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January 15, 2018

Re: OpenVMS Susceptibility to Meltdown and Spectre Attacks

Dear customers, partners, and friends:

VMS Software, Inc. has performed extensive research into the susceptibility of the OpenVMS platform to the Spectre and Meltdown attacks. The following are the results of our findings:

OpenVMS on Itanium

Our Itanium research has confirmed Intel's own findings that OpenVMS on Itanium is not susceptible.

OpenVMS on Alpha

Our Alpha research followed two inquiries: Pre-EV6 Alpha and EV6-and-later Alpha hardware.

- i. OpenVMS on Pre-EV6 Alpha is not susceptible.
- ii. OpenVMS on EV6-and-later Alpha is so far not susceptible, as we have not reproduced behavior that speculatively executes load instructions that miss the data cache. Ongoing research is being pursued to further validate our findings for OpenVMS on EV6-and-later Alpha hardware.

OpenVMS on x86-64

Early design decisions for the x86-64 port of OpenVMS have already mitigated the impact of the attacks on OpenVMS:

- i. OpenVMS on x86-64 is not susceptible to Meltdown.
- ii. OpenVMS on x86-64 has limited susceptibility to Spectre. We will work diligently to eliminate susceptibility as we complete the port.

As always, we look forward to your feedback on this and any other vulnerabilities in future.

Regards,

A handwritten signature in cursive script that reads 'Eddie Orcutt'.

Eddie Orcutt
VP of Software Engineering