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Cyber Catalyst by Marsh
Cyber Technology Evaluation Program

Hewlett Packard Enterprise

Silicon Root of Trust — Cyber Catalyst Designation

The Silicon Root of Trust from Hewlett Packard Enterprise (HPE) has been designated a 2019 Cyber Catalyst cybersecurity solution. It protects against firmware attacks, detects previously undetectable compromised firmware or malware, and helps to rapidly recover the server in the event of an attack.

The Silicon Root of Trust satisfies organizations' need for a robust security foundation that permits only trusted firmware to be loaded onto the server, and that can rapidly mitigate the impact of firmware attacks. It is able to recover itself from attacks by malicious code to a known and secure state, with trusted firmware, and without manual intervention.

Available on HPE Gen 10 servers, the Silicon Root of Trust is based on a hardware-validated boot process that ensures a computer system can only be started using code from an immutable source. This involves an anchor for the boot process rooted in hardware that cannot be updated or modified in any way. When combining this foundation with a cryptographically secured signature, there are no easily accessible gaps for hackers to exploit. If a hacker inserts a virus or compromised code into the server firmware, the configuration of the firmware is changed, creating a mismatch to the digital fingerprint embedded in the silicon.

As it initiates, HPE Integrated Lights-Out 5 (iLO 5) firmware validates the basic input/output system and looks for the "digital fingerprint" of iLO firmware burned into the silicon chip. That immutable fingerprint verifies all the firmware code is valid and uncompromised.

If the validation fails at any level, iLO 5 and the Silicon Root of Trust will not allow the server to power on. Because HPE makes its own silicon chip and firmware, it is able to create the bond that cannot be broken between the two.

**Product information provided by Hewlett Packard Enterprise*

Why the HPE Silicon Root of Trust is a Cyber Catalyst-Designated Solution

Cyber Catalyst participating insurers rated the HPE Silicon Root of Trust highest on the criteria of differentiation, performance, viability, efficiency, and flexibility.

In their evaluation, the insurers characterized it as:

- "Arguably a close to perfect solution. Security that is baked in at the bare metal hardware level is the standard that security risk management professional should strive for."
- "Very strong, robust hardware security."
- "Difficult-to-subvert protection. Admirable product architecture and scope."

Insurance Policies and Implementation Principle

Organizations that adopt Cyber Catalyst-designated solutions may be considered for enhanced terms and conditions on individually negotiated cyber insurance policies with participating insurers.

Those insurers, when considering potential policy enhancements, will expect organizations to deploy Cyber Catalyst-designated products or services in accordance with certain "implementation principles" that have been developed by the insurers with vendors of Cyber Catalyst-designated solutions.

The implementation principle for the Silicon Root of Trust is:

- Users must have the firmware runtime verification activated, to scan firmware every 30 days at a minimum.

Evaluation Process

Applications for evaluation of cybersecurity solutions were accepted from March 26 through May 5, 2019. More than 150 cybersecurity offerings, spanning a broad range of categories from hardware to messaging security to IoT security, were submitted for evaluation. Cyber Catalyst participating insurers evaluated eligible solutions along six criteria:

1. *Reduction of cyber risk.*
2. *Key performance metrics.*
3. *Viability.*
4. *Efficiency.*
5. *Flexibility.*
6. *Differentiating features.*

Cyber Catalyst designation was awarded to solutions receiving positive votes from at least six of the eight participated insurers, which voted independently. Neither Microsoft — which served as technical advisor — nor Marsh participated in Cyber Catalyst℠ designation decisions.

The next Cyber Catalyst program is expected to open in 2020.

For more information on the Cyber Catalyst 2019 designated solutions or the program, visit the Cyber Catalyst pages at www.marsh.com/cybercatalyst.

For more information about Marsh's cyber risk management solutions, email cyber.risk@marsh.com, visit marsh.com, or contact your Marsh representative.

For more information about the HPE Silicon Root of Trust, visit www.hpe.com/go/security.

2019 CYBER CATALYST DESIGNATED SOLUTIONS

In the inaugural Cyber Catalyst program, 17 cybersecurity products and services have been designated as Cyber Catalyst solutions. More information about all the 2019 Cyber Catalyst-designated cybersecurity solutions is at www.marsh.com/cybercatalyst.