

Les membres de la Fondation OpenPOWER dévoilent des solutions matérielles offrant de nouvelles alternatives sur le marché des serveurs

Paris - 19 mars 2015: La Fondation OpenPOWER annonce aujourd'hui plus de 10 solutions matérielles et un nouveau microprocesseur adapté pour la Chine. Construites conjointement par les membres de la Fondation OpenPOWER, les nouvelles solutions exploitent l'architecture POWER pour fournir aux clients un choix plus large ainsi qu'une personnalisation et des performances accrues. Ces solutions incluent des datacenters hyperscale.

Google, IBM, Rackspace et Suzhou PowerCore s'associent à plus de 100 autres organisations issues de plus de 20 pays pour dévoiler des innovations pour les datacenters, offrant ainsi une alternative ouverte sur le marché des serveurs informatiques.

OpenPOWER, la première architecture de serveur ouvert au monde conçue pour traiter le Big Data, gagne du terrain dans les industries, les entreprises et les pays qui prennent de plus en plus conscience des limites de l'architecture x86. Les clients ressentent le besoin d'une innovation ouverte et ils réalisent également la supériorité de la technologie OpenPOWER. Le processeur POWER offre un rapport prix-performance 60% plus efficace que celui offert par les puces alternatives.

Lors de l'OpenPOWER Summit, la Fondation OpenPOWER a dévoilé plus de 10 innovations matérielles concernant les puces, les composants et les cartes mères développés sur la base de l'architecture de serveur OpenPOWER, démontrant ainsi à quel point un flux continu d'innovations est possible quand les entreprises se réunissent et collaborent ouvertement.

Parmi les principales annonces, l'on trouve :

- Le prototype du premier serveur HPC OpenPOWER, conçu pour les laboratoires américains Lawrence Livermore et Oak Ridge National
- Le premier serveur OpenPOWER disponible à la vente, le TYAN TN71-BP012
- La première plateforme OpenPOWER pour le développement d'applications (big data analytics, deep learning, scientifique) accélérées par GPU, avec Cirrascale RM4950

OpenPOWER Foundation Technology Leaders Unveil Hardware Solutions To Deliver New Server Alternatives

- *Technology Movement Backed by Google, IBM, NVIDIA, Mellanox and Tyan to Transform Data Center with World's First Open Server Architecture*
- *Rapidly Expanding Ecosystem Fueled by More than 100 Members Worldwide Working on More than 100 Innovations*
- *POWER8 Processors Offer Nearly 60% Better Price-Performance than Alternative Chips*

OPENPOWER SUMMIT, San Jose, Calif. - 18 Mar 2015: The [OpenPOWER Foundation](#) today announced more than ten hardware solutions - spanning systems, boards, and cards, and a new microprocessor customized for China. Built collaboratively by [OpenPOWER members](#), the new solutions exploit the POWER architecture to provide more choice, customization and performance to customers, including hyperscale data centers.

In San Jose, California, at the inaugural OpenPOWER Summit, Gordon MacKean, Chairman, OpenPOWER Foundation (left), and Brad McCredie, President, OpenPOWER Foundation (right), unveil a rapidly expanding hardware ecosystem with more than 10 new OpenPOWER community-developed solutions. The OpenPOWER Foundation is a collaboration of technologists encouraging the adoption of an open server architecture for computer data centers and has grown to more than 110 businesses, organizations and individuals across 22 countries. (Credit: Feature Photo Services)

The OpenPOWER Foundation which is a collaboration of technologists encouraging the adoption of an open server architecture for computer data centers has grown to more than 110 businesses, organizations and individuals across 22 countries. IBM's POWER architecture is the cornerstone of innovation for the OpenPOWER Foundation, creating a computing platform available to all.

Members and customers recognize the technical benefits of the POWER architecture. The POWER8 microprocessor is the first processor designed from the ground up for Big Data and analytics workloads. With the best of breed alternative chip estimated to be priced 50% higher (1), the POWER8 processor utilized by OpenPOWER members and others can enable the design of systems that deliver better performance (2) - projected at nearly 60% (3) better performance per dollar spent on processors.

*"Since our first public event just under one year ago, the OpenPOWER Foundation has expanded dramatically and enabled the development of a new breed of data center technology products worldwide," said **Gordon MacKean, OpenPOWER Foundation Chair**. "Through our members' individual and collective efforts we are positively changing the game, delivering innovations that advance data center technology, expand choice and drive market efficiency."*

Among the products and prototypes OpenPOWER members revealed today are:

- **Prototype of IBM's first OpenPOWER high performance computing server on the path to**

exascale – IBM and Wistron are jointly developing the first OpenPOWER-based high performance computing server using technology from NVIDIA and Mellanox. The system will be the debut offering in a series of solutions to be introduced as part of IBM's OpenPOWER technical computing roadmap, which includes IBM's future delivery of two systems to Lawrence Livermore and Oak Ridge National Laboratories. The systems are predicted to be five to 10 times faster than today's leading supercomputers.

- **First commercially available OpenPOWER server, the TYAN TN71-BP012** – With planned availability in the second quarter of 2015, the [TYAN TN71-BP012](#) servers are designed for large-scale cloud deployments and follow Tyan's highly successful OpenPOWER [customer reference system](#) introduced in October 2014. IBM will be among the first to deploy the new servers as part of its SoftLayer infrastructure, utilizing them for a [new bare metal service](#) offering.
- **First GPU-accelerated OpenPOWER developer platform, the Cirrascale RM4950** – The [Cirrascale RM4950](#) is the result of collaboration between NVIDIA, Tyan and one of the OpenPOWER Foundation's newest members, Cirrascale. Immediately available for order and shipping in volume in the second quarter of 2015, the platform supports the development of GPU-accelerated big data analytics, deep learning, and scientific computing applications.
- **Open server specification and motherboard mock-up combining OpenPOWER, Open Compute and OpenStack** – Rackspace, a managed cloud company, revealed an [open server design](#) and prototype motherboard, combining OpenPOWER and Open Compute design concepts. The new design, targeted to run OpenStack services and be deployed in Rackspace data centers, will draw upon a wide range of open innovations to deliver users improved performance, value, and features.

Other member-developed solutions revealed leverage Coherent Accelerator Processor Interface (CAPI), a unique feature built into the POWER architecture. CAPI provides members and other technology companies the ability to build solutions right on top of the POWER architecture. New CAPI-based solutions include the [ConnectX-4 adapter card](#) by Mellanox, Convey's CAPI developer kit leveraging Xilinx FPGA-based co-processors, and shared virtual memory between a Stratix V FPGA accelerator and a POWER8 CPU developed by Altera and IBM. These OpenPOWER CAPI-based solutions join Nallatech's [OpenPOWER CAPI Developer Kit](#) developed by Nallatech in collaboration with Altera and IBM and released November 2014.

The Power of OpenPOWER in China

OpenPOWER Foundation members also revealed products under development in China, where the OpenPOWER ecosystem is providing Chinese technology companies the option to build custom solutions and accelerate local innovation.

At the center of China's emerging OpenPOWER-based ecosystem is CP1, the first POWER chip for the China market, from a Chinese chip design company named PowerCore. The first China OpenPOWER system with CP1 will come to market this year. CP1 will be utilized by Zoom Netcom for a new line of servers called RedPower, the first China OpenPOWER two-socket system coming to market in 2015. Additional Chinese OpenPOWER members, including ChuangHe, shared designs for China-branded OpenPOWER systems incorporating POWER8 processors which have planned availability in 2015.

These announcements follow an endorsement of OpenPOWER in the fall of 2014 by the Chinese government through the formation of the China POWER Technology Alliance (CPTA), a public-private partnership. In order to drive innovation and opportunity for China based companies, the major mission for CPTA is to promote the upgrading of China's industrial structure through the integration of Chinese local and the OpenPOWER ecosystem resources under the guidance of Chinese government. CPTA, through the international cooperation to lead POWER technology, will create the world's top technology solutions that leverage the latest Big Data and cloud computing capabilities and apply these outcomes in bank, telecommunications, energy, transportation, internet and Smarter City technology initiatives in China.

Cross-Community Collaboration Drives More Open Solutions

The OpenPOWER Foundation also announced the formation of the OpenPOWER Advisory Group, a formal mechanism for engaging with other open development organizations. Inaugural members of the Advisory Group represent the Linux Foundation, the Open Compute Project and the China POWER Technology Alliance (CPTA). The Advisory Group will provide guidance to the OpenPOWER Board of Directors and serve as a forum for support and collaboration between communities with open approaches to infrastructure and software development.

About the OpenPOWER Foundation

The goal of the OpenPOWER Foundation is to create an open ecosystem, using the POWER architecture to share expertise, investment, and server-class intellectual property to serve the evolving needs of customers.

- OpenPOWER enables collaborative innovation for shared building blocks
- OpenPOWER supports independent innovation by members
- OpenPOWER builds on industry leading technology
- OpenPOWER thrives as an open development community

For further details, a full membership roster, and guidance on getting involved in the OpenPOWER Foundation, visit www.openpowerfoundation.org.

Footnotes

[1] Pricing is based on estimates from the Linley Group December 29, 2014 report POWER8 Hits the Merchant Market which states "Pricing is no contest. We estimate that IBM's 12-core Power8 will list for \$2,500; add \$180 or \$360 for two or four buffer chips. Intel hasn't published a list price for the Xeon E5-2699v3, but after surveying some Internet re-sellers, we estimate it lists for about \$4,100." More information can be found at: http://www.linleygroup.com/newsletters/newsletter_detail.php?num=5275

[2] Performance is based on SPEC CPU2006 publishes and projections based on performance results as of February 28, 2015. SPEC® and the benchmark name SPECCPU® are registered trademarks of the Standard Performance Evaluation Corporation. For more information about SPECCPU2006, see <https://www.spec.org/cpu2006/>

OpenPOWER performance is estimated from an IBM Power System S824 published result with 24 cores / 192 threads, POWER8; 3.5GHz, 512 GB memory, RHEL 7.1 and extrapolated to a single socket OpenPOWER based 12 cores / 96 threads POWER8; 3.1 GHz.

Competitive performance result is published on NEC Corporation Express5800/R120f-1M (Intel Xeon E5-2699 v3) with (per socket) 18 cores / 36 threads; Intel E5-2699 v3; 2.3 GHz; 128 GB, RHEL 6.5.

[3] Price-performance is derived from the pricing in [1] and performance in [2].

#

Supporting Quotes

*"Collaborating across our open development communities will accelerate and broaden the raw potential of a fully open data center. We have a running start together and look forward to technical collaboration and events to engage our broader community." - **Corey Bell, CEO Open Compute Project***

*"By leveraging the CAPI technology designed for the IBM POWER8 servers and support from the OpenPOWER Foundation team, it allowed Algo-Logic Systems to develop world class ultra-low-latency Full Order-Book in FPGA logic that will benefit the Financial Services industry." - **John Lockwood, CEO Algo-Logic***

*"The future hardware architecture of OpenPOWER which shall include the next generation POWER processors, ultra high memory density systems, and NVIDIA's NVLink interconnect system, will provide the hardware platform for GPUdb that will unleash a massive performance improvement in every facet of operation. This will create even more performance improvements in the ability to ingest and conduct on the fly analytics on ultra-high velocity big data feeds." - **Amit Vij, CEO, GPUdb***

*"OpenPOWER started off as an idea that immediately resonated with our technology partners to strengthen their scale out implementations like analytics. Now, OpenPOWER is fundamental to every conversation IBM is having with clients -- from HPC to scale out computing to cloud service providers. Choice, freedom and better performance are strategic imperatives guiding customers around the globe, and OpenPOWER is leading the way." - **Ken King, General Manager OpenPOWER Alliances, IBM***

*"We expect OpenPOWER to broaden the scope of available supercomputing solutions and products which is crucial for us as a leading provider of supercomputing resources. Integrating POWER processor technologies and high-performance GPUs opens an exciting path towards power-efficient exascale computing." - **Dr. Dirk Pleiter, Jülich Supercomputing Center***

*"The Linux Foundation's mission includes supporting open and collaborative development to advance key technologies and transform markets. OpenPOWER is already resonating across many dimensions and stakeholders for both hardware and software and the time has never been more right for cross-collaboration among these communities." - **Mike Dolan, Sr. Director of Strategic Programs, The Linux Foundation***

"The prototype of IBM's system revealed today is the first in a series of new high-density Tesla GPU-accelerated

servers for OpenPOWER high-performance computing and data analytics. IBM plans to build upon this offering with follow-on systems, adding future-generation 'Pascal' GPUs with the NVIDIA NVLink high-speed GPU interconnect technology to help set the stage for exascale computing." - **Sumit Gupta, General Manager of Accelerated Computing, NVIDIA**

"China POWER Technology Alliances (CPTA) was established in order to accelerate the speed of China secured and trusted IT industry chain building, by leveraging OpenPOWER technology. CPTA joining the Advisory Group of OpenPOWER will be a significant milestone for engaging China into the global POWER ecosystem, and opening the development community to drive further POWER innovations through the deep collaboration between communities." - **Mr. Zhu Ya Dong, Chairman of Suzhou PowerCore**

"As a new open platform, OpenPOWER provides the prototype system that conforms to the specifications in order to satisfy the demands of the development of the OpenPOWER ecosystem in China." - **Mr. Zhiqiang Tian, Senior Engineer, BIOS research and development, TEAMSUN**

"The development of the OpenPOWER ecosystem in China's high security level market enriches China ISV and IHV's options for a total solution from hardware to software." - **Mr. Zhiqiang Tian, Senior Engineer, BIOS research and development, TEAMSUN**
