burn it to the ground and start over from scratch; it's totally destroyed.

Questions?

Useful links

- <https://www.youtube.com/watch?v=IPhvL3A-e6E>

Most complete and user-friendly explanation in 48 mins

- <https://www.youtube.com/watch?v=8FFSQwrLsfE>

Most complete and non user-friendly explanation in 55 mins

- <https://arstechnica.com/gadgets/2018/01/meltdown-and-spectre-heres-what-intel-apple-microsoft-others-are-doing-about-it/>

Meltdown and Spectre: Here's what Intel, Apple, Microsoft, others are doing about it

- <https://www.ivanti.com/blog/meltdown-spectre-need-know/>

The impact and potential issues with current solutions

- <https://gist.github.com/a0viedo/282f9fce9cfa7feeb8edced71451a77a>

A gist of useful links about Meltdown and Spectre with official reports