

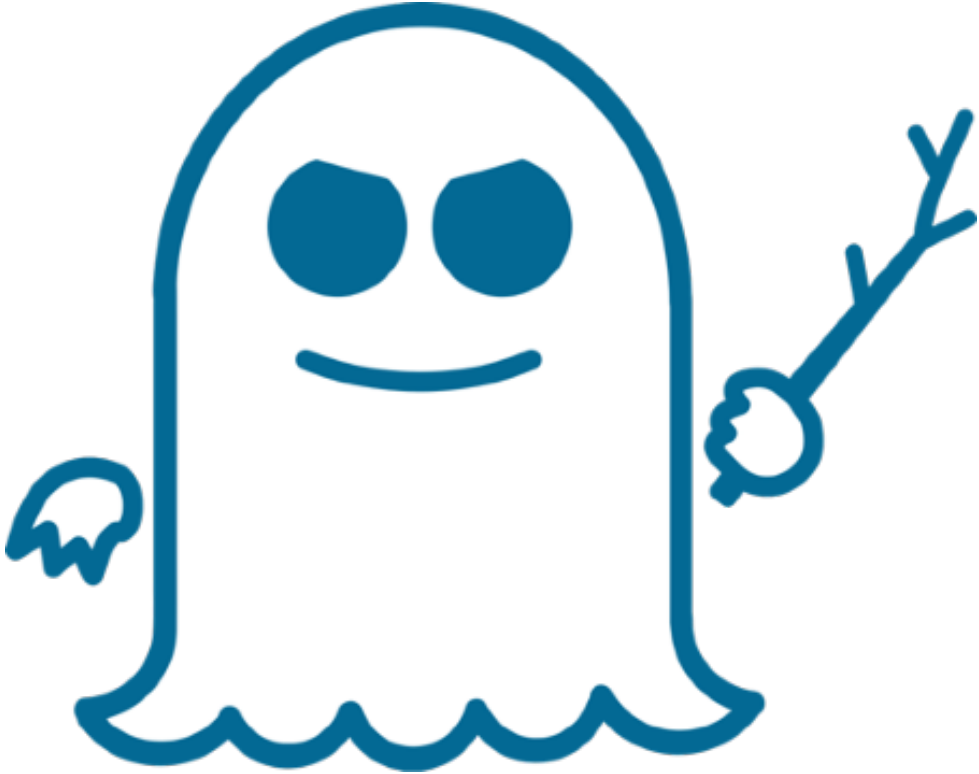


MANAGEMENT

SUMMARY

MELTDOWN AND
SPECTRE





MELTDOWN



- ▶ **Result:** Programs can read memory it should not
- ▶ **Affects:** All modern CPU/OS
- ▶ **Vector:** Uses *out of order execution* to read forbidden memory and *cache timing* as side channel to exfiltrate data
- ▶ **How bad:** Bad
- ▶ **Fixes:** Needs changes in CPU and/or OS patches. Modest (X%) to severe (XX%) performance impact, higher on older CPU. Performance impact varies and depends on CPU and workload type.



MELTDOWN AND
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MANAGEMENT SUMMARY