

News Byte

May 12, 2017

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[At Build, Microsoft's annual developers conference](#), taking place this week, Microsoft Azure CTO Mark Russinovich disclosed major advances in Microsoft's hyperscale deployment of Intel® field programmable gate arrays (FPGAs). These advances have resulted in the industry's fastest public cloud network, and new technology for acceleration of Deep Neural Networks (DNNs) that replicate "thinking" in a manner that's conceptually similar to that of the human brain.

The advances offer performance, flexibility and scale, using super low latency networking to leverage the world's largest cloud investment in FPGAs. The increases in networking speed achieved by this low latency networking will help business, government, healthcare, and universities better process Big Data workloads. Azure's FPGA-based Accelerated Networking reduces inter-virtual machine latency by up to 10x while freeing the Intel® Xeon® processors for other tasks.

Russinovich also outlined a new cloud acceleration framework that Microsoft calls Hardware Microservices. The infrastructure used to deliver this acceleration is built on Intel® FPGAs. This new technology will enable accelerated computing services, such as Deep Neural Networks, to run in the cloud without any software required, resulting in large advances in speed and efficiency.

"From our early work accelerating Bing search using FPGAs added to the Intel Xeon processor-based servers, to this new Hardware Microservices model that underlies the Deep Neural Networks (DNNs) infrastructure that Mark discussed yesterday afternoon, Microsoft is continuing to invest in novel hardware acceleration infrastructure using Intel® FPGAs," said Doug Burger, one of Microsoft's Distinguished Engineers.

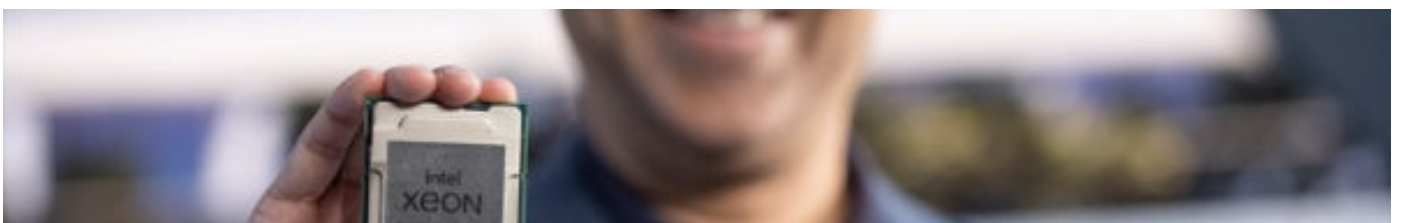
"Application and server acceleration requires more processing power today to handle large and diverse workloads, as well as a careful blending of low power and high performance—or performance per Watt, which FPGAs are known for," said Dan McNamara, corporate vice president and general manager, Programmable Solutions Group, Intel. "Whether used to solve an important business problem, or decode a genomics sequence to help cure a disease, this kind of computing in the cloud, enabled by Microsoft with help from Intel FPGAs, provides a large benefit."

See Microsoft Azure CTO Mark Russinovich's [presentation](#).

Learn more about Intel's [FPGAs for computing and storage](#).

Tags: [FPGA](#), [Microsoft](#)

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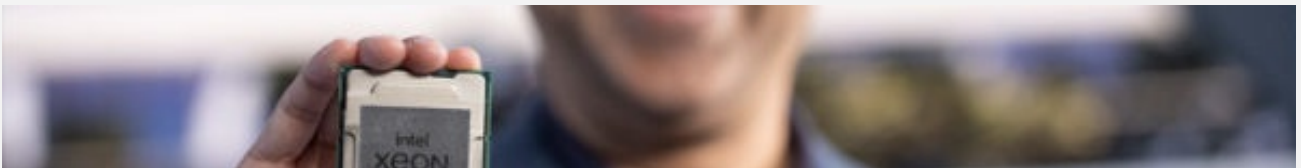
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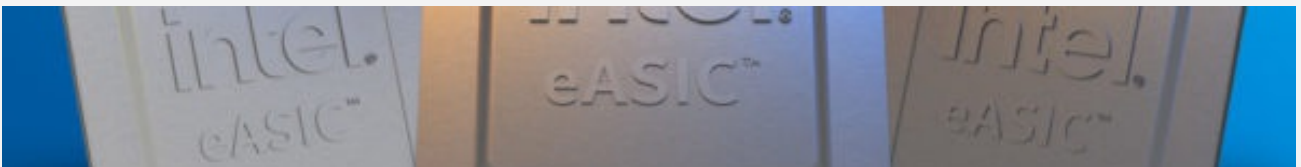
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